BURTON GRAD ASSOCIATES, INC.

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DATE: April 2, 1993

MEMO TO: Jan Phillips
                    Marty Silberberg

FROM: Burt Grad

Enclosed is a copy of the foils from Rich Carpenter's client/server presentation at the recent ITAA meeting.
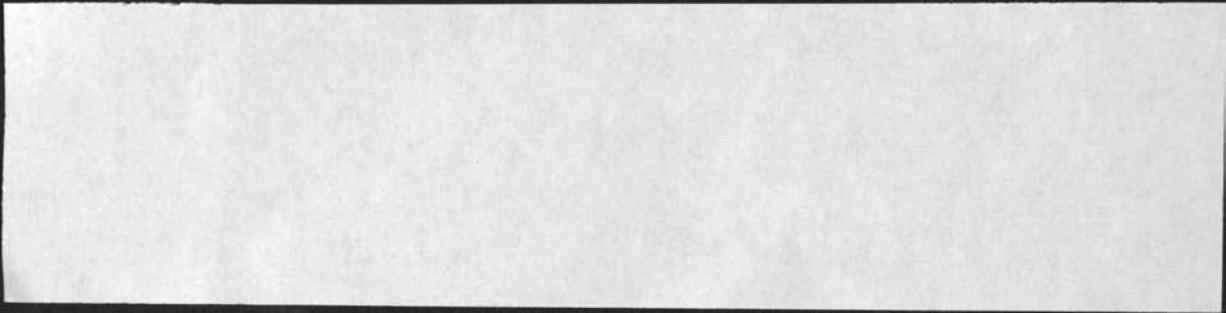
While I don't agree with Rich's classification of types of client/server systems toward the back, his structure and definitions hang together quite well.

Under sponsorship of the Technology Information Services Committee, Rich will produce a "monograph" on this subject within about three months.

Jan, also enclosed is the latest TIS mailing list.

BG:8950

ITAA

BURTON GRAD ASSOCIATES, INC.

March 12, 1993

Mr. Phil Moore
Sterling Software, Inc.
8080 N. Central Expressway
Suite 1100
Dallas, TX   75206

Dear Phil:

You asked me to take a fresh look at where Sterling is now and at
some of the areas which should be of interest to Sterling given its
new ability to make major acquisition investments. You asked me to
focus on new directions rather than extensions for existing groups.
You also asked me to avoid doing a grid-type analysis and to be more
reflective than analytic. So, here goes.

Current Status

Each of the current three principal Sterling groups has a different
focus:

- Systems Software is product-oriented, dealing with application
  development tools on both mainframes and PCs, communications
  between PC and mainframe systems and mainframe system
  utilities. Systems Software concentrates on functional
  systems products, but has not yet provided significant
  offerings for midrange systems or client/server oriented
  products.

- Ordernet is focused on EDI interconnect services and EDI
  formatting products for mainframe, midrange and micro
  computers. The application areas (banking, retail) appear to
  be secondary. It has not yet extended its offerings into
  proprietary data base offerings or transaction analyses.

- Federal Systems has primarily been involved in delivering high
  tech consulting and programming services along with operations
  and support for supercomputers. It is focused on the federal
  marketplace and has only begun to consider what products it
  might offer to the commercial marketplace from its vast
  technical experience.

ITAA

Assumptions

The basic assumptions underlying my identification of potential
growth opportunities for Sterling are:

. Marketing opportunities are and will be found among the
  Fortune 1000-type industrial and non-industrial companies that
  currently have large DP installations, and comparable
  international companies.

. Sales will be made at both the enterprise and divisional
  level, either through on-site or telemarketing capabilities,
  to the DP shops that are providing support services to
  operational groups within an enterprise or to its divisions.

. The preferred focus is on systems and cross-industry
  applications.

. The strategy is to acquire existing, successful companies with
  expertise and products, rather than build the expertise and
  products internally; the key reasons are timeliness and
  greater predictability of success.

. Acquisitions should not dilute per share earnings.

Opportunities

In my judgement, the most exciting growth opportunities in our
business will derive from the increasing focus on and use of
client/server systems. These enhance the effectiveness of multiple
people working together cooperatively and interactively, sharing
information to achieve an organizational goal. Client/Server is, in
fact, a new architecture that, if properly implemented, will define
new ways of using system facilities for business purposes. While
the
LAN emphasis has been on sharing resources (storage, printers,
etc.), the real opportunity is in an integrated, distributed
processing approach to the systems and application functions, with
work performed at multiple levels of a system.

We should expect the system vendors to provide the basic hardware
and operating systems. But, just as with mainframes and midrange
computers today, there will be major opportunities for companies

providing system extensions, system utilities and application
development facilities that permit optimal use of the client/server
system to achieve maximum group productivity in different use
environments. There will even be opportunities to provide
consulting and systems integration services for customers wanting
client/server solutions, which may be of interest to Sterling.

Product Structure (Start of a Grid?)
Assessing the possibilities, it is helpful to think about
application functions at three levels:

   Individual Functions -- Those which relate to the objectives of
      individuals working as part of a group within an organization
      or business.

   Group Facilities -- Those which enhance the effectiveness of
      multiple people working together cooperatively and
      interactively as a team, sharing information and resources.

   Organization/Business Activities -- Those activities which
      directly relate to the end objectives (goals) of an
      organization (business) to which the group belongs. These are
      business applications.

Appendix A shows a listing by these categories of some illustrative
functions, facilities and activities. The client/server approach
can enhance the effectiveness of a group in integrating the work of
individuals to better achieve the organization/business goals. The
specifics will vary by the environment (type, size, management
philosophy) of each organization. The goal should be to provide
client/server systems facilities and applications which can be tuned
to specific needs across a broad spectrum of functions and
industries

Conclusions and Recommendations

Sterling has a special opportunity to recreate its original
corporate success by staking out a leadership position in the
rapidly evolving client/server marketplace. This can be done by
focusing on the client/server platform with the same single-
mindedness that Sterling used in 1981-82 in focusing on the IBM
mainframe platform.

To do this with a high probability of success, Sterling needs to organize its client/server efforts as though it were creating Sterling II, but with the great advantage of building on the experience, skills, positions and financial strength of Sterling I, the present successful organization.

This focus on Sterling II should not in any way interfere with the present groups pursuing their own growth paths (including client/server) and making their own investments and acquisitions.

In the near term, Sterling would form a new group called Client/Server Systems (CSS) which would follow the same initial growth path as Sterling did in 1981-82 by buying, not building. CSS would analyze its market opportunities and potential products/services. It would examine the specific platforms which needed to be supported to provide for systems and application "universality," the equivalent of the IBM mainframe coverage in 1981-82.

Next, or in parallel, CSS would be identifying and evaluating companies already successful in the client/server marketplace, to spot those which would fit the Sterling acquisition model in terms of market position, product capability, management skills and financial results.

Combining the strategic conclusions from the market opportunity analysis and the company acquisition analysis, CSS would then focus on particular acquisition candidates and try to close a sufficient number of deals to provide for a critical mass for Sterling in the CSS arena.

Sterling may integrate these acquisitions in various ways:

- They may report directly within the CSS group.

- They may become part of an existing group.

- They may split development and support from marketing and sales to have CSS work cooperatively with an existing group.

In addition, CSS may set up partnerships or alliances with other companies to more rapidly exploit the new business opportunities opened up by the CSS technology.

Further, CSS may invest in emerging business opportunities (using the EOP model) to provide future technical grist for the CSS mill.

This appears to be a relatively unique point in time where the industry is going through a paradigm shift as occurred in the evolution of the mainframe (IBM), minicomputer (DEC, DG, etc.), midrange (Wang, Prime, IBM) and workstation (SUN, HP/Apollo) markets. While it will probably not be as significant as the introduction of personal computers (Apple, IBM), it will certainly create mammoth software opportunities and a chance to shift some of the momentum away from individual tools and applications to group-oriented and business-oriented systems facilities and application products.
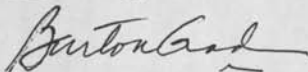
Actions

I suggest that Sterling take the following actions:

- Convene a leadership meeting at Corporate to put together a first cut at a strategic direction for client/server systems.

- Involve selected other key players from the current groups in forming an ad-hoc team to formulate and direct the CSS efforts (a la the Informatics acquisition and Project T).

- Use third party skills to move the process along quickly and to gain access to available knowledge and skills in the CSS area.

I'm personally excited about this ambitious approach and would enjoy being a part of the process.

Sincerely,

Burton Grad

Burton Grad
BG:8870

A Usage-Oriented View of Client/Server Systems

Individual Functions

    word processing
    spreadsheet preparation
    file storage and retrieval
    statistical and mathematical tools
    data input and retrieval
    query techniques
    multi-media tools
    coding tools
    graphics
    imaging
    data compression
    encryption
    indexing techniques
    modeling tools

Group Facilities

    intragroup communications
    workflow management
    program integration and testing
    document preparation
    document storage and retrieval
    data consolidation
    course authoring facilities
    expert systems
    decision support
    multi-media presentation
    transaction processing
    integrated communications

Organization/Business Activities

    lead generation and tracking
    customer support
    training courses
    customer satisfaction survey and analysis
    product quality management
    customer sales and management
    financial management applications
    advertising campaign materials
    sales management
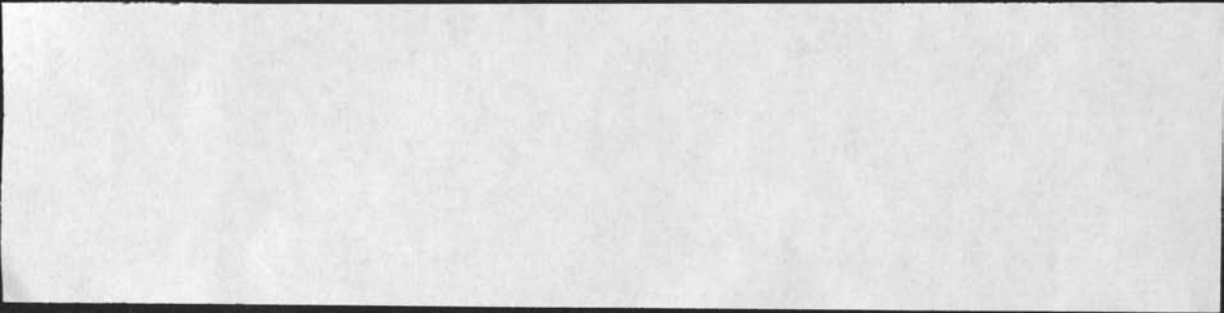
March 9, 1993

Mr. Phil Moore
Sterling Software, Inc.
8080 N. Central Expressway
Dallas, Texas 75206

Dear Phil:

Elizabeth Virgo and I attended the SPA Conference in San Diego on
March 4-6. We were able to attend a large number of panel sessions
and cross-talk workshops. We also went through the display tables
in detail.

The format of the meetings was such that the most visible
participants were often the press and the suppliers of services to
the software publishers. But, between the panel sessions and cross-
talk workshops, you can often spot interesting products and
distribution trends. Note that a large percentage of the attending
companies are small and that at least 50% of the attendees are from
publishers of educational or entertainment software. There were
well over 1000 attendees at this conference, with the number
probably boosted because of the Excellence in Software Awards.

We have enclosed a copy of the preliminary attendee list (the full
list with addresses will come out in 2-3 weeks) and a copy of the
agenda marked to indicate the sessions Elizabeth or I covered. Also
enclosed is the exhibitor list (from the SPA program guide) and the
audio tape ordering form.

Elizabeth and I have written up a few of the sessions which we
thought might be of interest to Sterling. These write-ups are
attached (they are also check-marked on the program guide):

- Borland (BG)
- Taligent (BG)
- Partnering (BG)
- Mobile Computing (BG)
- Distribution Trends (EV)
- Niche Marketing (EV)
- Groupware (EV)

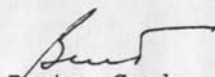**ITAA**

Mr. Phil Moore
March 9, 1993
Page 2

This information has also provided additional input to my
reflections on possible new opportunities for Sterling.

Some general conclusions are noted below:

- Many companies want to focus exclusively on product
  development and want to find marketing, sales and distribution
  partners.

- The SPA participants continue to show naivete regarding good
  business and management practices. They are underfinanced and
  not knowledgeable about common business operations.

- There are significant differences between higher priced/lower
  volume providers of substantial products (application
  development, communications tools, major application suites)
  and the low priced/high volume publishers who often sound just
  like consumer marketers even when they are selling to
  businesses rather than homes.

Please give me a call if you want to discuss any of these items
further.

Sincerely,

Burton Grad
BG:8880

Phillippe Kahn - Borland - 3/4/93

Information management is Borland's theme
Deliver packaged software under current operating systems
DOS migration to Windows
(first significant micro OS changeover since CPM migration
to DOS)
DOS is a slowly decreasing platform in terms of new sales
Windows is experiencing accelerating growth

Market Share under DOS

Spreadsheets:
Quattro Pro -   30%
1-2-3   70%
Word Processors:
WordPerfect   80%
Word   20%

Market Share under Windows

Spreadsheets:
Excel   55%
1-2-3   20%
Quattro Pro   25%
Word Processors:
WordPerfect   45%
Word   55%

Language Usage	DOS	Windows
Borland	50%	50%
MSFT	45%	45%
Other	5%	5%

DataBase	DOS	Windows
Borland	65%	
Foxpro	15%	(still to be determined
Other	20%	per Borland)

1993 Borland goals - Market Share under Windows

Spreadsheets   >35% share
Languages   >50% share
Databases   >50% share

To do this requires:
. Best of Breed products
. Lowest cost producer
. Best value to customers

Borland has used object-oriented development concepts and tools for
new products (20-30% more expensive to develop for VI.O, but should
be much less expensive and faster for subsequent releases).

Client/server architecture

. clients (applications) Quattro Pro, Paradox, C++,
            Pascal (dBase to come)
. IDAVI (middleware)
. Interbase (DB server) or other DB server

Reorganized company - products (no service/support?)
                      sales
                      financial
                      research & development

Reduced headcount by 15% with strong ongoing cost control

Introductory offers - 90 days only

        $ 99.95 for Windows Quattro Pro
        $139.95 for Windows Paradox
        $199.95 - Quattro Pro and Paradox for Windows

Joe Guglielmi - Taligent - 3/4/93

Developing next generation of system software

30M-35M microprocessors shipped each year in the
     $1,500-2,000 price range

Client/server market

Use object technology to improve application development process

Independent source of technology (not in application business)

Avoids platform porting

Dramatic reduction in development cycle for software companies
   and for custom development

Combined Apple Pink, Patriot Partners & IBM Austin Texas
   technology

Staging release of technology during 1994

System composed of frameworks and objects - consistent
   throughout system

Deals with existing environments

To be operable on Intel, Motorola, etc. hardware

Rich functionality including multimedia

Barriers to entry may go way down for application development

Can readily generate industry specific applications from generic
applications

Partnering

Booth Kalmbach - Pioneer Software - 3/4/93

Business model is changing - volume up, prices down

Role of partnering is vital for profitable growth

Pioneer - produces data base access products - OEM partnering has been successful

Issues - use of "outsourcing" model
- do just what you do best
  (if you write a book or write a song, you don't create your own publishing company)
  but business software has been different
- Is software primarily a product business or service business?
- Is the distribution channel the key to establishing pricing points and reducing pricing pressure on developer?
- Cost pressure tends to reduce technical support rather than product development
- Using OEM partners (worldwide)

Forms of Partnering

- OEM's for industry, country
- co-marketing
- cross-couponing
- catalogs
- joint marketing brochures

International distribution can be specially valuable

Mobile Computing

John Zeisler - Pensoft Corporation - 3/4/93

GO

Current market (expected set of initial customers) for use of
pen-based computing

- Engineers	8%
- Sales	24%
- On-site services	23%
- Managers/executives	18%
- Physicians/nurses	9%

Market vision -

public e.mail
fax
computers/modems
video phones
tablet to stenopad to pocket computers
  ($1K-$2K pricing point for 93-94)

Customer Research -

Job specific applications	60%
Communications	45%
"Pencentric"	35%
Desktop	20%

Staying in touch is a major application.

This will become a horizontal market rather than just a set of
vertical markets.

Installed Systems	1990
PC	80M
pager	9M
e.mail	8M
cellular	6M
fax (on computers)	4M

<u>Strategic Mapping (ATLAS)</u>   <u>Stephen Poizner</u>

> Demographic & geographic data
> Alliances with data base suppliers
> New product - local expert, local maps, local
> restaurants/hotels and regional and international guides; maps
> for 100 cities
> Need to deliver local updates -
>   want on-line update capability
> Pricing $99 - city map set $25

Q&A

   Backup and restore is critical
   Where is information -
      access more significant than synchronization
   Telephone circuits <u>or</u> wireless
   Want on-line distribution to customers
   (how to pay for content or system?)
   Is this a phone market with added computer function or a computer
   market with phone functions

   Intuit research - uses of mobile computers
      cash tracking
      credit care spending
      check tracking
      reimbursable business expenses

   PC/MCIA as a form factor
      but is not a consistent format standard at this time
      (fits into slots in Wizards or equivalent), first for memory,
      now for applications or data)

   HP should be a strong partner
   No discussion on voice recognition (still a long way to go)
   What platforms for mobile computing:
      Geoworks, Newton, Go, notebooks, General Magic

SPA MARCH 1993 - TRENDS IN DISTRIBUTION

PC magazine subscribers will buy shrinkwrapped through 3.6 different channels in next
12 months, LANs through 2.4 channels. No item asked about fell below 2.2 channels.

Buyers want choices to shop. Impacted by networking, object oriented programming, mobile
computing etc. Want resellers to get out of the way (must be well informed!). PC Mag
sees server on a network as a channel (users "pick") and that one day people can pick
paginator from one, spellchecker from another etc. Cable operators will deliver SW,
as will long distance carriers.

Charles Humphrey - Infocorp (ex Ziff Davis, now Computer Intelligence)

Interviewed experienced buyers outside large volume retail stores in October 91 (575
sample). Found 82% came presold.

Started new project Nov/Dec 92. Interviewed in multiple stores in 10 geographic areas
in peak hours. Sample split between buyers and shoppers, using Direction for Decisions
of NY for interviewing. Buyers defined as buying 1 or more pc products and shoppers
as those coming specifically to buy 1 or more pc products but did not buy. Out of 10,000
customers, got 1,237 buyers and 931 shoppers.

The outlets were PC superstores (PCS), Office Products (OSS) and Consumer Electronic
(CES).

Percentage who	PCC	OSS	CES	TOTAL
looked at/purchased PC	95	41	32	
buyers	61	13	8	
shoppers planning to but did not	21	13	10	
Median age	40	41	38	
Male/female	80/20	69/31	72/28	
% with a college education	64	63	62	
% using a PC				95
home/personal				80
business at home/work				77
rating myself very knowledgeable about PCs				44
involved in PC product business buying decisions at place of business				68
% giving source of information as				
pubs	66	54	48	
friends/relatives	42	34	40	
co worker	38	30	34	
sales people in store	20	17	14	
business pubs	16	15	13	
other pubs	12	12	14	

NOTE the researchers could not get solid answers on whether people bought the brand of software they planned e.g. people clearly blended 123 with generic spreadsheet so no analysis available.

<u>Lotus Crossmarketing</u>

Growth channels include

> mass merchants
> superstores
> direct
> OEM

New forms of delivery

> License packs
> CD ROM
> Volume licenses
> Pre installed

New technologies

> open networks and standards
> communication products
> mobile computing
> miniaturization

IDC shows superstores moving up but still accounting for less than 10%.

<u>Hugh Burn - Oracle Direct Response Marketing</u>

Direct is a primary channel for them, mainly selling to the larger platform work station/MF - desk top not <u>too</u> important for them - in a business environment. Target is the middle manager in the MIS. Sell seminars and education.

Direct will handle the largest accounts with a conglomerate of products and consulting services, as a solutions provider.

Focusing on working and partnering with other channels: systems integrators, resellers and eventually retail.

<u>Stephen Dukker - CompUSA</u>

Market is really expanding for the first time in years. Past growth has been from the replacement because of obsolescence but now NEW users are coming in because:

. price points of PCs are going down and new multimedia brings new consumer devices. How many PCs in each home?
. corporations are adopting networking as the standard rather than the exception so a PC on every desk like a phone.
. transitional technologies e.g. a PC inside a phone.

Expects double the unit sales in the next 5 years - 30 million units in 1992 will become70+ million in 1997.

There will be superstores but even drugstores will be involved.

Price points will drop for software: simple packages will be $10 to $20; business packages will be $50 to $100; the "classical" industry application packages will be $500 plus.

The obligation to educate will fall on suppliers, not retailers and there will be new sales and support techniques.

Kiosks in stores for viewing, with self running demos, might be an answer but how would you handle 300 people in a store?

Look at the consumer electronic pattern. Nintendo does very well with a video help line for a game costing $50, where people pay for the support on their credit card. The key element is to separate the profit on a product from support in the field.

Suggest using a 900 line to activate and advertising to get bundling out.

There is a company currently marketing a CD ROM for which you pay $995; you can use the 150 applications on it for a specified time/number of times on trial. Then you call a 900 number to get authorization with Visa card. An updated CD ROM is sent each quarter for a further payment of $15. Problem is how to deliver manual. Lotus is now building manual on line. Tricky to deliver electronically though, as very expensive for user.

SPA MARCH 1993 – NICHE MARKETING (TAKING ON THE BIG BOYS)

Toby Corey – Novell (formerly of Digital Research DR DOS)

- Sold 3 million copies DR DOS
- Claimed DR DOS much better than MS DOS

For success you must:

- get clear positioning in market place. Ashton Tate did poor job with DB and Borland a good job
- remove all barriers to buying (eliminate rigidity on site licensing, poor customer service, support, price etc.)
- find competitive weakness and exploit
- leverage market conditions – timing of launches to preempt etc. Lots of product PR – DR had over 200 product articles
- have relentless focus

Don Emery – Refererence Software

Sold out to Word Perfect for $90 million in December 92, with revenue of $14 million and 135 employees, after being founded in 85. Was finding growth very difficult as the price was so low.

Stressed the importance of having a clear longterm view from the start ie an exit strategy. Formed a lot of alliances for growth but this gave a good chance to look round for possible buyers.

Jeremy Jeach –Shapeware Corp

Shapeware $2\frac{1}{2}$ years old, with product for four months.

Looked for market discontinuities:

.platforms
.current players

Business drawing	Presentation	Graphic arts
	↑	↑
	DOS graphics	Windowsgraphics
Visio ⟶		
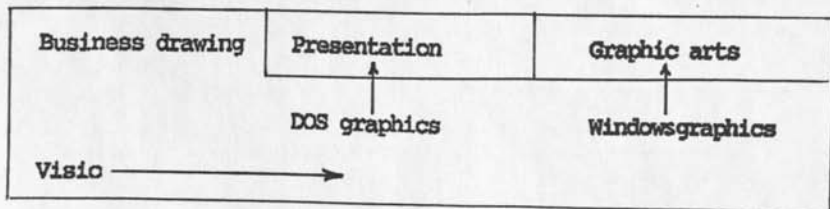
Reckons $1million to build, $2 million to launch.

Robert Kimball - XTree

Figures on one support call for every seven packages sold
Find value, add it FAST.

Figures on one support call for every seven packages sold
Find value, add it FAST.

Ray Kingman - Delta Point

Target higher risks and emerging markets e.g. groupware or pen computing.

Move up the "food chain" - scientific charting, data access tools, drawing primitives etc.

Try to sell value added to "big boy" core products i.e. add ons.

SPA MARCH 1993 - GROUPWARE GROWING UP

Eugene Lee - Beyond, Inc

Mail enabled applications are much more complex from all angles. Thinks it is very dangerous to do "the plumbing" which should be left to network vendors, but work closely with them, even though your own product works better with your own plumbing. You would probably lose out because other applications would not necessarily work on your approach.
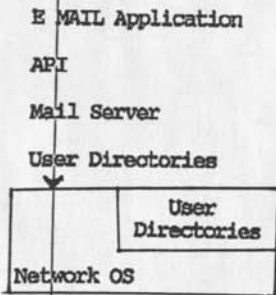

Today, the publisher must be concerned with multiple servers, you can't just be concerned with a single one.
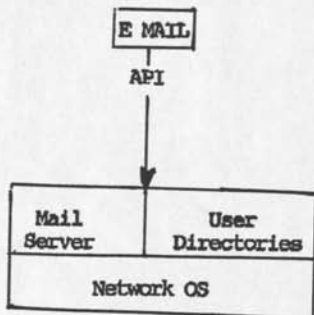
Michael Spies - Reach Software

Groups share a task and/or a server.

Proprietary Model   LAN Integrated Model

Workflow = enterprise software which helps the flow of information and the processing
of business tasks across an enterprise. Workflow market, using the broadest of content
to include items like optical etc, will be $1.3 billion in 1995, according to Forrester
Research. Same research project established that 76% of the Fortune 100 companies
plan to field mail enabled applications in "the future". Forrester also believes that
workflow applications will be built on LANs as only way in which application hooks
can be offered.

Definition of workflow :

- organizes and presents information
- intelligently routes information (eg varying rules for a PO based on $ size)
- automates processing at each stage
- tracks processes across an enterprise (eg where is PO? At what stage?)
- administers application and user rules
- has visual tools to model business processes

His company uses visual tools, with data structures, stages, links etc to quickly
prototype and put up a system for management to look at. They are using a group of
internal consultants to do this for outside sales prospects and not, as originally
planned, for helping their own staff become fully functional It is closing sales for
them in the "we are interested in your product but how would we..." etc mode.

Mail enabled model should be used when

- applications must scale without regard to network architecture
- transactions, not real time
- network band width/costs are important
- processes are administrative or ad hoc
- there are multiple databases or applications

Data based model should be used when

- processes are real time transaction oriented
- system response time is critical

Users gearing up for workflow must
- have integration with or migrate to LAN mail
- standard mail API's
- unified directory services
- have capable desktop processors
- planning for requirements
- pragmatic approach to applications
- platform approach to Windows

Ernie Moore - Portfolio Techniques

Defined a workgroup as

- one or more
- focusing on completing a task or project
- document oriented
- ad hoc or repetitive

- dependent on "good" information ie accurate, accessible
- collaborative in using information
- having information as a critical component

Plenty of problems with office information in a LAN context-

- documents everywhere- local drives, network drives, drawers, cabinets etc
- information is
    - unstructured, filed by application or creator, not task/project
    - unreliable- out of date, multiple copies all around etc
    - out of context as usually multiple related
    - incomplete as faxed or paper copies not available

It does not work because

- mainframe/minis v LANS - latter often limited to sharing files or printing
- significant investment in PCs, applications and networks
- people work as individuals
- collaborative use of information is difficult
- primary limitation is software

Can't be solved by putting in a single operating system as there have to be many

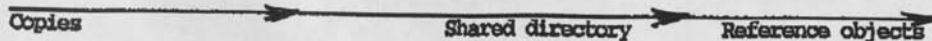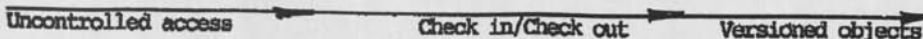| Applications |
| --- |
| Middleware |
| OS |
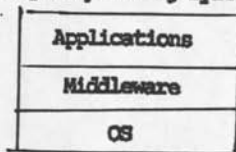
He then discussed

Information
Representation

Collaborative Computing
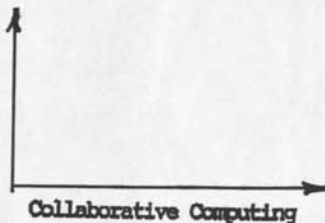
He defined   COLLABORATIVE COMPUTING as

Sharing Model

Copies ————————————▶   Shared directory ——▶ Reference objects

Access Model

Uncontrolled access ———————▶ Check in/Check out ——▶ Versioned objects

Distribution Model

E mode ————————————▶   Workflow ——▶   Object oriented
                                                     Workflow with rules
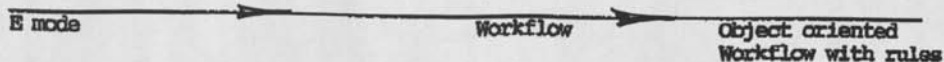
He defined   INFORMATION REPRESENTATION   as

Data Type

Text ——————————————————▶   Multimedia ——————▶

Data Organization

Flat files ——————▶   DB tables Objects ——▶ Complex Objects ——▶

Storage Model

Files in directory ——▶   Objects on database server Distributed Objects ——▶
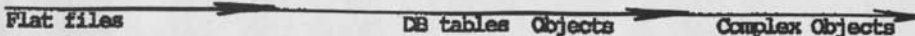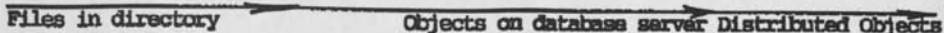
Sees technology versus solutions
End user accessibility vital
Productive activity does not always equate to productive work. Unproductive people
don't make productive groups. Cultural and political obstacles exist.

CLIENT / SERVER WORLD

CONFERENCE & EXPOSITION
JUNE 14-16, 1993 • BOSTON, MA

5 FOCUSED CONFERENCES

Managing the Client/Server Environment Conference
Building Client/Server Applications Conference
Client/Server Databases Conference
**Middleware and Database Connectivity
Conference – ALL NEW**
Systems Integration Conference

Sponsored by:

DCI
Digital Consulting, Inc.

BONUS
Attend
DATABASE WORLD
See Pages 26-33
for Details

CLIENT/SERVER WORLD & DATABASE WORLD
Conference & Exposition
June 14-16 • Boston, MA
Discover the Best of All Worlds at the Industry's Leading Event

Dear Colleague:

We cordially invite you to join over 20,000 IS and database professionals at the year's most important database, client/server and developer industry event. CLIENT/SERVER WORLD and DATABASE WORLD presents developers and users of database and client/server technology with the largest Conference and Exposition ever offered on DBMS and tools for mainframes, minis, PCs, servers, and more. This tested and proven event not only addresses the nuts and bolts of the database market, but probes the industry's cutting edge technological advancements.

Provocative Questions . . . Proven Answers

The power-packed conference program offers over 100 technical and managerial sessions exploring the latest advances in database and client/server related application development issues, including:

- Can Network Based Environments Replace Minicomputers for Database Applications?
- Can Relational Systems Evolve With Inheritance and Encapsulation to Support Objects?
- What about the Combination Systems that Support Both Relational and Object Database Types?
- Who Will Win the Microsoft, Borland, Computer Associates battle as Xbase becomes a new "Corporate Standard?"

CLIENT/SERVER WORLD and DATABASE WORLD bring together the most outstanding congregation of consultants, authors and researchers available anywhere. For example, a few of the experts in Boston will be:

- Philippe Kahn
- Adam Green
- Chris Date
- Mike Stonebraker
- Tom Furey
- Charles Wang
- Adele Goldberg
- Jeff Tash
- Richard Finkelstein
- John Dunkle
- Joel Appelbaum
- Larry DeBoever
- Chris Gane
- John Zachman
- Gerry Cohen

Running concurrent to the conference is an Exposition featuring over 500 exhibits showcasing what's new and what's hot on the database and client/server forefronts. A number of floor pavilions will demonstrate interconnectivity of applications using technologies such as ODBC, DRDA and EDA/SQL. Glance through this brochure and you are sure to find the crucial topics that you need to explore.

I look forward to seeing you in Boston at this extraordinary event!

Geo Schussel
Dr. George Schussel
DATABASE WORLD and CLIENT/SERVER WORLD
Event Chairman

Chairman Address

Dr. George Schussel
DATABASE WORLD and CLIENT/SERVER WORLD
Event Chairman

Understanding The New Database Technologies

Monday • 9:00 a.m.

Dr. George Schussel opens The DATABASE WORLD and CLIENT/SERVER WORLD Conference with a fast-paced, broad overview of the topics facing application developers in the software industry today. His talk gives you an insider's view of what's happening with relational, distributed, client/server, and object-oriented DBMS. His research visits to leading suppliers, such as IBM, Sybase and Information Builders, are recounted. Using his laptop computer to drive the presentation (which will be shown on a 30' screen—like having a computer in your own hands), Schussel demonstrates the latest in database application building and connectivity approaches.

• What's Happening to the Relational Model   • Client/Server Approaches To Database Computing

• The Role Of Objects In Application Development   • Windows Application Development

• The Intersection Of Relational And Objects

Schussel is the best known consultant in the database industry. His lectures have spanned a 22 year database career and have been attended by over 40,000. His seminars and conferences are offered before audiences in North America, Japan, Germany, Spain, Holland, France and other international locations. He is also the Editor of *Schussel's Downsizing Journal,* a newsletter which is currently distributed on 3 continents.

Plenary Sessions

Philippe Kahn
Chairman,
President & CEO
Borland
International

The Present and Future of Database Management

Monday • 11:00 a.m.

Today's database environment is extraordinarily complex. There are LAN databases with end-users querying the data on an ad hoc basis, power users building applications, full blown mission critical applications up and running, as well as client/server applications solving problems for a quarter of the investment initially made on large systems. More than ever, the usability of applications is becoming a key criteria. Philippe picks up all the pieces in this new puzzle and proposes ways in which both power and ease-of-use can be delivered today and tomorrow.

Charles Wang
Chairman and CEO
Computer
Associates
International, Inc.

A CEO Perspective On Investing In Technology

Tuesday • 8:30 a.m.

The latest and hottest topic in the information systems world is the importance of aligning IS with business goals. It's the number one item on the CIO "to do" list. Too often, however, the proposed answers reflect the technologist's perspective and miss the mark of the business problem. In this address, the CEO of the industry's leading independent software vendor discusses "Intelligent Evolution", outlining a practical strategy for moving forward with information technology by aiming the solutions squarely at the business objective.

CLIENT/SERVER WORLD OVERVIEW
Two World Events—9 Conferences!

Mix and match the CLIENT/SERVER WORLD Conferences and
DATABASE WORLD Conferences that best suit your educational needs.

Building Client/Server Applications Conference

How do you pick the best software development products for building mission-critical client/server applications? That's the focus of Building Client/Server Applications Conference. Software productivity tools such as Windows 4GL's, application generators, and CASE products are all evolving to incorporate important client/server technologies including graphical user interfaces, object-oriented programming languages, expert system facilities, networked database access, distributed transaction management, and remote procedure calls. This conference will provide insight and recommendations from industry experts who will help you to position today's rich set of product offerings.   **pgs. 10-11**

Managing the Client/Server Environment Conference

The three key enabling technologies, GUIs, LANs, and SQL have all achieved a level of maturity that makes it now possible to build mission-critical systems using client/server computing. Compared to mainframes, client/server promises significant cost saving, plus overall improvements in terms of performance and system responsiveness. Moreover, the development of client/server applications conforms with the movement in the business community towards restructuring, downsizing, and re-engineering business processes. This conference focuses on the critical information you need to manage the transition to a client/server environment.   **pgs. 12-13**

Client/Server Databases Conference

The Client/Server Databases Conference presents the newest technologies and analyzes the latest developments relating to server database computing. Attendees benefit from presentations covering such issues as TPS speeds, extended SQL functionality, utilizing GUI application development tools, building OLTP systems on micro and mini computers, and database server and application software evaluation and selection. This information is essential for those who are developing or considering the deployment of new applications using the client/server database model. Also included as part of the Conference highlights are the Netware Loadable Module (NLM) Spotlight, and the Super Server Showcase.   **pgs. 14-17**

Middleware & Database Connectivity Conference

Networking and distributed, heterogeneous database access are essential technologies for many of the benefits of client/server computing. But making client/server a reality across the enterprise network is a difficult task. You'll get a new perspective on the client/server strategies of major network players and explore such issues as making client/server work in a LAN environment, in a mainframe application world and with GUI Applications. You'll also learn how to handle network management — one of the thorniest concerns today — in a client/server environment and find out what some leading-edge users are doing with client/server networks.   **pgs. 18-19**

Systems Integration Conference

The confluence of technologies — client/server applications, super servers, fault tolerant databases, network management, high-speed wide area network and reliability have allowed almost all new applications to be able to be implemented on the network platform. Networks can require the integration of products from more than 20 different vendors. In this era, open system standards have displaced single vendors for market leadership. Systems integration is now a critical issue whether performed solely by in-house staffs, partnered between internal and external staffs or turned over project by project to external resources. This conference provides significant insight into how others are solving the systems integration problem.   **pgs. 24-25**

DATABASE WORLD OVERVIEW

Two World Events—9 Conferences!

Mix and match the CLIENT/SERVER WORLD Conferences and DATABASE WORLD Conferences that best suit your educational needs.

Database Technologies Conference

For many organizations, database is now an indispensable computing technology, sufficiently well-established to support mission-critical applications. Its evolution, however, continues at a dizzying pace. Current challenges center on both technical, as well as organizational issues. Realizing that database offers unique opportunities as well as organizational challenges, a key concern is determining which practices actually work . . . and which don't. As experience grows, new insights are being rapidly gained. The Database Technologies Conference presents leading industry experts to address these and other important issues in the field.　　　　　　　　　　　　　　　　　　pgs. 26-27

Object-Oriented Technologies Conference

Object-Oriented technology is no longer a promise but a proven solution to many of the classic problems of information management. The speakers in this conference explain how object DBMSs differ from previous generations of database technologies. They will demonstrate through both benchmarks and real-world examples how object DBMSs can offer faster, simpler access to the complex data involved in engineering, manufacturing, and other technical applications. In addition, you will learn how to integrate object technology with your existing relational database.　　pgs. 28-29

PC Databases & Xbase Conference

Turning data into information quickly and easily was one of the major reasons the personal computer caught on so fast. Database management software is a key component of this knowledge revolution. Starting with dBASE II, PC DBMS software has matured to include powerful products that are easy to use, yet include complete programming languages. If you are facing the dilemma of which products are available, how they work or which one is right for your problem, this is the conference for you. If you are a programmer or developer, you'll learn tricks and techniques that will make your software run faster and look sharper. If you are a user or instructor, you'll see how to get more out of software you already own. This conference will also highlight the Xbase arena with representation from Borland, Computer Associates and Microsoft.　　　　　　　　　pgs. 30-31

DB2/Information Warehouse Conference

For many organizations worldwide, DB2 is now considered the key database management system for critical enterprise data. DB2's technical evolution continues to respond to customer performance, productivity, security, and other requirements. Increasingly, effective use of data and information has become a complex problem. In order to deliver information to the right person at the right time in the right format, a framework is required. The IBM Information Warehouse framework is evolving to support management of and access to, multiple database management systems, and files often distributed across the enterprise as well as interfaces, tools and facilities. Presentations analyze and explore DB2's abilities to exploit and leverage enterprise data in support of this new framework.

pgs. 32-33

Keynote
Presentations

Special Keynote Presentation
Chris J. Date
Independent Consultant

Explorations in Relationland
Monday, 5:00 p.m.

There is a widespread notion that relational technology is fast becoming passé. The truth is, however, that the relational model is much deeper than most people realize, and is still directly (indeed, fundamentally) relevant, even in these days of object-oriented systems and so forth. The speaker briefly examines some aspects of the model that are not as widely appreciated as they should be.

- Closure and its Implications
- New Operators
- Nullology
- Missing Information
- Domains, Data Types, and Objects
- Relation-Valued Attributes

Data Warehousing and Decision Support in Client/Server Environments
Monday • 5:00 p.m.

Gerry Cohen
President &
Founder
Information
Builders, Inc.

The success of the data warehouse model has driven an explosion of approaches to making corporate data widely available. Hardware and software vendors are creating rich, flexible models to support the mixed architectures of the '90s to satisfy the decision support, information analysis, and GUI-based systems of the new enterprise. As we move to new processing platforms and open systems standards, understanding the complexities of multi-vendor networks and data architectures become paramount. The presentation provides a framework for understanding the issues which must be faced, and how to architect a solution that manages and optimizes new technologies for maximum business advantage. Mr. Cohen addresses the following issues:

- Achieving Transparent Data Access in Heterogeneous Environments
- Integrating Multiple Standards: Networks, Operating Systems; Data Architectures
- Effective Data Staging

The Software Paradigm of the 1990s: Data Bases, Networks and Development Tools
Monday • 5:00 p.m.

William Zachmann
President
Canopus Research

The paradigmatic applications for personal computers in the 1980s were spread sheets and word processors. The 1990s, however, will be dominated by the need to build "industrial strength" application systems on a foundation of microcomputers, networks and servers. Mr. Zachmann examines this paradigm shift in software requirements and what it means both for IS professionals and for end users in business and government organizations. Further, he looks beyond the '90s toward the type of software that will characterize the early days of the Third Millennium.

- DBMS, Network and Development Tools Key to "Industrial Strength" Application Systems
- Can You Count on Your Software Vendors?
- Foundations of Rock? Or of Sand?
- The Battle of the Standards
- Likely Winners and Losers

Objects, Management and Success
Tuesday • 9:30 a.m.

Adele Goldberg
Chairman and
Co-Founder
ParcPlace Systems,
Inc.

There are ways to be successful with object-oriented technology. There are ways to reap benefits broadly advertised for more productive development teams creating higher quality software. But this involves careful commitment to both the organizational and methodical issues raised by the technology. And it requires thoughtful planning on how objects will be reused and how change should propagate. This talk, based on a broad set of case studies conducted over the last two years, outlines a prescription for successful adoption of objects.

The Future Of Xbase
Tuesday • 9:30 a.m.

Adam Green
President
Adam Green
Seminars, Inc.

In a candid analysis of the Xbase market, Adam Green shares his vision of the changes facing Xbase developers in the coming years. Some of the issues covered include:

- Will There Ever be an Xbase Standard?
- How Will the Transition to Windows Change the Role Of Xbase?
- When Will Data Dictionaries be Added to Xbase Products?
- What is the Role of Object-Oriented Programming in the Growth of the Xbase Language?

Client/Server: Key To Competing in the 21st Century

Tuesday • 9:30 a.m.

Rapid advances and convergence of computer systems, telecommunications and users' computer literacy are transforming the scale, scope and immediacy of information processing at the point of action. This is profoundly impacting the way industrial, commercial, academic and government enterprises organize both themselves and their use of information through the Client/Server computing model. Specific topics include:

- Trends Towards Downsizing Applications
- Advantages of the Client/Server Model
- Benefits to Client/Server

Tom Furey
General Manager of
Client/Server
Computing
IBM

Gaining Control of Your Enterprise With Client/Server

Tuesday • 4:30 p.m.

This session shows you how client/server computing is being used today to re-engineer business processes into flexible, adaptable business systems that support your enterprise's overall business strategy.

- The Benefits of the Client/Server Model
- Supporting Your Efforts to Re-Engineer
- Building an Infrastructure

Ronald H. Rolland
Partner
Andersen
Consulting

Client/Server Implementations: The Real Story

Tuesday • 4:30 p.m.

Client/Server "fever" is spreading rapidly throughout the landscape of corporate information technology. There are a few success stories to boast about, but many problems remain. Has your department become a miniature computer center instead of building business applications? Do we have tools for problem determination, software distribution, backup and recovery, configuration, performance and capacity management? Can you really save money by using Client/Server technology?

- 10 Rules for Client/Server Success
- Implementing Client/Server Systems
- Networking & Internetworking
- Performance Issues
- When Should You and When Shouldn't You Implement Client/Server

Shaku Atre
President
Atre, Inc.

The Impact Of Client-Server On Corporate I/S Architectures: The Next 5 Years

Tuesday • 4:30 p.m.

Increasingly, medium and large companies are redefining their technical I/S architectures to meet the critical challenges they are confronting. Client-Server is an important element of these new architectures and its role will substantially widen and evolve over the next 5 years. Mr. DeBoever draws on his consulting experiences in assisting Fortune 1000 companies redefine their technical architectures. He identifies the role of the client-server model in these architectures, and its dependencies and inter-relationships with the other components. His topics include:

- Redefining the I/S Technical Architecture of the Fortune 1000
- The Role of Client-Server in These New Architectures
- Client-Server vs. Other Architectures
- Client-Server & 'Event-Driven' Applications
- Client-Server & 'Work-Flow' Applications
- Client-Server & Desktop Integration
- 'Virtual' Client-Server Architectures
- Killer Mistakes

Larry R. DeBoever
Managing Director
Tucker/DeBoever
Technologies, Inc.

Information Systems Architecture: Implications and Directions

Wednesday • 8:30 a.m.

The plethora of methods and tools motivated the original development of the "Framework for Information Systems Architecture." The initial intent was to establish a neutral context against which any method or tool could be mapped and positioned and therefore understood in terms of its strengths and weaknesses, its biases and its implicit trade-offs. However, the major value of the Framework lies in helping define the emerging role of I/S and to understand its management challenges as enterprises make transitions into the uncertain and dramatically changing environment of the Information Age. This presentation summarizes the basic concepts of the Framework and then explores some of its implications with regard to methods and tools and their impact on the enterprise of the future.

- Role of I/S in the Information Age Enterprise
- Evolution of I/S Methods and Tools
- TQM in the I/S Environment
- Assemble-to-Order Systems Strategies

John A. Zachman
Author
Zachman
International

Keynote
Presentations

DBMS: Problems & Non Problems of the 90's

Wednesday • 8:30 a.m.

The good news is that several of the crucial problems facing managers of mission-critical DBMS applications will disappear during the 1990's. These include performance problems on transaction processing workloads and media failures. The bad news is that a new set of problems is waiting in the wings to plague the unsuspecting. These include issues with tertiary memory and distributed data bases. This talk forecasts the current issues that will become "non-problems" and what will replace them during the 1990's.

Michael Stonebraker
EECS Department
University of
California, Berkeley

- Useful to System Managers Needing to Plan for the Future
- Valuable to Technology Forecasters and Anyone Impacted by Long-Term DBMS Trends
- Relevant to Anyone Making Strategic Decisions About Company Directions in the DBMS Area

Accelerating the Growth of the Unix Market

Wednesday • 8:30 a.m.

With the recent acquisition of USL by Novell, there is a new opportunity to unify and accelerate the growth of the UNIX market. Increasingly, customers around the world are using UNIX as an advanced network-oriented applications environment that is highly complementary to distributed network services of the NetWare environment.

Joel A Appelbaum
President and CEO
Univel

With the resources of these successful companies, Univel is uniquely positioned to meet customers' needs for open systems, enterprise-wide computing by providing advanced state-of-the-art system software backed by worldwide distribution channels.

- UnixWare NetWare-ready Unix Operating System
- UNIX as the Proven Applications Environment
- The NetWare Environment Provides System Services that are Evolving to Support Fully Distributed Computing

Distributed System Design Through Enterprise Modeling

Wednesday • 3:00 p.m.

Distributed Cooperative systems require that different types of application software, running on different hardware platforms under different operating systems/DBMSs, at different geographical locations, should fit seamlessly together. The design of such systems not only poses formidable technical problems but also involves business decisions and tradeoffs, on issues such as security, user personnel skills and time, cost-risk penalties for data corruption, and so on. This session takes the view that these design issues must be worked out in the context of a dialog with the business users and shows how a 2-level enterprise object/flow model can help with the dialog and then feed into the use of expert system for optimizing the design.

Chris Gane
President & CEO
Rapid System
Development Inc.

- Enterprise Object/Flow Models
- The Allocation Problem: Geo/Tech Zones
- Strategic Design Tradeoffs
- Database, Procedure Unit, and Network Design Issues
- Expert-System Support For Forward Engineering

Successful Migration to Client/Server Computing

Wednesday • 3:00 p.m.

Mr. Papermaster presents case studies from client/server, network-based systems with which BSG has been involved. For example, he discusses one company's strategy which called for downsizing appropriate applications to client/server, network-based platforms, providing a new customer interface, simplifying allocations, and eliminating duplicate functionality in the process. Also discussed are the benefits from downsizing corporate, mission-critical applications such as:

Steven G. Papermaster
CEO & Chairman
BSG Consulting, Inc.

- Creating Systems That Satisfy the Business Needs and are Responsive to Business Changes
- Providing the Ability to do System Planning Concurrent with Process Re-Engineering
- Systems That are Accountable to Corporate Management
- Cost-Benefit Analysis that Supports Short-Term Payback of the New Systems

The Already Changing Technology and Market Landscape of Client/Server Computing

Wednesday • 3:00 p.m.

As PC-based client-serving computing becomes a daily reality in the IS organization, planning for how graphical tools, database servers and middleware are already changing technology becomes increasingly important. Mr. Gupta addresses the critical issues in this evolving marketplace by highlighting the key technical and market changes corporate IS organizations should plan for over the next decade. Highlights include:

Umang Gupta
President & CEO
Gupta Corporation

- The Increasing Importance of Middleware
- The Emergence of Interoperability Standards
- "Point Suppliers" vs Full Systems Solutions Companies
- The Importance of Front-End Tools for Graphical C/S Computing

INDUSTRY CO-SPONSORS

Blyth Software is the leading supplier of client-based, cross-platform application development software for enterprise computing. Blyth is the first and only company to offer a single solution for building and deploying powerful, easy-to-use, applications that run cross-platform (Windows and Mac) with connectivity to a full range of SQL and Non-SQL server databases. The company's flagship product, OMNIS is an open, extensible, interoperable, cross-platform development environment.

Cognos provides a complete industrial strength toolset for developing client/server business applications. These include PowerHouse 4GL and PowerHouse Windows for developing and deploying client/server applications on the industry's most popular and powerful servers networked with Microsoft Windows clients. Cognos also offers a complete solution for client/server information access and analysis with Impromptu, a Windows-based SQL-query tool that provides users with access to relational DBMS'.

Computer Associates International, Inc. offers a complete line of Information Management Solutions including: DATABASE MANAGEMENT SOLUTIONS with CA-IDMS and CA-DATACOM as well as a complete line of tools and utilities for IMS and DB2, APPLICATION DEVELOPMENT SOLUTIONS with CASE, application generator, and life cycle management tools. INFORMATION WAREHOUSE SOLUTIONS with SQL connectivity, data distribution, query, reporting and decision support. CLIENT-SERVER SOLUTIONS with SQL Multiplatform, distributed solutions across mainframe, PC, Unix and VAX.

Digital is a leader in the implementation of standards and the development of open computing technology. We have developed a single computing environment that enables customers to integrate VAX VMS and RISC UNIX systems with personal computers, parallel processors, and Digital's advanced 64-bit architecture. Digital can provide its customers with systems, applications, and services they need to solve business problems or gain a competitive advantage. We support and service over 10,000 hardware and software products built by more than 1,000 other manufacturers.

EcoSystems Software, Inc. provides the industry's first integrated systems management software for client/server UNIX environments. The products, EcoSPHERE, and EcoTOOLS, enable user management, system administrators, and DBAs to monitor and manage all the resources in their computing environment—computers, networks, and relational database applications—from a centralized console.

The complete Gupta SQL System consists of database servers (Gupta SQLBase), end-user and application development tools (Gupta SQLWindows and Gupta Quest) and SQL connectivity software (Gupta SQLNetwork) for connecting Gupta tools to a host of back ends including IBM DB2, Oracle, Sybase/Microsoft SQL Server, OS/2 Database Manager, Informix, AS/400, HP Allbase and TurboImage, Cincom Supra Server and Netware SQL.

IBM has taken several steps in the evolution of the Information Warehouse framework, introduced in 1991, which provides an integrated set of products and facilities for accessing and managing diverse data on IBM and non-IBM systems in a common, easy-to-use manner. It is comprised of three major elements; Enterprise Data, Data Delivery, and Applications and Decision Support. Recent announcements have continued this evolution with specific architecture, and advances in the management of data in complex environments.

Information Builders

Information Builders suite of products includes FOCUS, a complete application development and decision-support environment consisting of the world's leading Fourth Generation Language (4GL) and Enterprise Data Access/SQL (EDA/SQL), a family of client/server products that provide SQL-based access to all data, relational and non-relational. Information Builders is pleased to be Co-Sponsor of the EDA/SQL Pavilion.

INFORMIX Informix Software, Inc., your Database Application Technology partner, is ready with world-class server and tools solutions that keep your global enterprise operating at its most cost effective and productive level possible. Informix, once again, presents a showcase of its products, services, and partners to help you achieve your Informix System's goals.

Ingres Ingres is the leader in relational database and application development technology for rightsizing solutions for business needs. Ingres offerings include the Intelligent Database, INGRES/ Windows4GL —the premier fourth generation language for professional developers of graphical client/server applications, and open connectivity products.

POPKIN SOFTWARE & SYSTEMS INCORPORATED Popkin Software & Systems, Inc. is the developer and supplier of Systems Architect, "The CASE Price/Performance Leader." Founded in 1986, Popkin Software and Systems' mission is to provide powerful and affordable CASE solutions for the real world. Today, more than 13,000 software practitioners at 3,000 organizations worldwide use Popkin Software's CASE tools to build robust and well-designed Client/Server applications.

Powersoft
THE POWER IS YOURS

Powersoft develops and markets PowerBuilder, an object-oriented, Windows-based application development environment for client/server. PowerBuilder permits developers to easily and quickly build sophisticated, graphical applications with access to database information stored on networked servers. PowerBuilder is designed for teams of application software developers working on large-scale projects. Focused at MIS, it permits them to satisfy corporate pressure to "downsize" information systems from Mainframe systems to more economic PC-based networks.

TEXAS INSTRUMENTS TI's Information Engineering Facility™ (IEF) CASE product consists of planning, analysis, design and construction toolsets utilizing a GUI interface and a host Encyclopedia that automates the full system development life cycle, including 100% code and data base generation. From a single business system specification, the IEF product generates executable code for IBM-MVS, OS/2 EE and/or VM/SQL/DS; DEC Rdb, Oracle; UNIX/Oracle and Tandem environments.

9

Building Client/Server Applications Conference

DBMS Technical Co-Sponsor

DBMS *is the largest database magazine, with over 58,000 readers. Every month editors cover the exciting, new area of Client/Server Computing...an emerging, $38 billion dollar marketplace. DBMS provides IS and professional database developers with the strategic and technical information they need to manage these large information systems. The goal is to help readers increase corporate productivity through client/server technology.*

Chairman Address

Jeffrey B. Tash
President
Database Decisions

Application Development Tools For The Client/Server World

Monday • 3:00 p.m.

Client/server systems are trivial—clients issue requests and servers respond to requests. Unfortunately, building client/server applications is not so simple. Developers are confronted with enormous complexity. They must navigate through an intricate maze of difficult decisions selecting from a wide variety of alternative choices. This presentation describes Database Decisions' Client/Server Industry Road Map which guides application developers through the evaluation of client/server tools and technologies.

- Using Database Decisions' Client/Server Industry Road Map

— Clients	— NOSs	— RDBMs
— GUIs	— Servers	— Networks

- Understanding Middleware Technological Choices
- Differentiating and Positioning Client/Server Software Tools
- Evaluating Leading Application Development Products

— PowerBuilder	— Open Interface	— DataEase	—Choreographer
— SQL Window	— Easel	— Ellipse	—Plus More ...

VIAA Picks Up Where EIS Left Off

Tuesday • 11:00 a.m.

David Friend
Chairman
Pilot Software

Visual Information Access and Analysis does for the rest of the organization what EIS did for executives. Using a combination of object-oriented GUI front ends, computational and connectivity middleware, new data server technology, and tight integration with corporate groupware, low-cost VIAA solutions are finally delivering on the promise of improved information flow for middle management.

- What is VIAA and How is it Different From EIS?
- What is Computational Middleware?
- Understand the "Three Pillars of VIAA"
- See Integration of VIAA, Notes, and Microsoft Mail
- Why SQL Doesn't Always Work For VIAA

Professional Application Development Tools: Cracking the CODE for Good Client/Server Citizenship

Tuesday • 3:00 p.m.

David Litwack
President
Powersoft
Corporation

Client/server technology has evolved as a non-proprietary computing platform comprised of interchangeable technology components—the Client/Server Open Development Environment, or CODE. Key to CODE success is the concept of "good client/server citizenship," or availability of professional development tools that reflect user demand for an open environment for custom application development. Among the considerations:

- Interoperability. Does it Provide Support for a Variety of DBMS, Networks, and Other Servers?
- Scalability: Can it Accommodate a Variety of Applications?
- Adaptability: Will it Provide Support for New Technologies?

Post-4GL Application Development in the Client/Server Environment

Tuesday • 3:00 p.m.

Jonathan Hashkes
Vice President,
Research &
Development
Magic Software
Enterprises

As client/server architecture plays an increasingly important role within the context of open environments and multiple data sources, application development technology must adapt accordingly. Post-4GL application development must facilitate the linking of massive and dispersed amounts of data.
• Flexible Access to Heterogeneous Database Files in the Corporation
• Real-Time Application Portability and Interoperability

Client/Server Power Tools

Wednesday • 9:30 a.m.

Don DePalma
Senior Analyst
Softwater Strategy
Research

When it comes to client/server, the Fortune 1,000 is no longer asking, "Should we?" but "How should we develop applications for client/server?" This session looks at client/server "power tools"—high-end tools for professional developers creating industrial strength applications. Mr. DePalma:
• Identifies Key Vendors and Their Offerings
• Analyzes the Dynamics of the Client/Server Tools Market

CASE Toolkits for Client/Server Development

Wednesday • 10:30 a.m.

Aaron Zornes
Vice President
and Director
Application
Development
Strategies
META Group

Client/server computing is both a framework for downsizing and the integration platform for heterogeneous environments—promising savings while providing a path into open systems. Users are finding that tools are scarce, standards are inadequate, and the required SI efforts considerable.
• Overcoming Obstacles
• Reconciling CASE/4GLs with Frontware and Emerging Distributed APIs (RPCs, OMG ORB, etc.)

Integration of CASE with Client/Server Computing

Wednesday • 1:00 p.m.

Pieter Mimno
President
Technology Insight,
Inc.

A new class of windows-based development tools greatly simplifies the generation of graphic client/server applications within an open systems environment. These tools enable users to paint graphic client applications that integrate fully with relational database servers. This session compares leading client/server development tools.
• Products That Support Screen Capture and Emulation
• Products That Support Graphic Client/Server Applications

CASE Enablement of Cooperative Processing

Wednesday • 1:00 p.m.

Johnny Long
Director, Sales
& Marketing
Texas Instruments

Every several years the data processing industry turns its attention to cooperative processing usually centering on computer applications running across multiple machines within a network. This presentation traces the events that have taken place within the cooperative processing and CASE initiative and details the I-CASE shell technique.
• Issues Surrounding Cooperative Processing
• Automated Methodology

11

Building Mission-Critical Applications for Flexible Client/Server Deployment

Wednesday • 2:00 p.m.

Chip Ziering
Vice President
and Founder
Progress Software
Corporation

Tools that help build applications that are independent of the deployment architecture will speed the implementation of client/server computing by providing robust applications that leverage existing technology investments and offer a seamless migration to client/server computing.
• Insulating the Developer From Platform-Specific APIs
• Distributed Heterogeneous Database Access Among NLM, DOS, OS/2, UNIX, and AS/400 Servers

Related Educational Sessions

Managing the Client/Server Environment Conference

SOFTWARE magazine™   Technical Co-Sponsor

Software Magazine serves the corporate software market. This includes software development and software acquisition for enterprise-wide computing in all major industries: manufacturing, banking, finance, wholesale/retail trade, government, health care and education.

Chairperson's Address

Judith Hurwitz
President, Hurwitz Consulting Group
Editor, *Client/Server Tool Watch*

Trends in Client/Server Operating Systems: How The Emerging Operating Systems Are Positioned To Help Users Move To Client/Server

Monday • 3:00 p.m.

This session will focus on the operating system options available to IT organizations to host their client/server environments. The operating systems discussed during this session will include Unix, OS/2, and NT. Hurwitz makes predictions as to where each operating system environment is headed and the long term prospects for each. In addition, this session focuses on some of the most important issues surrounding client/server operating systems such as:

- Scalability
- Support for Heterogeneous Computing
- Multitasking
- Network Support
- Availability of Tools

What's Holding Up Downsizing?

Dennis McEvoy
President and
Chief Executive
Officer
Cooperative
Solutions, Inc.

Tuesday • 11:00 a.m.

Client/server computing is growing in popularity as companies seek to decentralize their computing resources and put information technology out into the local office, branch or subsidiary where the most fierce competition is taking place. During this presentation, McEvoy shares the insights he has gained during his twenty year career on such topics as:

- Why do organizations want to move their core business applications from the mainframe and the minicomputer to the local area network and client/server platforms?
- What are examples of this new class of application? How are organizations developing these applications?
- What can we expect over the next five years as more and more companies move their core business applications to client/server platforms?

The Development of Platform Independent Applications for Client/Server Environments (UNIX, OS/2, DOS and MVS)

Steven Rabin
Director,
Development
Technologies
American Software

Tuesday • 3:00 p.m.

A new generation of methodologies and integrated tools provide the means for developers to create and maintain client server applications that operate on a variety of platforms and architectures. These applications may be newly developed or downsized/re-engineered from a larger host environment.

UNIX, Windows and OS/2 each bring specific advantages to the business application solution table. A detailed review of how to maximize the code developed, in the face of constantly changing architectures/platforms, is explored.

- Isolation and Process Splitting Coding Techniques
- SQL Database Access
- Quality Considerations
- Architectural Considerations
- Tools and a Development Methodology

Client/Server Development on a Repository Platform

Graham Thompson
Chief Operating
Officer
R&O Inc.

Wednesday • 9:30 a.m.

This presentation stresses how the importance of a repository driven philosophy to application development is further accentuated for building client/server solutions. Mr. Thompson addresses the complexities that client/server development brings to the already complicated task of building quality systems. Examined are requirements of a repository in both functionality and portability together with the need for the repository itself to be client/server architectured.

- The Need for Repository Driven Client/Server Development
- The Requirements of a Repository to Support Client/Server Development
- The Pitfall of Ignoring the Disciplines of a Repository Platform
- The Necessary Steps to Initiate a Pragmatic Repository Implementation

Giving End Users Access To Corporate Data

Ron Zambonini
President
Cognos

Wednesday • 10:30 a.m.

With the advent of powerful client/server query, reporting and EIS tools, MIS people face a new set of problems in how best to develop, organize and manage the delivery of information to the end user's desktop. Mr. Zambonini examines the issues and lays out a road map for successful implementation.

- Why it's Important to Stage the Data
- Transforming Data into Information
- Dealing with Legacy Data
- Comparison of Available Tools

Transaction Servers: Moving Beyond the Database Server Model

John Canestraro
Vice President
Product Strategy
Easel

Wednesday • 1:00 p.m.

Building client/server applications must provide for distributing the logic and processing of an application over a network of computers as well as for distributing data. This has given rise to the transaction server model of client/server computing, which allows for application function to be distributed between client and server. This session focuses on how the transaction server model differs from the database server model and how the transaction server model can be implemented.

- Models of Client/Server Computing
- Transaction Server Benefits
- Implementing Transaction Server Applications
- Real-World Examples

Integrating Client/Server Applications with Current Legacy Environments

Raj Bhargava
Consulting Services
Manager
Hewlett Packard
Professional
Services Division

Wednesday • 2:00 p.m.

Integrating new client/server applications with current legacy environments is a challenge that must be addressed today. New technologies and tools continually become available to build these applications, predominately in client/server architectures. We need to apply new skills and methods to use these new technologies and tools effectively. This session discusses the key issues in implementing client/server, for example:

- Selecting the Client/Architecture to Implement
- Relevant Technologies and Tools to Apply
- Appropriate Rapid Application Development Methodologies
- Integrating Current Legacy Environments

13

Related Educational Sessions

► Sunday, 9:00 a.m.-5:00 p.m.—One Day Seminar
Downsizing/Re-engineering Applications with Client/Server Computing
Dr. George Schussel pg. 35

► Tuesday, 9:30 a.m. — Keynote Address
Client/Server: Key to Computing in the 21st Century
Tom Furey pg. 7

► Tuesday, 4:30 p.m. — Keynote Address
The Impact of Client/Server on Corporate I/S Architectures: The Next 5 years
Larry DeBoever pg. 7

► Wednesday, 3:00 p.m. — Keynote Address
Successful Migration to Client/Server Computing
Steven G. Papermaster pg. 8

Client/Server Databases Conference

NEWS 3X/400 Technical Co-Sponsor

NEWS 3X/400 is the leading journal for professional users of IBM Systems 3X and AS/400. It features independent product reviews and midrange technology articles for both management and technical experts.

Chairman Address

Richard Finkelstein
President
Performance Computing, Inc.

Client/Server: What's Hot and What's Not
Monday • 3:00 p.m.

1993 promises to be an explosive year for client/server technology. New operating systems, new front-end tools, and new database servers give customers more choices than ever before—but also more chances to make mistakes. This session investigates some of the latest developments in client/server and takes a critical look at the pluses and minuses of the latest vendor offerings.

• Is Managing Client/Server an Oxymoron?

• A Look at the Operating System Wars: Windows/Win NT, Netware, UnixWare, OS/2, Unix

• The Best of Front-End Tools: Access, Paradox For Windows

• Do You Really Want to Distribute Your Databases?

API Madness: Connecting Clients to Servers
Tuesday • 11:00 a.m.

Dave McGoveran
President
Alternative Technologies

A proprietary API can increase the costs of moving data from one vendor's product to another to the point of locking a user into a single DBMS. On the other hand, a least common denominator solution can prevent access to the unique features of a DBMS. This presentation addresses the question of whether the introduction of standard APIs promises a solution or just makes matters worse. This presentation is a must for all technical managers.

• What is a Client/Server API?
• Proprietary APIs: Custom APIs, ORACLE Call Interface, Sybase DB-Library. GLUE, DB2 Embedded SQL, etc.
• Standard APIs: ANSI Embedded SQL, ANSI SQL Module Language, SAG SQL/CLI, ODBC, ODAPI, IDAPI, etc.
• What Makes Them Fail?

KISS (Keep Its Solution Simple)
Tuesday • 3:00 p.m.

Ed Reynolds
President
Client Server Solutions, Inc.

Development of Client/Server systems is different from the way host based systems have been developed. Mr. Reynolds addresses the differences and how to make the first Client/Server system a success. Mr. Reynolds offers guidance on application selection; design analysis; database modeling; network, hardware and software selection; staffing and training project personnel; application development, implementation and maintenance.

• Application Selection Guidelines
• System Analysis and Database Design Techniques
• Network, Hardware, and Software Selection Options
• Staffing and Training Considerations
• Development, Implementation and Maintenance Strategies

Client/Server Databases Conference

Database Re-Engineering: Moving Legacy Databases to the Server

James Davey
Consultant
DCI

Wednesday • 9:30 a.m.

When legacy systems are replaced by new client/server implementations, the old database model is seldom useful in the development of the new server database. The old database contains a great deal of application knowledge that can be mined and used in the development of a new data model. Database re-engineering is a technique that can be used to mine the old database. Database re-engineering can be done at three levels of complexity; using table or record definitions; using attributes and dependency, and analyzing the database content.

- Analysis of Current Databases and Files
- Developing the Data Model
- Verification of the Data Model

A Road Map to Re-Engineering Corporate Computing—The Tools That Fuel the Transition

Nancy Colwell
Director of Commercial Tools and Technologies
Sun Microsystems Computer Corporation

Wednesday • 10:30 a.m.

To better manage and distribute critical information, companies are re-engineering their data management systems with client-server computing solutions. Making the transition from traditional host-based systems to the distributed client-server architecture means evaluating business processes and re-modeling information technology to support a more effective business model.

- Port Database Applications to Server, with Legacy Systems Serving as Information "Warehouses"
- Leave Database on Host Systems, Initiate Remote Access

Related Educational Sessions

Designing Distributed Client/Server Systems

Beth Gold-Bernstein
Director of Client/Server Group
Boston Computer Society

Wednesday • 1:00 p.m.

The migration to client/server architecture, open systems, and distributed databases presents unique challenges. System development life cycles (SDLC) of mainframe systems do not adequately address the new challenges. This presentation will cover:

- The Challenges of Client/Server Systems
- Designing Distributed Systems
- Data Modeling Techniques
- Managing Distributed Systems

Using Microsoft Access In The Client-Server Environment

Dave Kaplan
Group Product Manager
Microsoft ACCESS

Wednesday • 2:00 p.m.

Microsoft Access was designed to be both a local and a connected database. This talk examines how Access can be used as a client front-end to server databases, via the Open Database Connectivity (ODBC), API, and outlines the tools available in Access to end users and developers for implementing client-server applications.

- Access Use of ODBC
- Transactions Against Server Databases
- Access Data Transparency

A Distributed Client/Distributed Server Database Architecture for the Open Systems Environment of the 1990's

Marco Emrich
Director of System Software Products & Architecture
Cincom Systems, Inc.

Wednesday • 2:00 p.m.

Most corporations have taken advantage of the availability of computer technology and decreasing hardware costs to decentralize (downsize, rightsize) the data processing activities, resulting in dispersed data across a multitude of software and hardware platforms.

- Portability, Interoperability, Distributability
- Compliance to Standards: ANSI/ISO SQL2, SQL ACCESS Group API/FAP, X/OPEN, etc.
- How to Treat Enterprise-Wide Data as a Single Unified Resource
- How to Permit Sharing Data Across Multi-Vendor Software and Hardware

Client/Server Databases Conference

Technical Co-Sponsor

DMR Data Management Review

Data Management Review is the most widely read publication in the data base community. Covering mainframe data bases including DB2, IMS, IBMS, SQL/DS, Datacom as well as related topics in the client/server and application development arenas, Data Management Review focuses on the real issues and concerns of enterprising database management personnel.

Netware Loadable Module (NLM) Spotlight

From a database point of view one of the most exciting things that has recently happened is the emergence of Novell's NetWare as a host for DBMS servers. Gupta, Oracle, Netware SQL, Informix, XDB, Progress, and Sybase servers are all available now as NLMs. NLM databases are server DBMS that are implemented as extensions to NetWare and therefore enjoy the full functionality of the operating system. Sessions at CLIENT/SERVER WORLD will focus on the technical and user aspects of NLM databases. Consultants that are both pro and con for this technology will present their points of view. And on the Expo floor several vendors will show off the performance of the NLM DBMS products.

Joel A Appelbaum
President and CEO
Univel

Accelerating the Growth of the Unix Market
Wednesday • 8:30 a.m.

With the recent acquisition of USL by Novell, there is a new opportunity to unify and accelerate the growth of the UNIX market. With the resources of these successful companies, Univel is uniquely positioned to meet customers' needs for open systems, enterprise-wide computing by providing advanced state-of-the-art system software backed by worldwide distribution channels.

- UnixWare NetWare-ready Unix Operating System
- The NetWare Environment Provides System Services that are Evolving to Support Fully Distributed Computing

Chip Ziering
Vice President and Founder
Progress Software Corporation

Building Mission-Critical Applications for Flexible Client/Server Deployment
Wednesday • 2:00 p.m.

Tools that help build applications that are independent of the deployment architecture will speed the implementation of client/server computing by providing robust applications that leverage existing technology investments and offer a seamless migration to client/server computing.

- Insulating the Developer From Platform-Specific APIs
- Distributed Heterogeneous Database Access Among NLM, DOS, OS/2, UNIX, and AS/400 Servers

Karen Watterson
Consultant
Wattterson Database Group
Moderator

Database NLMs: Configuration and Tuning — Panel Discussion
Wednesday • 2:00 p.m.

Panelists will make short presentations describing typical configurations of production systems using their NLM, providing audience members with concrete examples like the maximum number of users for various application environments. Dwight Davis, Novell's Director of Engineering, will be on hand to explain technical aspects of developing and using database NLMs.

Panelists:

Pam Allen, Product Manager, Gupta
Paul Wolmering, Senior Sales Engineer, Informix
Dr. Derick Wright, Manager of Strategic Support, Ingres
Dwight Davis, Director of Engineering, Novell
Leith Anderson, Sr. Director of Marketing, Oracle
Gary Davis, Product Manager, Progress
Peter Thawley, Technical Specialist, Sybase, Inc.

John Matze
President
John Matze, Inc.

Introducing NLM Programming
Thursday, 8:30 a.m.—12:00 p.m.

This discussion starts with an overview of the Netware NLM architecture, development environments and compiling tools. Also, focus on developing Client/Server NLM applications, Novell's Interprocessor Communication Architectures and a final discussion of Netware's NLM services.

Please Note: Special registration required for this session — see registration page for details.

Middleware & Database Connectivity Conference

NETWORK WORLD
The Newsweekly of User Networking Strategies

Technical Co-Sponsor

Network World, *established in 1986, is the national newspaper for users of multi-vendor enterprise networks. The industry's fastest growing network publication, Network World provides strategic information about how to manage the enterprise network for competitive advantage. Network World has a circulation of 150,000 network executives and is published by Network World, Inc., a wholly owned subsidiary of International Data Group (IDG).*

Chairman Address

John Dunkle
President
WorkGroup Technologies, Inc.

Distributed Applications: Making The Connection
Monday • 3:00 p.m.

Major organizations and smaller businesses alike are wrestling with a similar problem: how to maximize technology to achieve a strategic advantage over their competitors? Typically, the cornerstone to this new computing strategy are personal computer and server based applications, which are rapidly undergoing technological transformations which deliver new capabilities to the end-user. However, even though there is wide-spread excitement over distributed computing, the selection of the applications and their core enabling technologies is one of the most fearsome tasks MIS professionals have to tackle. Mr. Dunkle's session focuses on the current state of distributed applications, inter-operability and Middleware, as well as the need for these technologies as viewed within the personal computer and LAN environments. Specific topics include:

- Technological Trends
- LAN Based Cooperative Processing
- Distributed Databases
- Database Middleware
- Strategies in the 90's

Trends in LAN/WAN Technology & Their Impact On Client/Server Applications
Tuesday • 11:00 a.m.

Larry R. DeBoever
Managing Director
Tucker/DeBoever
Technologies, Inc.

There are enormous changes underway in the technologies of local area networks (LAN) and wide area networks (WAN) which will greatly impact client/server computing. Mr. DeBoever, recognized as one of the leading experts in systems integration and network computing, identifies the key trends in networking and related technologies, and their potential impact on the features, functions, design, and underlying architecture of many client/server applications. Mr. DeBoever analyzes these changes from the perspective of the user, the developer, and the corporation.

- The 'Business' Drivers For Connectivity
- LAN Advancements

Database Connectivity: Today and Tomorrow
Tuesday • 3:00 p.m.

Hal Spitz
Senior Group
Manager ISS
Sybase

Explore the ways to leverage existing hardware and software by using current connectivity technology. Further, explore how future trends in connectivity standards and technology will impact new application development. This presentation covers such topics as:

- What are the Current Database Connectivity Choices?
- What are the Real Interoperability Issues?
- What are the Technology Issues For Enterprise-wide Application Deployment?
- How an Effective Database Connectivity Strategy is Essential to "Right Sizing"

OPEN TO CONFERENCE-AT-A-GLANCE ►

Middleware & Database Connectivity Conference

Betsy Burton
Sr. Product Manager
IDAPT

Interoperability in Middleware

Successful client/server solutions must incorporate diverse hardware and software components into an integrated environment. To achieve this, a new layer of intelligent system software is emerging, called middleware, which supports existing standards and connects a variety of clients and servers on various platforms.
• Middleware Objectives
• Examples of Middleware, including IDAPI
• Benefits for Users

Mark P. Roy
CEO
NetLinks
Technology, Inc.

Developing Reusable Client/Server Applications Using an ORB
Wednesday • 9:30 a.m.

The Object Request Broker (ORB) brings client/server technology and object technology together to provide a powerful framework for distributed computing. Use of an ORB enables development of distributed, reusable services. These services can take full advantage of existing, hardware, software, and applications in a heterogeneous network.
• What is an ORB?
• Use of an ORB to Build Reusable Client/Server Applications
• ORB Products Now on the Market and When to Use Them

Mike Goulde
Senior Consultant
Editor in Chief,
Open Information Systems
Patricia Seybold Group

A Fresh Look at Portability and Interoperability
Wednesday • 10:30 a.m.

Once the holy grail, portability is receding as a concern for application developers. The need for interoperability, both at the data level and application level is rapidly transcending the requirement for portability. Achieving interoperability is difficult, however, as formal standards are severely lacking. Users need effective ways to integrate data from multiple sources into their mix of packaged and internally developed applications.
• What are the Requirements for Database Interoperability?
• Is there Any Way to Develop an Application Once and Be Assured of Interoperability?
• Will X/Open's XPG4 Help Achieve Interoperability?

Jim Louderback
Director
PC Week Labs

The Ups and Downs of Middleware
Wednesday • 1:00 p.m.

Everyone is talking about Middleware. ODBC, IDAPI, Glue, EDA/SQL, DRDA and others are just some of this new product that everyone just has to have. This session presents an objective overview of Middleware and the products competing for your software dollar. Mr. Louderback analyzes both the category and the specific products that purport to be middleware, and talks about whether you really need Middleware at all. Specific points include:
• Category Definition
• Middleware Benefits/Drawbacks
• Strengths/Weaknesses of Competing Products

Ron Haupert
Principal Marketing
Systems Engineer &
Database Specialist
Amdahl Corporation

Applications and Database Integration Using Federated Database Architectures
Wednesday • 2:00 p.m.

A federated database architecture is a collection of independent database management systems which are united into loosely or tightly coupled federations in order to share and exchange information. Federated database management systems allow enterprise-wide schema definitions for multi-DBMS applications. This presentation will discuss application and database integration when using a federated database architecture approach for addressing:
• The Evolution of Application and Database Interaction
• The Affect of Active Databases on Data Integration and Application Programming
• Advantages of Building Federated Database Architectures Using Active Databases and Federated Database Management System Techniques

19

Related Educational Sessions

► Monday, 5:00 p.m. — Keynote Address
The Software Paradigm of the 1990s: Data Bases, Networks and Development Tools   William Zachmann pg. 7

► Wednesday, 3:00 p.m. — Keynote Address
Distributed System Design Through Enterprise Modeling   Chris Gane pg. 8

ONE-DAY SEMINARS

Sunday, 9:00 a.m.—5:00 p.m.

■ **Downsizing/Re-Engineering Applications with Client/Server** — *George Schussel pg. 35*

■ **The Relational Model** — *Chris Date pg. 35*

Friday, 9:00 a.m.—5:00 p.m.

■ **Object Oriented Programming with dBASE for Windows** — *Adam Green pg. 35*

MANAGEMENT/TECHNICAL SEMINARS

Thursday, 8:30 a.m.—12:00 p.m.

■ **Introducing NLM Programming** — *John Matze pg. 34*

■ **Comparison and Evaluation of Client/Server Tools** — *Pieter Mimno pg. 34*

■ **Object Oriented Database Systems** — *Stan Zdonik pg. 34*

Thursday, 1:30 p.m.—5:00 p.m.

■ **The Best CASE Tools for Data Modeling, Database Re-Engineering and Database Design** — *Jim Davey pg. 34*

■ **Computer Aided Database Design: Knowledge-Based/Iterative Development** — *Ken Orr pg. 34*

■ **Synergy Tools for I/S Teams** — *Robert Ruotolo pg. 34*

SPECIAL SESSIONS

Wednesday, 9:00 a.m.—12:30 p.m.

■ **Experiences in Client/Server Computing**
A Half-Day Forum Presented by the Client-Server Round Table — *pg. 37*

Wednesday, 1:00—1:50 p.m.

■ **Xbase Panel: "The State of Xbase"** — *Moderated by John Hawkins pg. 25*

Wednesday, 2:00—2:50 p.m.

■ **NLM Panel: "Database NLMs: Configuration and Tuning"** — *Moderated by Karen Watterson pg. 16*

Audio Cassettes

Professional audio cassette recordings of DATABASE WORLD & CLIENT/SERVER WORLD will be available on-site as well as shortly after the event. If you are attending the conference you may purchase the cassettes in advance for $550, this represents a 10% discount on top of the low on-site conference special price. If you are unable to attend the conference, but don't want to miss any valuable information you may order the cassettes for $995. (Price includes the three day conference program along with an accompanying conference manual.*) To place your order please refer to the registration form on page 38. Simply fill in the appropriate information and mail or fax it to DCI.

*some conference sessions will not be available for taping or inclusion in the proceedings manual.

DATABASE WORLD Conference At A Glance

MONDAY, JUNE 14

Time				
9:00-10:50	**Event Chairman Address:** Understanding The New Database Technologies *George Schussel* pg. 3			
11:00-12:00	**Plenary Session:** The Present and Future of Database Management *Philippe Kahn* pg. 3			
12:00-6:00	DATABASE WORLD EXPOSITION — Visit the EXPO — FREE Lunch Available			
Conference	**Database Technologies**	**Object-Oriented Technologies**	**PC Databases & Xbase**	**DB2/Information Warehouse**
2:00-2:50	**Real World Product Presentations** pg. 36			
3:00-3:50	**Conference Chair Address** Returning the "I Word" to Database Methodologies R. Ross pg. 26	**Conference Chair Address** Directions in Distributed Object-Oriented Databases S. Zdonik pg. 28	**Conference Chair Address** Exploiting Windows: Application Design Strategies M. Schnapp pg. 30	**Conference Chair Address** Designing High Availability DB2 Applications and Systems R. Yevich pg. 32
5:00-6:00	**KEYNOTES:** Data Warehousing and Decision Support in Client/Server Environments G. Cohen pg. 6 Explorations In Relationland C. Date pg. 6 The Software Paradigm of the 1990's: Data Bases, Network and Development Tools W. Zachmann pg. 6			
6:00-7:00	**Special Event:** Comedy Club — Don Gavin pg. 37			

TUESDAY, JUNE 15

Time				
8:30-9:30	**Plenary Session:** A CEO Perspective On Investing In Technology *Charles Wang* pg. 3			
9:30-10:30	**KEYNOTES:** Objects, Management and Success A. Goldberg pg. 6 Client/Server: Key to Competing in the 21st Century T. Furey pg. 7 The Future of Xbase A. Green pg. 6			
10:30-4:30	DATABASE WORLD EXPOSITION — Visit the EXPO — FREE Lunch Available (12:30-1:30 p.m.)			
11:00-11:50	Downsizing IS Applications H. Fosdick pg. 26	Moving Objects into Relational Systems M. Loomis pg. 28	How to Move Up to Client/Server B. Linn pg. 30	Making the C/S Vision a Reality P. Hessinger pg. 32 Distributed Data and Client/Serving Midware for Information Warehousing J. Fulton pg. 32
2:00-2:50	**Real World Product Presentations** pg. 36			
3:00-3:50	Repositories and Client/Server: Do They Fit? P. Bernstein pg. 26	Conducting Accelerated Analysis Projects Using Object-Oriented Methods J. Huchzermeier pg. 28	PC's and Client/Server: The Right Solution for Rightsizing? M. Irwin pg. 30	Characteristics of the Data Warehouse C. Kelly pg. 33
4:00-4:30	A Taste of Boston Reception — On the Expo Floor			
4:30-5:30	**KEYNOTES:** Gaining Control of Your Enterprise with Client/Server R. Rolland pg. 7 Client/Server Implementations: The Real Story S. Atre pg. 7 The Impact of Client/Server on Corporate I/S Architectures L. DeBoever pg. 7			

WEDNESDAY, JUNE 16

Time				
8:30-9:20	**KEYNOTES:** Information Systems Architecture: Implications and Directions J. Zachman pg. 7 DBMS: Problems & Non Problems of the 90's M. Stonebraker pg. 8 Accelerating the Growth of the Unix Market J. Appelbaum pg. 8			
9:30-10:20	Legacy DBMS Systems: What To Do With Your Achilles Heel M. Stonebraker pg. 27	Applying an Object-Oriented Approach to the Integration of Distributed Applications M. Renzullo pg. 29	Building Database Applications for MS-DOS and Windows T. Neilson pg. 31	The Challenge of Large DB2 Databases in the Information Warehouse J. Bischoff pg. 33
10:30-11:20	Who Manages the Distribution of What? Databases, Distribution and the Relational Imperative F. Pascal pg. 27	What is the Role of Data Administration in an Object-Oriented World? L. English pg. 29	Windows and DBMS: The Present and Future C. Prague pg. 31	Information Warehouses & Application Networking: Getting at Data Across the Enterprise K. Orr pg. 33
1:00-1:50	Riding the Zachman Framework into the World of Data Sharing B. Von Halle pg. 27	Benchmarking Object Databases for Large-Scale Deployment L. Anderson pg. 29	The Object Paradigm: Changing PC Databases Development L. English pg. 31	DB2 in Mainframe Client/Server Environments R. Anderson pg. 33
2:00-2:50	SQL 92 or The Shape of Things To Come J. Celko pg. 27	Extending Relational with Object-Oriented Capabilities S. Gala pg. 29	Million Dollar Rightsizing. Using Xbase? D. Grimsted pg. 31	The Change Management Administration Paradigm in DB2 J. Olsen pg. 33
3:00-4:00	**KEYNOTES:** Successful Migration to Client/Server Computing S. Papermaster pg. 8 Distributed System Design Through Enterprise Modeling C. Gane pg. 8 The Already Changing Technology and Market Landscape of Client/Server Computing U. Gupta pg. 8			
4:00-4:30	**Wrap-Up With Jim Davey:** CASE Tools for Data Modeling, Database Re-Engineering and Database Design			

CLIENT/SERVER WORLD Conference At A Glance

MONDAY, JUNE 14

Time					
9:00-10:50	**Event Chairman Address:** Understanding The New Database Technologies *George Schussel* pg. 3				
11:00-12:00	**Plenary Session:** The Present and Future of Database Management *Philippe Kahn* pg. 3				
12:00-6:00	**DATABASE WORLD EXPOSITION — Visit the EXPO — FREE Lunch Available**				

Conference	**Building C/S Applications**	**Managing the C/S Environment**	**Client/Server Databases**	**Middleware/ Database Connectivity**	**Systems Integration**
2:00-2:50	**Real World Product Presentations** pg. 36				
3:00-3:50	**Conference Chair Address** Application Development Tools For the Client/Server World *J. Tash* pg. 10	**Conference Chair Address** Trends in C/S OS: How the Emerging OS are Positioned to Help Users Move to C/S *J. Hurwitz* pg. 12	**Conference Chair Address** C/S — What's Hot and What's Not *R. Finkelstein* pg. 14	**Conference Chair Address** Distributed Applications: Making the Connection *J. Dunkle* pg. 18	**Conference Chair Address** Strategic Networks for the Nineties . . . and Beyond *P. Haige* pg. 24
5:00-6:00	**KEYNOTES:** Data Warehousing and Decision Support in Client/Server Environments *G. Cohen* pg. 6 Explorations In Relationland *C. Date* pg. 6 The Software Paradigm of the 1990's: Data Bases, Network and Development Tools *W. Zachmann* pg. 6				
6:00-7:00	**Special Event:** Comedy Club — *Don Gavin* pg. 37				

TUESDAY, JUNE 15

Time					
8:30-9:30	**Plenary Session:** A CEO Perspective On Investing In Technology *Charles Wang* pg. 3				
9:30-10:30	**KEYNOTES:** Objects, Management and Success *A. Goldberg* pg. 6 Client/Server: Key to Competing in the 21st Century *T. Furey* pg. 7 The Future of Xbase *A. Green* pg. 6				
10:30-4:30	**DATABASE WORLD EXPOSITION — Visit the EXPO — FREE Lunch Available (12:30-1:30 p.m.)**				
11:00-11:50	VIAA Picks Up Where EIS Left Off *D. Friend* pg. 10	What's Holding Up Downsizing? *D. McEvoy* pg. 12	API Madness: Connecting Clients to Servers *D. McGoveran* pg. 14	Trends In LAN/WAN Technology & Their Impact On Client/Server Applications *L. DeBoever* pg. 18	The Networked Org.: Improved Information Flow with Large C/S Databases *D. Remnitz* pg. 24
2:00-2:50	**Real World Product Presentations** pg. 36				
3:00-3:50	Professional Appl. Devel. Tools: Cracking the CODE for Good C/S Citizenship *D. Litwack* pg. 10 Post-4GL Appl. Dev. in the C/S Environment *J. Hashkes* pg. 11	The Development of Platform Independent Applications for C/S Environment *S. Rabin* pg. 12	KISS (Keep Its Solutions Simple) *E. Reynolds* pg. 14	Database Connectivity: Today & Tomorrow *H. Spitz* pg. 18	The Impact of 32-Bit Operating Systems on C/S *A. Moss* pg. 24
4:00-4:30	**A Taste of Boston Reception — On the Expo Floor**				
4:30-5:30	**KEYNOTES:** Gaining Control of Your Enterprise with Client/Server *R. Rolland* pg. 7 Client/Server Implementations: The Real Story *S. Atre* pg. 7 The Impact of Client/Server on Corporate I/S Architectures *L. DeBoever* pg. 7				

WEDNESDAY, JUNE 16

Time					
8:30-9:20	**KEYNOTES:** Information Systems Architecture: Implications and Directions *J. Zachman* pg. 7 Accelerating the Growth of the Unix Market *J. Appelbaum* pg. 8 DBMS: Problems & Non Problems of the 90's *M. Stonebraker* pg. 8				
9:30-10:20	Client/Server Power Tools *D. DePalma* pg. 11	C/S Development on a Repository Platform *G. Thompson* pg. 13	Database Re-Engineering: Moving Legacy Databases to the Server *J. Davey* pg. 15	Developing Reusable C/S Apps. Using an ORB *M. Roy* pg. 19 Interoperability in Middleware *B. Burton* pg. 19	The Evolution of Network Infrastructure and Its Impact on C/S Computing *B. Clark* pg. 25
10:30-11:20	CASE - Toolkits for C/S Development *A. Zornes* pg. 11	Giving End Users Access to Corporate Data *R. Zambonini* pg. 13	A Roadmap to Re-Engineering Corp. Computing *N. Colwell* pg. 15	A Fresh Look at Portability and Interoperability *M. Goulde* pg. 19	Chaos in the Workplace *R. Ruotolo* pg. 25
1:00-1:50	Integration of CASE with C/S Computing *P. Mimno* pg. 11 CASE Enablement of Cooperative Processing *J. Long* pg. 11	Transaction Servers: Beyond the Database Server Model *J. Canestraro* pg. 13	Designing Distributed C/S Systems *B. Gold-Bernstein* pg. 15	The Ups & Downs of Middleware *J. Louderback* pg. 19	
2:00-2:50	Building Mission-Critical Apps. for Flexible C/S Deployment *C. Ziering* pg. 11	Integrating C/S Apps. with Current Legacy Environments *R. Bhargava* pg. 13	Using Microsoft Access in the C/S Environment *D. Kaplan* pg. 15 A Dist. C/S Database Arch. for the OS Environment of the 1990's *M. Emrich* pg. 15	Applications and Database Integration Using Federated Database Architectures *R. Haupert* pg. 19	
3:00-4:00	**KEYNOTES:** Successful Migration to Client/Server Computing *S. Papermaster* pg. 8 Distributed System Design Through Enterprise Modeling *C. Gane* pg. 8 The Already Changing Technology and Market Landscape of Client/Server Computing *U. Gupta* pg. 8				
4:00-4:30	**Wrap-Up With Jim Davey:** CASE Tools for Data Modeling, Database Re-Engineering and Database Design				

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Thanks

The above publications act as technical co-sponsors for each conference. They provide invaluable assistance in bringing you the most up-to-date and in-depth information. The result is the most comprehensive coverage of today's issues found only at DATABASE WORLD & CLIENT/ SERVER WORLD. For this, we at DCI would like to thank each of them for their help and support.

Systems Integration Conference

Computer ResellerNews **Technical Co-Sponsor**

Computer Reseller News and VAR Business are two of the three publications that comprise CMP Publications, Inc.'s Channel Group. Computer Reseller News is a weekly newspaper that offers breaking news and comprehensive analysis on VARs, system integrators and dealers, as well as the latest high-end hardware, software and networking technology. VAR Business is a monthly magazine that covers trends within the VAR, integrator and developer communities and offers information to aid resellers in the business and product decision-making process. Computer Retail Week, which is tailored for mass merchants and the retail market, rounds out the Channel Group.

Chairman Address

Peter J. Haigh
Executive Director, Strategic Markets & Technologies
JWP Network & Integration Services

Strategic Networks for The Nineties . . . and Beyond

Monday • 3:00 p.m.

High speed, hyper-bandwidth, multi-media communication isn't coming to communications networks, it's already here in leading-edge businesses and institutions! Mr. Haigh examines why this is so and projects when most organizations will need these kinds of "Strategic Nets for the Nineties... and Beyond"... as they re-engineer and right-size their business. Futurist and technologist views as well as examples from the pioneering work of early implementors are cited to underline the significance of networking and the critical importance of investing strategically. Technologies covered include:

- Fiberoptics in Infrastructure and Equipment: The Current Status of CDDI, 100Mbps Ethernet and Level 5 UTP
- FDDI Versus ATM
- ISDN, Frame Relay and SMDS and Other Strategic Choices

David M. Remnitz
Director of Systems Architecture
Evernet Systems, Inc.

The Networked Organization: Improved Information Flow With Large Client/Server Databases

Tuesday • 11:00 a.m.

In an attempt to increase the availability of corporate data, many of today's large corporations are moving what was typically mainframe-based data onto powerful midframe and superserver platforms. This discussion focuses on the business benefits and issues related to moving extremely large databases (greater than 20GB) from the mainframe to the midframe environments.

- Moving Large Scale Decision Support Applications From the Mainframe to Midframe and Superserver Platforms
- Implications of this Move
- Changes in Tomorrow's Decision Support and Massive Database Environments

Andrew Moss
Regional Practice Manager
Microsoft Consulting Services

The Impact of 32-Bit Operating Systems on Client/Server

Tuesday • 3:00 p.m.

Among the many changes which will impact client/server architecture is the emergence of 32-bit operating systems. The increased power and functionality of these operating systems will significantly enhance both application development and performance in client/server environments. This presentation provides important guidance for organizations which have hesitated with full-scale deployment, as well as those which are already involved, about how they can take advantage of "new generation" client/server technology.

- The Evolution of 32-Bit PC Operating Systems
- Implications of This New Technology for Client/Server
- Anticipated Challenges in 32-Bit OS Deployment
- 32-Bit OS Implications for Network Operating Systems
- 32-Bit OS Impact on Application Development Strategies

24

Systems Integration Conference

The Evolution of Network Infrastructure and Its Impact on Client/Server Computing

Tuesday • 3:00 p.m.

Brice Clark
Strategic Planning
Manager
Hewlett-Packard

Through the end of the decade and beyond, advances in both LAN and WAN performance will transform our network infrastructure and enable whole new classes of applications. Vast amounts of desktop computing power at ever lower prices will make distributed client/server the norm by the end of the decade. This session looks at the impact that advances in network infrastructure will have on computing, examines some key hardware technology trends and explores some of the options that will transform information technology in this decade. Key subjects include:

- New Advances in LAN Technology Relating to Utilization of Multimedia Technology
- Transformation of Campus Backbone Networks and WANs into Integrated Voice, Data and Video Hiways
- Choices for Servers, Clients and Infrastructure that will Influence C/S Computing
- How the Age of Pervasive Computing Will Impact Users and Vendors

Chaos In The Workplace: Sustaining Employee Productivity and Morale

Wednesday • 10:30 a.m.

Robert Ruotolo
President
Performance
Management
Consulting

The I/S workplace will never be the same: restructuring, downsizing, deployment, etc.! Learn how to manage your future and others' with a "new paradigm" for these chaotic times! This talk features breakthroughs in performance and career management, recruiting and staffing, as well as how to change relationships with employees to be competitive.

- Chaotic Times in the World of I/S
- A New Way to View Employee/Organization Relationship
- New Alternatives to Sustain Productivity, Morale, Flexibility

Related Educational Sessions

▶ Tuesday, 8:30 a.m.—Plenary Session
A CEO Perspective on Investing in Technology   Charles Wang, pg. 3

▶ Tuesday, 4:30 p.m.—Keynote Address
The Impact of Client/Server on Corporate I/S Architectures: The Next 5 Years
Larry R. DeBoever, pg. 7

▶ Thursday, 1:30 p.m.-5:00 p.m.
Management/Technical Seminar
Synergy Tools for I/S Teams
Robert Ruotolo, pg. 34

25

SPECIAL INDUSTRY PANEL

The State of Xbase

Wednesday • 1:00 p.m.

Moderator: John Hawkins, Editor in Chief of the leading database magazines, including Data Based Advisor, FoxPro Advisor, Clipper Advisor and Access Advisor

Panelists: Representatives from the major Xbase companies, including Borland, Computer Associates and Microsoft

Xbase products are the subject of heated activity. Three of the largest software companies have each purchased an Xbase product line. An ANSI committee has been formed to create a standard for the Xbase programming language. Books on Xbase products dominate the database sections of bookstores. Xbase is by far the most widely used category of database manager and application development tool on the PC. In this panel, the key Xbase companies discuss and debate the issues, with the goal of helping you take the best advantage of Xbase now and in the future.

- Why Is Xbase So Hot, What's Happening Now, and Where Are We Going From Here?
- What is the Role of Windows in Xbase?
- How can Client/Server Xbase be Implemented?
- Is Xbase a Solution for Non-PC Platforms?
- What Should Xbase Users Plan for Over the Next 18 Months?

Database Technologies Conference

Chairman Address

Ronald G. Ross
Editor, *Data Base Newsletter*
Ronald G. Ross Associates

Returning the "I-Word" to Database Methodologies

Monday • 3:00 p.m.

Database technology has always been about re-usability. Originally confined to structured data, new areas of innovation focus on objects, business rules and multi-media. Current trends in hardware/software platforms, including client/server and other forms of distribution, are also having dramatic impact. To keep up, state-of-the-art methodologies, including information engineering, must evolve rapidly. Structured techniques are out; methods based on extended data models are in. In this presentation, Mr. Ross offers insights about these and other innovations in database methodologies that practitioners should expect in the 1990's.

- Enterprise Analysis and Planned Re-Usability
- Data Architecture++
- Zachman Framework: Asking the Right Questions
- Object-Orientation—Good News or Bad News?
- Business Rules: Re-usability at the Next Threshold

Downsizing IS Applications

Tuesday • 11:00 a.m.

Howard Fosdick
Consultant
Fosdick Consulting, Inc.

Today's biggest trend is downsizing, yet approaches are thrown at IS with little comparison among them. In this presentation Fosdick offers a sound IS perspective on downsizing approaches, what works, what doesn't, pitfalls to avoid, and trends to be aware of. The presentation places the downsizing trend within an IS context and offers proven approaches for gradually moving your shop in this direction. In this presentation you will learn:

- Major Approaches to Downsizing
- What IS Actually Does—Successes and Failures
- Why Industry Analysts Mislead IS
- Unmentioned Pitfalls
- Risk-Averse, Evolutionary Ways to Downsize

Repositories And Client/Server: Do They Fit?

Tuesday • 3:00 p.m.

Philip A. Bernstein
Technical Director of NAS
Digital Equipment

A repository manager is a fancy data dictionary for managing design data for CAD and CASE. Most repository products were developed for mainframe or time-sharing environments. How must they change to serve the needs of client/server environments? What repository problems arise when single-user repositories must scale up for the workgroup?

- Repository Fundamentals
- Distributed Repositories
- Heterogeneous Tools Sharing a Repository
- Repository Standards
- State-of-the-Art and Prognosis

Database Technologies Conference

Legacy DBMS Systems: What To Do With Your Achilles Heel

Michael Stonebraker
EECS Department
University of California, Berkeley

Wednesday • 9:30 a.m.

Most organizations are suffering from the "sins of the past". i.e., mission-critical application systems that are very large, "tired", and linked to obsolete data base systems. This talk presents two algorithms to migrate such systems to modern computing environments, together with a case study of their application to a legacy system from a large, money-center bank.

- Useful to System Administrators Burdened by Legacy Systems
- Useful to Technical Managers, Who Think There is "No Way Out"
- Valuable for Anyone Desiring More Information on This Crucial Topic

Who Manages the Distribution of What? Databases, Distribution, and the Relational Imperative

Fabian Pascal
Independent Industry Analyst & Consultant
Micro-paSQL

Wednesday • 10:30 a.m.

Insofar as database management is concerned, there are several kinds of distribution, each with its practical implications and support requirements from products and users. There are also technical reasons why relational technology is a pre-requisite for distributed database environments. This presentation clarifies:

- The Concept of Distribution in Database Management
- Why and How Relational Technology, Facilitates Distribution
- The Distinction, in This Context, Between File Servers, Client/ Servers, and Distributed DBMS

Riding The Zachman Framework Into The World Of Data Sharing

Barbara von Halle
Principal
Spectrum Technology Group, Inc.

Wednesday • 1:00 p.m.

Data sharing does not happen by itself. Barbara introduces a data sharing strategy based on the Zachman Framework for Information Systems Architecture. The framework makes it possible to clarify audiences and improve cohesion of each model. Most importantly, the framework challenges us to look beyond data, to other dimensions. Further, use of the framework heightens levels of completeness, consistency, and traceability of the entire model set. The presentation covers:

- Enterprise Modeling
- Importance of Good Quality Information
- Location Analysis
- Creative Politics for Success
- Involvement of Business People

SQL92—The SEQUEL or The Shape of Things To Come

Joe Celko
Technical Editor
DBMS Magazine

Wednesday • 2:00 p.m.

Mr. Celko examines the recent developments in SQL2. The ANSI X3H2 Database Standards Committee received the public review comments for SQL2 at the end of June 1992. This means that SQL2 will become ANSI SQL-92, replacing the current SQL-89 standard, by the end of the year. Vendors are now implementing the new features in this product! Mr. Celko addresses these features, along with a look at:

- New Datatypes and Domains
- More Orthogonality
- Full Range of Set Operations

Related Educational Sessions

Object-Oriented Technologies Conference

DATAMATION Technical Co-Sponsor

DATAMATION is the magazine designed to meet the information needs of corporate computing professionals worldwide. It reaches more than 75,000 key computer-using units responsible for more than 70% of the $190 billion U.S. market for computer software and hardware. DATAMATION aims to help its readers do their jobs better by interpreting the products, events and technologies of significance for information systems management. Its' cross platform, enterprise-wide editorial features cover the installed base spectrum from supercomputers to PCs and workstations, networks, midrange and mainframe systems and peripherals, software, as well as a unique three-part product guide.

Chairman Address

Stanley B. Zdonik
Brown University
Department of Computer Science

Directions In Distributed Object-Oriented Databases

Monday • 3:00 p.m.

Object-oriented databases have been designed from the start to run on networked workstations in support of various kinds of design activities. As a result, they have always found themselves in a distributed computing environment. This talk focuses on current approaches for managing distributed objects and on how this technology is likely to mature in the future.

- Objects in a Client/Server World
- Data Integration
- Implementation Problems and Solutions
- Multidatabases
- Self-Adaptive Techniques

Moving Objects into Relational Systems

Tuesday • 11:00 a.m.

Mary E.S. Loomis
Vice President,
Technology
Versant Object
Technology

Object and relational database technologies may appear to compete with each other. In fact, they can be complementary. Each has its own strengths and weaknesses; you may need both. The speaker discusses the benefits and challenges of bringing objects into relational environments, focusing on technical aspects of achieving coexistence and integration. Topics include:

- Why You Might Need Both Objects and Relational Technology
- What Coexistence and Integration Really Mean
- Leveraging the Relational Model
- Leveraging the Object Model
- Who's Doing What?

Conducting Accelerated Analysis Projects Using Object-Oriented Methods

Tuesday • 3:00 p.m.

Jerry Huchzermeier
Executive Director,
Advanced Systems
Engineering
Solutions
KnowledgeWare

Business area analysis is a critical step in application development. Accelerated analysis techniques (a'la JAD) significantly improve the speed of analysis. This presentation describes how to further improve analysis by blending object orientation with accelerated analysis. The effect is a high quality, high speed mechanism for producing effective business requirements using integrated OO models which are used to design OO or conventional application systems.

- What is Accelerated Analysis?
- Conducting Accelerated Analysis Projects
- Elements of Object Orientation Which are Most Effective for Analysis
- Tasks, Timings, Deliverables and Techniques of Object Oriented Accelerated Analysis

28

Object-Oriented Technologies Conference

Applying an Object-Oriented Approach to the Integration of Distributed Applications
Wednesday • 9:30 a.m.

Mike Renzullo
Software Consultant
Engineer
Digital Equipment
Corp.

This session focuses on the practical application of the Object Management Group (OMG) Common Object Request Broker Architecture (CORBA) to the problem of integrating independently developed applications in a heterogeneous network environment. It illustrates how the unique aspects of an object-oriented approach can result in more easily implemented and manageable solutions to a traditionally difficult set of systems integration problems.

- Problems of Application Integration
- Using Objects to Describe Applications
- Introduction to CORBA
- Definition and Evolution of Applications

What is the Role of Data Administration in an Object-Oriented World?
Wednesday • 10:30 a.m.

Larry P. English
President &
Principal
Information Impact
International, Inc.

Object technology and techniques are emerging as one of the key driving forces in information systems development this decade. What impact will object technology and methods have on the role of the Data Administrator? This presentation explores the evolving role of the Data Administrator and the issues it must face and solve over the next decade of technology evolution.

- Data Administration Versus Object Administration
- Data Dictionary/Repository Versus Class Libraries
- Enterprise Models in an OO World
- DA: Evolution or Extinction?
- Critical Success Factors for the Management of OO Development

Benchmarking Object Databases For Large-Scale Deployment
Wednesday • 1:00 p.m.

Dr. Lougie Anderson
Program Manager
Object Technology
Sequent Computer
Systems, Inc.

Object Database Management Systems (ODBMS) promise great productivity and performance improvements over traditional DBMSs. However, benchmarks for ODBMSs are in their infancy. Dr. Anderson reviews extensions to existing single-user benchmarks to measure multi-user performance and scalability.

- Existing ODBMS Benchmarks: The Object Operations and Hypermodel Benchmarks
- Extensions for Benchmarking Multi-User Scalability
- Issues in Large-Scale ODBMS Deployment

Extending Relational With Object-Oriented Capabilities
Wednesday • 2:00 p.m.

Dr. Sunit Gala
Research Scientist
UniSQL, Inc.

Dr. Gala introduces a powerful new commercial database technology that incorporates both full relational and object-oriented technologies in a single coherent database engine. The session examines motivations, design and implementation issues, and productivity and performance benefits associated with such a system. Specific topics include:

- The Symbiotic Fit Between the Object-Oriented Paradigm and Extensions to the Relational Model
- Specific Extensions to ANSI SQL
- Implementation and Performance Considerations
- Sharing and Reuse of Data and Application Code Through Object-Oriented Extensions

29

Related Educational Sessions

▶ Tuesday, 9:30 a.m. — Keynote Address
Objects, Management and Success
Adele Goldberg pg. 6

▶ Wednesday, 1:00 p.m.
The Object Paradigm: Changing PC Database Development   Larry English pg. 31

▶ Thursday, 8:30 a.m.-12:00 p.m.
Management/Technical Seminar
Object-Oriented Database Systems
Stan Zdonik pg. 34

▶ Friday, 9:00 a.m.-5:00 p.m.
Object-Oriented Programming with dBASE for Windows   Adam Green pg. 35

PC Databases & Xbase Conference

DATA BASED ADVISOR
MAGAZINE

Technical Co-Sponsor

Data Based Advisor *is the leading monthly magazine for developing corporate applications at the desktop. Since 1983, DBA has provided application developers, VARs, and consultants with practical solutions to real world problems. Every month, DBA covers database management products and issues at the desktop, client/server, Windows/GUI, downsizing/rightsizing, CASE, and networking. In addition, DBA covers emerging technologies , IS management, hands-on programming, product reviews, and corporate case studies. DBA writers are the leading industry experts and frequent speakers at technical conferences, including DATABASE WORLD and CLIENT/SERVER WORLD.*

Chairman Address

Marc Schnapp
President
Primary Key Consulting

Exploiting Windows: Application Design Strategies
Monday • 3:00 p.m.

Programming Windows offers the application developer a level of access once available only to the systems programmer. This session explores how the latest generation of Windows Xbase products makes Windows-unique features available to the application developer. We'll see how Xbase DBMS's from Borland, Computer Associates and Microsoft support dynamic link libraries, OLE, and DDE. Also explored are useful development tools, third party DLL's and the like. If you're contemplating migrating to Windows, this is a session you can't afford to miss.

- Application Integration Opportunities
- Third Party Building Blocks
- The Nature of the Windows API
- Language Syntax Comparison and Contrast
- Assessing Development Productivity vs. Power

How To Move Up To Client/Server

Bruce Linn
Director, Product
Management
Interbase
Business Unit
Borland

Tuesday • 11:00 a.m.

Whether you manage Xbase, Paradox or any of the other popular PC DBMS's, you'll want to assess the direction application development will take in the coming year. This session identifies the distinctions between direct access local database engines and developing client-side applications for client/server architectures. It also focuses on the critical role of the server for client application scalability and meeting the unique requirements of the desktop.

- When to Go Client/Server
- Criteria for a Good Database Engine
- Clients that Exploit Server Power
- Setting and Meeting Realistic Design Goals

PC's and Client/Server: The Right Solution for Rightsizing?

Mike Irwin
Independent
Database Specialist

Tuesday • 3:00 p.m.

This presentation examines the emerging role of client/server computing. Are microcomputers a robust platform upon which to build your mission critical systems? Mr. Irwin discusses current software and hardware technology as they impact on your decision. Included are multiprocessor CPU's, back end servers, PC front ends and connectivity issues. MIS managers, database administrators and micro managers will appreciate this frank look at this promising technology.

- Alternatives to Client/Server
- Migrating Today's Applications
- Assessing PC Client Products
- Operating System Robustness

PC Databases & Xbase Conference

Tod Nielsen
Group Product
Manager
Data Access
Business Unit/
Applications
Microsoft

Building Database Applications for MS-DOS and Windows

Wednesday • 9:30 a.m.

What do you consider when planning an application for Windows and DOS? Mr. Nielsen provides practical tips to insure that your finished product will be a real Windows application and a great MS-DOS program. The session examines FoxPro 2.5 and DataEase as examples of tools providing these capabilities.

- User Interface Design
- Exploiting System Services (DDE, OLE, etc.)
- Where Should the Application Development Take Place
- Moving Between DOS and Windows

Cary Prague
Director, Software
Productivity
Travelers Insurance
Co.

Windows and DBMS: The Present and Future

Wednesday • 10:30 a.m.

The use of Microsoft Windows is undoubtedly growing and PC software vendors are moving to provide Windows versions of their DBMS products. Others are introducing fresh new products specifically for Windows. Though Windows promises a consistent user interface, each DBMS is unique. This session surveys the best selling and most innovative products in the Windows database arena.

- DOS vs. Windows: Virtues and Vices
- Migration Strategies from DOS to Windows
- The Future of Databases (Xbase and Non-Xbase)
- Assessments of Access, FoxPro, Paradox, dBase, Approach, Superbase 4, R&R Report Writer, etc.

Larry English
President and
Principal
Information Impact
International, Inc.

The Object Paradigm: Changing PC Database Development

Wednesday • 1:00 p.m.

The popular PC application development languages (BASIC, Xbase, PAL) are all going object oriented. The object paradigm changes the way applications are developed. Object technology and techniques are yielding significantly improved reliability, flexibility and maintainability of applications. This presentation helps you to prepare for the coming changes by describing the object paradigm and identifying the characteristics of object-oriented software development.

- The Object Paradigm and the Copernicus Revolution
- What Object Technology is and What It is Not
- The Fundamentals of Object Modeling
- How to Gain the Benefits of an Object Approach

Douglas Grimsted
CEO
RDI Software
Technologies, Inc.

Million Dollar Rightsizing. Using Xbase?

Wednesday • 2:00 p.m.

Are Xbase products robust enough to satisfy the traditional needs of MIS for mission-critical applications? This session explores techniques to yield speed, security and economy from rightsizing projects. Mr. Grimsted shares his arsenal of tools used to create custom applications for Fortune 1000 companies while addressing:

- How to Pinpoint the Costs of Large Complex Projects
- Quality Assurance Techniques Resulting in Bulletproof Apps
- Structuring Software Development Teams for Maximum Output
- Xbase and Client/Server: Technology and Trends

31

Related Educational Sessions

DB2 J·O·U·R·N·A·L

Technical Co-Sponsor

DB2 Journal is the first and only magazine completely dedicated to anyone who manages DB2 data, is responsible for the DB2 system itself, or accesses DB2 data in any way.

Chairman Address

Richard Yevich
President
Richard Yevich Consulting

Designing High Availability DB2 Applications and Systems
Monday • 3:00 p.m.

Continuous availability of information in DB2 databases requires special methods of design both in applications and systems to approach a 24 X 7 environment. These systems offer significant benefits to an organization but most often this direction is taken without a full understanding of the risks, costs, and development techniques. Application and DBA issues are examined with respect to the details and the tradeoffs required for achieving success in this environment. Implications of the distributed database environment are shown to be of assistance in developing continuous availability information stores.

- Requirements for Continuous Availability
- Database and Application Design Guidelines
- Controlling Planned and Unplanned Outages
- Fully Duplexed Fault Tolerant Environments
- Distributed Database as Part of Solutions

Paul R. Hessinger
Senior Vice President
Research & Business Development
KnowledgeWare

Critical Success Factors: Making the Client/Server Vision a Reality

Tuesday • 11:00 a.m.

A vision of client/server applications as ad hoc "information at your fingertips" obscures the challenging reality of collecting, organizing, "warehousing" and distributing enterprise data needed to support 'client' access to its server(s). This management oriented presentation discusses several critical success factors associated with the architecture of, and methodology for, DB2's role in client/server processing.

- The Evolving Realities of the 'Database' Vision
- Data Architecture(s) for Client/Server
- The Importance of an 'Enterprise Data Server' Strategy
- An Assessment of IBM's Plans for DB2 and Several ISV's Offerings
- Methodology Considerations

John Fulton
Chief Software Engineer-AS/400
Database System
IBM

Distributed Data and Client/Serving Mid-ware for Information

Tuesday • 11:00 a.m.

In today's competitive business environment access to "up-to-date" information is critical. Yet data sources are becoming more heterogeneous and "spread-out" across the enterprise. The benefits of this are real, but so are the problems. Network and data management are everyday challenges. This session focuses on the benefits offered and the problems solved by the use of mid-ware in today's business environments.

- The Myths vs. Realities
- The Data Warehouse Model
- What Do I Do Now?

DB2 / Information Warehouse Conference

Characteristics of the Data Warehouse

Tuesday • 3:00 p.m.

Mr. Kelley defines a data warehouse and discuss the evolution of the data warehouse. Also presented is a discussion of the characteristics and why they differ from production systems. These characteristics include:

- Separated from Production Systems
- Integrated Data
- Metadata

Charles R. Kelley
President
FrontRange
Consulting
International, Inc.

The Challenge of Large DB2 Databases in the Information Warehouse

Wednesday • 9:30 a.m.

Although the Information Warehouse may offer a wealth of opportunity for analytical processing, real-world hardware and software constraints mandate special physical design techniques to achieve success. A creative approach to design must recognize DB2 performance tradeoffs and DB2's role in a client/server environment.

- Multi-Level Data Architecture
- Selection of Partitioning, Clustering, and Data Granularity
- Loading and Refreshing Large DB2 Tables

Joyce Bischoff
President
Bischoff Consulting, Inc.

Information Warehouses and Application Networking: Getting at Data Across the Enterprise

Wednesday • 10:30 a.m.

Current systems collect and store vast amounts of data, but only a fraction of that data is available for decision-making. Much of this critical data is embedded in backbone operational systems built on early database systems or hardwired into applications. Two of the most significant approaches being used to "mine" this data are "information warehousing", and "application networking".

- The Real-Time Organization and the Data Access Problem
- The Foundations of the Information Warehouse and Application Networking
- The Technology Underlying Information Warehousing and Application Networking

Ken Orr
President
The Ken Orr
Institute

DB2 in Mainframe Client/Server Environments

Wednesday • 1:00 p.m.

Access to DB2 data both from new relational environments and from older legacy systems is a much needed and desired goal in most corporations. This presentation shows how to accomplish this for large mainframe applications. Critical is the ability to connect all enterprise applications to the relational databases.

- DB2 Client/Server Architecture
- CICS APPC In A High Transaction Environment
- Real-Time Organization and Data Access Problem

Rick Anderson
Director of
Distributed
Technology
CIGNA Insurance

The Change Management Administration Paradigm in DB2

Wednesday • 2:00 p.m.

This presentation examines database design issues that deal with enhancing the ability to manage DB2 applications from an administrative point of view. Factors that influence the efficiency of the application for such topics as recoverability, version control, designing data structures and change impact are explored.

- Change Management's Impact on Database Structure Design
- Unique Requirements of Change Migration
- Multi-Platform Utility Implications

Jack Olsen
Product Author
BMC Software

33

Related Educational Sessions

Six Management/Technical Seminars

Choose One Morning and Afternoon Session
Thursday, June 17

DATABASE WORLD & CLIENT/SERVER WORLD offers six half-day seminars after the Conference. You'll have the opportunity to ask questions, discussion applications, problems and solutions with colleagues, network and enjoy the benefits of a classroom style presentation. DATABASE WORLD & CLIENT/SERVER WORLD's information packed seminars are opportunities you and your colleagues cannot afford to miss!

Morning Sessions · 8:30 a.m.-12:00 p.m.

John Matze
President
John Matze, Inc.

Introducing NLM Programming

This discussion starts with an overview of the Netware NLM architecture, development environments and compiling tools. Next it focuses on developing client/server NLM applications, Novell's Interprocessor Communication Architectures and a final discussion of Netware's NLM services.

- Netware NLM Architectures
- Development Environments
- Design of Client Server Applications

Pieter Mimno
President
Technology Insight, Inc.

Comparison and Evaluation of Client/Server Tools

A new class of windows-based development tools greatly simplifies the generation of graphic client/server applications within an open systems environment. Client/server tools provide a low-cost alternative to traditional CASE tools for many applications. They are large object-oriented, do not use structured diagrams, and require far less training and cultural change than CASE tools.

- What to Look for in a Client/Server Tool
- Evaluation of Leading Client/Server Tools
- Integration of Client/Server and CASE Technology

Stan Zdonik
Department of Computer Science
Brown University

Object Oriented Database Systems

This half-day tutorial is intended to introduce the student to the basic concepts and terminology of object-oriented databases. Mr. Zdonik carefully distinguishes between object-oriented databases and their relational counterparts. Where are the fundamental differences? Basic object-oriented principles are also reviewed. Examples are drawn from current systems.

- Object-Oriented Principles
- What Makes OODBs Different?
- Where is the Technology Today?

Afternoon Sessions · 1:30 p.m.-5:00 p.m.

Jim Davey
Consultant
DCI

The Best CASE Tools for Data Modeling, Database Re-Engineering and Database Design

This seminar looks at the tasks of data modeling, database re-engineering and database design and the CASE tools that are used to support these activities. Attendees are encouraged to use their Expo time to look at database CASE tool. Open discussion is encouraged. At the end of the session the attendees will vote on "Best of Type", "Best of Segment", and "Best in Show."

- Data Modeling/Database Design
- Database Re-Engineering
- CASE Market
- Overview of CASE Tool Vendors

Ken Orr
Principal
The Ken Orr Institute

Computer Aided Database Design: Knowledge-Based/Iterative Development

Database design is one of the most critical issues in the development of large scale systems. The combination of advances in database theory, together with automatic systems/database tools, makes it possible to develop much more sophisticated and effective database designs than were possible just a few years ago. This seminar addresses the practical application to database design.

- Database History and Theory
- Database Design Methodologies
- Future Developments

Robert A. Ruotolo
President
Performance Management Consulting

Synergy Tools for I/S Teams

Using 'synergy tools' to create a 'continuous learning' culture within your I/S organization. Here is a set of proven behavioral, quality oriented tools that will help you to be more effective. This capability is a fundamental requirement if I/S organizations are going to keep pace with the rapid technology and business changes of today!

- What 'Synergy Tools' Are
- How They Are Used
- Benefits of Using 'Synergy Tools'

One Price — Choose Twice!

One-Day Seminars

DATABASE WORLD & CLIENT/SERVER WORLD offers three one-day seminars held before and after the Conference. These seminars give you the opportunity to learn and explore a subject in-depth for an entire day. You'll have the chance to ask questions, discuss applications, problems, and solutions with colleagues; network, and enjoy the benefits of a classroom style presentation. These One-Day Seminars provide you with a truly comprehensive education that you can't afford to pass up.

Sunday, June 13, 1993 • 9:00 a.m.—5:00 p.m.

■ Downsizing/Re-engineering Applications with Client/Server Computing

Dr. George Schussel
President & Founder
Digital Consulting,
Inc.

Schussel's intensive one day seminar provides a fast paced survey of both the technologies and management strategies necessary for successfully downsizing with a focus on the use of database client/server approaches. The day begins with a review of the cost justification and benefit issues of downsizing. Short case histories of several re-engineering, downsizing efforts are reviewed and the effect of downsizing on budgets and staff are discussed. The day continues with a discussion of open desktop platforms. Windows 3.1, Windows NT, OS/2v2, UNIX and their roles are analyzed. Network issues and management are discussed as are the relative positions of Novell, Microsoft, Banyan, DEC, and IBM. What is the future role for Visual Basic and Xbase in a Windows world? A discussion of how to integrate the new approaches with existing systems shows how remote data access strategies can be profitably used. The management approach to downsizing is discussed, featuring problems and their resolution in database and networks. Schussel reviews how to integrate current mainframe based applications into the new distributed, downsized world.

OUTLINE
- Why Bother Downsizing?
- Building Competitive Advantage with Re-engineering
- A Review of Case Studies (Including Cost Histories)
- Open Systems—A Critical Component of Downsizing
  - Windows 3.1 —Windows NT
  - OS/2 —UNIX

- LAN Operating Systems
- Superservers
- Client/Server Computing
  - DBMS
  - Windows Tools
- Managing the Move to Downsizing

■ The Relational Model

Chris Date
Independent
Consultant

Date's full day seminar provides the most careful presentation available anywhere of the fundamental ideas underlying DB2, ORACLE, INGRES, and all the myriad of other relational products available in the marketplace today. Chris shows how the relational model is not well understood, even by the leading vendors. Problems with SQL are discussed in some detail. If you don't understand the limitations and/or potential of relational DBMS, then your applications are likely to be hampered, or more likely, responsible for returning incorrect results. If you are involved in any aspect of database technology, be it as an end user or as a database administrator or anything in between, then you owe it to yourself to be familiar with this material.

OUTLINE
- Preliminaries
- Relational Data Structure
- Relational Data Integrity
- Relational Data Manipulation
- Some Ramifications

Friday, June 18 • 9:00 a.m.—5:00 p.m.

■ Object-Oriented Programming with dBASE for Windows

Adam Green
President
Adam Green
Seminars, Inc.

In this one-day tutorial Adam Green will show how the OOP enhancements in dBASE for Windows can dramatically improve the productivity and capabilities of Windows applications developers. This tutorial will emphasize practical programming solutions and techniques, and is aimed at experienced Xbase programmers. No prior knowledge of Object Oriented Programming is needed. Topics covered will include:

- Basic OOP Syntax and Concepts
- Event Driven Programming Techniques
- Creating Custom User Interface Controls
- Object Oriented Design
- Construction of Class Libraries

EXPO PROGRAM

CLIENT/SERVER WORLD & DATABASE WORLD EXPO

Co-Sponsored by **N** Northeastern University

June 14-15, 1993

Join 20,000 of Your Fellow MIS Professionals at 1993's Most Comprehensive Computing Event!

The CLIENT/SERVER WORLD and DATABASE WORLD Exposition is the only exposition of its kind, offering you the most comprehensive array of both database companies AND client/server companies under one roof! Armed with the knowledge you gain from the conference sessions you'll be ready to effectively tour the exhibit hall. **The exposition offers you an unsurpassed educational bonus!**

▶ EDA/SQL Pavilion

Sponsored by DCI and Information Builders, Inc.

The EDA/SQL Pavilion will showcase Enterprise Data Access/SQL (EDA/SQL) products that provide SQL-based access to all data, relational and non-relational, local and remote, on multiple platforms and in multiple data architectures, throughout an enterprise. IBI supplies Enterprise Data Access/SQL, the data access component of the Information Warehouse, the solution framework that provides a comprehensive approach to the use of enterprise information. The Pavilion will highlight the EDA/SQL Enabled Vendors throughout the floor including: Microsoft, Channel Computing, Blyth Software, DataEase International, Easel Corp., ParcPlace Systems, Tactics Software, Brio Technologies, Andyne Computing, IBM, Digital Equipment Corporation, Apple, Lotus and Pyramid. **Join us to see fully interconnected demonstrations of EDA/SQL in action.**

▶ Database Gateway Solutions Pavilion

Sponsored by DCI & Micro Decisionware

The Micro Decision Database Gateway Solutions Pavilion will feature PC application development and end-user decision support tools using the Database Gateway to access DB2 and non-relational data sources in the IBM mainframe environment.

WHERE:	John B. Hynes Convention Center 900 Boylston Street Boston, MA
WHEN:	Monday, June 14, 12:00 p.m.-6:00 p.m. Tuesday, June 15, 10:30 a.m.-4:30 p.m.

▶ Computer Associates Business Partner Programs

Computer Associates provides value to their business partnerships with their products, services and support. CA Programs include the CA Authorized Reseller Program, CA Certified Consulting Partners Program, CA Authorized Education Centers Program, and the CA Development Partnership Program. These programs have been developed to provide Computer Associates' Business Partners with the tools necessary to deliver the highest level of product, service, and support to their mutual clients.

To find out more about Computer Associates' Business Partner Programs, stop by the Computer Associates Business Partner Booth.

Client/Server Tool Watch
▶ Winner's Circle Pavilion

Sponsored by DCI and The Hurwitz Consulting Group

The Client/Server Tool Watch Winner's Circle Pavilion will showcase the key products that have been evaluated in the newsletter within the past year. These are some of the hottest emerging tools in the area of open applications development that have received favorable reviews in the *Client/Server Tool Watch*. The tools have succeeded in meeting many of the criteria in the Hurwitz Tools Benchmark such as scalability, portability, cross platform support, modularity and adherence to emerging standards. Companies invited to exhibit include: Uniface, Visix, Information Builders, Inc., Cadre, Tivoli Systems, Business Objects, Inc., Red Brick Systems, Independence Technologies, and Information Resources, Inc.

Real World Product Presentations

DCI, in conjunction with the following companies, has created these sessions to educate you on cutting edge products. You'll have the unique opportunity to talk candidly with these technical leaders about their plans for growth and technical excellence, and get the facts you need to make informed buying decisions.

Andersen Consulting FOUNDATION®	Cross Access CrossAccess	KnowledgeWare Application Development Workbench ADW® /CWS-GUI	Popkin SYSTEM ARCHITECT
Computer Associates Int'l CA-DATACOM for UNIX CA-IDMS for UNIX	DataEase DataEase for Windows	Magic Software Magic	Texas Instruments Information Engineering Facility™
Cooperative Solutions Ellipse	Gupta SQLWindows, Quest	Matesys ObjectView 2.0	Versant Object Technology Corp. VERSANT ODBMS

36

Special Events

▶ Experiences in Client/Server Computing • Wed., 9 a.m.-12:30 p.m.

Half-Day Forum Presented by the Client/Server Round Table

This interactive event is part of the continuing workshop program of the Client-Server Round Table, a user-industry consortium. It provides attendees with a chance to hear about the benefits and disadvantages of client/server computing, to discover the problems users have faced in moving to this new computing paradigm, and to discuss your own situation.

The opening session features a special presentation on "Bridging the Gap Between Corporate Strategy and Client/Server Computing". David Rummler, president of Competitive Advantage Group, Saratoga, CA, outlines the various planning and development issues, and discusses organization and support. Mr. Rummler also discusses results of a recent survey showing how various Information Technology architectures support specific strategic business advantages.

Four concurrent workshops follow:

**Management Planning for Transitioning to
Client/Server Computing**
David Rummler, Competitive Advantage Group

**Technical Issues of Planning the Transition to
Client/Server**
Don Rule, MIS Manager, DunsNet

Client/Server Development Tools

Organization and Support Issues

The Client/Server Round Table is a consortium of users, IS executives, consultants, vendors and editors. Its purpose is to foster the adoption of client/server computing through education. The group conducts workshops under the theme "Experience in Client-Server Computing" as well as producing white papers. For information on joining, contact Ed Bride at (508) 529-3544.

▶ Industry Spotlight
Live Product Demonstrations!

*Evaluate
Database & Information
Technology Products
Today!*

Don't miss this opportunity to join a select group of exhibitors who will demonstrate the technical capabilities of their newest products. The informative presentations will be held on the Exposition Floor continually and will feature live demonstrations of the newest state-of-the-art products. Industry Spotlight will be held Monday and Tuesday during the Exposition.

Due to the delicate nature of this information, details of Industry Spotlight products and sessions will not be revealed until showtime. You simply cannot miss this unique opportunity to benefit from privileged insight into the industry's leading products and services.

▶ The Boston Computer Society User Group Meetings

DCI and The Boston Computer Society have worked together to provide you with a unique education program. With 25,000 members in 50 countries, The Boston Computer Society is the world's largest, and most influential personal computer user group. The BCS has provided objective and insightful information to its members for more than 15 years! Through its 40 user and special interest groups, 20 publications, 25 electronic bulletin boards, and scores of monthly meetings and events, the BCS offers many options for those interested in personal computers.

Invited Boston Computer Society User Groups Include:

- **Microsoft SQL Server User Group**
- **Client/Server User Group**
- **R:BASE Users Group**
- **Paradox User Group**
- **FoxPro User Group**

Boston's Favorite Funny Man!

Comedy Club • Monday, 6:00 p.m.-7:00 p.m.

End your day with a few good laughs! After a productive day of gathering valuable, insightful information, kick back, relax and enjoy one of Boston's favorite comedians. Don Gavin will entertain you with a hilarious one hour comedy presentation at the close of the first day.

Don Gavin

HOTEL & TRAVEL INFORMATION
Travel & Lodging

For all your DATABASE WORLD & CLIENT/SERVER WORLD hotel and airline needs, please contact Conference and Travel Services (CATS) at 800-767-2755.

Hotel and Travel Information

CALL CATS 800-767-2755

Digital Consulting, Inc. is pleased to offer you special discounted* hotel room rates at our events and discounted airfares to our events on Continental, US Air and Air Canada. To receive discounted reservations or information on these special services, please call Conference and Travel Services (CATS) at 800-767-2755, or fax your request to 508-470-0526.

*Discounts only apply to space reserved through CATS.

Meeting Site

Hynes Convention Center
Prudential Tower
900 Boylston Street, Boston, MA

Official Hotels — DATABASE WORLD & CLIENT/SERVER WORLD

Boston Marriott Copley Place
100 Huntington Avenue
Boston, MA 02116

Hyatt Regency Cambridge
575 Memorial Drive
Cambridge, MA 02139

Boston Park Plaza Hotel &
Towers
64 Arlington Street
Boston, MA 02116

Sheraton Boston
39 Dalton Street
Boston, MA 02199

The Westin Hotel
10 Huntington Avenue
Boston, MA 02116

The Copley Plaza
138 St. James Avenue
Boston, MA 02116-5071

NOTE: *Other hotels are available for this event. Please contact CATS at 800-767-2755 for rate information and availability.*
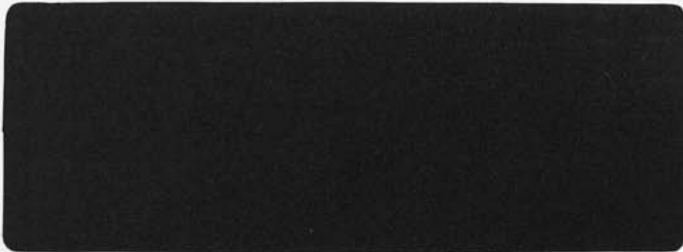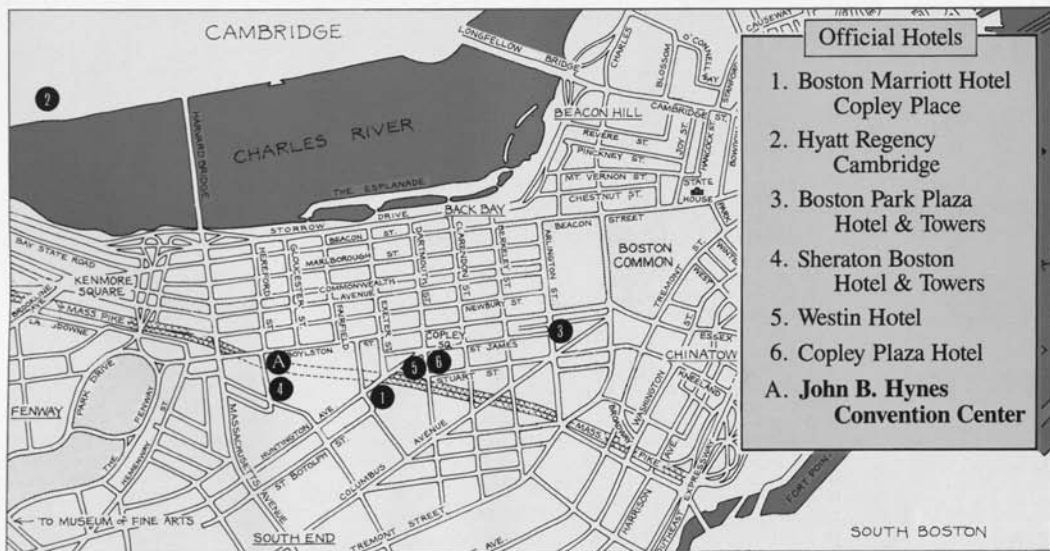
Official Hotels

1. Boston Marriott Hotel Copley Place
2. Hyatt Regency Cambridge
3. Boston Park Plaza Hotel & Towers
4. Sheraton Boston Hotel & Towers
5. Westin Hotel
6. Copley Plaza Hotel
A. **John B. Hynes Convention Center**

CLIENT/SERVER WORLD & DATABASE WORLD
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► Popkin Software & Systems,
  Inc.
► Powersoft Corporation
Prism Solutions, Inc.
Prologic Computer Corp.
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Quarterdeck Office Systems
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Raima Corporation
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• Industry Spotlight • Xbase Panel • Super Server Showcase . . . and much more!

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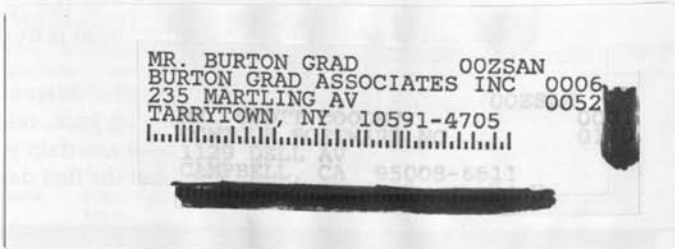
Mailroom: PLEASE ROUTE this brochure to this person's manager or replacement if
he is no longer employed at your company.

40
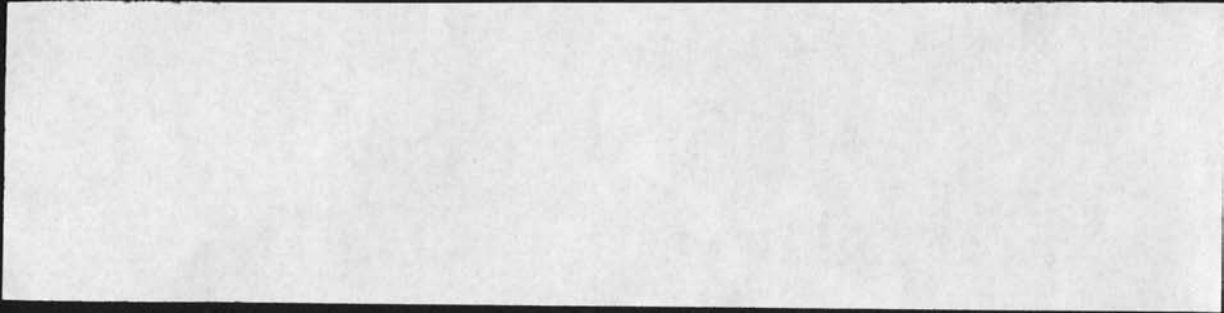
Client Server

Systems

Op Syst Extensions
    DB
    TP

Syst Util
    Files
    peripherals
    job mgt /acct
    security

applic Devel tools
    building
    testing

Communications
    EDI
    file trf.
    backup/recovery

Applications

Cross Industry
    Acctg.
    office mgt
    business applic (prospect, service)
    Documentation
    Educ + Trng.
    Decision Support

Industry Specific -
    banking
    retail
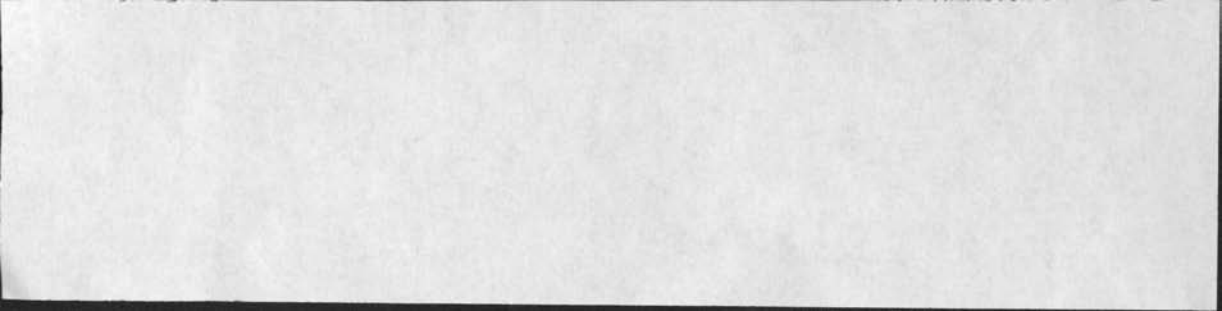
EOP - Nil Moore -   2/25/93

> where we are
> areas which should be f interest
> companies to take a look at
> outside of existing groups

> 2 wks   (or longer if I wish)
> "no grids"

---

work with Marty Silkenberg (charge for his time)
3/3/93 - 9-12 am.

Opportunities

> Business Applications
> - Customer Service, Sales Mgt, Prospecting
>   ~~Doc~~
> - Documentation production, retrieval
> - Education + Training tools, courseware
> ← Systems Mgt - AS/400
> - Systems Mgt - UNIX
> - Communications/interfaces
>   call directors, knowledge-based systems
>   ~~Ex~~

4. <u>Document Production, Storage and Retrieval</u>

- structured and restructured text

- graphics material

- query analysis and display techniques

- image mode

- data compression

- encryption

- indexing techniques

5. <u>AS/400 and UNIX Systems Management Facilities and Tools</u>

6. <u>Decision Support Tools and Facilities</u>

7. <u>Integrated Communications</u>

8. <u>Client/Server Systems Management Facilities and Tools</u>

Sterling can pursue these areas in two different ways:

- Buy the assets of a substantial company concentrating
  successfully in one of the selected areas

- Invest in new companies which have successfully demonstrated
  the technology needed to pursue one or more of the business
  areas

Marty Silberberg worked with me to produce these initial thoughts on
Sterling opportunities.

Sincerely,

Burton Grad
BG:8870

Advanced Office Systems Concepts

Burton Grad

1. Comprehensive message communications at source; many information
   types can be sent:

   > data
   > text
   > image -- fax (bilevel), grey shades, color
   > voice
   > various formats for data:
   >> . 1-2-3, QuattroPro, etc. spreadsheets
   >> . WP, Word, etc. word processing
   >> . etc.
   > Pen computer

   At destination(s) many information types can be produced and
   distributed (with some opportunity for type translation (image to
   text). Full message trail to be kept assuring sending and
   receipt. Source and destination may be mobile.

2. Enhanced storage, retrieval, display functions for client
   stations to handle multiple (and mixed) information types.
   Secure access to stored information (at any client or server
   system). Intelligent indexing, computer aided search/solution,
   professional level display and report preparation.

3. A rich set of application functions to produce statistical and
   text extracts and analyses, sorting, ranking, work flow
   management, logical and calculation facilities, input validation.
   These application building blocks would enable construct useful
   applications (prospect management, customer service operations,
   etc.)

Essentially, Sterling would provide the infrastructure to interface
with existing e/mail type systems (Profs, All-in-One), and provide *interface*
to use of "standard" office applications (word processing,
spreadsheets, etc.) and provide enhanced capabilities for general
office operations.

Key Ideas:

   - envelope/contents
   - transform operations to common interface form for each data
     type (markup, language)
   - use available technologies (voice generation, OCR) and add new
     ones when they are available.
   - follow-up processes -- trigger dates

INTEGRATED MESSAGING

APPLICATION DESCRIPTION

At the heart of the system are two fundamental ideas;

1) That a user should be enabled to deal with multiple messaging systems (Voice and text) through a single integrated interface and

2) That a user be allowed to freely choose and mix his messaging medium.

With regard to the first point, it is clear that a visual interface is the preferred way to manage mail. It allows one to see important mail at a glance and select it for processing in a non sequential manner unlike voice messaging and telephone answering machines. For this reason the primary interface was built on a PC.

With regard to the second, the selection of medium should be a function of both user preference and the type of message. The prototype inplemented voice and text. Given today's state of the art in multi-media PCs and transmission technology, image should be considered for implementation at this time.

FIGURE A

IN BASKET

	DATE	TIME	FROM	NODE/NO	SUBJECT	TYPE
1	10/01/92	9:00AM	Smith, T.	VMVIENNA	Bulletin Board	TEXT
2	10/01/92	8:30AM	Jones, W.	Ext. 3333		VOICE
3	9/30/92	6:30PM	?????	??????		VOICE
4	10/01/92	12:30PM	Grad, B.	(914) 555-1234	Washington Meet	TEL

Figure A illustrates the above points. If Message 1 is selected, a standard text message will be displayed. The user could reply to this message with text or if he preferred select the voice reply option and the system would turn on his speakerphone and record his message and send it to the appropriate address automatically. Or he could forward to an associate with a voice comment such as "Please handle".

Message 2, if selected, would cause the user's speakerphone to be turned on and the associated message to be played. Again if the user preferred not to respond with voice, he could send text.

INTEGRATED MESSAGING

(Underlying the above functions is both an enterprise-wide
and a personal directory system which provides the
appropriate address for E-mail, voicemail, telephone calls,
FAX, Pager etc. for the given individual.)

FIGURE A

IN BASKET

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4	10/01/92	12:30PM	Grad, B.	(914) 555-1234	Washington Meet	TEL

Message 3 illustrates a voice message which came from
outside the enterprise and the identification of the calling
party cannot be known to the system. (With the advent of
ANI (Caller ID) coupled with the personal directory selected
integrated messaging functions could be implemented).   If
selected, the voice message would be played but reply etc.
could not be automated as with message 2.

Message 4 shows a telephone call taken by a message center
and, via an interface to the system, inserted into the In
Basket. If selected, the system would telephone the calling
party. A trivial extension to the system would enable a FAX
center to send notification that a FAX had arrived for a
given individual.

Other Functions

Though primary access to the system was through a work
station in his office, secondary access was supported, both
from remote work stations as well as telephones.   Text-to-
Speech synthesis was employed to "read" text messages over
the telephone.

To enable notification of urgent new mail, a prototype
interface to a nationwide paging system was implemented.
Short text messages were sent using this capability.

Selected telephone features, based on capabilities in the
ROLM CBX and telephones, such as call screening and display
of calling number were demonstrated.

The functions that were supported in the prototype were
constrained by the functions already existing in *PROFS* and
PHONEMAIL. Since these two systems were functionally rich
(distribution lists, networking of messages etc.) the user
had available to him a full menu of choices through the
integrated interface. However differences between the two
systems showed through. Ideally the next step would have
been to converge the two systems to the point that the user
would only have to learn and deal with a common interface to
a multi-media messaging system.

Conclusion

It would seem that "Integrated Messaging" is an application
which inevitably will be developed. In numerous discussions
with customers, its importance in meeting the needs of the
communication intensive office worker was underscored. The
ingredients for its implementation are well understood.
Perhaps, what is needed, is a customer (or customers) who,
recognizing the importance of this requirement, would lead
and potentially invest in its development.

Client/Server?
It's Making Computing
Downright Democratic

by Ted Pollock
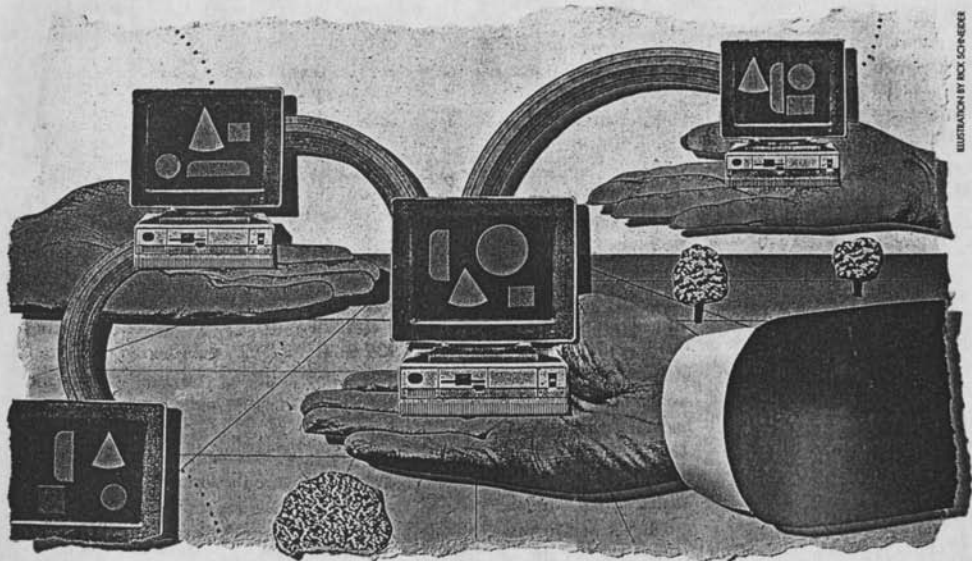
It came to the Soviet Union and its former satellites. It came to a number of Latin American countries. It came to parts of Africa. It even came to big business.

Why shouldn't it finally come to computing?

It's democracy, a trust in — and reliance on — the wisdom of the many, not the few.

With the benefit of hindsight, we can say that the trend toward democracy in the workplace began with the introduction of personal computers, which increased employee access to information.

Two other developments contributed to the trend: networks that allow PCs to be connected with other parts of a computing complex, and the movement toward more streamlined companies with smaller management chains.

In the search for more efficient ways to operate, many organizations — public and private — have been seeking productivity gains through employee empowerment, cross-functional team approaches to problems, and the elimination of bureaucracy wherever possible through downsizing.

In the process, businesses have flattened their organizations from the old hierarchical model and pared down intermediate staffs to speed up decision making.

Now the next logical step has been taken — the development of a computing model that reflects and enhances this democratization of the workplace: a move away from the old "glass house" to computing at the local, desktop level.

Its name: client/server, a new approach that takes advantage of the combined power of all the computer
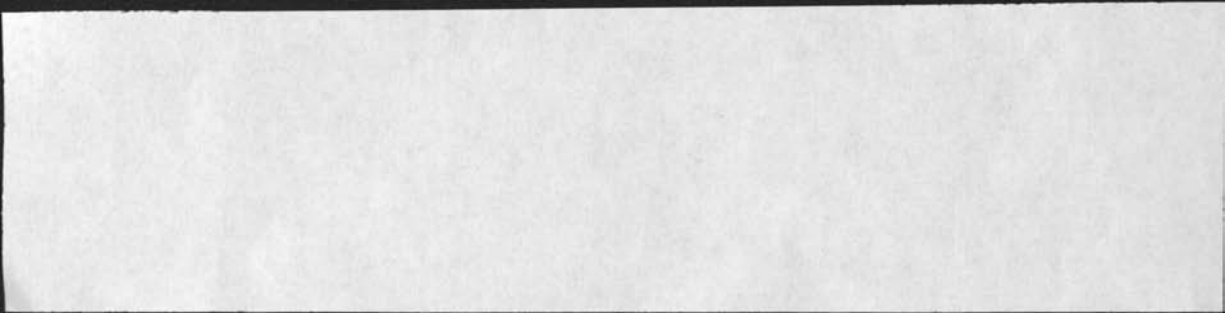
and banking products do not seem to be leading toward any
substantial opportunity.

. Federal Systems is focused on the federal marketplace and
has only begun to consider what products it might offer
from its vast technical experience.

Opportunities

The basic assumptions underlying this identification of potential
growth/expansion/acquisition opportunities for Sterling.

1. That Sterling's marketing opportunities are and will be found
   among the Fortune 1000 industrial and non-industrial companies
   that have large DP installations

2. That Sterling's sales will be made at both the enterprise and
   divisional level, directly, either on-site or via
   telemarketing to the DP shops that are providing support
   services to function/operational groups within and across
   divisions

3. That Sterling's preferred focus is a cross-industry systems
   and applications, and

4. That applicability across multiple platforms is a key
   consideration.

Within this framework, I have identified the following opportunity
areas:

1. Business applications
2. Advanced office systems
3. Education and training software and courseware
4. Document production, storage and retrieval
5. Systems management facilities and tools
6. Decision support tools and facilities
7. Integrated communications
8. Client/server systems management facilities and tools

Skills and technology know-how acquired and justified for all of
these areas will often be applicable to other areas as well. One
example is expert (knowledge-based) systems which will be applied
initially on customer source and support applications, but also is
applied to training and decision support. Another obvious example
is multi-media presentation facilities.

Following is some detail on the type of applications and functions
to be pursued in each of these opportunity areas:

This Advanced Office System approach involves covering the following areas:

1. Office systems capabilities:
   - input format and format conversion
   - validation
   - analysis
   - report
   - compression/decompression
   - encryption/decoding
   - secure access/change
   - storage
   - retrieval/search
   - display

2. Office systems functions:
   - spreadsheet
   - word processing
   - graphics
   - calendar
   - trigger
   - follow-up
   - log
   - phone and address lists

3. Communications (LAN, WAN, etc.)
   - input/transmit
   - tracking
   - destinations
   - acknowledgement
   - store and forward
   - facilities usage
   - output format

4. Specific business functions:
   - customer support
   - product documentation preparation
   - prospect info management
   - sales contact management

Sincerely,

Burton Grad
BG:8870

cc: Carol Anne Ances
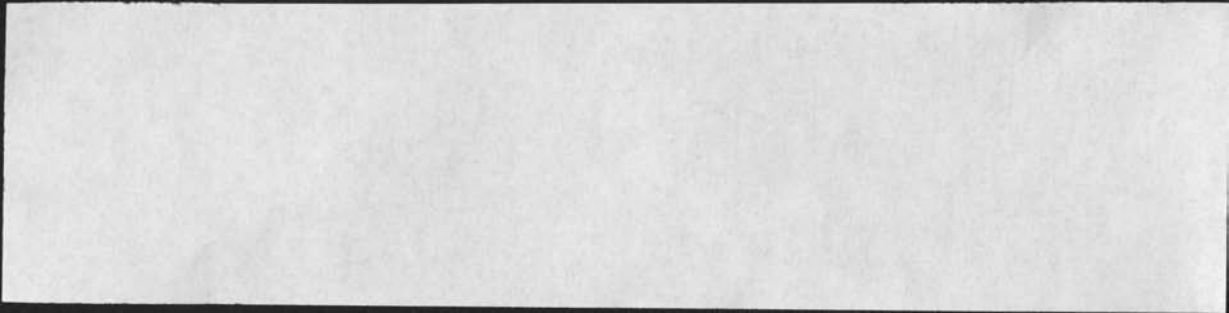
March 2, 1993

Mr. Phil Moore
Sterling Software, Inc.
8080 N. Central Expressway
Suite 1100
Dallas, TX   75206

Dear Phil:

You asked me to take a fresh look at where Sterling is now and at
some of the areas which should be of interest to Sterling given its
new ability to make major acquisition investments. You asked me to
avoid doing a grid-type analysis and to be more reflective than
analytic. So, here goes.

Current Status

The three principal business groups have different focus and
structure:

- Systems software is product-oriented, dealing with application
  development tools on both mainframes and Pcs, communications
  between PC and mainframe systems and mainframe system
  utilities.

- Ordernet is focused on both EDI services and EDI products for
  mainframe, midrange and micro computers. The application
  areas appear to be secondary.

- Federal Systems has primarily been involved in delivering high
  tech consulting and programming services along with operations
  and support for supercomputers.

Interestingly enough each has a different framework:

- Systems software concentrates on functional systems products,
  but has not provided significant offerings for midrange
  systems, nor broad systems functionality or client/server
  oriented products.

- Ordernet is focused on a particular application with
  interconnect services and forwarding products. It has not
  extended its offerings into substantive data base
  accumulations or transaction analyses. The retail, wholesale

Business Applications

- lead generation and tracking
- customer and prospect data bases
- sales records
- salary and commission payment systems
- customer satisfaction surveys
- expert systems for technical support
- product quality (defect) data and analysis

Advanced Office Systems

- in office communications

- group work flow management

- document creation, storage and retrieval, including imaging

- information services

Education and Training Software and Courseware

- tools for retraining the industrial work force
- expert systems for training and post-training support
- multi-media presentation of material
- specific course as applicable; e.g., tool/die making (?)

Document Production, Storage and Retrieval

- structured and restructured text

- graphics material

- query analysis and display techniques

- image mode

- data compression

- encryption

- indexing techniques

Systems Management Facilities and Tools

Decision Support Tools and Facilities

<u>Integrated Communications</u>

Client/Server Systems Management Facilities and Tools

Looking at the opportunity areas which are not being addressed by the current group suggests possibilities for Sterling investment and growth:

1. Cross industry business application

2. Advanced office systems

3. Education and training software and courseware

4. Documentation production and retrieval

5. AS/400 and UNIX systems management facilities and tools (on line transaction processing; data base storage and retrieval, etc.)

6. Decision support tools and facilities (knowledge-based systems, "artificial intelligence," etc.)

In trying to describe an Advanced Office System and indicate what role Sterling might play, we literally run into an excess of ideas:

- Work flow management
- Document creation
- Document storage and retrieval
- Messaging
- Document imaging
- Integrated office functions
- Marketing and service applications
- Object oriented data bases and programming
- Object linking and embedding

and on and on.

To try to bring some focus to this area, I have prepared a first cut document describing one possible view of the advanced office system market and some ideas on how to pursue these opportunities. It is in a format that might be useful in structuring other EOP or new group-oriented activities. I have not pursued potential connections within Sterling (e.g., EDI, Intelligence-base capabilities).

My definition of an Advanced Office System is to provide access to and use of data, text, image and invoice messages and files for each office worker whenever he or she is operating (in office, at home, on the road).
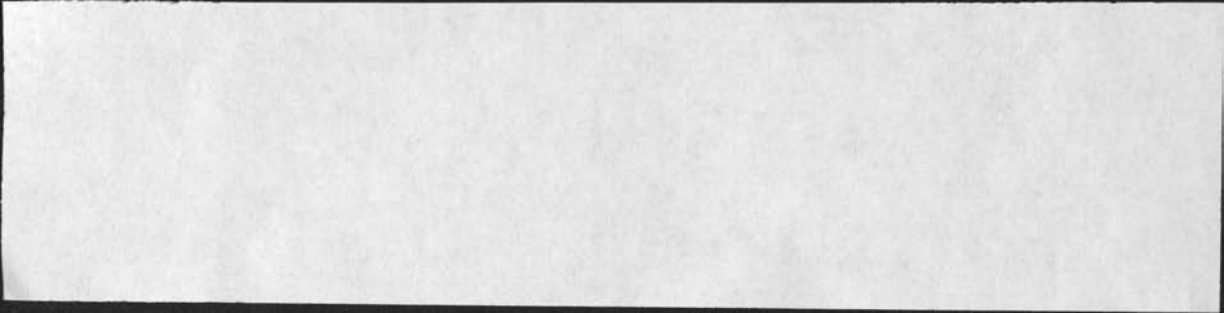
BusinessWeek

THE VIRTUAL CORPORATION

Big, complex companies usually can't react fast enough. Small, nimble ones may not have the muscle. What's the answer? A new model that uses technology to link people, assets, and ideas in a temporary organization. After the business is done, it disbands. It's called the virtual corporation. Just another management fad —or a vision of the future?

PAGE 98
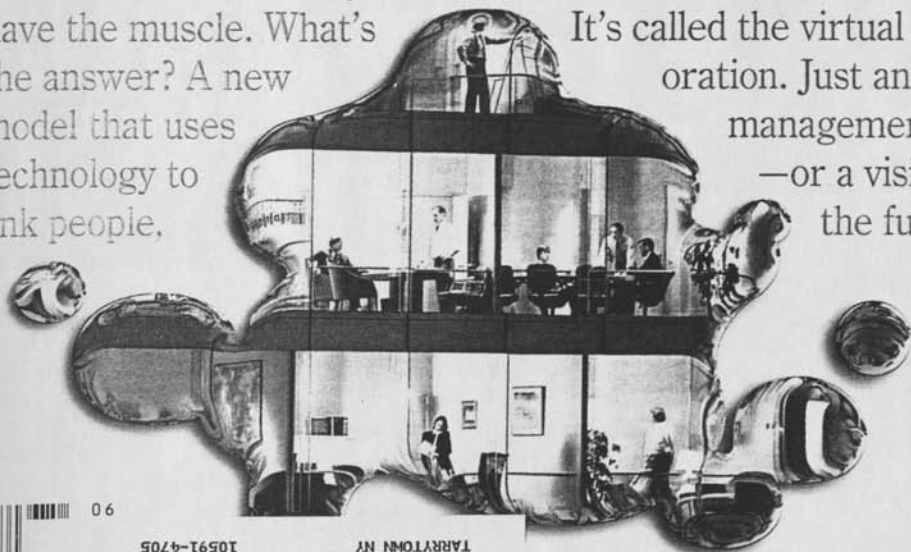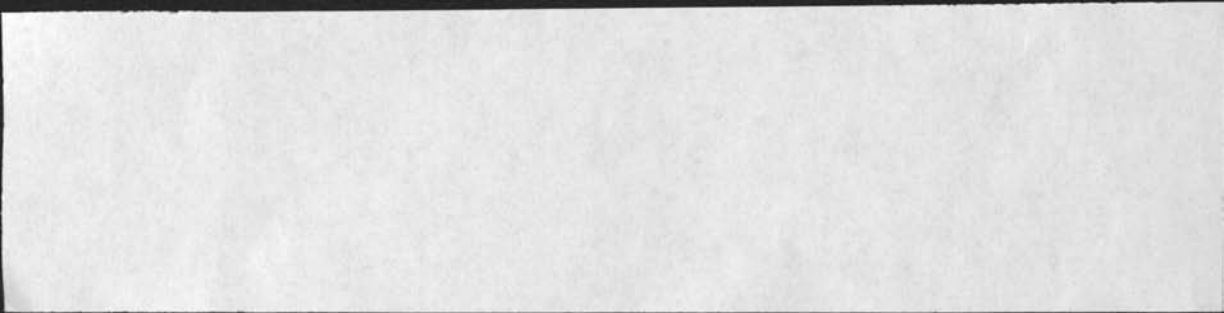
PROPOSED ACTION PLAN FOR

EMERGING BUSINESS INVESTMENT PROGRAM (EBIP)

Prepared for: Sterling Software, Inc.
                                 8080 N. Central Expressway
                                 Dallas, Texas 75206

Prepared by: Burton Grad Associates, Inc.
                                 235 Martling Avenue
                                 Tarrytown, New York 10591

Date: July 23, 1992

Table of Contents

Appendices

SECTION I. Scope and Objectives

In order to assist in exploiting new technology and market opportunities, Sterling wishes to initiate an Emerging Business Investment Program (EBIP).

100 % ownership

The concept would be to make minority investments in a variety of small companies which are addressing advanced technology or new market areas. Each investment would be made with an appropriate option to acquire ~~majority control~~ of the business at a later point in time. The intent is to make a number of relatively small investments to maximize the odds of opening up major new areas for Sterling.

What does Sterling bring to the table?

- money
- business counseling
- Board of Directors participation
- strategy
- relationships and contacts
- potential buyout

The kind of investments would focus on companies which have demonstrated technical practicality and are ready for significant market entry and growth.

The purpose of this study is to propose a plan of action for identifying and qualifying candidate companies which fit within appropriate selection guidelines. Further, this study will lay out materials on the type of agreement desired, areas of primary interest and a way to test out (debug) the approach.

SECTION II. <u>Process for EBIP</u>

1. Criteria and Guidelines

   Establish and, as necessary, revise criteria and guidelines to be
   used in sourcing, screening and selecting candidates. Establish
   and, as necessary, revise models for negotiation and agreement in
   terms of investment level and form, guarantees, rights, buyout or
   disposition formulas, controls over EB decisions, etc. (See
   Section IV.)

2. Sourcing

   Use various information sources to generate lists of suspects in
   various areas of technological or market interest. (See Section
   V.) Sources will include VC's, M&A firms, ICP new listings (and
   review of recent listings). Broadview and Geocapital, conference
   exhibitors (Comdex, etc.), SPA, ITAA, magazines, newsletters,
   etc. All of these suspect names will be put into a data base for
   classification, analysis and reference purposes.

3. Screening

   Using criteria (template) with available company data, determine
   which suspecta qualify as prospects. The information sources may
   be public or private. The criteria will focus on technical,
   financial and business elements.

4. Initial Contact

   With approval from the EBIP Committee, initial contact will be
   made with each prospective company to determine if it has any
   interest in further discussions and whether the company will
   provide information about its technology, status, investors and
   potential market on a non-disclosure basis.

5. Discussions and Negotiations

   Discussions will be conducted with those companies which meet
   both the criteria after examining information provided by the
   company and feedback from other knowledgeable people inside and
   outside Sterling. These negotiations will start with a
   presentation by Sterling on the nature of the projected
   relationship and are intended to see whether a fit satisfactory
   to both parties can be achieved. Legal, financial and operations
   advice will be obtained from inside Sterling before a firm letter
   of intent is offered. (See Section VI.)

6. Closing

   If the letter of intent is accepted, Sterling will perform a
   limited due diligence study and prepare and sign a final
   agreement.

7. On-going Relations and Monitoring

   After closing, a Sterling executive (Corporate, Group or
   Division) will be assigned the responsibility of maintaining an
   effective on-going relationship with the company. The individual
   will serve on the company's board and provide regular feedback to
   the EBIP process on progress, problems, opportunities and risks.

8. Dispositions

   At suitable intervals (semi-annually or annually), status of each
   investment will be reviewed and a determination made to:

   - continue relationship
   - increase investment
   - eliminate investment
   - obtain majority ownership of company

SECTION III. <u>Roles and Responsibilities</u>

The EBIP will be directed and coordinated by Phil Moore with direct support from Ed Lott. The two of them plus Sterling Williams and George Ellis will constitute an EBIP Guidance Committee to set up criteria, review progress, set negotiating priorities and limits and make decisions regarding dispositions.

The roles and responsibilities for each phase of the EBIP are shown below:

	Primary	Support
1. Establish and revise sourcing, screening, selection and negotiating criteria and guidelines	EBIP Comm.	PM
2. Sourcing (generate suspect lists)	PM	EL
3. Screening (qualify prospects -- internal)	PM	EL
4. Initial prospect contact to establish interest and obtain information	PM/EL	EBIP Comm.
5. Negotiations	EL/PM	Fin. & Legal
6. Closing	EL/PM	EBIP Comm. & Legal
7. Ongoing relations/monitoring	Assigned Exec.	PM
8. Disposition	Assigned Exec.	EBIP Comm. & Legal

Necessary administrative and technical support will come from the Sterling HQ staff, from Group and Division business development organizations and from third parties as necessary.

One other critical role which is not described above is the need for a person (small organization) to provide a home for acquired companies unless they fit within an existing group. This organization would provide management and guidance (as a group does) until the company (or related set of companies) has become large enough to justify setting up a separate group.

SECTION IV. <u>Rules for Selection</u>

In selecting candidates for further investigation, a template will
be established considering the nature of the company, financial
needs, ownership, technology, market, etc.

   Revenue -- $.5M-$5M (from product sales)
     Must be capable of becoming a $20M or larger company

   Profits -- not significant

   Money needed -- $.25M-$2M (Sterling maximum)
     Could seek additional investment if more money needed (up to
     $5M)

   Ownership -- sole proprietor
             dominant owner
             multiple owners
             not VC
             not division of larger company

   Size of unit sale -- < $100K software (unbundled)
                    > $10K (multiple copies of program)

   Length of sales cycle -- not a concept sale
                   < 6 months sales cycle

   Level of support -- Not changing the base system
              Low requirements

   Level of customizing -- none

   Technological status -- technology must be operational in a
   working product implementation

   Technological areas -- within target grid cells
                framework products
                priorities

SECTION V. Technologies and Applications

The following is an initial list of technologies, market and application areas in which Sterling may have particular interest. After reviewing the grids (see Appendix A and Appendix B), this list should be sharpened and better focused.

- integrated multi-use databases for image and text, query, display, analysis

- modern application building tools for various workstation/server operating systems

- integrated image, text, voice processing (e.g., reading, interpreting and converting from one mode to another)

- complex system management, monitoring, measuring and cost allocation on a dynamic and static basis

- comprehensive business customer support systems (documentation, training, hot line, maintenance, on-line help, diagnosis)

- LAN administration system software

- software distribution to users including code and all support materials, both initially and for maintenance and upgrade

- customer sales and support system: product and processing service

- systems software for IBM RS 6000/AIX

- UNIX -- open system flavor; DEC, HP; systems software

- work flow management (groupware?) for service organizations (include documentation management?); managing flow, storage, interpretation and responses

The market focus should continue to be on large users of computer systems and application programs (e.g., Fortune 1000), both in the U.S. and internationally. The biggest difference for Sterling will lie in the nature and types of environments and platforms to be supported. Against the historical concentration on IBM mainframe programs, the primary emphasis will be on client/server configurations (which may include LANs, RISC machines and mainframes).

SECTION VI. EBIP Model

The basic deal for an EBIP investment would be as follows:

. Investment

Sterling would provide a specified amount of money (under $2M)
for a period of time (possibly three years) probably as a
convertible note with detachable warrants for stock to be
exercised at a specified price and minimum time frame.

Sterling would have the right to buy ~~a majority interest~~ *100% ownership* in the
company.

. Security

Sterling would be granted non-exclusive rights to use the
technology on a royalty basis (against remaining balance on the
note). There would be some reasonable restrictions on actions
which can be taken by the company without Sterling approval
(investments, commitments, licenses, grant of rights to others,
etc.). Sterling would place one member on the Board of
Directors.

. Disposition

There would be a formula agreed to in advance for Sterling to
dispose of its investment or to obtain majority control.

One approach to this would be a valuation formula which could be
applied by Sterling at a time of its selection (minimum/maximum)
based on a combination of multiples of trailing revenues,
profits, balance sheet values, growth rates, etc. This buyout
price could include additional considerations for future
earnings, non-compete, employment agreements, etc.

The problem is to come up with a formula that doesn't just seem
reasonable at the time of the original investment, but will
appear fair and equitable at the time that Sterling wishes to
exercise its buyout rights. The relative financial power of
Sterling versus the EB Company may make the deal seem too one-
sided and lead to bad feelings or even manipulation by the EB
Company.

Therefore, another alternative may be more effective. This would
involve a Solomon-like (bible, not investment banker) approach.
Sterling would set a price. At the price, the owner(s) of the EB
Company could buy Sterling's warrants (and pay off the note) or
sell their stock to Sterling. Sterling could even offer to lend
them the money to buy out Sterling's interest. This would also
handle the disposition issue.

SECTION VII. <u>Concerns</u>

EBIP is quite a unique undertaking for a software and services company. While companies like IBM and DEC have invested in certain businesses, these have generally been substantial sized operations and the interest was in partnerships and relations, not in majority control.

The model being followed is more of a VC approach, but the planned majority ownership is a different twist.

The major concerns are:

- Making the deal attractive to the company owner and to Sterling

- Making the deal simple enough to negotiate quickly with minimum legal costs to the company owner

- Setting up and operating effective procedures for collection, classifying and finding candidate companies; keeping track of contacts, negotiations and progress

- Differentiating these candidates from acquisition candidates

- Maintaining Sterling commitment and follow-through since this is a relatively long-term investment

- Having a "group home" for the companies which are acquired

SECTION VIII. Action Recommendations

The EBIP concept is novel, but given Sterling's desire to get into
new businesses on a "look and see" basis, this seems like a sound
approach to take. Therefore, we recommend that the following
actions be taken:

1. Review this proposed plan and structure. Modify as needed and
   then use it as the mission statement and operating plan for
   EBIP. Assign people and responsibilities.

2. Set up one focus area as a prototype to work through sources,
   processes and procedures along with determining the
   effectiveness of the selection template and the acceptability
   of the proposed investment/buyout deal. Customer Service is
   the suggested focus area.

3. Establish necessary administrative responsibilities (internal
   or external) to collect, classify and maintain data base and
   control of the EBIP process.

4. Set up regular meetings (monthly) of the EBIP Committee.

5. Set up measurements and targets to determine relative success
   of the program.

6. If prototype appears to work, extend to 3-4 key areas.

Proposed Focus Area and Evaluation Procedure

Customer Service

    A. <u>Post Sales Activities</u>

        delivery of code, manuals, guides, etc.
        installation and testing of product
        maintenance releases
        product upgrades (enhancements)
        add-on deliveries
            additional features
            additional users
            additional related products

    B. <u>Customer Service</u>

        problem reporting/tracking
        problem analysis
        problem determination (bug, procedure, enhancement, training)
        providing resolution information
        technical fixes
            one on one
            general
        problem backlog analysis
        analysis and reports on maintenance: problems, causes,
            resolutions

    C. <u>Customer Satisfaction</u>

        customer satisfaction surveys
        reports on customer requirements
        analysis of customer satisfaction progress

Evaluation Procedure

    A. Collect information on candidate companies from ICP and direct
       contacts

    B. Apply template to select a few high probability candidates

    C. Have preliminary (idea testing) discussions with a few
       candidates to get their impressions and feedback

    D. Assess likelihood of closing any of these candidates

    E. Recommend changes to make process more effective.
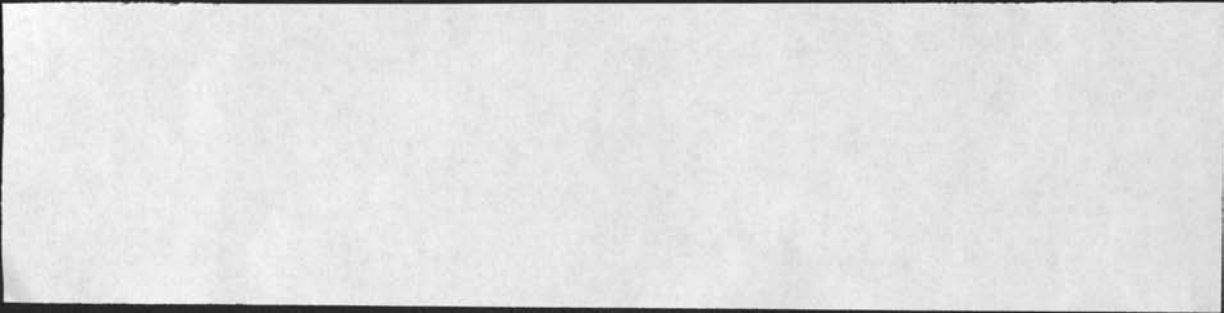
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4 - complex system management, monitoring, measuring and cost allocation on a dynamic and static basis

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7 - software distribution to users including code and all support materials, both initially and for maintenance and upgrade

8 - customer sales and support system: product and processing service

9 - systems software for IBM RS 6000/AIX

10 - UNIX -- open system flavor; DEC, HP; systems software

11 - work flow management (groupware?) for service organizations (include documentation management?); managing flow, storage, interpretation and responses

12 -

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Automated Extended Message Handling (image, text and voice)

Technology Area Description #1

Subject: Integrated multi-use data bases for image and text, query, display, analysis

Description: Provide for receipt, storage and indexing of data bases which contain structured data, unstructured text, technical and scientific reference information and image forms. Appropriate query, analysis and display techniques would be available for seeking, searching and correlating this material; use of decision support techniques to improve efficiency/effectiveness would be available. This should run on a wide range of client and server machines/systems

**Technologies
Needed:**
- Information indexing
- Information searching algorithms and decision support concepts
- Compaction and indexing techniques for images
- Client/server systems and languages

**Applicable
Sterling
Technologies:**
- Selected Answer programs
- Fed Systems work for Intelligence Agencies

**Market
Opportunities:** . Large U.S. and global companies

**Available
Products/
Companies:**
- image processing (IBS, etc.)
- text management (Infodata, etc.)
-
-
-
-

<u>Technology Area Description #2</u>

Subject: Modern Application Building Tools

Description: New application design and development tools are
              needed to build applications which will operate in a
              client/server architecture and be "compatible" for
              various client and server platforms.   The tools
              themselves also need to operate in various
              client/server environments in an integrated fashion.

**Technologies
Needed:**
              . Upper CASE tools
              . Lower CASE specifications/programming languages
              . Multi-environmental support
              . Intermediate translation language
              . Object oriented libraries and programming tools

**Applicable
Sterling
Technologies:** . Mark and Dylakor experience

**Market
Opportunities:** . All user companies of various sizes both U.S. and
              international

**Available
Products/
Companies:**   . Forecross
              . Object Oriented Programming Systems

Technology Area Description #3

Subject: Integrated Image, Text, Voice Processing

Description: Provide ability to analyze and interpret content of
text, image and voice "documents" and to convert this
into a character storage form.   Ability to generate
text, image or voice output from character storage
form.

**Technologies
Needed:**
- Voice analysis to generate words
- Image analysis to generate words
- Analysis of text (words) to establish meaning for
indexing
- Image generation from formulas
- Voice generation from characters/word storage

**Applicable
Sterling
Technologies:**
- Fed Systems work for Intelligence Agencies

**Market
Opportunities:**
- Large U.S. and global enterprises

**Available
Products/
Companies:**
- Voice recognition
- Voice generation
- Image analysis
- Image generation
- Text analysis

8425

RS 6000/AIX System Software #9

Subject: The new RISC machines require effective systems software
(OLTP, DBMS, Utilities, Resource Control, etc.) to be
able to be used successfully in business environments.
While performance is an outstanding attribute,
simplicity of use (a la AS/400) and efficiency of use (a
la IBM mainframes) will be essential for extended
business use. This envisions a suite of programs
comparable to those available for the AS/400.

Technology Area Description #10

Subject: UNIX System Facilities for UNIX Environments -- open
                     systems with additional cover

Description: A comprehensive set of system management facilities
                     (like those provided for VM) which would run on
                     various UNIX platforms. The functions would mimic
                     those needed for mainframe and midrange systems:
                     storage management, network management, utilization
                     of system resources, usage charge formulas, control
                     systems, etc.

**Technologies
Needed:**   . individual system utilities and system services
                        programs or technology

                     . comprehensive tools for building UNIX-based
                        applications for multiple UNIX platforms

**Applicable
Sterling
Technologies:**   . system programs from Software Labs or from Mark

**Market
Opportunities:**   . Risc buyers (IBM, HP, DEC)
                     . strong opportunity in Europe
                     . larger LAN networks

**Available
Products/
Companies:**   .
                     .
                     .
                     .
                     .
                     .

8425

Work Flow Management #11

Subject: This groupware type product would be designed
                     primarily for service organizations to manage the
                     creation, flow, storage and maintenance of
                     documentation and other materials within a working
                     group (organizational or ad hoc).

Description:
Technologies
Needed: . Document creation (word processing)
                     . Integration of graphs and images within documents
                     . Multiple person access to and controlled editing
                       of documents
                     . Document "publishing" tools
                     . Tracking all changes, modifications and
                       distributions
                     . Individual work desk management
                     . E-mail facilities
                     . Report specification
                     . Statistical tools

Applicable
Sterling
Technologies: . Zim
                     .

Market
Opportunities: . Various sized business and government operations;
                       can be used on a department or work group basis
                       since it is essentially free standing.

Available
Products/
Companies: . Groupware
                     . Document preparation and editing
                     . Change management
                     .
                     .
                     .

Technology Area Description #12

Subject: Automated Extended Message Handling

Description: Provide for receipt, storage, analysis, delivery and
presentation of data, text, image and voice messages
within an enterprise and from/to external enterprise
"partners"

**Technologies
Needed:**
- electronic data/text message handling (e.g.,
  entry, store and forward)
- image, scanning, storage and transmittal
- voice receipt, storage and transmittal
- message identification techniques (subject,
  sender, receiver)
- content indexing for data and text
- content analysis for image and voice
- transformation from any form to any form for
  delivery and "display"

**Applicable
Sterling
Technologies:**
- EDI
- Intelligence Agency Analysis techniques

**Market
Opportunities:**
- Large, U.S. and global enterprises
- High value for timely communication and access to
  messages

**Available
Products/
Companies:**
- Office systems
- Text-based retrieval
- Image processing
- Message handling
- Voice recognition
- Voice generation

8425
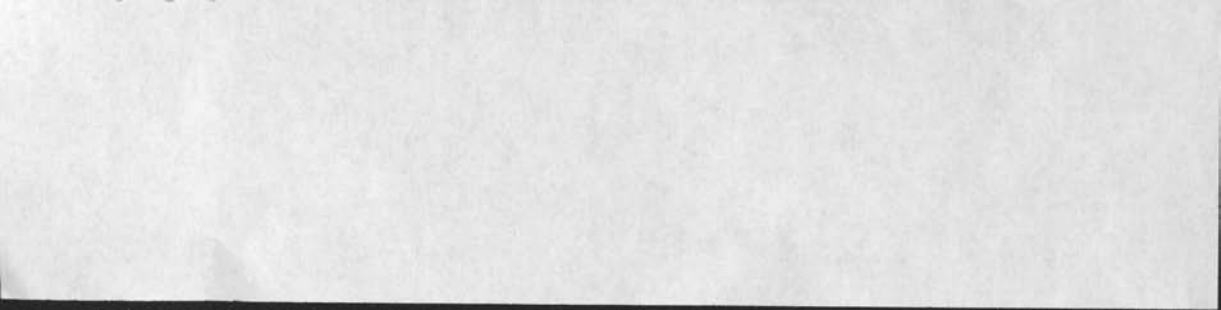
January 14, 1992

Mr. Phil Moore
Sterling Software, Inc.
8080 N. Central Expressway
Suite 1140, LB 53
Dallas, Texas 75206

Subject: Strategic Planning

Dear Phil:

As a follow-up to the 12/16-12/17 meeting, you asked me to do two
things:

1. Prepare a new grid for client-communications-server versus
   application tools (and "stuff").

2. Analyze the ICP Directories for sales and marketing management
   and customer service programs. The purpose of this analysis
   was to identify products of interest, and determine the
   companies which market these products.

Attachment A is a draft of the list of functional areas and
platforms which were to be used as the basis for a new grid. These
are preliminary at best and I would like your comments on them,
especially in the Communications section of the Platform Axis. I am
even concerned about whether this is a useful axis.

Attachment B is a summary of the analysis of the entries in the ICP
Directories; Carol Anne Ances did the bulk of the analysis work on
this attachment. Attachment B includes the following:

1. An identification of the specific functions required in
   marketing, sales and customer support packages (Pages 1-2 of
   Attachment B). The corresponding letter (A, B, C and D)
   identifies the functional grouping on the attached Product
   Summary sheets.

2. A Selected Product Summary (Pages 3-4 of Attachment B).

3. Following the Summary is information on the vendor of each
   listed product (Pages 5-7 of Attachment B).

The criteria used to select packages for this list include:

- run on a wide range of platforms and/or be written in widely-
  supported languages

- provide a significant number of required functions in one or
  more product areas.

The selected products were rated from 1 to 4 (low to high) to
indicate how well each product provided the required functions
(blank means the product does not provide any functions in that
area). This rating is shown under the "Functions" column on the
right side of the Selected Product Summary sheets (Pages 3-4).

We have included a number of PC-only products. Although the
description of the functionality appears good, additional study is
needed to determine just how rich these packages are. Although they
might just be glorified data base packages, they still might be
considered as front-end packages that can pass data into other more
complex systems.

Although the Summary includes prices, these are not consistent in
the ICP Directory. In some cases, it is the total price and in
others it is price per station. Additional study is needed to
determine the actual price for each platform.

The key findings of the review of available products are:

- There are not any major software industry companies involved in
  the sales/marketing/customer service activities from a non-
  accounting standpoint. D&B has a product, but it is only for
  sales analysis.

- There are no products available which cover the full range of
  needed functions or even a major portion of these functions; many
  of the programs are primarily data base management products.

- Only a few of the products cover the full range of platforms or
  have been developed using tools which permit easy porting; data
  base coverage is spotty.

. While some companies reference professional services for
  customization to ensure that the delivered product meets customer
  needs, most appear to deliver a packaged product.

. There are also a number of industry specific application products
  which address some or all of these functions, but we have not
  researched these.
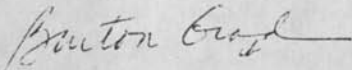
It appears that a further examination of the selected products and
companies might identify a way for Sterling to provide a
product/service capability in the customer management systems area.
While it will not provide a single "buy" solution, there may well be
a way to put key products (and companies) together so as to have a
reasonable customer base (and revenue stream) and technology base
for supporting a wide range of client-server configurations.

There are at least 5 companies where products appear to meet a
number of the principal acquisition (or investment) criteria:

. Brock Control Systems, Inc.
. Technology Development Inc.
. Interactive Systems
. Hi-Tek Computer Products Corp.
. Scientific Marketing

While this analysis has focused on the specialized functions of
sales and marketing management and customer service, the nature of
the solutions available suggests that a well designed document
management system (with data and text management functions, e.g.,
multi-media) could be the foundation for a comprehensive customer
management system to be offered by Sterling, as well as a base for
future information system offerings.

Sincerely,

Burton Grad

Burton Grad
BG:8017

cc: Ed Lott

New Grid -- Functional Axis

Application Systems

Sales/Marketing Management

Maintenance and Customer Service

Employee Management

Inventory and Distribution

Contract

Regulations

Import/Export

Transportation

Quality Management

Training

Product Design and Development

Product Production

Financial Management

Executive Information

<u>New Grid -- Platform Axis</u>

1. Client Platforms

   a. PC

        DOS
        DOS/Windows
        OS2
        MAC OS
        UNIX
        Others

   b. Workstation

        UNIX
        OS2
        DOS/Windows (NT)
        SUN OS

2. Communications

   a. Local Area Networks

        Netware (Novell)
        LAN Manager (MS)
        Vines (Banyan)
        IBM - LAN Server (IBM)

   b. Wide Area Networks

3. Servers

   a. PC/Workstation (LAN Server)

        OS2
        DOS/Windows (NT)
        UNIX
        MAC
        Proprietary

   b. RISC Systems (HP, DEC, IBM)

        UNIX
        Proprietary

   c. Midrange

        VAX/VMS
        AS/400
        UNIX
        Proprietary

8017

d. Mainframe

    VM
    VSE
    MVS

In addition, there are key extensions related to these platforms.

on-line transaction processing
time sharing
hierarchical data bases
relational data bases
information type
   (data, text, graphics, image, voice)
language used (C, Object Oriented, Assembler, BASIC, COBOL, etc.)

Marketing, Sales, Customer Support Functions

A. <u>Marketing</u>

    market research
    service/product requirements (general)
    suspect identification
    suspect contact
    prospect qualification
    product packaging/pricing
    direct mail/mail merge
    telemarketing
    developing marketing materials
    distributing marketing materials
    trade shows, conferences, etc.
    advertising
    yield analysis

B. <u>Sales</u>

    initial contact
    follow-up
    specific customer requirements (customer needs vs product
    capabilities)
    demos
    presentation
    competitive analysis
    contracts
    closing
    order scheduling
    order entry
    sales forecasting
    pipeline management/analysis
    win/loss analysis
    account management
    salesrep performance against targets/quotas
    yield analysis

C. <u>Post Sales</u>

    delivery
    installation
    add-on sales
       additional features
       additional users
       additional products
    product upgrades
    replacement sales
    maintenance
    enhancements
    analysis
    performance
    customer satisfaction

8017

D. <u>Customer Service</u>

    problem reporting/tracking
    problem analysis
    problem determination (bug, procedure, enhancement, training)
    providing resolution information
    technical fixes
       one on one
       general
    backlog analysis
    analysis and reports: problems, causes, resolutions

Selected Product Summary

Product Name	PC	WS	LAN	Mid	MF	Price ($)	# Users	A	B	C	D
ACT!	X		X			$495	–	1	1	–	–
CallBack	X	X	X	X		–	70+	1.5	1.5	–	–
CEO SALES	X					$199	250+	–	1	–	–
Cogent.CIS				X	X	–	–	1	2	–	–
Customer Assistance Tracking System (CATS)	X			X		$5K – $125K	104			–	–
Customer Response System	X		X			$595	–				1.5
Dun's Sale Search	X					$495	125		1		
E-Power	X		X			$495–$1995	500+		1		1
Eighty/20	X		X			$395–$995	500	1.5	1.5		1.5
EMIS I/ EMIS II	X		X			$695–$2995	1750	1	1		
EXPRESS: Sales Management System	X		X	X	X	$125K	–		2		
EXSELL	X	X	X			$395–$1495	4000+	1	1.5		
LEADtrack: Sales Lead Management Software	X					$1875	100+	1			
MarketFax	X		X	X		$2995–$8995	3500	2	2		
Marketing Management System/Plus (MMS/Plus)	X		X	X		$995– $15,800	1200	1			

The Platform columns are grouped under "Platform" (PC WS LAN Mid MF) and the A B C D columns are grouped under "Functions".

8017

Product Name	PC	WS	LAN	Mid	MF	Price ($)	# Users	A	B	C	D
			Platform			Price ($)	# Users		Functions		
Marketing Management System/Project Tracking (MMS/PT)	X					$2500-$5000	200+	1			
Marketrieve Plus	X			X		-	110	1.5	2		
National Sales Territory Management		X		X		-	-	1.5	1.5		
OMNITRAC Sales Management System	X	X		X		$1100-$15,000	120	2	2		
PROFIT$	X	X		X		-	50+	2	1.5		
SaleMaker	X	X	X	X	X	$995-$100,000	110	2	2		
Sales and Customer Support Activity Manager		X		X		-	6000	2	2		2
Sales Management Solutions	X	X		X		$695-$1995	250,000		2		
Sales Vision	X					$295-1995	1500	1.5	1.5		1.5
Sales/ Marketing Business System	X	X		X		$1250-$7000	350+	2	1.5		
SPM Sales Prospecting Marketing	X	X	X		X	$695-$995	500+	2	2		
SPS	X				X	$750-$1250	75+		1.5		

Selected Product Summary

Product Name	Company Name and Address
ACT!	Conductor Software 1625 W. Crosby Road-Suite 132 Carrollton, TX 75006
CallBack	Abend Associates, Inc. 265 Winn Street Burlington, MA 01803
CEO SALES	Commercial Micro, Inc. P.O. Box 1998 Roswell, GA 30077-1998
Cogent.CIS	Cogent Information Systems, Inc. 830 Morris Turnpike Short Hill, NJ 07078
Customer Assistance Tracking System (CATS)	LSW, Inc 8240 Professional Place Landover, MD 20785
Customer Response System	Syspro Corporation P.O. Box 243 Orinda, CA 94563
Dun's Sales Search	Dun's Marketing Services 3 Sylvan Way Parsippany, NJ 07054
E-Power	SourceMate Information Systems, Inc. 20 Sunnyside Avenue Mill Valley, CA 94941
Eighty/20	EIGHTY/20 Software Mankato, MN 56001-3128
EMIS I/EMIS II	EMIS Software, Inc. 901 N.E. Loop 410, Suite 526 San Antonio, TX 78209
EXPRESS: Sales Management System	Information Resources, Inc. 200 Fifth Avenue Waltham, MA 02154

EXSELL

Excalibur Sources, Inc.
131 Village Parkway
Building Four
Marietta, GA   30346

LEADtrack:
Sales Lead
Management
Software

LEADtrack Corporation
620 Colonial Park Drive
Suite 100
Roswell, GA   30075

MarketFax

Scientific Marketing
23046 Avenue De La Carlota
Suite 602
Laguna Hills, CA   92653

Marketing
Management
System/Plus
(MMS/Plus)

JEB Systems, Inc.
32 Daniel Webster Highway
Suite 12
Merrimack, NH   03054

Marketing
Management
System/Project
Tracking
(MMS/PT)

JEB Systems, Inc.
32 Daniel Webster Highway
Suite 12
Merrimack, NH   03054

Marketrieve
Plus

Marketrieve Company
Londonderry Commons
Suite A-3
Londonderry, NH   03053

National Sales
Territory
Management

Cogent Information Systems, Inc.
830 Morris Turnpike
Short Hills, NJ   07078

OMNITRAC
Sales
Management
System

Interactive Systems, Inc.
600 Suffolk Street
Lowell, MA   01854

PROFIT$

Delta Business Systems, Inc.
5900 Princess Garden Parkway
Suite 711
Lanham, MD   20706

SaleMaker

Technology Development, Inc.
59 Stiles Road
Salem, NH   03079

Sales and Customer Support Activity Manager	Brock Control Systems, Inc. 2859 Paces Ferry Road Suite 1000 Atlanta, GA 30339
Sales Management Solutions	Real World Corporation 282 Loudon Road P.O. Box 2051 Concord, NH 03302-2051
Sales Vision	System Vision Corporation P.O. Box 281857 San Francisco, CA 94128-1857
Sales/ Marketing Business System	JKL Marketing 422 Industrial Drive Maryland Heights, MO 63043
SPM Sales Prospecting Marketing	Hi-Tek Computer Products Corp. 308 W. Erie Suite 500 Chicago, IL 60610
SPS	Saratoga Systems, Inc. 1550 S. Bascom Avenue Suite 330 Campbell, CA 95008

PRICING: $3,500.00 Purchase; $112.00/Mo. 60 Mo. Lease
P38577

XIOX Resale Billback Series
PLATFORMS: IBM PC, PC-XT, PCjr ☐ MS-DOS
LANGUAGES: BASIC
NUMBER OF CLIENTS/USERS: 37
DESCRIPTION: PRO-Time manages telephone systems for attorneys, cpas, architects, contractors, advertising agencies — anyone who bills expenses to a client. The system automatically posts charges to a client's account as calls are make. It also does billing of professional fees to clients' accounts by dialing a code into the phone. Prevents employee phone abuse by monitoring all extensions. Warranty/guarantee: 12 months. Program maintenance terms: Maintenance and enhancement are available for $350.00 per year. Manual is included in price of program.
SPECIAL CONFIGURATION REQUIREMENTS: 256K
CONTACT DATA: XIOX Corporation ☐ 577 Airport Boulevard ☐ Suite 700 ☐ Burlingame, CA 94010-2024 ☐ TELE. 415-375-8188
PRICING: $3,500.00 Purchase; $112.00/Mo. 60 Mo. Lease
P38578

31.7.2 Marketing and Sales Support

SELLit
PLATFORMS: IBM System/36, AS/400 ☐ OS/400, SSP
LANGUAGES: RPG II/III/400
DESCRIPTION: SELLit is a sales information system that enables executives, sales managers and sales reps to automate the "entire" sales process. SELLit's features include follow-up information, customer/sales inquiries with sort/selection capabilities, update and analyze customer information, order processing, product and price information, create and print sales letters and labels and allows users to leave phone messages right on the terminal. SELLit also allows printing out various information reports. For example, Progress Reports allows viewing by detail and summary, totals for proposals, orders, new customers, follow-up activity and profitability.
CONTACT DATA: Eva Freud ☐ Vice President of Sales and Marketing ☐ TenMan Systems, Inc. ☐ 1855 Mount Prospect Road ☐ Des Plaines, IL 60018 ☐ TELE. 708-699-7500
PRICING: Price Upon Request
P35649

ACCESS Executive Marketing Analysis System
PLATFORMS: DEC VAX; IBM 360/370, 30XX Series, 43XX Series, PC; MS-DOS-based Hardware; Prime; UNIX-based Hardware ☐ VMS, IBM DOS, MVS, VM, PRIMOS, UNIX, MS-DOS
LANGUAGES: FORTRAN
NUMBER OF CLIENTS/USERS: 25
DESCRIPTION: ACCESS Executive is a menu-driven, interactive marketing analysis system that integrates internal shipment data with syndicated data sources such as SAMI, Nielsen, Majers and NABSCAN. ACCESS reports, complete with presentation- quality charts and graphs, provide marketing managers with top-line or detailed information on assessing promotions, monitoring pricing strategies, double checking sales forecasts and managing sales accounts. ACCESS Executive can directly retrieve data from SQL/DS, DB2 and Oracle. A 90-day warranty is included; maintenance is 15 percent of purchase price per year thereafter. Three to four days of training are also included.
SPECIAL CONFIGURATION REQUIREMENTS: Special Configuration Requirements: TSO
CONTACT DATA: Norman White ☐ Vice President ☐ Dialogue, Inc. ☐ 19 Rector Street ☐ New York, NY 10006 ☐ TELE. 212-425-2665
PRICING: $2,500.00— $175,000.00
P24016

ACS-Query
PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: FORTRAN
DESCRIPTION: ACS-Query is a computer-aided telephone interviewing (CATI) system for market research and telemarketing. Users can write questionnaires, conduct interviews, record verbatim responses, and obtain frequency counts, cross tabs, and listings of open-end responses. The

program has a full range of call management features, including auto dialing, automatic call scheduling, sample management, quota control, and automatic tracking of disposition codes. On screen monitoring of interviewers is feasible. It is not copy protected.
SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM, 286 or 386 FileServer connected by Novell Advanced 286 network, SMC ARCNET cards
CONTACT DATA: Amy J. Yoffie ☐ Marketing Director ☐ Analytical Computer Software, Inc. ☐ 434 Sandford Avenue ☐ Westfield, NJ 07090 ☐ TELE. 201-232-2723
PRICING: $2,000.00 and Up
P36364

ACT!
PLATFORMS: IBM PC, PC-XT, PC-AT; Intel 80286, 80386, 808X; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: Assembler, C Language
DESCRIPTION: ACT! is a professional contact management system used to more effectively manage the day-to-day activity of any business person. ACT! seamlessly integrates database, word processing, telemarketing and time management functions in a PC based software program that will benefit salespeople, managers, professionals, executives and secretaries. ACT! also includes an auto dialer, an instant record search that will locate any record or group of records, an expense module and the ability to create reports.
SPECIAL CONFIGURATION REQUIREMENTS: 460K RAM, hard disk recommended
CONTACT DATA: Catherine Block ☐ 1625 W. Crosby Road ☐ Conductor Software ☐ Suite 132 ☐ Carrollton, TX 75006 ☐ TELE. 214-418-1866
PRICING: $395.00
P34955

Analyzing Sales Performance Using Lotus 1-2-3
PLATFORMS: IBM PC; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: C Language
DESCRIPTION: Analyzing Sales Performance Using Lotus 1-2-3 helps the user learn how to analyze the sales performance of people, products, sales territories and customer accounts. It provides step-by-step instruction in the techniques of sales analysis with the use of templates. Features include: 1) Analyzing accounts with return on selling time invested; 2) Analyzing the performances of individuals or groups; 3) Forecasting sales and setting quotas; 4) Analyzing the workload and determining how many salespeople are needed to do the job; and 5) Tracking and reporting sales commissions.
CONTACT DATA: Intellisance Corporation ☐ 1885 Lundy Avenue ☐ San Jose, CA 95131 ☐ TELE. 408-432-0430 or 800-829-1213
PRICING: $179.95
P28302

ASIS (Automated Sales Information System)
PLATFORMS: IBM PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: COBOL
DESCRIPTION: ASIS (Automated Sales Information System) is designed to provide management, salesmen, and support staff with information about their accounts. ASIS provides for: New Orders, Open Orders, Change Orders, Shipments, Debit/Credit Data, Cancellations, Work-In-Process Inventory, Finished Goods Inventory, Sales History, Account Coverage History, Account Call Reminder, Customer File, Prospective Customer File, and Sales Call Activity. Administrative features include: Memo Pad, Weekly Calendar, To Do List, Electronic Mail, and Calculator.
CONTACT DATA: Computer Technology Consultants, Inc. ☐ 2845 Eastern Boulevard ☐ York, PA 17402 ☐ TELE. 717-755-3391
PRICING: $495.00
P33713

BAS Sales Analysis
PLATFORMS: IBM PC-AT; NCR Tower; UNIX-based Hardware ☐ UNIX, XENIX
NUMBER OF CLIENTS/USERS: 1,000
DESCRIPTION: The BAS Sales Analysis package reports historic customer, salesman and inventory information and calculates the profit contributions of each. Sales transactions are available at detailed and summary levels. Sales can be analyzed by product, customer, salesperson, territory, warehouse, branch, route, etc. The package features: customer purchase history; inventory sales history; history available online through a powerful

query capab
ance analysi
— discount a
tory analysis
CONTACT DAT
P.O. Box 23-
PRICING: $1,8
P37429

BAS Sale
PLATFORMS:
XENIX
NUMBER OF C
DESCRIPTION:
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sequences in
tiple letters n
sales activity
CONTACT DAT
P.O. Box 234
PRICING: $1,8
P37431

Benefit M
PLATFORMS: I
based Hardw
LANGUAGES: C
DESCRIPTION:
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based on mo
mine: segme
packaging, di
CONTACT DAT
Sciences Co
215-757-401
PRICING: $24.
P31839

Billing/Sa
PLATFORMS: I
LANGUAGES: R
NUMBER OF CL
DESCRIPTION:
grams design
invoices and :
support and
Accounts Rec
tems are prov
tions. Comple
CONTACT DATA
vard ☐ Suite
704-535-7180
PRICING: $2,50
P28024

Bullseye
PLATFORMS: A
based Hardwa
DOS, MS-DO
NUMBER OF CL
DESCRIPTION:
vestments, co
monitors sale
responsibility,
unqualified lea
measuring the
SPECIAL CONFI
disk, dBase III
CONTACT DATA:

92

ICP SOFTWARE DIRECTORY — Business & Financial Management
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September 1991
68th Edition

September 199
68th Edition

query capability; many reports are provided that can be used for performance analysis: order statistics — price analysis by customer, order statistics — discount analysis by salesman, ABC Analysis by customer, ABC Inventory analysis by item, ABC Inventory analysis by product group.
CONTACT DATA: Leland M. Cole ☐ President ☐ MultiBAS Corporation ☐ P.O. Box 234 ☐ Terrace Park, OH 45174 ☐ **TELE.** 513-831-6173
PRICING: $1,875.00 License
P37429

BAS Sales Prospecting
PLATFORMS: IBM PC-AT; NCR Tower; UNIX-based Hardware ☐ UNIX, XENIX
NUMBER OF CLIENTS/USERS: 1,000
DESCRIPTION: BAS Sales Prospecting System maintains information necessary for effective control and management of sales. This on-line system records all customer and prospect contact activities as they occur, including time spent. A letter writing capability is also provided. It features: sales prospect contact information and history available on-line; rapid inquiry by prospect name, number, location, type of business, etc.; prospect information includes: contact person, phone, fax, telex, etc.; reports sorted in many sequences including zip code and category; sales follow-up system; multiple letters maintained; records mailings; lost deal reporting; records all sales activity; time recording system for invoicing.
CONTACT DATA: Leland M. Cole ☐ President ☐ MultiBAS Corporation ☐ P.O. Box 234 ☐ Terrace Park, OH 45174 ☐ **TELE.** 513-831-6173
PRICING: $1,875.00 License
P37431

Benefit Maximization System (BENEMAX)
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware; UNIX-based Hardware ☐ UNIX, MS-DOS, XENIX
LANGUAGES: C Language
DESCRIPTION: BENEMAX is a comprehensive benefit maximization optimizing system that can identify and optimize product feature and benefit sets, and improve advertising and marketing program reach and intensity. It is based on modern mathematical psychology, and has been used to determine: segmentation strategies; promotion materials; thematic appeal; packaging, distribution and service options; and image enhancements.
CONTACT DATA: Info Systems of N.C., Inc. ☐ President ☐ Applied Management Sciences Corp. ☐ 721 Clay Avenue ☐ Langhorne, PA 19047 ☐ **TELE.** 215-757-4011
PRICING: $24,000.00
P31839

Billing/Sales Analysis System
PLATFORMS: IBM System/36 ☐ SSP
LANGUAGES: RPG II/III/400
NUMBER OF CLIENTS/USERS: 12
DESCRIPTION: The Billing/Sales Analysis System is a series of RPGII programs designed to allow for the entry of invoice information, printing of invoices and subsequent sales analysis reporting. It offers multi-company support and online entry and inquiry. Automatic interfaces with the ISI Accounts Receivable, Inventory Management and General Ledger systems are provided. The System/36 version offers online operation instructions. Complete source code is provided.
CONTACT DATA: Info Systems of N.C., Inc. ☐ 7510 E. Independence Boulevard ☐ Suite 100 ☐ P.O. Box 18466 ☐ Charlotte, NC 28227 ☐ **TELE.** 704-535-7180
PRICING: $2,500.00 License
P28024

Bullseye
PLATFORMS: AT&T 6300; IBM PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; Radio Shack/Tandy 1000 thru 4000 ☐ PC-DOS, TRS-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 25
DESCRIPTION: Bullseye measures payback on advertising/promotional investments, cost/lead, cost/prospect, sales dollars per advertising dollar, monitors sales lead follow-up activities, automatically assigns follow-up responsibility, generates mailings for new prospects, and monitors for unqualified leads. Other features include automated forecasting, reports measuring the effectiveness of ads/promotions, and sales force follow-up.
SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM, DOS 2.0 or later, hard disk, dBase III Plus, compiled FoxBase Plus
CONTACT DATA: Don Ridgeway ☐ Director of Marketing ☐ Target Microsys-

tems, Inc. ☐ 444 Castro Street ☐ Suite 400 ☐ Mountain View, CA 94041 ☐ **TELE.** 415-967-3990 or 800-735-5776
PRICING: $1,195.00
P36313

C.A.T. — Relational database for managing Contacts, Activities and Time
PLATFORMS: Apple Macintosh ☐ MAC OS
DESCRIPTION: Additional information about this product may be obtained from the vendor listed below.
CONTACT DATA: Donald McConnell ☐ Director of Communications ☐ Chang Laboratories, Inc. ☐ 3350 Scott Street ☐ Santa Clara, CA 95054-3104 ☐ **TELE.** 408-727-8096
PRICING: Price Upon Request
P34522

CallBack
PLATFORMS: AT&T 6300; DEC VAX; Data General Eclipse MV Series; Hewlett-Packard 9000; IBM System/38, System/36, 9370 Series, PC-XT, PC-AT; MS-DOS-based Hardware; Motorola 68000; NCR 9800, 9000 Series, Tower; Prime; Sun Microsystems; Unisys V Series, A Series, PC; Wang VS ☐ VMS, ULTRIX, IBM DOS, DOS/VSE, MVS/XA, MVS, VM, PC-DOS, OS/2, VRX, IRX, ITX, PRIMOS, SUN OS, MS-DOS, XENIX
NUMBER OF CLIENTS/USERS: 70+
DESCRIPTION: CallBack is a sales and client management system that is designed for tracking customer information in a multi-user sales and marketing environment. By using ORACLE, CallBack has the power to manage detailed information on customers and their product needs, leaving the salesforce to manage the relationships. CallBack uses keywords to organize and generate qualified Hit Lists of customers. CallBack can also rank, distribute, track, and report on sales leads and fill prospects' requests for product and price information. It provides management with the information needed on who the customer base is, what kind of products they are interested in, and how they came to the company. CallBack includes contact entry, call reports, calendar, to-do list, expense reports, marketing reports, and mail merge. It also allows the user to design custom screens.
SPECIAL CONFIGURATION REQUIREMENTS: 20MB hard drive for PCs
CONTACT DATA: Shelley Orenstein ☐ Director of Marketing ☐ Abend Associates, Inc. ☐ 265 Winn Street ☐ Burlington, MA 01803 ☐ **TELE.** 617-273-5383
PRICING: Price Upon Request
P36211

CAM-1+™ (Computer Aided Marketing)
PLATFORMS: IBM PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, OS/2, MS-DOS
LANGUAGES: BASIC
DESCRIPTION: CAM-1+, for desktop marketing. Includes a demographic database of the user's choice of metro area(s). A typical site analysis or target marketing report using CAM-1+ would show demographics by zip code or postal carrier route for a search area, such as a radius around an address or cross streets, or a zip code. Demographics include household counts, average income, owner occupied, households with children, age groups, education and more. The distance from the search site is also shown. A spreadsheet with 50 columns, calculations, sorting choices and more is available to customize each report. In addition, the user can import ASCII-format data files, such as customer and sales records, to create customer profiles or buying power indices. CAM-1+ reports can be exported to spreadsheet and mapping programs that support ASCII files. License fee is per metro area. Regional and national discounts are available.
SPECIAL CONFIGURATION REQUIREMENTS: Hard disk; DOS 3.0 or higher
CONTACT DATA: Richard Byers ☐ National Sales Manager ☐ Datamap, Inc. ☐ 7525 Mitchell Road ☐ Suite 300 ☐ Eden Prarie, MN 55344-1958 ☐ **TELE.** 612-941-0900 or 800-533-7742, FAX: 612-941-0230
PRICING: $495.00 LICENSE
P38180

CAS — Computer Aided Selling
PLATFORMS: AT&T 3B Series; DEC VAX, MicroVAX; IBM PC, PC-XT, PC-AT, PS/2 Series; Radio Shack/Tandy 1000 thru 4000; UNIX-based Hardware ☐ MicroVMS, VMS, ULTRIX, PC-DOS, UNIX, MS-DOS, XENIX
LANGUAGES: C Language
DESCRIPTION: A computer-aided selling system which features extensive functionality, flexibility and portability. It automates sales and marketing

activities from the lowest point (field staff) to the highest point (senior management) and in between. Provides sales managers with instantaneous access to activity reports, sales analyses, forecasts and a variety of other information for monitoring the sales force. From the salesperson's standpoint, it serves as a productivity tool: updating client profiles, maintaining ticklers, sending out letters and keeping in touch with the rest of the organization. Shared data between laptops, PCs, minicomputers and mainframes enables an organization to utilize consistent and up-to-date information.

CONTACT DATA: Betty F. Kadis ☐ Vice President of Marketing ☐ Advanced Marketing Systems ☐ 190 Littleton Road ☐ Number 16 ☐ Westford, MA 01886-3510 ☐ **TELE.** 508-454-6472
PRICING: $30,000.00—$150,000.00
P36244

CATILOG
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware; Unisys PC ☐ PC-DOS, MS-DOS
LANGUAGES: C Language
DESCRIPTION: CATILOG (Computer Assisted Telephone Interviewing) is designed to meet the demand for telephone interviewing. With the increasing cost of face-to-face interviewing, many fieldwork agencies and businesses use CATILOG as a cost effective solution for their interviewing needs. CATILOG is transparent to the user.
CONTACT DATA: Suzanne Wembridge ☐ Software Support Consultant ☐ Mercator Computer Systems ☐ 12 Mead Court ☐ 2 Part Road ☐ Thornbury, Bristol BS12 2UW ☐ ENGLAND ☐ **TELE.** 4054-281-211
PRICING: Price Upon Request
P37380

CCC Direct Marketing
PLATFORMS: DEC VAX; IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware; UNIX-based Hardware ☐ VMS, PC-DOS, UNIX, MS-DOS, XENIX
LANGUAGES: DIBOL
NUMBER OF CLIENTS/USERS: 40
DESCRIPTION: Direct Marketing provides the ability to maintain a customer/prospect mailing list of either individuals or companies interested in the user's product or service. The user can also track and report the source of the responses and the products or services of interest. Maintenance facilities are included for the Mailing List Master File, Product or Service Master File, Source Master File, and zip code table. Allows interactive entry of prospect or customer responses and new lists. Mailing list inquiry is available. Reports include a Response Summary, Zone Mailing, Weekly Summary, Customer Profile of Response Transactions, Detailed Response Analysis by Response Type, and Detailed Response Analysis by Publication. Supports Novell.
CONTACT DATA: Arthur Martin ☐ Prime Track ☐ 136 Old Farms Road ☐ P.O. Box 368 ☐ West Simsbury, CT 06092 ☐ **TELE.** 203-651-9756
PRICING: $1,500.00
P30464

CEO Sales — A Dynamic Marketing System
PLATFORMS: IBM PC; MS-DOS-based Hardware ☐ MS-DOS
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 250+
DESCRIPTION: CEO Sales is a client and prospect tracking system with fully integrated tickler, appointment scheduling, profile data, activity data, media tracking, purchase history, and unlimited notes. The program offers data base, tickler and appointment search and inquiry on screen with hard copy listings in condensed or expanded formats; multi-key search options; instant letters, labels and envelopes directly from the search screens; continuous letters and labels; status, masterfile, and analysis reports; and multi-key report selection. User programmable file import, file export, built-in backup and recovery with file purge and change options are included. Have up to 20 different masterfiles (one million records each) in the data base and 40 category codes; custom user schedule time template. Color, graphics and fast, single-key program control.
SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM, hard disk, color screen preferred
CONTACT DATA: Judy A. Ferris ☐ Vice President of Marketing ☐ Commercial Micro, Inc. ☐ P.O. Box 1998 ☐ Roswell, GA 30077-1998 ☐ **TELE.** 404-992-2701
PRICING: $199.00
P35850

CFS/Sales Analysis System
PLATFORMS: Hewlett-Packard 3000 ☐ MPE, MPE XL
LANGUAGES: RPG II
DESCRIPTION: The CFS/Sales Analysis System is an operating and profitability reporting system. Taking information from the CFS/Order Entry, Inventory Management, and Accounts Receivable Systems, reports are generated to assist management in monitoring and managing sales. Features include: online review of sales and order activity by customer, salesman, item, product line, and other parameters; detailed and summarized reporting at increasingly deeper levels of data; multi-dimensional reporting of sales, gross margin, time, and financial results; region and buying group reporting; and time-phased reporting.
SPECIAL CONFIGURATION REQUIREMENTS: Additional language: HP FOS
CONTACT DATA: Gordon H. Lowell ☐ Vice President of Sales and Marketing ☐ Computer Financial Services, Inc. ☐ 11621 114th Avenue S.E. ☐ Suite 213 ☐ Bellevue, WA 98004 ☐ **TELE.** 206-453-4776 or 800-228-1442, FAX: 206-453-6473
PRICING: Price Upon Request
P29025

CIS/Direct
PLATFORMS: Hardware Not Applicable ☐ Operating System Not Applicable
LANGUAGES: Not Applicable
NUMBER OF CLIENTS/USERS: 10
DESCRIPTION: CIS/Direct is the direct marketing database management system that helps users improve the way that select target customers, schedule promotional activities and measure results. Because CIS/Direct is the central focus for direct marketing activities across an organization, it coordinates marketing implementation while leaving strategy in the hands of business managers. CIS/Direct provides a vehicle for integration of direct marketing promotions into the institution's overall marketing plans. CIS/Direct manages multiple aspects of direct marketing activities, including direct mail, telemarketing, personal sales and other types of customer communications.
CONTACT DATA: Thomas M. Smith ☐ Senior Vice President of Sales ☐ Harte-Hanks Data Technologies ☐ 25 Linnell Circle ☐ Billerica, MA 01821-3961 ☐ **TELE.** 508-663-9955
PRICING: $20,000.00— $100,000.00 Annual Service Fee
S00672

Client Tracking System
PLATFORMS: IBM PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 20
DESCRIPTION: Client Tracking telemarketing system aids in organizing information, servicing existing clients, and prospecting. Features include: fast record access; individual notepads for each client or prospect; user-defined classifications; unlimited telephone numbers and address; letter file which merges with database, tickler system, action pending, reports, mailing labels, return address labels, etc. Supports Novell NetWare.
CONTACT DATA: Nelson Business Systems, Inc. ☐ 7823 Capwood Avenue ☐ Tampa, FL 33637-4938 ☐ **TELE.** 813-989-8072
PRICING: $395.00
P33839

CLIENT/Mac
PLATFORMS: Apple Macintosh ☐ MAC OS - System 6, MAC OS - System 7
NUMBER OF CLIENTS/USERS: 100
DESCRIPTION: CLIENT/Mac features support lead management, territory and marketing data analysis, management reporting, service and customer support, telemarketing, and multi-user processing. CLIENT/Mac offers representatives one organized place to store important details with an unlimited number of follow-up records for ticklers and contact history. It has Keyword ability to assign attributes to each client, allowing for unlimited filters on the client base. CLIENT/Mac also provides built-in mailmerge, automatic strategy based contacts, time tracking, a multi-window, palette driven interface and more.
SPECIAL CONFIGURATION REQUIREMENTS: 1MB minimum memory; 40MB hard disk required; AppleTalk and Ethernet are supported; Other requirements: POS IMAGEwriter, CLient Image laser desk PLT, COGNOS Postscript printer, or ATM compatible
CONTACT DATA: Karen L. Cohen ☐ Principal ☐ Software Complement ☐ 8 Pennsylvania Avenue ☐ Matamoras, PA 18336 ☐ **TELE.** 717-491-2492 or 717-491-2495

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PRICING: $595.00 — $1,395.00
P39118

Client/Sales Master

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: BASIC
DESCRIPTION: Client/Sales Master features include: track clients and prospective clients; easily maintain client/customer list; print mailing labels (one to four across); compiled programs for fast performance; assign as many as 40 different classes or types to each address or person that has been defined; unlimited number of files or addresses (limited only by available disk space); print all reports and labels in either alpha sequence or by ZIP code; select the addresses to be used by 40 different codes or address types defined by users; reports or labels printed based on certain qualifications (e.g., name, address, city, state, ZIP, and any of 40 different classifications); allow for duplicate names and addresses; use 10-digit ZIP codes; all searches and print selections can be global.
CONTACT DATA: F. Ruckdeschel ☐ Marketing Director ☐ DYNACOMP, Inc. ☐ 178 Phillips Road ☐ Webster, NY 14580 ☐ **TELE.** 716-265-4040
PRICING: $59.95
P35901

Cogent.CIS (Client Information System)

PLATFORMS: AT&T 3B Series; DEC Mainframe; Encore Computer; IBM Mainframe; McDonnell Douglas; Pyramid; Ultimate; Unisys 1100 Series ☐ PRIMOS, UNIX, Pick
LANGUAGES: BASIC
DESCRIPTION: Cogent's Client Information System (Cogent.CIS) provides organizations with a centralized client and vendor information processing system. It handles up to 1 million records. Cogent.CIS assists marketing by providing a centralized source of client background necessary to identify market trends based on past sales activities and develop strategies to increase sales and improve communication with clients. With Cogent.CIS, companies have the tools necessary to manage, control, and better communicate with clients and vendors. It allows companies to create targeted mailings to the appropriate audience. Cogent.CIS includes features such as: automatic duplicate checking option, cross-referencing, correspondence tracking, high speed searching (with phonetic capabilities), user definable security system, bulk rate label sorting, historical mailing information, standard and custom label configurations, and more.
CONTACT DATA: Sales Department ☐ Cogent Information Systems, Inc. ☐ 830 Morris Turnpike ☐ Short Hills, NJ 07078 ☐ **TELE.** 201-379-7979
PRICING: Price Upon Request
P37324

COMARKS — Comprehensive Marketing System

PLATFORMS: DEC PDP-11; Data General Eclipse ☐ RT-11, AOS
NUMBER OF CLIENTS/USERS: 6
DESCRIPTION: COMARKS is an on-line computerized marketing system including word processing that supports marketing activities from direct mail and literature fulfillment to lead tracking and market research. It generates sales leads, forecasts, competitive analyses, summaries by product line and territory. Profiles of data about customer/prospect people allow a user to search and select qualified audiences for more cost effective on-line processing of requests for information, allows management to track market trends, promotion effectiveness, fulfillment processing, sales activities, and more accurately forecast sales.
CONTACT DATA: Mel Platte ☐ President ☐ Impact Systems, Inc. ☐ 83 Cambridge Street ☐ Burlington, MA 01803-4181 ☐ **TELE.** 617-270-0099
PRICING: Price Upon Request
P12303

Combi-Name

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: BASIC
NUMBER OF CLIENTS/USERS: 140
DESCRIPTION: Helps create names for new products, services and companies.
CONTACT DATA: Mel Long ☐ President ☐ Mel Long Associates ☐ 715 N. 21st Street ☐ Allentown, PA 18104 ☐ **TELE.** 215-433-2588
PRICING: $99.00
P36156

COMPUTIME

PLATFORMS: IBM 30XX Series, 43XX Series, 9370 Series ☐ DOS/VSE, MVS/XA, MVS
LANGUAGES: COBOL, Assembler
NUMBER OF CLIENTS/USERS: 2
DESCRIPTION: COMPUTIME is a software package designed to serve the needs of Telemarketing. Both inbound and outbound systems provide interactive access with an IBM mainframe computer. Features include order entry, stationing, tracking, lead generation, automatic call scheduling and distribution, automated recalling, scripting, surveys and complete fulfillment processing.
SPECIAL CONFIGURATION REQUIREMENTS: CICS
CONTACT DATA: Martin E. Hensley ☐ Vice President ☐ Computime, Inc. ☐ 401 N. 117th Street ☐ Omaha, NE 68154 ☐ **TELE.** 402-330-1311
PRICING: $150,000.00 and Up License
P25460

CONTACT

PLATFORMS: Wang VS ☐ VS/OS
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 5
DESCRIPTION: CONTACT is a sales and marketing decision support system to organize and track sales and marketing efforts. CONTACT is on-line and menu driven; provides displayed listings of people and their related organizations as well as a prioritized things-to-do list. From these, users can access information, write letters or generate pre-formatted documents, and keep notes on their contacts in their notebooks. CONTACT also generates labels, personalized letters to contacts based on users pre-selected criteria.
CONTACT DATA: Douglass Loud ☐ President ☐ The Loud Consulting Corporation ☐ P.O. Box 7337 ☐ Wilton, CT 06897-7337 ☐ **TELE.** 203-762-7373 FAX: 203-762-0331
PRICING: Price Upon Request
P33253

Contact Plus™

PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: Assembler, C Language
NUMBER OF CLIENTS/USERS: 300
DESCRIPTION: Contact Plus provides sales, marketing, law, real estate, and insurance industries with a flexible method of keeping track of clients. Dials the phone and tracks time spent on the phone. Features include: unlimited date/time stamped notes; mail-merge for labels and personalized forms; phone call history; correspondence history; monthly appointment calendars; automatic rescheduling; up to 100 follow-up letters; on-line Help; laptop compatible; one-key data entry through pop-ups; nine user-definable fields; 24 user-definable categories; and multiple databases. Notes are searchable.
SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM, dual floppy or hard disk, Hayes compatible modem for auto-dial, Novell NetWare
CONTACT DATA: Donna Rintamaki ☐ Vice President ☐ E. Trujillo Software ☐ P.O. Box 3992 ☐ Albuquerque, NM 87190 ☐ **TELE.** 505-881-3223
PRICING: $195.00/Single; $595.00/Multi User
P36524

Control Classic

PLATFORMS: Apple Macintosh ☐ MAC OS - System 6, MAC OS - System 7
LANGUAGES: 4th Dimension
NUMBER OF CLIENTS/USERS: 11
DESCRIPTION: Control Classic is a Lead, Customer, Contact management system for anyone who needs to control the process of converting leads to customers. Processes and Tasks allows users to let Control Classic manage all follow-up activities with leads. Control Classic lets users work with easy-to-understand lists of their data. A built-in word processor makes repetitive mail merge tasks a breeze. Control Classic's In Box lets users see "Things to Do" while the Out Box shows items which need to be printed and mailed. Features include: full import/export of data; automatic formatting of text and phone numbers; global record modification; custom report editor; custom label editor; RAM-based operation with auto-save to disk for security; multi-user; and password access system.
SPECIAL CONFIGURATION REQUIREMENTS: 2.5MB minimum memory, 4MB recommended; 5MB hard disk required; AppleTalk and Ethernet are supported; math coprocessor recommended

CONTACT DATA: Chris B. Dirmen □ President □ Diamante Software □ 11651 Plano Road □ Suite 160 □ Dallas, TX 75243 □ **TELE.** 214-341-6711, FAX: 214-341-6013
PRICING: $595.00 Purchase; Site License Available
P40397

Customer Assistance Tracking System (CATS)
PLATFORMS: AT&T 3B Series; IBM AS/400, PC-AT, PS/2 Series; NCR Tower; Prime; UNIX-based Hardware □ OS/400, OS/2, PRIMOS, UNIX, XENIX
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 104
DESCRIPTION: CATS is an online, menu-driven system that tracks customer service inquiries from the inception of the inquiry through the resolution of the problem. CATS records customer information, inquiry details, responsibilities, time considerations and other factors pertinent to the inquiry. It tracks internal as well as external referrals and issues alerts that identify inquiries outstanding beyond an acceptable period. A complete problem history for every customer can be developed. CATS acknowledges inquiries from a menu of standard or personalized letters. In addition, the database can be accessed to develop a wide range of customer, problem or performance reports at detail and summary levels for specified time periods.
CONTACT DATA: Roger Hancock □ Marketing and Sales Manager □ LSW, Inc. □ 8240 Professional Place □ Landover, MD 20785 □ **TELE.** 301-459-2323
PRICING: $5,000.00— $125,000.00 License
P38012

Customer Information System
PLATFORMS: IBM System/34, System/36, AS/400 □ OS/400, SSP
LANGUAGES: RPG II/III/400
NUMBER OF CLIENTS/USERS: 10
DESCRIPTION: The Customer Information System is designed to maintain, make available on-line and report on current customer and prospect information. It maintains pertinent information about customer prospects or vendors such as name, address, phone number, contact, business volume, method of contact, last contact date, next contact date, and eight undefined fields. Up to 100 memos may be maintained for each customer to record activity, marketing status, comments, history, etc. Ten special codes can be assigned to classify each individual customer. A Report Generator System provides reports based on user-defined criteria. Prospects can be cross referenced to up to 100 other customers or vendors for quick reference during on-line use. A tickler system provides follow-up or expected event notification for proper account management. Mailing labels can be printed for all or a selected group of customers or prospects. Blank forms can be printed for data collection.
CONTACT DATA: L. Hurston Anderson □ Sales Manager □ Arkansas Systems, Inc. □ 8901 Kanis Road □ Little Rock, AR 72205 □ **TELE.** 501-227-8471
PRICING: $2,900.00 — 15,000.00
P25491

Customer Response System
PLATFORMS: IBM PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; Radio Shack/Tandy 1000 thru 4000; Unisys PC □ PC-DOS, Novell NetWare, MS-DOS
LANGUAGES: C Language
DESCRIPTION: Used by customer service personnel to track all types of inquiries or problems. Response features include automated letter generation, telephone autodialer, and refund check writer. Other features include search lists, user definable report scripts, context sensitive Help, and file import and export. Tracks by customer account number, name, inquiry number, status, type, due date, last route-to, and a user field. Includes routing capabilities to simplify movement of inquiries to the person or workgroup responsible for resolution. LAN versions available.
CONTACT DATA: Frank Woodward □ President □ Syspro Corporation □ P.O. Box 243 □ Orinda, CA 94563 □ **TELE.** 415-254-9755
PRICING: $595.00
P37519

ICP MILLION DOLLAR AWARDS WINNER

M&I Data Services, Inc.

Custom Statement Formatter
PLATFORMS: IBM 30XX Series, 43XX Series, System/370 □ MVS/ESA, MVS/XA
LANGUAGES: COBOL, Assembler
NUMBER OF CLIENTS/USERS: 23
DESCRIPTION: The Custom Statement Formatter software solution allows users to design and produce customized, innovative, marketing-oriented documents. Customers receive personalized and concise information in a clear, easily read document that is tailored to their needs. In addition, marketing is made more effective with simplified and targeted communications to the users' customers. The laser output functionality of Custom Statement Formatter means users can help their companies attain: 1) higher profitability; 2) enhanced corporate image; and 3) increased operating efficiencies. Programmers spend less time designing, implementing and maintaining laser-printed documents. The operations staff realizes efficiencies through a streamlined and organized document flow.
CONTACT DATA: Todd Huss □ Marketing Manager, CSF □ M & I Data Services, Inc. □ 770 N. Water Street □ BDX1 □ Milwaukee, WI 53202 □ **TELE.** 800-236-3282, Ext. 3734
PRICING: Price Upon Request
P38618

Datamar "Sales Analysis"
PLATFORMS: CP/M-based Hardware; IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ PC-DOS, UNIX, CP/M, MS-DOS, XENIX
DESCRIPTION: Used with Datamar "dINVOICER" to provide detailed analytical sales data necessary for accurate management decisions. It provides data in concise, readable format with accuracy. Allows the user to determine absolute and relative sales, profit percent, profit in dollars by customer, product and/or salesperson on a monthly, year-to-date, annual and multi-year historical basis. Version 4.0 includes analyses by territory, category and by sales department.
CONTACT DATA: Henry Wakefield □ Datamar Systems □ 8586 Miramar Place □ San Diego, CA 92121 □ **TELE.** 619-452-0044
PRICING: $99.00
P41239

Direct Mailer
PLATFORMS: ADDS Mentor; Bull Ultimate; CIE Model 680; DEC Ultimate; General Automation; IBM PC-AT; McDonnell Douglas; Pick-based Hardware; Prime; Ultimate □ Pick
LANGUAGES: BASIC
NUMBER OF CLIENTS/USERS: 1
DESCRIPTION: Maintains separate client accounts with demographics; Super Select — by one or a combination of items i.e. mail code, state, origin date; Print — forms, word processed letters, envelopes, labels; Track Response — by one or more criteria; Entry Operator control with automatic counts; user-defined codes maintenance; word processing; supports multiple printers with each specialized feature.
SPECIAL CONFIGURATION REQUIREMENTS: 512K memory
CONTACT DATA: Sally Crowell □ Vice President □ E. A. Crowell & Associates, Inc. □ 756 Tyvola Road □ Suite 130 □ Charlotte, NC 28217 □ **TELE.** 704-525-6551
PRICING: $15,000.00 Base System
P33588

DOCU/MANAGER™ Inquiry Fulfillment System
PLATFORMS: Wang VS □ VS/OS
LANGUAGES: RPG II/III/400
DESCRIPTION: The Inquiry Fulfillment is a multi-company system that enables users to answer customer inquiries, track sales leads, measure advertising effectiveness, and manage mailing lists. It has interactive entry

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and update of inquiries and mailing lists, calculates follow-up dates, prints labels, determines sales territory based on zip code, moves qualified leads to sales lead file, and checks mailing list for duplicates before updating. It prints reports of sales leads by territory based on follow-up date. It tracks advertising effectiveness by product, media source, and issue date. Labels from mailing list can be printed based on product codes, territories, entry date or follow-up date.
CONTACT DATA: Dick Hart □ Marketing Manager □ Application Development Services □ 25371 Hugo Road □ Laguna Niguel, CA 92677-1522 □ **TELE.** 714-261-2543
PRICING: $2,000.00
P12319

DSAM, the Dealer Sales Activity Manager
PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; NCR PC; Radio Shack/Tandy 1000 thru 4000; Unisys PC; Wang PC □ PC-DOS, MS-DOS
DESCRIPTION: DSAM is a dedicated telemarketing and customer follow-up program for automobile dealers. It generates daily, weekly and monthly workplans which are used to help salespeople manage their telephone follow-up activities with both prospects and customers. The program maintains a powerful sales database and has an optional online query system and custom report generator. Single and multi-user versions are available.
SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM; hard disk; Aker Magic PC Database Runtime and Novell Btrieve Runtime are included
CONTACT DATA: David D. Kelley □ President □ Dynamic Software □ 109 S. Main Street □ Greer, SC 29650 □ **TELE.** 803-877-1122
PRICING: $995.00—$2,995.00 License
P38912

Dun's SalesSearch
PLATFORMS: IBM PC-XT, PC-AT; MS-DOS-based Hardware □ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 125
DESCRIPTION: Dun's SalesSearch allows the sales professional to analyze, plan, implement, and track clients/prospects. It maintains contact names, titles, call-back dates, products discussed, and competitive information. Database management system allows user to define custom fields. Generates mailing labels, produces sales reports, provides for integration with word processors or export to popular software packages. Includes daily tickler file for qualifying prospects and clients, setting appointments, and ad hoc report generation with dBase III Plus as a separate product. Discount for multiple purchase.
SPECIAL CONFIGURATION REQUIREMENTS: 512K RAM, hard disk, DOS 3.0 or later
CONTACT DATA: John Bagnasco □ Product Manager □ Dun's Marketing Services □ 3 Sylvan Way □ Parsippany, NJ 07054 □ **TELE.** 201-605-6653
PRICING: $495.00
P36051

E-Power
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS based Hardware □ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 500+
DESCRIPTION: E-Power is designed to manage contact information from sales, customer service, purchasing and collections activities. Automates contact and entry activities, reduces data entry, paperwork and recordkeeping. Offers sophisticated data manipulation functions, allowing import/export from many different sources. Contact information can be sorted in many ways — to create call-back calendars, to track contact activity, to assess individual sales personnel performance and to print a wide range of reports. Contains a word processor and a report writer.
SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM, hard disk
CONTACT DATA: Sue Durgin □ Market Communications Coordinator □ SourceMate Information Systems, Inc. □ 20 Sunnyside Avenue □ Mill Valley, CA 94941 □ **TELE.** 415-381-1011 or 800-877-8896 (U.S. and Canada)
PRICING: $495.00 Single User; $1,995.00 Multi-User
P37888

EASY PRICE Price Administration/Profit Management System
PLATFORMS: Bull Mainframe; IBM Mainframe; Unisys Mainframe □ GCOS, DOS/VSE, OS/VS1, MVS, VM, EXEC 8
LANGUAGES: COBOL

NUMBER OF CLIENTS/USERS: 1
DESCRIPTION: EASY PRICE is a series of computer programs which facilitate marketing and sales management in the development and evaluation of pricing strategies which best fulfill the goals of the corporate business plan. This powerful "bolt-on" pricing system offers total flexibility for any one or combination of pricing policies. EASY PRICE accurately and automatically handles complex pricing situations and provides management with a series of performance reports based upon the EASY PRICE pricing history database. It includes a profitability report, credit/adjustment report, lost order report and price increase report. A one-year warranty is included.
CONTACT DATA: Andrew P. Bellinghieri □ President □ Andrew Bellinghieri Associates □ 62 Holly Lane □ Middletown, CT 06457 □ **TELE.** 203-347-8798
PRICING: Price Upon Request
P18148

EIGHTY/20
PLATFORMS: AT&T 7300; IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware □ IBM DOS, PC-DOS, OS/2, MS-DOS
NUMBER OF CLIENTS/USERS: 500
DESCRIPTION: EIGHTY/20 is a client information database system designed to support the needs of small businesses and sales/marketing functions. It tracks and sorts prospects, clients, vendors, customers or employees and provides automatic history reports and schedules by client group, user and time frame. It includes a built-in word processor, interactive calendar and automatic telephone dialing (with modem and software) The system allows an unlimited number of schedule items or historical records for each client and an unlimited length memo field for each event. It prints labels, envelopes, letters, and multiple-page proposals compatible with laser printers. Optional modules include Product tracking/Quoting, Time Billing, Telemarketing, Expense Reporting and File Utilities for merging systems. A network system is also available.
SPECIAL CONFIGURATION REQUIREMENTS: 512K RAM minimum, dual disk drive, hard disk recommended, Clipper
CONTACT DATA: C. Ray Wight □ EIGHTY/20 Software □ Mankato, MN 56001-3128 □ **TELE.** 507-345-8020 or 800-635-8020, FAX: 507-345-1270
PRICING: $395.00 Single User; $995.00 Networks
P34749

EMIS I/EMIS II
PLATFORMS: IBM PC-XT, PC-AT; Intel 80286, 80386, 808X; MS-DOS-based Hardware □ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 1,750
DESCRIPTION: EMIS I and II is a comprehensive system for managing business relationships. EMIS can record contact history, contact person, delivery date, dates of past calls, generate proposals and save them for future reference, and much more. EMIS can be used for account management, telemarketing, sales forecasting, sales prospecting, credit management, fund raising, and other functions which require maintaining information about business relations. The amount of information that can be stored is limited only by the amount of disk space available. Form letters can easily be customized to each individual in the database for mass mailings or individual letters.
SPECIAL CONFIGURATION REQUIREMENTS: 512K RAM; 640K RAM on LAN; operates on all LANs with 3.0 and NetBIOS
CONTACT DATA: Orlando Salazar □ Director of Sales □ EMIS Software Inc. □ 901 N.E. Loop 410 □ Suite 526 □ San Antonio, TX 78209 □ **TELE.** 512-822-8499 or 800-658-1000
PRICING: $695.00 — $1,995.00 Single User; $995.00 — $2,995.00 Plus LAN System Multi-User
P34160

Excalibur Plus Customer Information — Database Management
PLATFORMS: AT&T 6300; IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware; UNIX-based Hardware □ PC-DOS, UNIX, MS-DOS, XENIX
NUMBER OF CLIENTS/USERS: 4,000
DESCRIPTION: The Excalibur Plus Customer Information — Database Management module is a database system that maintains information on prospects or customers. This information can be sorted in virtually any order and printed in label or report format. Instant inquiries of information on all customers can be made at any time, and the data can be printed to the screen, on labels or in report format. Popular uses for this system include mailing lists, sales and territory lists, prospect and client lists, statistical data reports on source of sales or leads, and prospect/customers

lists sorted according to product interest.
CONTACT DATA: Kathe Riley Jackson ☐ Marketing & Communications ☐
Armor Systems, Inc. ☐ 324 N. Orlando Avenue ☐ Maitland, FL 32751 ☐
TELE. 305-629-0753
PRICING: $395.00 Purchase
P25227

ExhibiTrak
PLATFORMS: IBM PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware
☐ PC-DOS, MS-DOS
DESCRIPTION: ExhibiTrak tracks exhibitors and exhibit space. Provides
multiple booths per exhibitor, unlimited additional items, consolidated
statements, multiple payments and booth assignments. Avoid double-
booking of booths. Keep track of booths with booth inventory. Source code
and source program included.
SPECIAL CONFIGURATION REQUIREMENTS: Requires 640K RAM memory;
20MB hard disk; DOS 3.1 or higher
CONTACT DATA: Rudy K. Chew ☐ Marketing Manager ☐ Phoenix Solutions
Inc. ☐ 480 Second Street ☐ San Francisco, CA 94107 ☐ **TELE.** 415-495-
7440 (San Francisco), 800-669-6847 (Chicago), 703-764-3723 (Virginia)
PRICING: $1,495.00 Single User; $2,495.00 Multi User
P41277

EXPRESS Sales Management System
PLATFORMS: DEC VAX; Hewlett-Packard 3000; IBM System/370, 30XX
Series, 43XX Series, PC-XT, PC-AT; MS-DOS-based Hardware; Prime
☐ VMS, MPE XL, MVS, VM, PC-DOS, PRIMOS, MS-DOS
DESCRIPTION: The Sales Management System gives sales management
timely access to the internal and external information required for effective
territory management. This system combines exceptional user interface
with reporting, graphic, and analysis capabilities. It analyzes sales perform-
ance by product, geography, account and time and also provides easy
access to internal shipment, order, and quota information. The Sales
Management System evaluates the effectiveness of promotion or product
sales. Sales Managers can highlight exceptions and "zoom in" on the
reasons behind them. It provides the benefits of an integrated, distributed
solution. The mainframe component acts as the data warehouse, collect-
ing, verifying and distributing information to the field, with an emphasis on
integrity and security. Personal computers are the workstations. Once
refreshed by the mainframe, all reporting, graphic, and analysis takes
place on PCs.
CONTACT DATA: Michael Cassettari ☐ Vice President of Marketing ☐ Infor-
mation Resources, Inc. ☐ 200 Fifth Avenue ☐ Waltham, MA 02154 ☐ **TELE.**
617-890-1100
PRICING: $125,000.00
P32378

EXSELL
PLATFORMS: IBM PC; MS-DOS-based Hardware; UNIX-based Hardware
☐ PC-DOS, OS/2, UNIX, MS-DOS, XENIX
LANGUAGES: BASIC, C Language
NUMBER OF CLIENTS/USERS: 4,000+
DESCRIPTION: EXSELL is a hardware/software system that supports a
variety of marketing and sales functions. It stores company and personal
data, contact history, has an automatic tickler function, phone directory,
search and list capabilities, and complete telephone call management
functions. The hardware consists of a microprocessor-based autodial
telephone that interfaces with the software for complete automated phone
functions. A parameter file allows user tailoring to specific sales applica-
tions. Online Help facilities, mailing list, word processing, interface and
telephone number directory are also included. The UNIX version interfaces
to the INFORMIX data base management system for reporting capabilities.
SPECIAL CONFIGURATION REQUIREMENTS: 384K of memory, two floppy drives
or hard disk; also operates on LANs
CONTACT DATA: Excalibur Sources, Inc. ☐ 131 Village Parkway ☐ Building
Four ☐ Marietta, GA 30346 ☐ **TELE.** 404-956-8373
PRICING: $395.00 (Single User); $1,495.00 (Multi-User)
P23234

FASTECH Sales Information System (SIS)
PLATFORMS: DEC VAX; IBM 30XX Series, System/390, PC,
PC-XT, PC-AT; MS-DOS-based Hardware ☐ VMS, MVS, MS-DOS
DESCRIPTION: FASTECH specializes in providing sales information sys-
tems to the consumer packaged goods industry: manufacturers, broker
organizations and retailers. FASTECH Sales Information System (SIS)

links portable computers to a mainframe database for competitive advan-
tage in account headquarters selling, enhancing orders and communicat-
ing market data. Information throughout the system is exchanged
overnight. Field sales representatives gain quick access to newly author-
ized products, electronically transmitted sales reports and up-to-date pro-
motion plans. Managers monitor distribution gains, check competitive
pricing and marketing strategies, and plan and execute sales force deploy-
ment. The system provides information through immediate online access,
by requesting from dozens of available reports or importing data into
leading spreadsheet programs.
SPECIAL CONFIGURATION REQUIREMENTS: Hand-held computers with 256K
RAM; MS-DOS laptop computers with 640K RAM; or pen-based comput-
ers
CONTACT DATA: Dennis R. Dean ☐ Vice President ☐ FASTECH Inc. ☐ 450
Parkway Drive ☐ Broomall, PA 19008 ☐ **TELE.** 215-565-3405
PRICING: Price Upon Request
P33919

Financial Analysis System (FAST)
PLATFORMS: Datapoint ☐ RMS
LANGUAGES: DATABUS
DESCRIPTION: FAST is a tool designed to analyze and improve the perform-
ance of dealers, franchise holders, agents, representatives, and OEMs. It
performs a comparative analysis of financial statements, and is used to
pinpoint the strengths and weaknesses of individual dealer organizations,
and can provide the basis for improvement suggestions. FAST generates
information regarding business trends within a dealer or franchise organi-
zation, and highlights potential areas where dealers can increase their
business activity, or cut some costs. Management in the parent organiza-
tion can use the trend analysis, profit and loss analysis, and planning
volume reports to work with individual organizations to recommend specific
areas for improvement. A report writer is included.
CONTACT DATA: Lance R. Wayman ☐ President ☐ Wayman and Associ-
ates, Inc. ☐ 217 S. Pacific Coast Highway ☐ P.O. Box 3134 ☐ Redondo
Beach, CA 90277 ☐ **TELE.** 213-379-2453
PRICING: Price Upon Request
P24901

Flexware Sales and Lead Tracking
PLATFORMS: Apple Macintosh ☐ MAC OS - System 6, MAC OS - System
7
LANGUAGES: Pascal
DESCRIPTION: Flexware's sales and lead tracking system is a sophisticated
product to manage prospects and customers through all stages of devel-
opment. It is a network accounting product with a central, protected data-
base for all sales and support persons. Management can review the sales
functions without having to look through individual databases. The data-
base can be protected from unauthorized use and is always available to
management. As salespersons process request for information or product,
the information immediately appears on the "to do" list of the designated
assistant for quick response. The system maintains an unlimited number
of prospects, contact individuals with the company, provides access by
either company or individual name, a hot list, complete call history for each
prospect, detailed journal of daily activity, and a "to do" list for either follow
up calls to customers or activity not tied directly to prospects such as
personal items, projects, etc. Sales and Lead Tracking ties directly to the
customer database in accounts receivable. A complete set of reports is
provided.
CONTACT DATA: Flexware ☐ 15404 E. Valley Boulevard ☐ Industry, CA
91746 ☐ **TELE.** 818-961-0237
PRICING: Price Upon Request
P40175

Flexware® Sales Analysis
PLATFORMS: Apple Macintosh; Corvus Concept; DEC MicroVAX; IBM PC,
PC-XT, PC-AT; MS-DOS-based Hardware ☐ MAC OS, PC-DOS, MS-
DOS, UCSD-p System
LANGUAGES: Pascal
NUMBER OF CLIENTS/USERS: 500+
DESCRIPTION: The Sales Analysis system provides complete control over
sensitive corporate data. It can be customized to individual requirements
and international standards. Other features include: 1) Multi-user capability
with file and record locking; 2) Built-in flexible database; 3) Ability to handle
multiple companies and departmental accounting automatically; 4) Report
writer and query processor; 5) On-line Help; 6) Graphics option; 7) Win-
dows; 8) Sales by product/product category; 9) Sales by customer; 10)

Sales by salesperson; 11) Sales by customer by product/product type; and 12) Commission analysis. The Sales Analysis system is included in the Flexware Accounts Receivable and Order Processing systems.
SPECIAL CONFIGURATION REQUIREMENTS: 256K RAM, 10MB hard disk
CONTACT DATA: Denise Ause □ Marketing Manager □ Flexware □ 15404 E. Valley Boulevard □ Industry, CA 91746 □ **TELE.** 818-961-0237
PRICING: Price Upon Request
P17542

Follow up ... with a future ...
PLATFORMS: IBM PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: BASIC
DESCRIPTION: Store and edit names and addresses; print labels or envelopes. Sort lists in alphabetic order, zip code order; print listings. Data selection capabilities. Select sub-lists by category. Can be used for making phone calls. Features include: edit and print introductory and follow up letters; automatic sequence letters for effective follow up strategy; "Yes, No, Wait, No Contact Method" of follow through; and prints dissimilar letters in a single merge operation.
CONTACT DATA: Robert T. Price □ President □ Scientific Marketing □ 23046 Avenue De La Carlota □ Suite 602 □ Laguna Hills, CA 92653 □ **TELE.** 714-957-0225
PRICING: $395.00—$895.00
P36154

Follow-Up
PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: Assembler, BASIC, C Language
NUMBER OF CLIENTS/USERS: 4,600+
DESCRIPTION: Follow-Up is a sales lead tracking and management system. It provides salespeople with information for selling, organizes to-do tasks, keeps track of who to contact and when, and maintains a record of previous calls. Sales forecast and call reports are available. The program has a built-in word processor and can produce form letters and mailing labels.
SPECIAL CONFIGURATION REQUIREMENTS: 384K RAM, two floppy disk drives, hard disk recommended
CONTACT DATA: Sales Department □ Xycad Group □ 1577 St. Clair Street □ Cleveland, OH 44114 □ **TELE.** 800-428-8457 or 216-589-5788
PRICING: $249.95
P36312

D&B SOFTWARE

Forecasting System
PLATFORMS: IBM System/370, 30XX Series, 43XX Series, System/390, 9370 Series □ DOS/VSE, OS/MVS
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 100
DESCRIPTION: The Forecasting System calculates demand and sales information, allowing customers to more accurately forecast revenue information. Major capabilities include SKU level forecasts for detailed item location forecasts and MKU forecasts for key customer/market level forecasts. Group forecasting capabilities generate forecasts by geography, product families or territories. MATRIX generates forecasts by multiple operating views such as marketing, sales, finance, distribution or production. Flexible "aggregate" forecasting allows for multi-level "top/down" forecasts and flexible "summary" forecasting allows for "bottom/up" forecasts. The Forecasting System also provides multiple allocation options for group, matrix, aggregate and summary forecasts and forecasts in multiple values, including units, cost, selling prices, margin, weight, volume, and other equivalent units. Provides online realtime forecast modeling, error correction, SKU forecast adjustments and flexible time-driven forecast adjustments for all forecast levels to tie into company promotional campaigns and other time-biased activities.
CONTACT DATA: Dun & Bradstreet Software □ 3445 Peachtree Road, N.E. □ Atlanta, GA 30326-1276 □ **TELE.** 404-239-INFO
PRICING: Price Upon Request
P39197

Circle 23 on Reader Service Card

Free-Link
PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; NCR PC; Unisys PC; Wang PC □ PC-DOS, OS/2, TRSDOS, MS-DOS
LANGUAGES: Assembler, C Language
DESCRIPTION: Free-Link electronically reads information encoded on attendees' badges at trade shows, saving the user hours of data entry. All data is stored in a comma delimited ASCII file for easy transfer to word processing software or database.
CONTACT DATA: Michael Nolan □ Vice President of Sales and Marketing □ Free World Marketing □ 444 N. Newport □ Newport Beach, CA 92663 □ **TELE.** 714-722-6414
PRICING: $225.00
P35797

FREEDOM Series Sales Analysis
PLATFORMS: IBM System/38, AS/400 □ OS/400, CPF
LANGUAGES: RPG III/400
NUMBER OF CLIENTS/USERS: 18
DESCRIPTION: Sales Analysis provides comprehensive video and hard-copy analysis of all sales activity. Video representation shows unit and dollar sales volume by product within location, by customer, by salesman, by product class for both current period and year-to-date. All data is current as of the last transaction; hard-copy representation shows in-depth analysis of cost of sales and gross margin analysis by product line and customer profitability statements. Additional video and hard-copy analysis is triggered by user option codes.
CONTACT DATA: John W. Butler □ Executive Vice President □ Butler & Curless Associates □ 7610 Falls of Neuse Road □ Suite 270 □ Raleigh, NC 27615-3307 □ **TELE.** 919-847-1811 or 800-729-7950, FAX: 919-847-6584
PRICING: Price Upon Request
P27698

Front Office, The
PLATFORMS: IBM PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; Radio Shack/Tandy 1000 thru 4000; Unisys PC; Wang PC □ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 50+
DESCRIPTION: The Front Office accommodates lead tracking, sales call reporting and follow up, auto phone dialer, telemarketing, sales performance, word processing, job costing, commission accounting (due and paid), and sales order processing. Features include multi-user, import and export, foreign ASCII files, letter writer and label maker.
SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM, hard disk, Clipper
CONTACT DATA: Howard A. Brooks □ President □ Interactive Micro Inc. □ P.O. Box 478 □ Bradford, NH 03221 □ **TELE.** 603-938-2127
PRICING: $49.95—$69.95
P36591

Great Creator, The
PLATFORMS: Apple II Series □ Apple DOS 3.3
LANGUAGES: BASIC, Machine Code
DESCRIPTION: The Great Creator is a menu-driven program which aids in creating and operating multiple-choice and fill-in-the-blank questionnaires on the computer in the language of the user's choice. There is no limit to the number of questionnaires that can be created for as many responders as desired. Features include: 1) A powerful word processor text entry system; 2) Up to five possible answers for each question; 3) Allowance for custom-designed title pages and screen instructions in any language; 4) Scoring system to keep track of each responder's progress and offer detailed results to the supervisor; and 5) Multi-lingual capabilities. A Russian disk gives the ability to create, operate and print questionnaires in Russian. A Math and Science disk allows for the insertion of math and science symbols where necessary. These disks are priced separately at $39.95 and $29.95 respectively.
SPECIAL CONFIGURATION REQUIREMENTS: 48K, disk drive
CONTACT DATA: Claire Phillip □ Dealer and Consumer Aid □ The Professor Corporation □ 3411 N.W. 21st Street □ Coconut Creek, FL 33066 □ **TELE.** 305-977-0686
PRICING: $399.95
P21224

Growing Your Business
PLATFORMS: AT&T 6300; IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware □ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 50
DESCRIPTION: Growing Your Business provides a marketing tool to build a service business from scratch. The software provides telemarketing, merge letters, statistics on sales, and relationship management features. Growing Your Business manages clients, prospects, word-of-mouth campaigns, and referral tracking.
CONTACT DATA: Steve Kantor □ President □ Gnossos Software □ 1534 16th Street N.W. □ Washington, DC 20036 □ TELE. 202-387-0858
PRICING: $295.00— $2,995.00
P35712

ICBM (Interactive Computer Based Marketing)
PLATFORMS: DEC VAX □ VMS
DESCRIPTION: ICBM (Interactive Computer Based Marketing) is an interactive, multi-user, data base marketing system. It provides inquiry, update, retrieval, analysis and extraction of information from data bases of any size or complexity. The system will capture, and turn customer intelligence into sales dollars; prequalify new customers through telemarketing, or direct mail; and explore new markets and increase existing market penetration at a low cost per new sales dollars. It has a telemarketing front-end option complete with screens for open/close, question asking/answering; call/call back scheduling; literature/sales order processing; personalized letter generation; and data base interface.
CONTACT DATA: Advanced Management Services Inc. □ 3 Harbor Street □ Salem, MA 01970 □ TELE. 617-744-5330
PRICING: Price Upon Request
P28710

IMREX Marketing Plus
PLATFORMS: IBM AS/400 □ OS/400
LANGUAGES: RPG III/400
DESCRIPTION: IMREX' Marketing Plus helps the marketing and sales staff to review and analyze customer sales; generating calling lists as described by user-defined parameters; develop online quotation; and monitor and control the type and number of phone calls made. Complete mailing lists and marketing letters are maintained and generated by the system. Other features include: complete sales history with gross profit; flexible report writer with letter and label generation; prospect and/or customer database; sales call logging and followup; automatic creation of letters for direct mail campaigns; realtime inquiry into historical records; complete sales history with gross profit display; dynamic search of the lead/customer database; and total integration with IMREX Order Entry and Invoicing application.
CONTACT DATA: Valerie Drew □ Marketing Manager □ IMREX Computer Systems, Inc. □ 307 E. Shore Road □ Great Neck, NY 11023 □ TELE. 516-466-5210 or 800-874-1020
PRICING: Price Upon Request
P33270

In-Charge
PLATFORMS: AT&T 6300; IBM PC, PC-XT; MS-DOS-based Hardware □ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 50
DESCRIPTION: In-Charge is a PC-based module which logs changes in force availability and requirements in a telemarketing call center. It provides output that can be used as input for payroll processing, attendance recording, performance reports and force reports. A 90-day warranty is included.
CONTACT DATA: Marketing Manager □ AFFINITEC □ 11737 Administration Drive □ St. Louis, MO 63146 □ TELE. 314-569-3450
PRICING: $7,500.00
P26419

InfoTrak
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ BASIC OS, PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 15
DESCRIPTION: Mail list management with the ability to track a wide range of information for anyone on the list, typically transaction data (sales, subscriptions, memberships, donations, pledges, etc.) or open-ended comments. Analysis reports may be generated with nested subtotals up to three layers deep. Any of the data may be used in selecting multiple criteria for "Finds" and "Sorts". Extensive and flexible coding capability.
SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM, 20MB minimum hard

disk; executable Clipper file and data files included
CONTACT DATA: Glick Associates, Inc. □ 1616 S.W. Sunset Boulevard □ Portland, OR 97201 □ TELE. 503-244-5278
PRICING: $995.00—$3,600.00 License
P28235

InQuiry Action eXpress (QAX)
PLATFORMS: Data General Eclipse, Nova, Eclipse MV Series, Desktop; IBM PC-XT, PC-AT; MS-DOS-based Hardware □ AOS, RDOS, SuperDOS, MS-DOS
LANGUAGES: BASIC
DESCRIPTION: QAX is a salesman's marketing and management system. It provides the 3*16 Word Processor and the Client Finder which allows entry of leads and immediate generation of any of nine standard response letters. These prospects can be assigned to a territory or salesman, or placed into the Open Inquiry Pool for later action. Additional information may be recorded (type of business, size, referred by, contact dates, title, status, etc.). Special information may be saved by adding electronic note cards. QAX tracks advertising effectiveness with individualized selectable mass mailings, sequenced letters, and domestic and foreign mailing addresses; and it provides statistics to help direct product improvements and sales approach. QAX also contains a multi-level script processor. Telemarketers can select any one of nine online scripts and vary the text of the script in response to the prospect's comments.
CONTACT DATA: Robert Quackenbush □ President □ QAX International Systems Corp. □ 4273 Cavehill Road □ Spring Hill, FL 34606 □ TELE. 904-596-2090
PRICING: $995.00 — $2,495.00 License
P24257

Inquiry Management Software
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: FORTRAN
DESCRIPTION: Inquiry Management Software is designed for the marketing communications department of large and small industrial firms, responsible for fulfilling inquiries and distributing sales leads to the field sales network. It provides a way to aid in converting inquiries generated from advertising, trade shows, publicity and promotional efforts into sales. It features professional inquiry fulfillment, automatic sale responsibility assignment, tracking, follow-up and performance/analyzation reports. A 90-day warranty is included; maintenance is available for $420.00 per year.
CONTACT DATA: Ken Corradini □ Marketing Manager □ Inquiry Plus □ 814 Eagle Drive □ Bensenville, IL 60106 □ TELE. 312-595-5059
PRICING: $1,500.00/Single User; $3,249.00/Novell Network
P25820

IS250/260 Sales Analysis
PLATFORMS: Hewlett-Packard 250 Series □ BASIC OS
LANGUAGES: BASIC
NUMBER OF CLIENTS/USERS: 7
DESCRIPTION: The Sales Analysis System allows the user to evaluate business performance by transforming raw sales data and salesperson expenses into a meaningful set of statistics. Accounts Receivable passes raw data to Sales Analysis. The computer inputs variable information such as salesperson expenses or a new product code. After data collection, Sales Analysis produces statistics in 16 different reports with 6 graphic reports. It gives the user complete control of analyzing the accumulated data. The operator chooses the needed reports which are generated either on the CRT or hardcopy on the line printer. Different sort and display options are available for each report. This module also contains an optional five-year history file on customer, product line and salesperson. Other fully-integrated packages include Receivables, Payables, General Ledger, Payroll, Job Costing, Inventory Fixed Assets and Word Processing.
CONTACT DATA: Arelen Crispin □ Innovative Solutions □ 1903 W. 169th Street □ Gardena, CA 90247-5253 □ TELE. 213-715-6900
PRICING: Price Upon Request
P27873

JDE Sales Analysis
PLATFORMS: IBM System/38, AS/400 □ OS/400, CPF
LANGUAGES: RPG III/400
NUMBER OF CLIENTS/USERS: 114
DESCRIPTION: JDE Sales Analysis provides a comprehensive database which facilitates detailed management analysis of sales. This system

requires, and interfaces with, JDE Sales Order Processing. Features include: the creation of a sales history database from which standard and user-defined reports can be prepared; and the ability to produce standard reports, such as location, sales by salesperson, sales by product category, non-stock item sales, and sales by sales territory. This system also provides video inquiry into the entire database, as well as comprehensive security features. JDE Sales Analysis requires: JDE Sales Order Processing, JDE Address Book/Electronic Mail, JDE Inventory Management.
CONTACT DATA: Marissa Gotta ☐ Marketing Support Specialist ☐ J. D. Edwards & Company ☐ 4949 S. Syracuse Street ☐ Denver, CO 80237 ☐ **TELE.** 800-727-5333
PRICING: $2,500.00 — $14,300.00/Module
P24921

Keep In Touch
PLATFORMS: IBM PC; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
DESCRIPTION: Keep in Touch is a tool for developing a network of business contacts and for managing the desktop. The software is for managers and professionals who are in constant communication with clients and associates and need to make business grow, satisfy client needs, and organize a network of personal/business contacts. Keep in Touch includes a database system for address books, to-do lists, autodialing, alarm clock, reports, calculator, mailing labels, and logs of all calls and completed tasks. The software is unprotected and can be used with all hardware configurations.
CONTACT DATA: Steve Kantor ☐ President ☐ Gnossos Software ☐ 1534 16th Street N.W. ☐ Washington, DC 20036 ☐ **TELE.** 202-387-0858
PRICING: $295.00— $10,000.00
P26886

Lead Tracker, The
PLATFORMS: AT&T 6300, 7300; IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, OS/2, MS-DOS
NUMBER OF CLIENTS/USERS: 100+
DESCRIPTION: The Lead Tracker maintains a client/prospect database. Features include: inquiry/retrieval of prospect data and manipulation; account visit status logging and updates; leads vs. sales closed ratios; management reports by sales rep, product, and territory; automatic updating of prospect leads; and forms design, word processing, label printing, etc.
SPECIAL CONFIGURATION REQUIREMENTS: 256K memory, hard disk
CONTACT DATA: Vilma Ram ☐ Vice President ☐ Bits and Bytes Inc. ☐ 1650 Oakland Boulevard ☐ Suite 105 ☐ Walnut Creek, CA 94596 ☐ **TELE.** 415-945-0987
PRICING: $129.00/Copy; $750.00 Multi User
P36137

Leads & Sales +
PLATFORMS: IBM PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
DESCRIPTION: Leads & Sales + is designed for use by sales professionals to organize all lead information. It is designed for the multi-office environment as well as for individuals. It has its own security system and independently assignable privileges. Features include: immediate availability of lead information; fast and easy information search on any field; sort and select on 22 fields for mailing labels, reports and merge file records; tickler file; disk file transfer of information to word processor or other offices; English commands and requests; on-line screen Help throughout; produces dozens of different reports including special phone directories and tickler lists. It also produces lead cards to take out into the field.
CONTACT DATA: Dana Pomeroy ☐ Director of Marketing ☐ Atlantic Software House ☐ P.O. Box 033187 ☐ Indialantic, FL 32903 ☐ **TELE.** 407-724-4113
PRICING: $329.00
P34992

LEADtrack: Sales Lead Management Software
PLATFORMS: AT&T 6300; IBM PC-XT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: BASIC
NUMBER OF CLIENTS/USERS: 100+
DESCRIPTION: LEADtrack is a multi-functional marketing tool allowing a company to tabulate, fulfill, track and analyze its sales leads. This sophisticated package uses a master menu and several sub-menus to chain proprietary programs including word processing, database management and reporting capabilities. The system will assist to close the loop between

marketing expenditures and the sales effort through measurement of media insertions, sales territory aging analysis, and product and state reports. The inquiry management software modules include database management, lead fulfillment (labels, personalized letters), tracking and analysis, and sales lead field notification. Maintenance is included for 60 days; $175.00 per month option thereafter.
SPECIAL CONFIGURATION REQUIREMENTS: 640K memory, floppy disk drive, hard disk, printer
CONTACT DATA: Mike Stack ☐ President ☐ LEADtrack Corporation ☐ 620 Colonial Park Drive ☐ Suite 100 ☐ Roswell, GA 30075 ☐ **TELE.** 404-587-0412
PRICING: $1,875.00
P14211

LetterMaster Advanced
PLATFORMS: IBM PC-XT, PC-AT; MS-DOS-based Hardware; NCR PC; Radio Shack/Tandy 1000 thru 4000; Unisys PC; Wang PC ☐ PC-DOS, TRSDOS, MS-DOS
LANGUAGES: Assembler, C Language
NUMBER OF CLIENTS/USERS: 17,000
DESCRIPTION: LetterMaster Advanced is a contact management system that allows users to maintain client data bases. From these client data bases, users are able to track client activity, do mass mailings based on individual client data, manage sales calls, do telemarketing campaigns, keep client histories, and more. Advanced allows the user to custom tailor the data base. Network version available.
SPECIAL CONFIGURATION REQUIREMENTS: 512K RAM, hard disk, DOS 2.1 or later, supports Novell NetWare
CONTACT DATA: Susan Bargsley ☐ Marketing Director ☐ Dilg Publishing, Inc. ☐ P.O. Box 1238 ☐ Grapevine, TX 76051-1238 ☐ **TELE.** 817-860-0155
PRICING: $495.00
P36743

Market Master Manager
PLATFORMS: Apple Macintosh ☐ MAC OS - System 6, MAC OS - System 7
NUMBER OF CLIENTS/USERS: 300+
DESCRIPTION: Market Master Manager bridges the gap between our individually licensed program for one salesperson and the site license for a large corporation. Everything is in one Market Master collection so one operator runs it for the entire sales office. Market Master Manager automatically assigns sales territories by Zip Code, product line or rotation. It prints all letters in one pass and groups them by sales rep for signature. It also prints separate call lists for each salesperson. It produces a host of results analysis and activity reports by sales rep or by group so the separate or combined activities of the sales force are available to the manager in several ways for analysis. Also available in Multi-User.
SPECIAL CONFIGURATION REQUIREMENTS: 1MB minimum memory, 2MB recommended; hard disk required
CONTACT DATA: Maria Robinson ☐ Marketing Director ☐ Breakthrough Productions ☐ 210 Park Avenue ☐ Nevada City, CA 95959-2614 ☐ **TELE.** 916-265-0911
PRICING: $595.00 First 3; $100.00/Additional
P35398

Market Master R/A
PLATFORMS: Apple Macintosh ☐ MAC OS - System 6, MAC OS - System 7
LANGUAGES: Double Helix
NUMBER OF CLIENTS/USERS: 300+
DESCRIPTION: Market Master for the Macintosh Version 3.0 has all the features of Market Master Version II, plus a Results Analysis module. With it, the user can quickly see what sales activities work best and which lead sources pay off with the most sales (and the least). Besides showing the number of Yes, No, Reschedule, and Sale responses for each step of the marketing strategy, Market Master for the Macintosh Version 3.0 also displays the same information for each lead source. Its flexibility allows the same analysis by product line, location, or any other criteria users decide upon in place of lead source, and it analyzes campaign results over any selected date range.
SPECIAL CONFIGURATION REQUIREMENTS: 1MB minimum memory, 2MB recommended; hard disk required
CONTACT DATA: Maria Robinson ☐ Marketing Director ☐ Breakthrough Productions ☐ 210 Park Avenue ☐ Nevada City, CA 95959-2614 ☐ **TELE.** 916-265-0911

PRICING: $395.00
P35397

MARKET NICHER™

PLATFORMS: Apple Macintosh ☐ MAC OS - System 6, MAC OS - System 7

LANGUAGES: C Language

DESCRIPTION: MARKET NICHER is an interactive, menu-driven program for strategic marketing decisionmaking. It helps users determine the optimum target market for their product or service. It enables marketing groups to use a systematic, comprehensive, and logical method to identify their key target market, and evaluate the viability of any specific segment. An integrated database of key marketing information includes market segment descriptions, benefits, and marketing channels. The system can report graphic output and ranked market segment comparisons based on user input. In addition to a flexible, user-friendly tutorial, the system features online help and documentation written using the Information Mapping format. It is written in C and uses Hypergate. During execution, it accepts both subjective, user-specified criteria for possible market segments, as well as quantitative demographic information.

SPECIAL CONFIGURATION REQUIREMENTS: 1MB minimum; 20MB hard disk recommended; Mouse required

CONTACT DATA: Robert Gahtan ☐ President ☐ Good News Marketing, Inc. ☐ 42 Windsor Street ☐ Arlington, MA 02174 ☐ **TELE.** 617-643-7131

PRICING: $695.00
P39787

Market Planner®, The

PLATFORMS: IBM PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, OS/2, MS-DOS

LANGUAGES: Assembler, APL, C Language

NUMBER OF CLIENTS/USERS: 150+

DESCRIPTION: The Market Planner and its related family of personal computer software systems enables access to hospital specific and external databases through fully integrated database management, mapping, graphing, display management and demand modeling capabilities. The Sachs Group provides strategic planning and marketing software, education, data, and support to health care organizations.

SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM

CONTACT DATA: Janet Guptill ☐ Vice President of Sales and Marketing ☐ The Sachs Group Ltd. ☐ 1800 Sherman Avenue ☐ Suite 609 ☐ Evanston, IL 60201 ☐ **TELE.** 312-492-PLAN

PRICING: $30,000.00 — $40,000.00 License
P36148

MARKETBASE

PLATFORMS: IBM System/36 ☐ SSP

LANGUAGES: RPG II/III/400

NUMBER OF CLIENTS/USERS: 10

DESCRIPTION: Designed for the IBM System/36, MARKETBASE is a database management system for sales and customer service support. It features lead generation and lead tracking, personalized direct mail, telemarketing support, information management and sales management tools, and list acquisition from magnetic media. It is completely menu driven and is designed for the non-computer oriented user.

CONTACT DATA: Steven Noe ☐ President ☐ VanArsdale Associates, Inc. ☐ 5540 Centerview Drive ☐ Suite 415 ☐ Raleigh, NC 27606 ☐ **TELE.** 919-851-6917

PRICING: $5,000.00
P32249

MarkeTemplates

PLATFORMS: Apple Macintosh; IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ MAC OS, PC-DOS, MS-DOS

LANGUAGES: FORTRAN, BASIC, Pascal, C Language, MACRO

DESCRIPTION: MarkeTemplates provides the interrelated, and individualized business services necessary to take a marketing idea from the concept stage to an integrated, functioning marketing system. These services include industry analysis, business planning, systems analysis, computer procurement, software programming documentation and training. Specializes in templates to general purpose software for marketing applications.

CONTACT DATA: Tracie F. Gilb ☐ President ☐ Marketing A La Carte ☐ 5237 James Avenue S. ☐ Minneapolis, MN 55419-1136 ☐ **TELE.** 612-929-6131

PRICING: $1,000.00 — $100,000.00
P36128

MarketFax

PLATFORMS: IBM PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS

LANGUAGES: BASIC

NUMBER OF CLIENTS/USERS: 3,500+

DESCRIPTION: MarketFax combines sales tracking, word processing, database management, strategic planning and implementation in a single system. Features include: user customized automatic sales plan driver (prepares automatic letters, moves clients through sales sequences automatically); creates and prints a variety of follow up letters all in a single print operation; telephone contacts may be printed to reports or displayed on a telemarketing screen for autodialing; follow up letter instructions are stored in a temporary file for printing at a later time; automatic tracking of marketing activity and client history; convert data into MarketFax from other data bases; generate automatic letters based upon a preset date without user intervention; selection of clients from one list to another by user definable criteria; sort clients by contact name, company name, zipcode, etc.; print letters, call notices, exception reports, labels, envelopes; find clients by any criteria; and manage prospect data bases up to 32,000 records on the PC version and approximately 4 million on the VAX version. Local Area Networks are supported.

CONTACT DATA: Robert T. Price ☐ President ☐ Scientific Marketing ☐ 23046 Avenue De La Carlota ☐ Suite 602 ☐ Laguna Hills, CA 92653 ☐ **TELE.** 714-957-0225

PRICING: $2,995.00—$8,995.00
P36152

Marketing Analysis Package

PLATFORMS: Altos; Data General Eclipse MV Series; IBM PC-XT, PC-AT; MS-DOS-based Hardware; Prime; UNIX-based Hardware ☐ AOS/VS, PC-DOS, UNIX, MS-DOS, XENIX

LANGUAGES: COBOL

NUMBER OF CLIENTS/USERS: 4

DESCRIPTION: The Marketing Analysis Package targets and defines prospects and streamlines current sales activity. This easy-to-use package will monitor and control both current and potential sales activity. Its unique extraction and analysis features allow the user to target potential vertical markets by industry or geographic area, obtain status reports of marketing efforts, view customer base or monitor competitors' market penetration. Its versatile extraction and sorting features allow direct mail activities to specifically targeted audiences rather than to waste time and resources on general mass mailings. The sales force is provided with significant tools, such as on-line viewing of prospect information, telephone calling reports, field call reports, and tickler file reports.

CONTACT DATA: Robert Crowder ☐ Marketing Representative ☐ ASC Computer Systems ☐ 550 Forest Avenue ☐ Suite 101 ☐ Portland, ME 04101 ☐ **TELE.** 207-772-8620

PRICING: Price Upon Request
P14136

Marketing and Sales Management (MSM)

PLATFORMS: IBM System/38, System/36, AS/400 ☐ OS/400, MS-DOS

LANGUAGES: RPG II/III/400, C Language

NUMBER OF CLIENTS/USERS: 400

DESCRIPTION: The Marketing and Sales Management System (MSM) will increase productivity, effectiveness, efficiency and control of the marketing and sales effort in the business-to-business selling environment. MSM is a full account management system that provides telemarketing, lead management, direct mail management, flexible reporting functions, quote tracking, key account management, and integrates inside and outside sales force. Easily interfaces with order entry and accounting packages. Supports laptop computers which integrate with the host.

CONTACT DATA: Sales Department ☐ Marketing Information Systems ☐ 1840 Oak Avenue ☐ Evanston, IL 60201 ☐ **TELE.** 708-491-3885

PRICING: $20,000.00—$100,000.00
P36237

Marketing Decision Maker

PLATFORMS: AT&T 3B Series, 6300, 7300; IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; NCR PC; Radio Shack/Tandy 1000 thru 4000; Unisys PC; Wang PC ☐ PC-DOS, OS/2, MS-DOS

DESCRIPTION: The Marketing Decision Maker accommodates the market

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Daniel Wei
603-883-46
PRICING: $5
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planning and product management professional who does market assessment and planning. Features include: market potential estimation; competition profiles and intelligence; product, price and promotion mix; distribution channels; and market plan implementation strategies.

SPECIAL CONFIGURATION REQUIREMENTS: 256K main memory

CONTACT DATA: Vilma Ram □ Vice President □ Bits and Bytes Inc. □ 1650 Oakland Boulevard □ Suite 105 □ Walnut Creek, CA 94596 □ **TELE.** 415-945-0987

PRICING: $159.00/Copy; $750.00 Multi User

P36139

MARKETING EDGE Issue 4.0

PLATFORMS: AT&T 6300, 7300; IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; NCR PC; Radio Shack/Tandy 1000 thru 4000; Wang PC □ MS-DOS

NUMBER OF CLIENTS/USERS: 9,000

DESCRIPTION: MARKETING EDGE is designed to assist product/marketing managers and entrepreneurs in building a professional market plan. It provides a tool to screen new product opportunities allowing the user to select markets, define customer needs, evaluate competitors, price products, and select distribution channels. It also includes 17 customizable market planning applications. On-screen tutorials of completed market analyses with built-in marketing expertise are provided, and supporting presentation graphics are automatically constructed from input.

SPECIAL CONFIGURATION REQUIREMENTS: 256K, Lotus 1-2-3 1A or 2.01

CONTACT DATA: Robert A. Sevio □ President □ SUCCESSware, Inc. □ 203 Annandale Drive □ Cary, NC 27511 □ **TELE.** 919-469-0119

PRICING: $299.00 One Time License

P34629

Marketing Management System (MMS)

PLATFORMS: DEC VAX; IBM PS/2 Series; MS-DOS-based Hardware □ VMS, PC-DOS, MS-DOS

LANGUAGES: COBOL, C Language

NUMBER OF CLIENTS/USERS: 1,200

DESCRIPTION: MMS features include: easy to use menus; marketing demographics, 9,999 lines memo, 9,999 lines sale activity; direct mail; lead distribution and tracking; telemarketing; follow-up schedules; sales forecasting; lead analyses (eight reports); import and export files; and ad hoc reports (optional).

SPECIAL CONFIGURATION REQUIREMENTS: IBM/LAN. Labtops

CONTACT DATA: Bonnie Nolan □ Sales Support □ JEB Systems, Inc. □ 32 Daniel Webster Highway □ Suite 12 □ Merrimack, NH 03054 □ **TELE.** 603-883-4662 or 800-821-1006

PRICING: $995.00—$15,800.00

P22524

Marketing Management System

PLATFORMS: IBM System/38, System/36 □ CPF, SSP

LANGUAGES: RPG II/III/400

DESCRIPTION: Brings to marketing management flexible sales analysis and marketing control facilities. It quickly isolates pockets of success and problem areas without inundation of paperwork.

CONTACT DATA: GMD, Inc. □ 1830 Underwood Boulevard □ Delran, NJ 08075 □ **TELE.** 609-764-1300

PRICING: $9,500.00

P30928

Marketing Management System/Plus (MMS/Plus)

PLATFORMS: DEC VAX, MicroVAX □ MicroVMS, VMS

LANGUAGES: COBOL, C Language

NUMBER OF CLIENTS/USERS: 1,200

DESCRIPTION: MMS/Plus features include: marketing demographics; account memo; sales history; literature management; up to 500 contacts primary company record; menu-driven; lead management; account management; daily transaction processing; telemarketing call reporting; sales forecasting and reporting; management reporting/lead analyses; and ad hoc inquiry/reporting (optional).

CONTACT DATA: Bonnie Nolan □ Sales Support □ JEB Systems, Inc. □ 32 Daniel Webster Highway □ Suite 12 □ Merrimack, NH 03054 □ **TELE.** 603-883-4662 or 800-821-1006

PRICING: $5,600.00—$15,800.00 License

P36129

Marketing Management System/Project Tracking (MMS/PT)

PLATFORMS: AT&T 6300; IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ PC-DOS, MS-DOS

LANGUAGES: COBOL, C Language

NUMBER OF CLIENTS/USERS: 200+

DESCRIPTION: MMS/PT features include: marketing demographics; memo; sales history; project tracking; report generator; direct mail (form letters and word processing interface); lead distribution, tracking and follow-up; telemarketing; multiple projects primary account; sales forecasting; lead analyses (eight standard reports); custom inquiries and reports; import and export files; and user security system.

CONTACT DATA: Bonnie Nolan □ Sales Support □ JEB Systems, Inc. □ 32 Daniel Webster Highway □ Suite 12 □ Merrimack, NH 03054 □ **TELE.** 603-883-4662 or 800-821-1006

PRICING: $2,500.00—$5,000.00 License

P36130

Marketrieve PLUS

PLATFORMS: DEC VAX, MicroVAX; Hewlett-Packard 3000; IBM PC-AT; MS-DOS-based Hardware □ MicroVMS, VMS, MPE, MS-DOS

NUMBER OF CLIENTS/USERS: 110

DESCRIPTION: Full sales force automation software. Quick access to data, searching by company, contacts, telephone number and other keys. Follow-up tickled automatically. Up to 75 user definable fields. Detailed market analysis and complete sales management reports. Complete literature fulfillment module. Full letter writing. Unlimited sales pipeline steps definable for each product or sell cycle. Ability to jump to other applications such as order entry. Easy capture of data electronically from mailing lists and other computer applications. Global changes to data allow mass changes such as territory re-assignments. Detailed unlimited on-line notes. User definable wrap up screen captures data about call type, call disposition, campaigns, etc.

SPECIAL CONFIGURATION REQUIREMENTS: Powerhouse a 4th GL from Cognos Corporation

CONTACT DATA: Edward P. Lucia, Jr. □ President □ Marketrieve Company □ Londonderry Commons □ Suite A-3 □ Londonderry, NH 03053 □ **TELE.** 603-434-0442

PRICING: Price Upon Request

P39124

marketrievePLUS™

PLATFORMS: DEC VAX, MicroVAX; Hewlett-Packard 3000 □ MicroVMS, VMS, MPE

NUMBER OF CLIENTS/USERS: 18

DESCRIPTION: Manage sales leads effectively. Quick access to data searching by company, contacts, or other keys. 50 user-definable demographic fields for each client; 25 user-definable transaction fields for each sale. Track each sales rep's activity daily, weekly, etc. Optionally, mandatory wrap up screens to capture activity. Detailed market analysis reports and sales management reports. Full Letter Writing, Lit. Fulfillment. Ability to jump to other software programs like accounting, inventory, etc., and return. Electronic lead capture from mailing lists, global changes to data allow mass changes such as territory re-assignments. Detailed notes of any length can be stored indefinitely.

SPECIAL CONFIGURATION REQUIREMENTS: PowerHouse 4GL from Cognos

CONTACT DATA: Jackie Cavallaro Jr. □ IDSC Rental Company, Inc. □ London Dairy Commons □ Suite A-3 □ London Dairy, NH 03053 □ **TELE.** 603-434-0442

PRICING: $900.00 — $1,200.00/User License

P35439

Marketware

PLATFORMS: Pick-based Hardware □ Pick

DESCRIPTION: A comprehensive sales support package designed to provide several communications tools to both managers and their sales staff. Marketware includes Customer Listings, Contact Listings, Contact Display (Terminal), Call Back Reports, Follow-up Reports, Contact Result History, and Telephone Directories.

CONTACT DATA: Stephen Setzman □ Account Representative □ The Distribution Source □ 873 Township Line Road □ P.O. Box 7137 □ Elkins Park, PA 19117 □ **TELE.** 215-885-4880

PRICING: Price Upon Request

P30581

MARKOPS

PLATFORMS: IBM PC, PC-XT, PC-AT □ PC-DOS, MS-DOS
DESCRIPTION: MARKOPS, a marketing operations and strategy simulation package. MARKOPS puts the user in charge of running both the top-down and bottom-up marketing activities of a simulated industry. The user is challenged to develop and test real-life marketing solutions in a no-risk environment. The user will: manage a line of products, launching new products and withdrawing poor performers; make decisions on direct and indirect marketing approaches; allocate resources of the firm across different client segments; and analyze and anticipate competitors behavior, and position products relative to competitive offerings and client needs.
CONTACT DATA: Debbie Lavender □ Marketing Coordinator □ Strat*X International □ 222 Third Street □ Cambridge, MA 02142 □ **TELE.** 617-494-8282
PRICING: $235.00
P36467

MATRIX Information Technology

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: C Language
DESCRIPTION: MATRIX provides complete corporate information management, and can be used by many groups within the same company. Provides lead tracking, client management, forecasting, sales analysis, call reporting, inventory maintenance, auto-scheduling and tickler systems. User interface is through light bar menus, pop-up windows and user-defined code tables. MATRIX is designed to be customized to individual company requirements for applications, screen design and reports. Supports communications between remote locations, branch offices and corporate headquarters. Also supports PC-to-mainframe links.
CONTACT DATA: Mary Anne Davis □ Marketing Communications Manager □ Market Power, Inc. □ 101 Providence Mine Road □ Suite 104 □ Nevada City, CA 95959 □ **TELE.** 916-265-5000, FAX: 916-265-5171
PRICING: Price Upon Request
P36887

MCBA's Sales History

PLATFORMS: Altos; Compaq; DEC VAX; Hewlett-Packard 3000; IBM PC-AT; NCR Tower; Unisys Series 5000/6000; Wang VS □ VMS, MPE V, MPE XL, VS/OS, UNIX, XENIX
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 2,000
DESCRIPTION: MCBA's Sales History reports period-to-date and year-to-date sales and costs in nine formats with percentage analysis, subtotals, and summaries; prints Sales Comparison Reports showing item sales in any period compared to the same period in the previous year, by product, by customer within product, by product within customer, by product within category, and by product within customer within salesman; prints detailed history reports showing all invoice data related to each line item sorted by customer, by salesman, by state, by product category, and by invoice date; obtains data automatically when invoices are printed, and optionally allows manual entry.
SPECIAL CONFIGURATION REQUIREMENTS: RM/COBOL-85
CONTACT DATA: Sales Department □ MCBA, Inc. □ 425 W. Broadway □ Glendale, CA 91204-1269 □ **TELE.** 818-242-9600
PRICING: $495.00—$5,500.00
P14516

MediaMark

PLATFORMS: Apple II Series, Macintosh; IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; Motorola 68000; Radio Shack/Tandy 1000 thru 4000 □ Apple DOS 3.3, MAC OS - System 6, PC-DOS, OS/2, TRSDOS, MS-DOS
LANGUAGES: Assembler, Pascal, C Language
NUMBER OF CLIENTS/USERS: 300,000
DESCRIPTION: MediaMark is for business or consumer marketing. Media-Mark Insights uses an "Active Sales Aid in a Disk" theme to communicate sales messages. Advertainment uses sales messages as an integral part of an entertainment process.
SPECIAL CONFIGURATION REQUIREMENTS: Color monitor required; 3 1/2MG hard disk required; VGA graphics card required
CONTACT DATA: Rick Blackman □ Production Manager □ The InMar Group □ 4242 Piedras Drive East □ Suite 120 □ San Antonio, TX 78228 □ **TELE.** 512-733-8999
PRICING: $20,000.00 — $99,000.00
P36246

MTI Sales/Service

PLATFORMS: Pick-based Hardware □ Pick
DESCRIPTION: Additional information about this product may be obtained from the vendor listed below.
CONTACT DATA: Bruce Hamilton □ President □ Media Technology, Inc. □ 3400 Silverstone □ Suite 126 □ Plano, TX 75023 □ **TELE.** 214-985-8102
PRICING: Price Upon Request
P30612

MYTE MYKE™ Sales Analysis

PLATFORMS: AT&T 6300, 7300; Altos; Hewlett-Packard 9000; IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; NCR Tower; UNIX-based Hardware □ PC-DOS, Novell NetWare, UNIX, MS-DOS, XENIX
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 300
DESCRIPTION: The Sales Analysis system is a sales history data base system which maintains two-year comparative sales information. Features include: 1) Month-to-month, year-to-date and previous comparisons; 2) Quantity and dollars by salesman, customer, product class and product; 3) Parameter-driven report generator which allows user formatting and sequencing of reports; and 4) Up to 13 columns of figures and 5 levels of totals. It is designed for both small businesses and major corporations with departmental, divisional or remote-site requirements. Sales Analysis supports both single and multi-user environments. A support program that includes system enhancements is available. A 90-day warranty is included.
SPECIAL CONFIGURATION REQUIREMENTS: 256K memory, 10MB hard disk (20MB recommended), Ryan McFarland Run Time COBOL
CONTACT DATA: Jane Carpenter □ Vice President, Marketing □ M & D Systems, Inc. □ 3885 N. Buffalo Road □ P.O. Box 108 □ Orchard Park, NY 14127 □ **TELE.** 716-662-6611
PRICING: $850.00 and Up
P27136

NAMER by Salinon®

PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: Assembler, BASIC
NUMBER OF CLIENTS/USERS: 2,000+
DESCRIPTION: NAMER by Salinon is a naming thesaurus for selecting names for companies, products, services, or anything. Product development managers, creative directors, marketing/advertising executives, R&D engineers, and brand researchers have found its menu orientation, Help screens, and easy-to-understand function keys user friendly. Version 2.2 contains over 10,000 name-parts categorized by industry and connotation, a comprehensive Naming Thesaurus and User's Guide, and database editing/file creation features. Includes 11 different name creation methods and more than 12 databases of pronounceable key words categorized and indexed. It lets the user build a single or multiple word name from individual letters, syllables, or whole words.
SPECIAL CONFIGURATION REQUIREMENTS: 256K minimum, DOS 2.0 or later
CONTACT DATA: Mike Carr □ President □ The Salinon Corporation □ 7424 Greenville Avenue □ Suite 115 □ Dallas, TX 75231 □ **TELE.** 214-692-9091
PRICING: $150.00
P29314

National Sales Territory Management

PLATFORMS: AT&T 3B Series; DEC Mainframe; Encore Computer; IBM Mainframe; McDonnell Douglas; Pyramid; Ultimate; Unisys 1100 Series □ PRIMOS, UNIX, Pick
LANGUAGES: BASIC
DESCRIPTION: National Sales Territory Management is a comprehensive sales support system designed to simplify and organize the many activities necessary for successful selling, from account prospecting to professional customer management. NSTMS provides all the features to improve control over the sales process, increase sales productivity, improve communication with prospects and clients, and to aid in effective reporting to management. Included are a wide range of management reports and capabilities such as: distributed and territory sales management, lead tracking and follow-up, mailing list management, activities and correspondence tracking, and follow-up reports. With NSTMS' easy-to-use menus, users can instantly review all activities; past, present, and future easily. Sales and marketing management, at all levels, can analyze current activities and results.
CONTACT DATA: Sales Department □ Cogent Information Systems, Inc. □

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830 Morris Turnpike □ Short Hills, NJ 07078 □ **TELE.** 201-379-7979
PRICING: Price Upon Request
P37321

Office Manager

PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 25
DESCRIPTION: Office Manager is a small business system that combines the power of a database with word processing, mail/merge, and customer/contact files to produce mail labels, Rolodex, follow-up lists and letters. The specific task is selective by using and/or search logic to find only those customers/contacts who are your target. The system has an easy-to-use accounting system that does not require any knowledge of accounting. All income and expense details are easily recorded using up to five checkbooks. Invoicing and asset records also. Memo writer and calendar are included. Compatible with Rep-Trakker and most word processors.
CONTACT DATA: Certified Software Distributors, Inc. □ P.O. Box 7824 □ Incline Village, NV 89540-7824 □ **TELE.** 702-832-7638
PRICING: $299.00
P31250

OMNITRAC Sales Management System

PLATFORMS: AT&T 3B Series, 6300; DEC VAX; IBM AS/400, PC, PC-XT, PC-AT; MS-DOS-based Hardware; Stratus; UNIX-based Hardware □ VMS, PC-DOS, UNIX, MS-DOS
LANGUAGES: C Language
NUMBER OF CLIENTS/USERS: 120
DESCRIPTION: OMNITRAC is a comprehensive direct sales and telemarketing tool incorporating automatic reminders, call lists, unlimited remarks, contact dates, multiple personal contacts, and more. It is a sales and marketing management tool with varied reporting on account, representative or product activity, sales forecast, lead source analysis, sales representative analysis and mailing labels for direct mail campaigns and inquiry fulfillment. Fully integrated relational database with data import/export facility and mass maintenance. Documentation and user friendly operation with on-line Help messages are provided.
CONTACT DATA: Sales Department □ Interactive Systems, Inc. □ 600 Suffolk Street □ Lowell, MA 01854 □ **TELE.** 508-937-8500 or 800-327-2333, FAX: 508-446-1562
PRICING: $1,100.00—$15,000.00
P24532

Order Desk 2.0

PLATFORMS: Apple Macintosh □ MAC OS - System 6, MAC OS - System 7
LANGUAGES: 4th Dimension
NUMBER OF CLIENTS/USERS: 80
DESCRIPTION: Order Desk 2.0 is a mail order management system that features: 1) Automatic Zip code lookup (no need to type in city and state); 2) Lets users designate the "next step" for each customer; 3) Maintains dates customer first contacted and most recent contact; 4) User-definable set of keyboards — unlimited for each customer; 5) Keeps full history of interactions with customer; 6) Lets users set up to three attributes for each product (e.g., color, size, etc.) with an unlimited number of individual attributes (e.g. colors: red, green, blue, etc.); 7) Supports product sets made up of other products (i.e., gift packs, multi-part products, component product sets); 8) Tracks all purchasers of every product and product set, including date, units ordered, and total value of order; 9) Billing portion accepts purchase orders, checks, credit cards; and 10) Products can be sold on a subscription basis for any length of time in any interval.
SPECIAL CONFIGURATION REQUIREMENTS: 1MB minimum memory; color monitor recommended; 20MB hard disk required; AppleTalk and Ethernet are supported
CONTACT DATA: Penelope Low □ Manager □ 4th Solutions □ 733 E. Loma Verde Avenue □ Palo Alto, CA 94303 □ **TELE.** 415-494-2829
PRICING: $295.00
P40399

Organizing for Successful Selling

PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: Pascal
DESCRIPTION: Designed for individual sales person, maintaining customer information, account information, sales history, itinerary, expenses, call patterns. Prints mailing labels and screens enabling salesperson to carry account information and update information while on the road.
CONTACT DATA: Joan A. Keilly □ Product Manager □ Management Campus, Inc. □ P.O. Box 88039 □ Atlanta, GA 30338 □ **TELE.** 404-668-9021
PRICING: $49.95
P35713

Oscar Interviewing System

PLATFORMS: Pick-based Hardware □ Pick
DESCRIPTION: Additional information about this product may be obtained from the vendor listed below.
CONTACT DATA: Ron Leeds □ President □ Oscar Inc. □ 48 Industrial West □ Clifton, NJ 07012 □ **TELE.** 201-777-6000
PRICING: Price Upon Request
P30622

Ozz Point

PLATFORMS: Datapoint; IBM PC; MS-DOS-based Hardware □ RMS, PC-DOS, MS-DOS
LANGUAGES: BASIC, DATABUS
NUMBER OF CLIENTS/USERS: 17
DESCRIPTION: Ozz Point has been designed as a powerful tool for sales and marketing. It allows the user to organize and retrieve customer information for updating, review by customer name, phone number, company name, as well as any of the user-defined codes, account balance, zip codes, states, appointment dates, and key words from the comment section. The system allows for unlimited customer history in the comment section. Reports can be printed or displayed. It integrates easily with word processing for personalized letters and creates mailing labels one or three across. Features include: 1) Marketing statistics; 2) Appointment scheduler; 3) Tickler system; and 4) Rotary card file. A 90-day warranty is included.
SPECIAL CONFIGURATION REQUIREMENTS: 128K minimum hard disk
CONTACT DATA: Michael Hahn □ Sales Director □ OZZ Networking Systems □ 3410 Midcourt Road □ Suite 110 □ Carrollton, TX 75006 □ **TELE.** 214-385-2300
PRICING: $450.00 Purchase
P25361

PC Customer Call Back

PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 10
DESCRIPTION: PC Customer Call Back helps close sales. Customer Maintenance display allows storing customer's name, address and phone number. Allows entering and retaining important comments, including the date of last contact and date to call customer bank. At the beginning of every work day, week or month, the call back report can be run to get a list of which customers need to be contacted. The PC Customer Call Back program will print all customers to call within the time period specified. Also has the ability to print customer lists and mailing labels. Network version available.
CONTACT DATA: Linda Methven □ Account Representative □ Columbia Systems, Inc. □ 10420 S.E. Hillcrest Drive □ Portland, OR 97266 □ **TELE.** 503-654-7722
PRICING: $95.00
P33481

PC Sales Prospector

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: Assembler, BASIC
NUMBER OF CLIENTS/USERS: 50+
DESCRIPTION: The records are pre-sorted by Name Code and by Zip Code or they can be sorted by any of the fields or even by attribute. The State and Zip Code fields are checked for validity. List printing can use all or selected records. This is based on the ability to assign up to 13 attributes per record. Full or partial lists can be printed in full or half page size. User-selected attributes can be totalled for all records. Duplicate record detection during data entry. It can interface to mail-merge systems in many word processors. It supports the attachment of 1 to 99 dated note/event records to any name record. This allows progress reporting for tasks, events prospecting, etc. Notes with future dates act as a tickler.
SPECIAL CONFIGURATION REQUIREMENTS: 128K for PC DOS; 192K for MS-DOS
CONTACT DATA: Kip Koehler □ Owner □ Data Consulting Group □ 18

Hector Lane □ Novato, CA 94949 □ **TELE.** 415-883-2300
PRICING: $125.00
P33675

PCAT (Professional Contact and Tracking)

PLATFORMS: IBM PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: Assembler, BASIC
NUMBER OF CLIENTS/USERS: 2,400+
DESCRIPTION: PCAT™ is a telemarketing and sales management tool which combines, in one package, a customer data file, call scheduler, telephone autodialer, script prompter, word processor, and mailing list processor. PCAT™ automates a wide range of business functions, including telephone sales, lead qualifications, customer service, surveys, receivables collection, inquiry processing, and fund-raising. PCAT™ is an interactive and integrated multi-function business application. Manual is provided; priced separately at $830.00.
SPECIAL CONFIGURATION REQUIREMENTS: 384K, two disk drives or one and hard disk, Hayes Smartmodem; supports IBM Token Ring and Novell NetWare
CONTACT DATA: Gary Pannone □ Arlington Software and Systems □ 21 Daniels Street □ Arlington, MA 02174-5923 □ **TELE.** 617-641-0290
PRICING: $1,295.00 Single User; $4,000.00 — $6,400.00 Multi User
P22984

PCI Sales Management Solutions

PLATFORMS: DEC VAX, MicroVAX; IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ VMS, PC-DOS, MS-DOS
LANGUAGES: C Language
DESCRIPTION: This package provides customer tracking, generation of quotes or proposals; forecasts product requirements based on quotes, forecasts dollars based on quotes, tracks inventory of products, builds a history by account and territory, calculates sales commissions, assigns split sales credit, provides customer support information, and allows easy report generation.
CONTACT DATA: Martha A. Schulte □ Vice President of Marketing □ PCI □ 20 Technology Parkway □ Suite 100 □ Norcross, GA 30092 □ **TELE.** 404-242-8222
PRICING: $695.00—$1,295.00/Module Single User; $3,000.00—$12,000.00/Module Multi User
P36149

People & Contacts™

PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 1,000
DESCRIPTION: People & Contacts is designed to maintain and print a daily contact calendar. Automatically provides the user with historical contact details for planning the next contact from a prospect. The program keeps track of customers, reminds the user to follow-up, records each contact event, autodialing, maintains mailing lists, and allows searches on 26 fields.
SPECIAL CONFIGURATION REQUIREMENTS: 384K RAM, two 360K floppy disk drives or one 360K disk and hard drive, DOS 2.0 or later
CONTACT DATA: Dr. Gary Lipe □ Owner □ People & Contacts □ P.O. Box 11830 □ Fort Worth, TX 76110 □ **TELE.** 817-332-5203
PRICING: $197.00
P36245

peopleBASE

PLATFORMS: AT&T 6300; IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware □ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 5,000
DESCRIPTION: peopleBASE was designed to help users keep track of and communicate with other people. Whether users keep in touch by phone or by mail, peopleBASE will streamline the flow of correspondence between users and the people they deal with. A database manager, word processor, mail merge, report generator and appointment manager are smoothly integrated using a simple system of pull-down menus. Users can store detailed information on thousands of people (including an almost unlimited amount of notes and comments), print personalized form letters and labels, create custom lists and reports, and direct phone calls at specific individuals or targeted groups of people.
SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM; hard disk; written in Clipper

CONTACT DATA: Al Schwendtner □ High Caliber Systems Inc. □ 165 Madison Avenue □ New York, NY 10016 □ **TELE.** 212-684-5553
PRICING: $199.00 Single User; $695.00 LAN
P30864

Performance Reports

PLATFORMS: AT&T 6300; IBM PC, PC-XT; MS-DOS-based Hardware □ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 50
DESCRIPTION: Performance Reports is a PC-based module designed to gather, analyze and report data which measures both the contributions of telephone representatives and the quality of the services they provide. The key to the system is the user's ability to select data input, create measurements and define the reports that best suit a user's method of evaluating and tracking telephone representatives. A 90-day warranty is included.
CONTACT DATA: Marketing Manager □ AFFINITEC □ 11737 Administration Drive □ St. Louis, MO 63146 □ **TELE.** 314-569-3450
PRICING: $5,000.00
P26420

PERSPECTIVE/700 Sales Analysis

PLATFORMS: DEC PDP-11, VAX □ VMS, RT-11, RSX-11, RSTS-E
LANGUAGES: BASIC, DIBOL
NUMBER OF CLIENTS/USERS: 500
DESCRIPTION: PERSPECTIVE/700 Sales Analysis is a multi-user/multi-company system designed to aid in producing comprehensive sales reports that allow managers to make decisions affecting company direction. The reports highlight which products are most profitable, who the best customers are, and which sales representatives are having the most positive results. Reports include: 1) Customer Sales Analysis which provides month, year and previous year comparisons and gross margin; 2) Product Class Sales Analysis which provides month and year-to-date comparisons, unit and gross dollar sales, and gross margin; 3) Salesperson Sales Analysis which provides product class, gross margin, and month, year-to-date, previous year and quota comparisons; 4) Sales Territory Recap which provides sales person summary, gross margin, product class, and month, year-to-date, previous year and quota comparisons; 5) Item Sales History which provides 12-month rolling history and unit sales ranked by sales volume; and 6) Commission statement.
CONTACT DATA: Michael B. Andelman □ President □ UOCS Corporation □ 246 E. Janata Boulevard □ Suite 262 □ Lombard, IL 60148 □ **TELE.** 312-953-2220
PRICING: $2,000.00— $5,000.00 Purchase
P25223

PRAXA® Bookings Analysis

PLATFORMS: DEC VAX, MicroVAX □ MicroVMS, VMS
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 50
DESCRIPTION: Bookings Analysis maintains orders booked history for the current year as well as the past four years. Input to this history comes from the Entry function within the Order Entry application. The system provides a series of reports that aid in monitoring the order capturing volume.
CONTACT DATA: Carol L. Higgins □ Manager of Marketing Administration □ Unitronix Corporation □ 1021 Centennial Avenue □ Piscataway, NJ 08854 □ **TELE.** 201-981-1600 or 800-257-7482
PRICING: Price Upon Request
P38712

PRAXA® Sales Quotations

PLATFORMS: DEC VAX, MicroVAX □ MicroVMS, VMS
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 30
DESCRIPTION: PRAXA Sales Quotations is designed to automatic generating sales quotes and proposals. Historic tracking of quotation data provides for price consistency. Issued quotations may be viewed by customer, product and sales representative. Integration with word processing provides professional appearance. Product availability is determined through integration with inventory control. Telemarketing information can be automatically entered into quotes and quotes resulting in sales can be converted into a sales order. Previously entered sales quotations can be purged from the system when desired.
CONTACT DATA: Carol L. Higgins □ Manager of Marketing Administration □ Unitronix Corporation □ 1021 Centennial Avenue □ Piscataway, NJ 08854 □ **TELE.** 201-981-1600 or 800-257-7482

PRICING: Price Upon Request
P38707

PRAXA® Telemarketing
PLATFORMS: DEC VAX, MicroVAX ☐ MicroVMS, VMS
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 30
DESCRIPTION: PRAXA Telemarketing is designed to assist in managing sales, prospecting activities from initial contact through customer sale. The system maintains specific information regarding contacts for each lead and can note the firms' products, and individuals identified as the competition for each sale. Activities can be date tagged and hot lead listing can be produced. Last sale data can be maintained; electronic mail messages can be automatically generated; numerous user-defined fields are provided; and the system includes a report writer for custom analysis. An interface with Sales Quotations and, in turn, Order Entry provides automatic entry of customer, information.
CONTACT DATA: Carol L. Higgins ☐ Manager of Marketing Administration ☐ Unitronix Corporation ☐ 1021 Centennial Avenue ☐ Piscataway, NJ 08854 ☐ TELE. 201-981-1600 or 800-257-7482
PRICING: Price Upon Request
P38708

PRIMO!
PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; NCR Tower, PC; Unisys PC; Wang PC ☐ PC-DOS, OS/2, MS-DOS
LANGUAGES: Assembler, C Language
DESCRIPTION: Automatically logs incoming and outgoing phone calls. Easy data entry and seamlessly interfaces to virtually any popular word processing program. Unlimited reports and forecasts. Print a calendar of activity by day, month or year. Automatically reminds users of an event kept in a tickler file or notepad; even accepts leads electronically. History of calls or correspondence.
CONTACT DATA: Michael Nolan ☐ Vice President of Sales and Marketing ☐ Free World Marketing ☐ 444 N. Newport ☐ Newport Beach, CA 92663 ☐ TELE. 714-722-6414
PRICING: $200.00
P35798

PRO-IV Sales Analysis
PLATFORMS: AT&T 3B Series; Altos; Bull DPS 6; DEC PDP-11, Micro/PDP-11, VAX, MicroVAX, Professional 300s, Rainbow; IBM System/36, PC, PC-XT, PC-AT; MS-DOS-based Hardware; Prime; Tandem NonStop ☐ VMS, RSX-11, RSTS, P/OS, GCOS MOD 400, PC-DOS, UNIX, MS-DOS, XENIX
LANGUAGES: PRO-IV
NUMBER OF CLIENTS/USERS: 1,000
DESCRIPTION: ASC's PRO-IV Sales Analysis is transportable, menu-driven developer modifiable, and can operate as a standalone module, but is a more powerful tool when used with ASC's PRO-IV Order Processing and Inventory Control modules. The system is used to maintain limited customer, item and sales person information; a log is automatically kept of any changes made to this information. Reports include the Detail Sales Analysis Reports in detail or summary format, sorted by sales person, customer type, customer code, item category and code and invoice date; and Monthly Summary Sales Analysis Report for six month summary totals which contains gross margin percent, sales units and dollars.
SPECIAL CONFIGURATION REQUIREMENTS: 256KB RAM
CONTACT DATA: Sales Department ☐ Applications Systems Corporation ☐ 4000 MacArthur Boulevard ☐ West Tower Suite 3300 ☐ Newport Beach, CA 92660 ☐ TELE. 714-757-7070
PRICING: $525.00 and Up Purchase
P28835

PRO/FIT Sales/Backlog Reporting System
PLATFORMS: DEC VAX; Hewlett-Packard 3000 ☐ VMS, MPE
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 4
DESCRIPTION: This integrated, interactive sales/backlog reporting system provides complete visibility into all sales activity by tabulating sales orders into reporting categories for on-line inquiry and hard copy reporting. Features include: 1) Any combination of items on the order (including order line items) can be used to define a level in the sales reporting structure; 2) Data at any organizational level; 3) Budget data at any organizational level; 4) Budget variance analysis can be performed on-line or using the report

writer; 5) Multi-level, multi-dimensional report writer; 6) Reporting parameters can be easily changed; and 7) Task level security.
CONTACT DATA: Ken Kennedy ☐ Sales Manager ☐ Computing Technicians Corporation/ Cardinal West ☐ 13896 Harbor Boulevard ☐ Suite 5-C ☐ Garden Grove, CA 92643 ☐ TELE. 714-554-1551, FAX: 714-554-5987
PRICING: Price Upon Request
P19578

PRO/FIT® Sales Order Management System
PLATFORMS: Hewlett-Packard 3000 ☐ MPE, MPE XL
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 100+
DESCRIPTION: The Sales Order Management System is designed to automate sales order processing in virtually any business environment. Through a proprietary "Configurator Subsystem", any number of order types can be given their own unique processing paths without any reprogramming. The system provides extensive user-oriented features such as automatic user-defined status assignment, automatic document scheduling, extensive pricing and unit measure capabilities, and unlimited freeform text. The Matrix Inquiry screen allows on-line queries using any combination of sales/order selection criteria. The Sales Order Management System is fully integrated with the entire Cardinal network of PRO/FIT Systems. A six-month warranty is included.
CONTACT DATA: Cynthia S. Gould or Heidi A. Jones ☐ Cardinal Data Corp. ☐ 75 Second Avenue ☐ Suite 200 ☐ Needham Heights, MA 02194 ☐ TELE. 617-449-0066
PRICING: Price Upon Request
P28759

Product & Service Rating System
PLATFORMS: IBM System/36, PC/36 ☐ SSP, PC-DOS
LANGUAGES: RPG II/III/400
NUMBER OF CLIENTS/USERS: 25
DESCRIPTION: The Product & Service Rating System is a totally interactive system for product/service related industries such as hospitals, hotels, theaters, restaurants, perfume companies, automotive companies, etc. Performs online entry of unit/company information, comment card item descriptions and data entry of customer responses. Provides graphical recap of statistical information using a table of percentages, histograms or bar graphs. Prints general and/or detailed reports for a unit or company. System is user installable.
CONTACT DATA: Bruce J. Voelker ☐ Vice President ☐ DARCOR ☐ P.O. Box 8830 ☐ Metairie, LA 70011 ☐ TELE. 504-888-6297
PRICING: Price Upon Request
P31716

Profit Tool™
PLATFORMS: IBM PC; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
DESCRIPTION: The Profit Tool computerized survey system dials the phone, displays a script for marketing people, and records audience responses. It also allows the user to manipulate the data through a set of built-in statistical functions. The straight-forward operation of Profit Tool makes it a simple procedure to enter in the questions of the survey. The user can choose between multiple responses, single responses or the standard fill-in responses to each question. At the beginning of each call, the script of dialogue and questions appears. The caller asks the questions and fills in the responses on the computer screen with the help of a pointer (mouse) or the punch of a key. Profit Tool will automatically branch to new questions based on a valid response to the prior question. The results are automatically recorded for immediate analysis. Profit Tool can also be used for administrative and educational applications, for immediate personnel record updates, government surveys, political polling, exam preparation, medical research surveys, legal collections, insurance sales and travel agencies.
CONTACT DATA: Norman J. Lang ☐ Vice President Sales and Marketing ☐ Prophecy Development Corporation ☐ 2 Park Plaza ☐ 7th Floor ☐ Boston, MA 02116-3932 ☐ TELE. 617-451-3430, FAX: 617-451-3566
PRICING: Price Upon Request
P26906

PROFIT$
PLATFORMS: AT&T 3B Series, 6300; Apollo; DEC VAX, MicroVAX; Hewlett-Packard 9000; IBM PC, PC-AT; Intel 80286, 808X; MS-DOS-based Hardware; NCR Tower; Prime EXL; Sun Microsystems; UNIX-based Hardware; Unisys B20/30 Series, Series 5000/6000 ☐ AEGIS, BTOS, CTOS,

MicroVMS, VMS, HP-UX, PC-DOS, SUN OS, UNIX, MS-DOS, XENIX
NUMBER OF CLIENTS/USERS: 50+
DESCRIPTION: PROFIT$ is a comprehensive, versatile and easy to use sale force automation system. Designed as a productivity tool to assist sales and marketing professionals in their day to day battle to maintain a superior level of account management. PROFIT$ includes complete client/prospect profiling, unlimited historical activity tracking as well as a powerful sales management report generator. PROFIT$ also includes a built-in tickler file, user defined auto event generation, database transfer for outside field rep support, a quotation worksheet, forecasting, speed letter utility, mail merging, importing and exporting as well as an appointment book, built-in calendar, calculator and much more. Features include: prospect tracking, telemarketing, direct mail campaigns, lead analysis, autodial, mail merge, flex reporting, database transfer, follow up, target marketing, word processing, call reporting, auto event generation, quotation worksheet/forecasting, importing/exporting, and calculator.
SPECIAL CONFIGURATION REQUIREMENTS: 640K minimum memory, 10MB hard disk
CONTACT DATA: Donna Clenott □ Director of Marketing □ Delta Business Systems, Inc. □ 5900 Princess Garden Parkway □ Suite 711 □ Lanham, MD 20706 □ TELE. 301-794-6726 or 800-776-3484
PRICING: Price Upon Request
P36690

ProMotion

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; NCR Tower, PC; Unisys PC; Wang PC □ PC-DOS, OS/2, TRSDOS, MS-DOS
LANGUAGES: Assembler, C Language
NUMBER OF CLIENTS/USERS: 400
DESCRIPTION: ProMotion manages strategic direct mail and telemarketing campaigns to qualify a volume of inquiries, easily and effortlessly. Electronically reads inquiries from major publishers. Features include: easily managed direct-mail and telemarketing lead generation activities; easily accessed detailed prospect and customer information; management reports and forecasts; seamless interface to the most popular PC based word processing software (or use our own WordStar clone ProMotion Writer); electronically "reads" attendee badges at most major trade shows and can accept leads electronically from major publishers.
CONTACT DATA: Michael Nolan □ Vice President of Sales and Marketing □ Free World Marketing □ 444 N. Newport □ Newport Beach, CA 92663 □ TELE. 714-722-6414
PRICING: Price Upon Request
P35795

ProMotion IQ

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; NCR Tower, PC; Unisys PC; Wang PC □ PC-DOS, OS/2, MS-DOS
LANGUAGES: Assembler, C Language
NUMBER OF CLIENTS/USERS: 200
DESCRIPTION: ProMotion IQ is a powerful information retrieval and analysis tool. With IQ users produce reports to the monitor or printer, X-Y graphs and histograms, totals on specific data in the ProMotion database and much more. It can be used with other database programs such as dBase and Lotus 1-2-3. ProMotion IQ is a natural language report writer, query system, graphics package, file transfer and reporting tool.
CONTACT DATA: Michael Nolan □ Vice President of Sales and Marketing □ Free World Marketing □ 444 N. Newport □ Newport Beach, CA 92663 □ TELE. 714-722-6414
PRICING: $300.00
P35796

PROPLANSYS© — Promotion Planning System

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: BASIC
DESCRIPTION: PROPLANSYS is an easy to use system allowing planners to develop up to 60 different promotional events and integrate them into one coherent program spanning up to 18 months. It tells the planner total costs, costs per package moved, redemptions and purchases influenced by event. The program summarizes total costs, quarterly expenditures, and trade deal spending. It frees the planner from the time consuming task of running the numbers, allowing concentration on key strategic and implementation issues.
CONTACT DATA: Robert Wals □ President □ Scarsdale Marketing Company

□ The Harwood Building □ Scarsdale, NY 10583 □ TELE. 914-725-5445
PRICING: $2,900.00
P36055

PROPOSAL Administration and Sales Support (PASS)

PLATFORMS: Motorola □ MFE
DESCRIPTION: PASS is an interactive, menu-driven, stand-alone application which incorporates data management and reporting features providing the end user with the following basic capabilities: 1) Preparation of initial sales quote/proposal; 2) Proposal pricing; 3) Recording and maintenance of the modifications to the sales quote during its negotiation; and 4) Generation of orders to manufacturing or warehousing facility consistent with the sales quote accepted by the customer.
CONTACT DATA: Allan Collautt Associates, Inc. □ 1489 Baltimore Pike □ Building 300 □ Springfield, PA 19064 □ TELE. 215-359-1210
PRICING: Price Upon Request
P31347

ProposalMaster

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: Assembler
DESCRIPTION: ProposalMaster is a collection of professionally written, sales meeting concepts and themes that sales executives and in-house AV departments can mix, merge and customize to create an infinite variety of meeting proposals and script treatments. ASCII text files can be transferred to nearly any word processor while search-and-replace targets insert company and product names across entire 10 to 20 page proposals in seconds. ProposalMaster disk contains hundreds of motivational modules, speech outlines, staging ideas and meeting structure approaches. Completely menu driven with AUTO INSTALL.BAT for hard disks. Not copy protected. Unlimited phone support at no cost. Network license available.
CONTACT DATA: John Mackenzie □ President □ Multi-MediaWare, Inc. □ 957 Park Avenue □ New York, NY 10028 □ TELE. 212-737-8910
PRICING: $475.00
P36126

Prospect Tracking System

PLATFORMS: AT&T 3B Series, 6300; IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware; Unisys PC, Series 5000/6000 □ PC-DOS, UNIX, MS-DOS, XENIX
DESCRIPTION: The Prospect Tracking System is a PROGRESS database application. This database tracks all contacts by prospect, prospect rating, category, interest, telephone number, and zip code. The prospect file may be queried by six different methods. Reports include all contacts for a prospect, mailing lists by three different methods, and overall listing by category. Call lists, which include information on the last contact, are printed based on next contact date. This application may be used for direct mail campaigns, telemarketing, and customer follow-up. Source code is included, and may be easily customized.
SPECIAL CONFIGURATION REQUIREMENTS: Written in PROGRESS DBMS
CONTACT DATA: Jo Ellen B. Cawfield □ President □ Eclectic Solutions Corporation □ P.O. Box 4162 □ Cleveland, TN 37320-4162 □ TELE. 615-476-1779
PRICING: $500.00—$1,500.00
P31413

Prospecting® Plus

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; NCR PC; UNIX-based Hardware □ PC-DOS, UNIX, MS-DOS, XENIX
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 1,124
DESCRIPTION: Prospecting Plus is a lead processing and sales support system. Outside salespeople, telemarketers, marketing management, and direct mail operations use it to increase sales and support customers. Prospect records are immediately available for viewing, changing, and searching. Each record has pages of free form notes to monitor the sales cycle. The programs produce customized letters, follow-up advice, and marketing reports. A Bulk Mail Manager organizes postage-saving mailings. Pop-up scripting and automatic telephone dialing support telemarketing. The system is easily tailored for different industries. Its import/export capability makes it easy to build prospect files from outside information.

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PRICING: :
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ICP SOFTWARE DIRECTORY — Business & Financial Management
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September 1991
68th Edition

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Reusable name lists are available. Available for single-user, multi-user, and networked systems.
CONTACT DATA: Carlile D. Crutcher ☐ Vice President ☐ Key Systems, Inc. ☐ 512 Executive Park ☐ Louisville, KY 40207 ☐ **TELE.** 502-897-3332
PRICING: $495.00—$1,485.00
P33280

PROSPECTOR
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 60
DESCRIPTION: PROSPECTOR allows the user to enter the names of contacts/customers into the computer and print mailings, Rolodex cards, mailing labels and mail/merge with word processors. It can also locate and print, using and/or selection logic, specific labels, mail/merge, etc. Also included are an appointment calendar and tickler file to remind the user when to re-contact customers/contacts on a daily basis. Compatible with Rep-Trakker and Office Manager.
CONTACT DATA: Certified Software Distributors, Inc. ☐ P.O. Box 7824 ☐ Incline Village, NV 89450-7824 ☐ **TELE.** 702-832-7638
PRICING: $189.00
P25365

Prospects
PLATFORMS: AT&T 6300; IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; NCR Tower, PC; Radio Shack/Tandy 1000 thru 4000; Unisys PC; Wang PC ☐ PC-DOS, OS/2, MS-DOS
LANGUAGES: C Language
NUMBER OF CLIENTS/USERS: 825
DESCRIPTION: Prospects provides a wide range of capabilities for helping track prospects and related information. Allows the user to market, sell and follow up after the sale. Features include tracking product related information by key words; following important dates; locating information by name, key word or company; and managing correspondence and promotional letters; handles up to 10,000 prospects; searches and sorts to locate specific information; menu selectable formats for editing; user definable reports; menu selectable reports; mailing labels and return address labels; letters merged with prospect names; history of each prospect with up to 999 lines of information; telephone numbers; addresses; revision dates; and more. Generates reports including action dates, phone book, name list, company list, and up to nine user defined formats.
CONTACT DATA: Bill Stone ☐ Director ☐ ATC Software ☐ 804 Jordan Lane ☐ Huntsville, AL 35816 ☐ **TELE.** 205-895-9187
PRICING: $125.00
P36207

PSS Direct Response Manager
PLATFORMS: IBM System/36, AS/400, PC-AT; PS/2 Series; MS-DOS-based Hardware ☐ IBM OS, SSP, PC-DOS, OS/2, MS-DOS
LANGUAGES: RPG II/III/400
NUMBER OF CLIENTS/USERS: 2
DESCRIPTION: Turn reader reply inquiries into sales with the tools for effective management of a direct response campaign. All information about each inquiry is maintained in one easy-to-access file. Information is coded by publication date of ad, inquiry date, S/C Code and enclosures mailed. A transaction record is maintained for each inquiry. System tracks assigned salesperson or distributor and all entered data. Reports advertising cost, average cost per inquiry and publication summary. Searches to match lead with nearest distributor and percent of returns. Prints warning letters. Other reports include on-demand listing of customers, distributors, returned inquiries, publications and advertisements.
SPECIAL CONFIGURATION REQUIREMENTS: Baby 36 required to run on PS/2 or PC LAN (Ethernet, Token Ring or Arcnet)
CONTACT DATA: Jon Heckman ☐ Account Executive ☐ Programming Services and Support, Inc. ☐ 1601 Caledonia Street ☐ Suite B ☐ La Crosse, WI 54603 ☐ **TELE.** 608-781-3200
PRICING: $1,895.00— $4,560.00 License: $50.00/Yr. Renewal
P38102

Quota $ Maker
PLATFORMS: Compaq; IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 22
DESCRIPTION: Quota $ Maker is designed to help professional sales people

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make and exceed quota. It is a prospect tracking and sales system that provides for territory management, appointment and call scheduling, correspondence and mailings, and company communications. It was designed to maximize prospecting and on-site call activities, minimize data entry, and automate many daily functions (eg., automatic dialing). Quota $ Maker may be used by one sales person, several in one office, or throughout an entire sales organization at many offices. Word processing, electronic mail, and spreadsheets can also be integrated into Quota $ Maker.
SPECIAL CONFIGURATION REQUIREMENTS: 512K, Hayes-compatible modem
CONTACT DATA: Mark Mays ☐ President ☐ Samurai Software, Ltd. ☐ 7464 Shore Place ☐ Castle Rock, CO 80104-8807 ☐ **TELE.** 303-624-1763
PRICING: $349.95 Purchase
P29350

Quoter, The
PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: C Language
NUMBER OF CLIENTS/USERS: 190+
DESCRIPTION: A sales management system that tracks leasing prospects, prints mailing labels and form letters. It interfaces with electronic pricing data and takes credit applications. Stores lease payment quotes, has online access to credit reports, lists funding source information. Compares lease to purchase and prints lease proposals and documents.
SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM, 10MB hard drive, 132 column printer; also written in Clipper
CONTACT DATA: Michael J. Pochan ☐ President ☐ LeaseTek, Inc. ☐ 300 Penn Center Boulevard ☐ Suite 500 ☐ Pittsburgh, PA 15235 ☐ **TELE.** 412-829-3080, FAX: 412-829-0840
PRICING: $1,500.00 and up
P38327

RealWorld™ Sales Analysis
PLATFORMS: Altos; DEC VAX; IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware; Radio Shack/Tandy 1000 thru 4000, 1200 ☐ VMS, PC-DOS, UNIX, MS-DOS, XENIX
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 20,000
DESCRIPTION: Sales Analysis works with the Accounts Receivable and Inventory Control packages. It tabulates and prints the following reports: Sales Analysis by Customer; Sales Analysis by Customer Type; Sales Analysis by Customer Sales Volume; Sales Analysis by Responsible Salesman; Sales Analysis by Actual Salesman; Sales Analysis by State; Sales Analysis by Zip Code; Sales Analysis by Item; Sales Analysis by Item Category; Sales Analysis by Item Sales Volume; Sales Analysis — Items for a Customer (with Order Entry/Billing); Sales Analysis — Customers for an Item (with Order Entry/Billing). Features include: multi-company capability; includes online help, automatic installation procedure, password protection, extensive data checks and backup/restore utilities.
CONTACT DATA: Sales Representative ☐ RealWorld Corporation ☐ 282 Loudon Road ☐ P.O. Box 2051 ☐ Concord, NH 03302-2051 ☐ **TELE.** 603-224-2200 or 800-678-6336
PRICING: $350.00—$500.00
P18144

Rep-Trakker
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 150
DESCRIPTION: Rep-Trakker and Rep-Trakker+ are programs that can be used by most people involved in commissionable sales who want to keep track of orders and customers including shipping schedules, order status and overdue commissions. Features include: 1) Keeping track of orders, shipments, commissions and samples; 2) Summarizing bookings, shipments and commissions by salesman, product, territory or customer over any period of time; 3) Cashflow projections based on either shipments or bookings; and 4) Change order to allow update information to any part of an order. Compatible with Prospector and office manager.
CONTACT DATA: Certified Software Distributors, Inc. ☐ P.O. Box 7824 ☐ Incline Village, NV 89450-7824 ☐ **TELE.** 702-832-7638
PRICING: $495.00 — $825.00
P25366

Rifleshot

PLATFORMS: AT&T 6300; IBM PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; Radio Shack/Tandy 1000 thru 4000 □ PC-DOS, TRS-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 25
DESCRIPTION: Rifleshot is an automated direct marketing system. Up to 38 user definable fields allow precise profiling and targeting of sales resources. Features include sales call agenda printouts, personalized direct mail campaign implementation, on-line telemarketing, and the ability to analyze customer and prospect databases.
SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM, DOS 2.0 or later, hard disk, dBase III Plus, compiled FoxBase Plus
CONTACT DATA: Don Ridgeway □ Director of Marketing □ Target Microsystems, Inc. □ 444 Castro Street □ Suite 400 □ Mountain View, CA 94041 □ TELE. 415-967-3990 or 800-735-5776
PRICING: $495.00
P36314

SaleMaker

PLATFORMS: AT&T 3B Series; Apollo; DEC VAX; Data General Eclipse MV Series; Hewlett-Packard 9000; IBM System/370, 30XX Series, 43XX Series, PC-AT, PS/2 Series; Intel 80286, 80386; MS-DOS-based Hardware; Motorola 68000; NCR Tower; Stratus; Sun Microsystems; UNIX-based Hardware; Wang VS □ DOMAIN/IX, VMS, AOS/VS, HP-UX, MVS, VM, PC-DOS, OS/2, SUN OS, VS/OS, UNIX, MS-DOS, XENIX
NUMBER OF CLIENTS/USERS: 110
DESCRIPTION: SaleMaker is a fully integrated sales and marketing automation system which is written in the ORACLE environment and which runs on a wide variety of hardware platforms. The system is designed for business-to-business marketing firms and includes features for inquiry handling, direct mail, telemarketing, quotation generation and tracking, account management, and forecasting and management reporting. SaleMaker allows an organization to efficiently manage the sales process from initial inquiry through final close and beyond. It also provides a consistent flow of information between departments involved in the sales and marketing process.
SPECIAL CONFIGURATION REQUIREMENTS: ORACLE RDBMS and 4GL tools
CONTACT DATA: Lynn Miller □ Marketing Administrator □ Technology Development, Inc. □ 59 Stiles Road □ Salem, NH 03079 □ TELE. 603-893-2422
PRICING: $995.00— $100,000.00
P36198

Sales Ally

PLATFORMS: AT&T 6300; Hewlett-Packard 3000; IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; Radio Shack/Tandy 1000 thru 4000; Unisys PC □ PC-DOS, OS/2, TRSDOS, MS-DOS
LANGUAGES: Assembler, Pascal
DESCRIPTION: Sales Ally is a comprehensive sales management and customer tracking system. The program includes a fully-integrated wordprocessor for group mailings and letter writing, prospecting features (including a call back tickler feature), a notepad for each individual record, product cross-reference, auto-dialing, calendar, calculator, expense reporting, an order-entry system, electronic mail and data transfer capabilities.
SPECIAL CONFIGURATION REQUIREMENTS: 384K RAM memory, 10-20MB hard disk
CONTACT DATA: Michael W. Ward □ Assistant Director of Marketing □ Scherrer Resources, Inc. □ 8100 Cherokee Street □ Philadelphia, PA 19118 □ TELE. 215-242-8751
PRICING: $395.00 Single User; $1,295.00 Multi User
P36270

Sales Analysis

PLATFORMS: Hewlett-Packard 3000, 250 Series, 260 Series; IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ MPE, BASIC OS, PC-DOS, UNIX, MS-DOS
DESCRIPTION: Sales Analysis provides summarized revenue and costing information in a job costing environment. Information is organized by type of cost, job and client or customer. It is also suited for many types of service organizations that work on a time and material basis. Reports provide detail information for jobs finished in current quarter, as well as summary information for previous four quarters and last year. An adjustable overhead percentage can be applied to all costs, in addition to the standard overhead costing features in the job cost system. Reports by client or by type of cost shows costs, sales, overhead, gross profit, profit as percentage of sales and profit as percentage of costs.
CONTACT DATA: Dependable Computer Programs □ 1701 Carmen □ Elk Grove Village, IL 60007 □ TELE. 708-952-0229
PRICING: Price Upon Request
P27961

Sales Analysis

PLATFORMS: Bull Ultimate; DEC Ultimate; General Automation; IBM 30XX Series, 43XX Series, 9370 Series, PC, PS/2 Series, RISC System/6000; McDonnell Douglas; Pick-based Hardware; Texas Instruments □ Pick
LANGUAGES: RPL
NUMBER OF CLIENTS/USERS: 300
DESCRIPTION: Sales Analysis provides current and historical sales comparisons to assist in the analysis of sales activity. A broad range of selectable parameters control sales reporting in a manner promoting timely and effective decision making. Sales Analysis features options ranging from regular reports on existing customer and/or inventory activity to the creation of in-depth analyses on a broad base detail history. Sales Analysis can operate on a standalone basis or as an integrated module of SMI's Business Control Programs (BCP).
CONTACT DATA: Judith A. Darr □ Manager of Sales Administration □ Systems Management, Inc. (SMI) □ 1011 E. Touhy Avenue □ Des Plaines, IL 60018 □ TELE. 708-698-4000 or 800-323-1143, FAX: 708-803-3539
PRICING: Price Upon Request
P38735

Sales Analysis

PLATFORMS: DEC VAX; IBM System/370, 30XX Series, 43XX Series, 9370 Series, AS/400, RISC System/6000; NCR Tower □ VMS, DOS/VSE, OS/VS1, MVS, VM, OS/400, AIX, UNIX, XENIX
LANGUAGES: PRO-IV
DESCRIPTION: The Sales Analysis system specifies profitability of individual products and product lines, customers, sales region, territories and sales representatives. It identifies sales trends through comparative analysis of current activity to prior performance. It is structured to retain 13 months of sales activities. The program provides activities relative to bookings received and/or invoiced sales and permits tracking sales dollars, cost dollars, and/or units sold by customer a in part, or summarized by product lines.
CONTACT DATA: Bill Weigle □ Director of Product Marketing □ Xerox Computer Services □ 5310 Beethoven Street □ Los Angeles, CA 90066 □ TELE. 213-306-4000, FAX: 213-306-2207
PRICING: $2,100.00—$22,500.00
P39097

Sales Analysis Systems

PLATFORMS: Apple Macintosh □ A/UX, MAC OS - System 6, MAC OS - System 7
DESCRIPTION: Business system that allows small business to have Database of customers that he can quickly do letters and labels for sales purposes. Then if prospect becomes customer it allows him to invoice and track Accounts Receivable for that customer. Also has inventory control module available.
SPECIAL CONFIGURATION REQUIREMENTS: 20MB hard disk required; color monitor recommended; laser printer recommended
CONTACT DATA: Dale Missler □ President □ Universal Software Application □ 13001 Cannes Drive □ St. Louis, MO 63141-7311 □ TELE. 314-878-1277
PRICING: $500.00
P39924

Sales and Customer Support Activity Manager

PLATFORMS: AT&T 3B Series; DEC VAX; Hewlett-Packard 9000; IBM RT; Sequent Computer; Sun Microsystems; UNIX-based Hardware; Unisys Series 5000/6000 □ VMS, ULTRIX, HP-UX, AIX, DYNIX, UNIX
LANGUAGES: C Language
NUMBER OF CLIENTS/USERS: 400+/6,000
DESCRIPTION: The Brock Activity Manager Series is designed to automate and support the areas of database marketing, telemarketing, sales account management, marketing information — in effect, a company's complete business cycle. The multi-user system features a central relational database with integrated functions to manage lead generation and qualification, account management, field sales, order processing and customer

support. Individual modules of the series include the Telemarketing Activity Manager, Sales Activity Manager, Customer Support Activity Manager and Order Processing Activity Manager. Telemarketing functions capture, qualify, fulfill and nurture all leads. The Sales Activity Manager supports both inside and outside sales through a central database. The Customer Support Activity Manager tracks incoming customer calls and prioritizes problems. Customer databases maintain a direct link back to the marketing function and provide an opportunity for repeat and cross-selling of products and services. The newest module to join the Brock Series is the Order Processing module, which features order entry, accounts receivable and inventory control. The latest version, 7.0, features several new application generation tools and is integrated with the latest advances in telecommunications technology, including ISDN.
SPECIAL CONFIGURATION REQUIREMENTS: 512KB for PC; 20MB minimum hard disk; also supports Centix operating system
CONTACT DATA: Pat Angulo ☐ Telemarketing Supervisor ☐ Brock Control Systems, Inc. ☐ 2859 Paces Ferry Road ☐ Suite 1000 ☐ Atlanta, GA 30339 ☐ **TELE.** 404-431-1200
PRICING: Approximately $2,500.00 Per User
P29414

Sales Assistant, The
PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: BASIC
DESCRIPTION: The Sales Assistant tracks client information. The three main components are: Client Information — stores client name, address, phone number, contact person, next call/visit date, last sale/sale date, running total of sales, product type, credit rating, and account number; Campaign Scheduling — helps plan a sales campaign schedule (includes a graph); Mail Labels — select single or double wide format, create labels according to entire database, by client, by city, by state, by ZIP code, and by area code.
CONTACT DATA: F. Ruckdeschel ☐ Marketing Director ☐ DYNACOMP, Inc. ☐ 178 Phillips Road ☐ Webster, NY 14580 ☐ **TELE.** 716-265-4040
PRICING: $59.95
P35903

Sales Associate System, The
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
DESCRIPTION: The Sales Associate System is based upon the book of the same name which is included. The system is designed to assist an individual salesperson to become more organized and to increase sales performance. It includes modules to maintain sales prospect lists, call records, account strategy records, forecasts, orders, time management planning, and mass marketing. A database management system is included to allow each salesperson to personally customize the system to meet individual needs and to design new reports. Also included are 20 sales reports, mailing labels and a program instruction booklet.
CONTACT DATA: Evergreen Ventures Corp. ☐ P.O. Box 445 ☐ Voorhees, NJ 08043 ☐ **TELE.** 609-753-0758
PRICING: $79.95
P35612

Sales Bible SpeedTutors
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, OS/2, MS-DOS
NUMBER OF CLIENTS/USERS: 1
DESCRIPTION: Sales Bible SpeedTutors is a productivity improvement program, designed to increase selling potential. It provides sales personnel with short, yet continual reinforcement of key selling points by flashing reminders on the screen as the user performs daily work tasks.
CONTACT DATA: Chrystyna Stecyk ☐ Vice President of Special Projects ☐ Profit Technology ☐ 17 Battery Place ☐ Suite 1441 ☐ New York, NY 10004 ☐ **TELE.** 212-809-3500
PRICING: $19.95
P36310

Sales Call Reports
PLATFORMS: IBM PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
DESCRIPTION: Sales Call Reports is a menu-driven, easy-to-use program that does not require computer expertise. Questions and responses are in English. Sales Call Reports is not copy protected and operates under

dBase III Plus. Source is included to enable future user modification to adapt to new requirements. Features include: new contact data entry; edit contact reports and mail list; and generate mail merge files from mail list.
SPECIAL CONFIGURATION REQUIREMENTS: 512K RAM, hard disk
CONTACT DATA: Argonaut Systems ☐ 15466 Los Gatos Boulevard ☐ Suite 109-314 ☐ Los Gatos, CA 95030 ☐ **TELE.** 408-867-5029
PRICING: $99.00
P33863

Sales Executive
PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 2,500
DESCRIPTION: Sales Executive is a lead tracking, telemarketing and client management sales productivity package. It simplifies, organizes and assists individuals in the areas of telesales, direct mail, telemarketing, follow up correspondence, and time management. It has six integrated subsystems. Features include: database with up to 2.5 million names; unlimited notepad attached to each name; memory swapping feature lets user run other programs while in Sales Executive; Action Programs let user pre-set sales activities; prints letters to selected clients; records calls, letters sent, and completed activities; built in word processor; can be set up to invoke a word processor; pop up calculator and calendar; telemarketing scripting with up to 99 page scripts; powerful scheduling (tickler) and time management; prints two sided telephone lists; sort and select data on any fields or combination of fields, or portions of fields; wildcard searches; searches on words in the clients notepad; user programmable hot keys; user definable and nameable fields; produces telephone call hot list; password security; import/export data for popular formats; send reports, envelopes, labels to separate printers; pre-set sales activities (action programs) will automatically send letters, reminders to call; and artificial intelligence duplicate record checking.
SPECIAL CONFIGURATION REQUIREMENTS: Written in Clipper
CONTACT DATA: Mike Williams ☐ Director of Marketing ☐ Aspen Software Company ☐ 5505 Morehouse Drive ☐ Suite 150 ☐ San Diego, CA 92121 ☐ **TELE.** 619-455-6094
PRICING: $395.00 Single User; $1,595.00 Multi User
P36362

Sales Lead Tracking
PLATFORMS: Apple Macintosh; UNIX-based Hardware ☐ Apple DOS 3.3, MAC OS - System 6, UNIX
LANGUAGES: Pascal
NUMBER OF CLIENTS/USERS: 10
DESCRIPTION: Sales Lead Tracking is designed to assist management and sales persons in tracking leads, performance, sources and closing percentages. Additionally, it is an efficient tool for quoting products and for following up on active potential customers. Interface with Accounts Receivable and Inventory enhances the power of this module. Current customer information and inventory parts with price levels can be accessed online to facilitate the entry of leads and quotes. Lead follow-up is efficient and daily, weekly or monthly schedules may be printed for calendaring. Many user-defined fields allow flexibility in reporting and percentage tracking.
SPECIAL CONFIGURATION REQUIREMENTS: 1MB minimum memory, 2MB recommended; color monitor recommended; 20MB hard disk required; Apple-Talk, Ethernet, Appleshare and Flexshare are supported; requires a dot matrix system printer
CONTACT DATA: Michele Cooper ☐ Technical Service & Support Supervisor ☐ Micro VertiSoft ☐ 1221 Roanwood Way ☐ Concord, CA 94521 ☐ **TELE.** 415-672-1166, FAX: 415-689-6249
PRICING: $695.00 — $1,095.00 License; Site License Available
P40446

Sales LetterWorks
PLATFORMS: Apple Macintosh ☐ MAC OS - System 6, MAC OS - System 7
NUMBER OF CLIENTS/USERS: 5,000
DESCRIPTION: Sales LetterWorks contains 300 customizable letters covering all areas of sales — including prospecting for new customers; setting up the sales call; proposals and quotations; follow-ups to sales calls; closing the sale; keeping the custom buying; selling with the fax; selling by direct mail; selling investments, real estate and banking services; and more. The user finds the letter he wants in the Sales LetterWorks book, using the table of contents or either of two indexes (by letter title or key word), then calls it up from within his word processor using the companion computer disk, customizes it and prints it out.

SPECIAL CONFIGURATION REQUIREMENTS: 1MB hard disk recommended; AppleTalk and Ethernet are supported; requires any type of word processor
CONTACT DATA: Henry J. Lefcort ☐ President ☐ Round Lake Publishing ☐ 31 Bailey Avenue ☐ Ridgefield, CT 06877 ☐ **TELE.** 203-431-9696
PRICING: $79.95
P40305

Sales Management Solutions
PLATFORMS: Altos; DEC VAX, MicroVAX; IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; Radio Shack/Tandy 1000 thru 4000 ☐ MicroVMS, VMS, PC-DOS, UNIX, MS-DOS, XENIX
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 250,000
DESCRIPTION: Sales managers can track income due and received. revenue and variances between these analyze sales performance; sales manager can define 999 statistics, and five levels of territories for tracking productivity; user-defined fields available for use in selecting and sorting contacts; unlimited number of contacts per company can be entered and quickly retrieved using part of the contact's name, state, etc.; proposals or quotes can be created and mailed to sales prospects; auto-dialing available; lists of leads, prospects or customers to be called can be generated; local, national and international telephone numbers are recognized; original or personalized form letters can be sent to selected contacts grouped on any list and envelopes/labels can be printed; productivity features include: personal calendar, system-wide sales calendar, personal note pad, word processor calculator with memory and "tape", and currency conversion tool.
SPECIAL CONFIGURATION REQUIREMENTS: IBM compatibles, DOS, RM/COBOL — 512K; IBM compatibles, XENIX, RM/COBOL 1MB; Altos, UNIX, RM/COBOL — 2MB
CONTACT DATA: Tammy Emond ☐ Corporate Communications Director ☐ RealWorld Corporation ☐ 282 Loudon Road ☐ P.O. Box 2051 ☐ Concord, NH 03302-2051 ☐ **TELE.** 603-224-2200 or 800-678-6336
PRICING: $1,995.00 Purchase; $695.00— $995.00 License
P38253

Sales Manager's Companion, The
PLATFORMS: AT&T 3B Series, 6300, 7300; IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; NCR PC; Radio Shack/Tandy 1000 thru 4000; Unisys PC; Wang PC ☐ PC-DOS, OS/2, MS-DOS
DESCRIPTION: The Sales Manager's Companion tracks account management by quota, territory and sales rep. Features include: sales rep performance by month and year to date; revenue register by month, year to date for sales reps, territory and products; and bar graphs and management reports.
SPECIAL CONFIGURATION REQUIREMENTS: 256K main memory
CONTACT DATA: Vilma Ram ☐ Vice President ☐ Bits and Bytes Inc. ☐ 1650 Oakland Boulevard ☐ Suite 105 ☐ Walnut Creek, CA 94596 ☐ **TELE.** 415-945-0987
PRICING: $159.00/Copy; $850.00 Multi User
P36138

Sales Manager, The
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: C Language
NUMBER OF CLIENTS/USERS: 4,000+
DESCRIPTION: The Sales Manager is a comprehensive sales information system. It tracks and reports on customers, prospects, expenses, sales analysis, personnel, quotas, commissions and planning. Customized software solutions are available.
SPECIAL CONFIGURATION REQUIREMENTS: 320K memory
CONTACT DATA: Mary Anne Davis ☐ Marketing Communications Manager ☐ Market Power, Inc. ☐ 101 Providence Mine Road ☐ Suite 104 ☐ Nevada City, CA 95959 ☐ **TELE.** 916-265-5000 FAX: 916-265-5171
PRICING: $795.00 Purchase; $1,995.00/ Network
P22303

Sales Producer Plus®
PLATFORMS: IBM PC, PC-XT, PC-AT, RT, RISC System/6000, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; NCR Tower, PC; Radio Shack/Tandy 1000 thru 4000; UNIX-based Hardware; Unisys PC, Series 5000/6000 ☐ PC-DOS, AIX, OS/2, TRSDOS, UNIX, MS-DOS, XENIX
NUMBER OF CLIENTS/USERS: 450+

DESCRIPTION: Sales Producer Plus is designed to automate the sales process from prospect discovery and activity follow-up to expense tracking and reporting, sales order entry, and invoicing. It enhances the basic Sales Producer package by including Expense Tracking and Reporting and Sales Order Entry modules. The program allows the user to relabel data fields, and features prospect activity/tickler notes. Available for single user and all 3.1 compatible LAN environments. Provides upgrade path from single to multi user.
SPECIAL CONFIGURATION REQUIREMENTS: 640K minimum RAM, 10MB hard disk, Hayes compatible modem for auto-dial function; written in DataFlex
CONTACT DATA: Don Ellers ☐ SALESPRO International ☐ Two Brentwood Commons ☐ Suite 150 ☐ 750 Old Hickory Boulevard ☐ Brentwood, TN 37024-2008 ☐ **TELE.** 615-371-6187, FAX: 615-371-6196
PRICING: $495.00—$10,000.00 License
P36053

Sales Producer®
PLATFORMS: IBM PC, PC-XT, PC-AT, RT, RISC System/6000, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; NCR Tower, PC; Radio Shack/Tandy 1000 thru 4000; UNIX-based Hardware; Unisys PC, Series 5000/6000 ☐ PC-DOS, AIX, TRSDOS, UNIX, MS-DOS, XENIX
NUMBER OF CLIENTS/USERS: 450+
DESCRIPTION: Sales Producer provides instant access to prospect and client information. Includes complete client/prospect profiling, activity tracking, query, and sales management reporting. The program features a search and auto-dial capability, providing on-screen account history. Customize sales information by relabeling data fields. It may be integrated with a word processor to produce targeted, personalized mailings, mailing labels, or routine correspondence. all 3.1 compatible LAN environments. Provides upgrade from single user to multi-user.
SPECIAL CONFIGURATION REQUIREMENTS: 640K minimum RAM, 10MB hard disk, Hayes compatible modem for auto-dial function
CONTACT DATA: Don Ellers ☐ SALESPRO International ☐ Two Brentwood Commons ☐ Suite 150 ☐ 750 Old Hickory Boulevard ☐ Brentwood, TN 37024-2008 ☐ **TELE.** 615-371-6187, FAX 615-371-6196
PRICING: $495.00—$10,000.00 License
P36054

Sales Repeater
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: BASIC
NUMBER OF CLIENTS/USERS: 2,000
DESCRIPTION: Sales Repeater is designed for use by sales representatives to manage customers and prospect contracts. Features include: a tickler file; follow-up file; and order, quote and contacts histories. Searches may be performed on the prospect database. Other features include a pop-up menu which displays the results of sales calls made by telephone; mailing lists and labels can be generated; and a SEARCH and CALL file can be created. The program is compatible with the merge print features of popular word processing programs.
SPECIAL CONFIGURATION REQUIREMENTS: Two disk drives or floppy and hard disk
CONTACT DATA: David Flowerree ☐ Streamline Software Systems, Inc. ☐ P.O. Box 467220 ☐ Atlanta, GA 30346 ☐ **TELE.** 404-392-9500
PRICING: Price Upon Request
P31793

Sales Repeater Executive Version
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ IBM DOS, MS-DOS
LANGUAGES: BASIC
DESCRIPTION: Sales Repeater Executive Version includes all of the features of Sales Repeater and Sales Repeater Plus. Additional features include a management report module which includes a weekly activity planner, weekly sales contact reporter and a weekly sales report. The reports may be transmitted via modem to remote locations. The system includes a customer and prospect database, contact history, order history and quote history files with a pop-up menu to display sales calls, and it includes an integrated word processor.
CONTACT DATA: David Flowerree ☐ Streamline Software Systems, Inc. ☐ P.O. Box 467220 ☐ Atlanta, GA 30346 ☐ **TELE.** 404-392-9500
PRICING: Price Upon Request
P31795

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Sales Repeater Plus

PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: BASIC
DESCRIPTION: Sales Repeater Plus is designed for use by sales representatives. It includes all the features of Sales Repeater and a word processor. The user can create merge print letters and follow-up correspondence without leaving the program. Information is imported from the customer and prospect database directly into the program. The Sales Repeater prospect management module includes a tickler file; follow-up file; order, quote and contact history files. A pop-up menu allows the user to display the results of sales calls.
CONTACT DATA: David Flowerree □ Streamline Software Systems, Inc. □ P.O. Box 467220 □ Atlanta, GA 30346 □ **TELE.** 404-392-9500
PRICING: Price Upon Request
P31794

Sales Vision

PLATFORMS: AT&T 6300; IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; NCR PC; Wang PC □ PC-DOS, OS/2, MS-DOS
NUMBER OF CLIENTS/USERS: 1,500
DESCRIPTION: Sales Vision is a user-friendly, menu-driven database system designed for field sales, telemarketing and customer service representatives. It manages complete account information including a company profile, key personnel, a history of contacts and purchases and unlimited notes. Over twenty user-defined fields are allowed. Any field or combination of fields can be used for searches and sorts. A schedule/calendar and to-do list is maintained automatically for each representative. The built-in word processor creates follow-up letters and mailmerge files for direct mail campaigns. Management reports, productivity reports, forecasts, customer lists and activity reports can be generated for the entire database or any selected portion of the data. A facility allowing the user to change any of the standard reports or to build custom reports is included. Special utilities and configuration options give the user great flexibility in setting up how many system features will operate. Other features include: global update, import/export, duplicate checking, autodial and branchable scripts.
SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM, hard disk
CONTACT DATA: Virginia Tormey □ President □ System Vision Corporation □ P. O. Box 281857 □ San Francisco, CA 94128-1857 □ **TELE.** 415-355-7308
PRICING: $295.00— $1,995.00
P37464

SALES-BASE

PLATFORMS: DEC VAX; Prime; UNIX-based Hardware □ VMS, PRIMOS, UNIX
LANGUAGES: FORTRAN
NUMBER OF CLIENTS/USERS: 3
DESCRIPTION: SALES-BASE is used for managing a marketing and sales organization. It can accommodate many product offerings, direct or indirect sales channels, and a customer base that needs to be serviced. Capabilities include probability standardization, net booking forecasts, gross revenue forecasts, individual quota tracking, organization quota tracking, reserved accounts, archived prospects, standardized product ID, kit control system, product mix analysis, specialized mailers, prospect assignment/reassignment, deposit projections, quotes, third party tracking, lead tracking, customer base analysis, and appropriate lists/reports.
CONTACT DATA: Jerry Pizet □ Senior Vice President □ Database Systems Corp. □ 1118 E. Missouri Avenue □ Phoenix, AZ 85014-2710 □ **TELE.** 602-265-5968
PRICING: $15,000.00— $50,000.00
P28997

Sales/Marketing Business System

PLATFORMS: AT&T 3B Series, 6300, 7300; DEC VAX, MicroVAX; IBM System/38, System/36, PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; NCR PC; UNIX-based Hardware; Unisys 1100 Series, PC □ MicroVMS, VMS, CPF, SSP, PC-DOS, OS/2, UNIX, MS-DOS, XENIX
NUMBER OF CLIENTS/USERS: 350+
DESCRIPTION: Sales/Marketing Business System is a customer and prospect data base system. Features include sorts, indexing, reports, letters, follow-up reminder screens and telemarketing. Special add-on modules are available for media tracking, trade shows, key account tracking, market research, sales literature inventory control and more. A complete turnkey system for the sales and marketing department.
SPECIAL CONFIGURATION REQUIREMENTS: C for micros, PRO IV for mini/mainframes
CONTACT DATA: Gerald L. Stadt □ President □ JKL Marketing □ 422 Industrial Drive □ Maryland Heights, MO 63043 □ **TELE.** 314-291-1167
PRICING: $1,250.00— $7,000.00 License
P36228

SalesCTRL 2

PLATFORMS: AT&T 6300; IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: C Language
NUMBER OF CLIENTS/USERS: 1,400
DESCRIPTION: SalesCTRL 2 combines a user-tailored data base for contact information, with easy and powerful tools to produce reports, letters, labels and other output, on demand and on a predefined schedule. Among those processes is the ability to transmit and receive updates among remote SalesCTRL 2 users, or between SalesCTRL 2 and other software products on other hardware facilities. In particular, sales reps in the field can easily run a periodic upload to keep the sales manager's database up to date back at region headquarters, or to keep reps and customer service staff informed of the latest customer requests, problems, or comments. At the same time, new leads or other important information can be downloaded from region telemarketing.
SPECIAL CONFIGURATION REQUIREMENTS: 384K of free memory, 3MB hard disk, DOS 2.1 and up
CONTACT DATA: Henry Jordan □ Sales Information Manager □ Sales & Marketing Systems, Inc. □ 1950 Old Gallows Road □ Suite 300 □ Vienna, VA 22182 □ **TELE.** 703-790-3422
PRICING: $695.00 Single User; $2,795.00 Network
P34212

SALESEYE

PLATFORMS: MS-DOS-based Hardware; PC-DOS-based Hardware □ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 6,000
DESCRIPTION: SALESEYE was designed with the individual salesperson in mind. The program helps salespeople qualify potential buyers, focus their efforts on accounts that will yield the highest sales, analyze their own performance, and manage their time. The program combines an extensive database manager, a complete wordprocessor, and a time manager into an integrated, menu-driven sales information system. Users can store, retrieve, update and print crucial information on thousands of prospects or customers. Users can also create and print personalized letters, and labels, manage appointments and analyze sales performance.
SPECIAL CONFIGURATION REQUIREMENTS: Written in dBase
CONTACT DATA: Al Schwendtner □ Sales Manager □ High Caliber Systems, Inc. □ 165 Madison Avenue □ 6th Floor □ New York, NY 10016 □ **TELE.** 212-684-5553
PRICING: $89.00
P25013

Salesman's Prospecting System

PLATFORMS: Data General Eclipse, Nova, Desktop □ AOS, AOS/VS, RDOS
NUMBER OF CLIENTS/USERS: 5
DESCRIPTION: The Salesman's Prospecting System is an electronic "tickler file" system for use in sales and customer service. The system carries prospect data, S.I.C. codes, operator-assigned reference codes, key contacts and a running chronological account of sales activity. Prospects can be sorted by follow-up contact date, level of interest, type of sale, and alphabetically. The system will generate mailing labels. This system works on an on-line, interactive basis or by printing lists for notes and later prospect-update. A 90-day warranty is included. Software subscription service is $150.00 per year.
CONTACT DATA: Roger Mann □ Vice President, Sales/Marketing □ JTW Computer Systems, Inc. □ 521 Southwest 11th Avenue □ Suite 200 □ Portland, OR 97205-2620 □ **TELE.** 503-223-5691
PRICING: $999.00 Purchase
P25376

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113

SalesMate System

PLATFORMS: DEC VAX; MicroVAX; IBM System/370, 30XX Series, 43XX Series, 9370 Series, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ VMS, MVS, VM, PC-DOS, MS-DOS

LANGUAGES: Assembler, C Language

DESCRIPTION: The SalesMate system is an integrated sales force information system providing offline/remote cooperative processing and synchronized databases with an online option for special application needs. The Envoy SalesMate system increases the productivity of all levels of the sales force organization through a comprehensive range of functionality, including: Account and Territory management (SalesFile), Order Entry (SalesOrder), Electronic Mail (SalesMall), Database Inquiries and Report Distribution (SalesInquire), and personal Information Management (SalesDesk). Envoy provides industry specific systems for Consumer Goods, Petroleum, Specialty Chemicals, and Apparel. Volume discounts are available. Customization is additional.

SPECIAL CONFIGURATION REQUIREMENTS: Minimum workstation configuration: 1MB memory, 20MB disk, 286 microprocessor, AT bus; Preferred configuration: 1MB memory, 40MB disk, 386SX microprocessor; Writetops — GRIDPad, GO

CONTACT DATA: Robert E. Carr ☐ Vice President of Sales and Customer Support ☐ Envoy Systems Corporation ☐ 1432 Main Street ☐ Waltham, MA 02154 ☐ **TELE.** 617-890-1444 or 800-537-3755

PRICING: $2,200.00/Workstation; Plus Host Software
P32865

SalesMeetingMaster

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series ☐ MS-DOS

LANGUAGES: Assembler

DESCRIPTION: Containing 100 sales meeting themes, and 20 detailed meeting scenarios, SalesMeetingMaster is a unique computer resource that sales and marketing executives can browse for ideas on meeting invitations, keynote speeches, motivational modules, performance reviews, awards staging, humor, live-talent uses and product launch concepts. ASCII text files can be transferred to any word processor for customizing.

SPECIAL CONFIGURATION REQUIREMENTS: 256K free memory

CONTACT DATA: John K. Mackenzie ☐ President ☐ Multi-Mediaware, Inc. ☐ 957 Park Avenue ☐ New York, NY 10028 ☐ **TELE.** 212-737-8910

PRICING: $49.50
P39818

SallyForth™

PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS

DESCRIPTION: SallyForth is a multi-level marketing information system for providing and managing historical sales, forecasts, budgets, and other organizational information. It is designed for companies with multiple outlets or multiple sales territories. The program provides an easy to use, interactive environment using graphs and charts to depict a given outlet's or territory's performance against a plan, by category, product class, or type of outlet. It gives the sales manager, market director, or financial planner the tools to examine budgets and plan operational strategies. Displays full color trend lines and forecasts for any organizational level and allows immediate consolidation to higher levels.

SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM, 20MB hard disk, color monitor

CONTACT DATA: Mike Carr ☐ President ☐ The Salinon Corporation ☐ 7424 Greenville Avenue ☐ Suite 115 ☐ Dallas, TX 75231 ☐ **TELE.** 214-692-9095

PRICING: $25,000 and Up
P36117

Salmon Sales Productivity System

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS

NUMBER OF CLIENTS/USERS: 250

DESCRIPTION: Comprehensive sales management system for use by sales and marketing departments (including telemarketing) or by a single salesperson. Fully customizable for any industry, provides managers and salespeople with complete account lists, call performance, account history, and call planning reports. Contains mailing system for complete control of client and prospect mailings.

SPECIAL CONFIGURATION REQUIREMENTS: 640K RAM, hard disk; written in Clipper

CONTACT DATA: John Hendricks ☐ Vice President ☐ Salmon Systems ☐ 2211 Fifth Avenue ☐ Seattle, WA 98121 ☐ **TELE.** 206-441-8100

PRICING: $500.00— $9,000.00 License
P37549

SCAMP Sales Control And Marketing Planner

PLATFORMS: Data General Eclipse MV Series; IBM PC, PC-XT, PC-AT ☐ AOS, PC-DOS, UNIX

LANGUAGES: COBOL

DESCRIPTION: SCAMP provides a simple, menu-driven solution to sales automation. Data base management for sales representatives is simplified by eliminating manual filing and cross-referencing. Alphabetical, location and "tickler" date files are set up automatically. Customer and prospect contacts are automatically recorded for telemarketing and direct mail contacts. Autodialer interfacing and automatic "custom" correspondence are included.

CONTACT DATA: Steve Heber ☐ Marketing Manager ☐ Profidex Corporation ☐ 80 Park Avenue ☐ Hoboken, NJ 07030 ☐ **TELE.** 201-420-7700 or 800-229-TELE. FAX: 201-420-9013

PRICING: Price Upon Request
P29579

ScanTools

PLATFORMS: IBM PC-XT, PC-AT, PS/2 Series ☐ PC-DOS

LANGUAGES: C Language

NUMBER OF CLIENTS/USERS: 1,200

DESCRIPTION: A series of utility software modules (Document System, Data Editor, Score) that allow a user to enter data into statistical analysis packages, data base management systems, and user-developed applications via the use of an optical mark reading scanner, thus eliminating the need for time-consuming, error-prone keyboard data entry. ScanTools creates a variety of record formats for transfer into the user application program.

SPECIAL CONFIGURATION REQUIREMENTS: Sentry 3000 series scanners, OpScan 5, 10 & 21 scanners

CONTACT DATA: National Computer Systems, Inc. ☐ 11000 Prairie Lakes Drive ☐ P.O. Box 9365 ☐ Minneapolis, MN 55440 ☐ **TELE.** 800-447-3269

PRICING: $495.00
P31503

Scott Customer Manager

PLATFORMS: IBM PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, OS/2, MS-DOS

LANGUAGES: COBOL

NUMBER OF CLIENTS/USERS: 100+

DESCRIPTION: Scott Customer Manager is a complete business to business sales/marketing system. Automates lead follow-up, forecasting, monitoring salesman activity, and direct mail marketing. Flexibility is achieved through a user defined customer profile of up to 420 fields.

CONTACT DATA: C. Ryland Scott ☐ President ☐ Scott Computing Systems ☐ 2780 Bert Adams Road ☐ Atlanta, GA 30339 ☐ **TELE.** 404-432-7000 or 800-241-7576

PRICING: $995.00
P36157

SDC Customer Information System

PLATFORMS: IBM System/34, System/38, System/36, AS/400 ☐ SSP

LANGUAGES: RPG II/III/400

DESCRIPTION: The Customer Information System is a comprehensive package for maintaining customers, referrals and prospects. Features include: 1) Online entry, edit and update of all database information; 2) User-defined master and activity codes with descriptions; 3) User-defined edit criteria; 4) Online inquiry of all information; 5) Unlimited activity entry; 6) Integrated name search; 7) User-tailored duplicate record detection; 8) Online report request with flexible selection and user-defined sort sequences; 9) Online speed input for mass additions with system-assigned account numbers; 10) Support for U.S. and foreign addresses; 11) Zip code range checking on U.S. states; 12) Country code to identify USA, Canadian and foreign customers; and 13) Customers categorized by division, status, account representative, referral source, business type and gross sales.

CONTACT DATA: SDC Software ☐ P.O. Box 3360 ☐ Carson City, NV 89702 ☐ **TELE.** 702-883-9339

PRICING: Price Upon Request
P27168

Seasons' Greeting Cards and Gifts

PLATFORMS: Pick-based Hardware ☐ Pick
LANGUAGES: BASIC
DESCRIPTION: Many companies like to recognize a valued customer at year end by way of a holiday greeting card and/or the gift of an advertising calendar or premium. This software package provides a centralized location for all related information. Master file stores recipient's names, address, and specifies card and/or premium. Edit lists are generated for each card-signer late each year in anticipation of mailing items to customers. After the master files have been updated from the edit lists, envelopes are individually addressed by Daisy Wheel Printer with each multiple signers' initials applied to inside flap. Labels may be generated for calendars or other packages.
CONTACT DATA: Jack Hardman ☐ President ☐ VIP Software, Inc. ☐ 140 Forest Avenue ☐ Glen Ridge, NJ 07028 ☐ TELE. 201-429-8833
PRICING: $149.00
P30681

Selectory — Manufacturer's Directory on Disk

PLATFORMS: AT&T 6300; IBM PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
NUMBER OF CLIENTS/USERS: 1,100
DESCRIPTION: Sales prospecting lead source for firms interested in selling to manufacturing firms. Nine different databases of manufacturing firms, each with in-depth company information ideal for building well-targeted prospect lists and for knowing about the prospect company before making contact. Database includes detailed product information, company size and key contacts. Software provides ability to search by 15 different fields, print call lists, mailing labels and save ASCII files. Databases cover all manufacturers in eight Midwest states and electronics manufacturers nationwide.
SPECIAL CONFIGURATION REQUIREMENTS: 512K, hard disk
CONTACT DATA: Richard Fein ☐ Product Manager ☐ Harris Publishing ☐ 2057 Aurora Road ☐ Twinsburg, OH 44087 ☐ TELE. 216-425-9000 or 800-888-5900
PRICING: $240.00— $695.00
P35783

Sell! Sell! Sell! Applications

PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
DESCRIPTION: Sell! Sell! Sell! Applications provides tools for planning, executing and analyzing sales calls. Customer needs are cross-referenced to product information in a data base. Time and territory management tools help with effective prospect management, as well as scheduling and evaluating calls. Features include prospect management, customized presentations, data base of features and benefits, extensive customer profiles, monthly calendar, daily schedules, expense reports, personal secretary, address book, commission calendar, advice on improving future calls, and advice on sizing up the customer.
SPECIAL CONFIGURATION REQUIREMENTS: 192K of memory, two dual-sided disk drives, monochrome or color monitor
CONTACT DATA: Thoughtware, Inc. ☐ P.O. Box 011151 ☐ Miami, FL 33101 ☐ TELE. 305-854-2318
PRICING: $99.00
P27153

Sell! Sell! Sell! Training

PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
DESCRIPTION: Sell! Sell! Sell! Training is a two-box assessment and training program. The assessment component evaluates the salesperson's attitude and skills, then directs the user selectively through the training program. The training program assists the salesperson in selling to customer needs. Newly acquired skills are critiqued in a simulated sales call. The Assessment Program provides for assessing sales characteristics, assessing sales skills, and sizing up the customer. The training program provides for pre-call planning, conducting the sales call, and questioning strategies.
SPECIAL CONFIGURATION REQUIREMENTS: 192K of memory, single disk drive, color graphics card
CONTACT DATA: Thoughtware, Inc. ☐ P.O. Box 011151 ☐ Miami, FL 33101 ☐ TELE. 305-854-2318
PRICING: $299.00
P27154

SELLSTAR! AI

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: Pascal, PROLOG
NUMBER OF CLIENTS/USERS: 100+
DESCRIPTION: SELLSTAR! AI addresses sales productivity using AI technology. The program tracks and organizes information, generates sales reports, and form letters/mailings, and offers advice in regard to individual and organizational buying behavior.
SPECIAL CONFIGURATION REQUIREMENTS: 640K, two disk drives or hard disk
CONTACT DATA: Peter Stoupas ☐ President ☐ Esprit Software Technology, Inc. ☐ P.O. Box 726 ☐ Hollis, NH 03049 ☐ TELE. 603-465-3378
PRICING: $195.00— $995.00
P36301

SELLSTAR! PM

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: Pascal, PROLOG
DESCRIPTION: SELLSTAR! PM is a sales productivity package for prospect/client management and telemarketing. It organizes information, generates reports, form letters, and labels.
SPECIAL CONFIGURATION REQUIREMENTS: 512K, two disk drives or hard disk
CONTACT DATA: Peter Stoupas ☐ President ☐ Esprit Software Technology, Inc. ☐ P.O. Box 726 ☐ Hollis, NH 03049 ☐ TELE. 603-465-3378
PRICING: $195.00
P36302

Small Business Partner

PLATFORMS: Apple Macintosh ☐ MAC OS - System 6
DESCRIPTION: Small Business Partner, which uses FileMaker Pro database from Claris Corporation, contains 11 business tools. Prospect File collects, sorts, organizes, compares and stores information on prospects and includes a tickler system. Vendor and Customer Files collect, sort, organize, compare and store information on goods bought and sold. Employees File facilitates employee-related calculations and analysis. Inventory tells users what they are buying, from whom, and for how much, and what they sell and charge, etc. Sale Order/Sale Detail lets users sort, organize, retrieve and compare sales-related data in various combinations and prints invoices and quotes, packing slips and work orders. Purchase Order/Purchase Detail let users find out what is on order and the turnaround feature measures vendor job performance. Receivables prints statements and reports, tracks payments, dates and invoices and tells users who is paying late. Payables keeps track of what has been paid and is due.
SPECIAL CONFIGURATION REQUIREMENTS: 1MB memory recommended; 20MB hard disk required; AppleTalk and Ethernet are supported; requires FileMaker Pro from Claris
CONTACT DATA: Packer Software ☐ 12 Roosevelt Avenue ☐ Mystic, CT 06355 ☐ TELE. 800-782-9955, FAX: 203-572-0765
PRICING: $195.00
P40959

SNAP Software

PLATFORMS: IBM PC, PS/2 Series; MS-DOS-based Hardware ☐ PC-DOS, OS/2, MS-DOS
LANGUAGES: C Language
NUMBER OF CLIENTS/USERS: 1,500
DESCRIPTION: A comprehensive sales and marketing management system linking activities of entire sales and marketing departments both internally and to other corporate divisions. Functions include lead tracking and fulfillment, direct marketing and account management. Major modules include: lead analysis, mailing analysis, direct mail processing, telemarketing, product tracking and forecasting, automatic electronic list loading (e.g. Money Market Directory), comprehensive data base, user-defined data base, integrated word processing, standard and custom report generator. New transaction logging feature allows for easy distributed database management. Portable and laptop versions are available.
SPECIAL CONFIGURATION REQUIREMENTS: 640K memory, 440K available RAM; 2MB minimum hard disk for SNAP Software, 4MB per 1,000 clients/prospects; MS-DOS version 3.1 or above; OS/2 version 1.2 or above in DOS mode; 3Com3+, StarLAN, Token-Ring, ARCNet and Banyan networks supported
CONTACT DATA: Claire Baker ☐ SNAP Software, Inc. ☐ 175 Canal Street ☐ Manchester, NH 03101 ☐ TELE. 603-623-5877
PRICING: $2,000.00/User
P36150

SOFTPROBE

PLATFORMS: Apple II Series, Macintosh; IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; Motorola 68000; Radio Shack/Tandy 1000 thru 4000 □ Apple DOS 3.3, MAC OS - System 6, PC-DOS, OS/2, TRSDOS, MS-DOS
LANGUAGES: Assembler, Pascal, C Language
NUMBER OF CLIENTS/USERS: 2,000
DESCRIPTION: SOFTPROBE supports critical, complex market research by surveying the target audience with a powerful, flexible questionnaire on a computer disk.
SPECIAL CONFIGURATION REQUIREMENTS: Color monitor required; 3 1/2MG hard disk required; VGA graphics card required
CONTACT DATA: Rick Blackman □ Production Manager □ The InMar Group □ 4242 Piedras Drive East □ Suite 120 □ San Antonio, TX 78228 □ TELE. 512-733-8999
PRICING: $20,000.00 — $50,000.00
P36248

Solomon III Sales Analysis

PLATFORMS: AT&T 6300; Compaq; IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware □ PC-DOS, Novell NetWare, MS-DOS, XENIX
LANGUAGES: C Language
NUMBER OF CLIENTS/USERS: 25,000+
DESCRIPTION: The Solomon III Sales Analysis subsystem generates a substantial number of period- and year-to-date management reports created from the Order Entry/Invoicing, Accounts Receivable, and Inventory subsystems. The system generates five summary reports, including: Sales By Inventory ID, Sales By Product Class, Sales By Customer, Sales By Customer Class, and Sales By Salesman.
CONTACT DATA: Solomon Software □ P.O. Box 414 □ Findlay, OH 45839 □ TELE. 419-424-0422
PRICING: $295.00
P32925

SouthWare SalesMate

PLATFORMS: Altos; Compaq; Data General Eclipse MV Series; IBM PC-XT, PC-AT, RISC System/6000, PS/2 Series; MS-DOS-based Hardware; NCR Tower; Texas Instruments; UNIX-based Hardware; Unisys PC □ AOS/VS, PC-DOS, AIX, UNIX, MS-DOS, XENIX
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 50
DESCRIPTION: SalesMate keeps all client/prospect information organized and available at the touch of a key. SalesMate tracks prospects and clients with detail call history and scheduled followups. It can be customized to business needs. Uniquely, SalesMate is interfaced to SouthWare's accounting software with the ability to "hot key" into customer inquiry, order inquiry, order history, etc., and then back to SalesMate. SalesMate can be especially useful to companies who use the telephone to communicate with their customers and prospects.
CONTACT DATA: Richard H. Hulsey □ Vice President of Sales □ SouthWare Innovations, Inc. □ P.O. Box 2797 □ Auburn, AL 36831-2797 □ TELE. 205-821-1108, FAX: 205-821-1146
PRICING: Price Upon Request
P37192

SPM Sales Prospecting Marketing

PLATFORMS: AT&T 3B Series, 6300, 7300; Apollo; IBM System/370, 30XX Series, 43XX Series, PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; NCR 8000 Series, 9000 Series, Tower; Sun Microsystems; UNIX-based Hardware; Unisys 1100 Series, 2200 □ PC-DOS, UNIX, MS-DOS, XENIX
LANGUAGES: C Language
NUMBER OF CLIENTS/USERS: 500+
DESCRIPTION: SPM provides the tools necessary to effectively plan, track, analyze, and organize sales and marketing activities. Composed of detailed, customized, or industry-specific databases, report writer, mail merge, word processor, appointment calendar and communications abilities, SPM increases the productivity of office personnel and sales force while decreasing administrative costs and helping to eliminate wasted time and labor. Developed specifically for sales and marketing professionals, SPM is tailored to fit their needs by providing complete control over prospect, client and sales force information, allowing instant recall of data by any criteria desired.
SPECIAL CONFIGURATION REQUIREMENTS: Novell NetWare
CONTACT DATA: Wayne Cohen □ Vice President of Sales □ Hi-Tek Computer Products Corp. □ 308 W. Erie □ Suite 500 □ Chicago, IL 60610 □ TELE. 312-787-2000
PRICING: $695.00/DOS Single User; $995.00 Multi User
P36884

SPS

PLATFORMS: IBM System/370, 30XX Series, 43XX Series, 9370 Series, PC, PC-XT, PC-AT, PS/2 Intel 80286, 80386, 808X; MS-DOS-based Hardware □ MVS/XA, MVS, VM, PC-DOS, MS-DOS
LANGUAGES: C Language
NUMBER OF CLIENTS/USERS: 75+
DESCRIPTION: SPS is an account management and sales information system. SPS enables salespeople and others to manage account relationships including unlimited information on people, products, notes, follow-up items, and many other types of data. SPS provides tailored displays of information in exactly the formats the user requires. It is designed for flexible sales force automation that allows incorporation of existing company information into an integrated SPS system. The user interface is designed to be easy to learn and easy to use. DB2, SQL/DS versions and VSAM database versions are available.
CONTACT DATA: Al Smith □ Director of Sales and Marketing □ Saratoga Systems, Inc. □ 1550 S. Bascom Avenue □ Suite 330 □ Campbell, CA 95008 □ TELE. 408-371-9330
PRICING: $750.00— $1,250.00/ End User
P36303

STATUS

PLATFORMS: Altos; CP/M-based Hardware; DEC PDP-11, VAX, Professional 300s; IBM PC; MS-DOS-based Hardware; TeleVideo □ VMS, RSX-11, RSTS, PC-DOS, UNIX, CP/M-86, MS-DOS
LANGUAGES: DIBOL
NUMBER OF CLIENTS/USERS: 35
DESCRIPTION: STATUS is designed to assist in keeping track of day-to-day client contact activity. It combines the standard functions of a telemarketing system with the critical functions of automatic reminders for follow-up. The system will forecast calls that need to be made grouped by date/territory/contact person/product or combination of criteria. It generates forecasts and other sales management reports. STATUS can be used interactively or with batch reports, but updating of follow-up and all other information occurs automatically. Active and history files are maintained for backup and archival storage. An existing word processing capability can be utilized in conjunction with the tracking system. A one-year warranty is included. Multiple site licenses for source code are available.
SPECIAL CONFIGURATION REQUIREMENTS: 256K memory, two disk drives, hard disk optional
CONTACT DATA: Michael W. Rohrbach □ Executive Vice President □ International Market Resources, Inc. □ 38 Garden Road □ Wellesley Hills, MA 02181 □ TELE. 617-235-8836
PRICING: Micro: $1,500.00; Mini: $3,600.00 Purchase
P14123

SuperRep™

PLATFORMS: Apple Macintosh □ MAC OS - System 6
LANGUAGES: Omnis
NUMBER OF CLIENTS/USERS: 8
DESCRIPTION: SuperRep is a business management system for manufacturer's representatives and independent rep agencies. This program manages multiple customers, multiple agents, multiple manufacturers, customer tickle cards, and a tickle card control system. Other features include comprehensive accounts receivable control, monitoring and reporting, purchase orders, and automated links between orders and invoices. Flexible invoicing allows multiple orders to be shipped on a single invoice, multiple invoices to be shipped on a single order, and invoices to have multiple commission splits. SuperRep provides three levels of detailed sales and commission analysis, inventory breakdown analysis, history recaps, and the ability to generate mailing labels and rolodex cards. The system keeps historical data for analysis, and provides over 40 different reports.
SPECIAL CONFIGURATION REQUIREMENTS: 2MB minimum memory, 4MB recommended; color monitor recommended; 20MB hard disk required; Apple-Talk, Ethernet and Appleshare are supported; math coprocessor recommended
CONTACT DATA: Donald Prater □ Director of Sales and Marketing □ Mac Management Systems □ 620 Congress Avenue □ Suite 200 □ Austin, TX 78701 □ TELE. 512-477-4747, FAX: 512-472-1242

PRICING: $395.00 — $2,595.00 License; Site License Available
P40480

TADMS (Technology Assisted Direct Marketing System)
PLATFORMS: DEC VAX, MicroVAX □ MicroVMS, VMS
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 3
DESCRIPTION: TADMS is a comprehensive direct marketing/telemarketing system. Features include: telemarketing management; scripting/call guides; reporting; control systems; direct marketing; letter writing; database marketing; facsimile support; response measurement and control; and more.
CONTACT DATA: Michael Falkson □ President □ Effective Telemarketing Inc. □ 77 Tarrytown Road □ White Plains, NY 10607 □ TELE. 914-328-8868
PRICING: $35,000.00— $50,000.00 License
P37223

Tel-ATHENA
PLATFORMS: DEC VAX, MicroVAX; Hewlett-Packard 3000, 9000; IBM 30XX Series, 43XX Series, PC, PC-XT, PC-AT, RISC System/6000; Motorola 68000; NCR Tower; Pick-based Hardware; Prime; UNIX-based Hardware □ PRIMOS, UNIX, Pick
LANGUAGES: C Language
NUMBER OF CLIENTS/USERS: 80
DESCRIPTION: Tel-ATHENA, a turnkey sales and marketing system, consists of a flexible database marketing capability and a telemarketing system that provides the user with powerful software for total control of inbound and outbound telemarketing. Database capabilities allow the user to perform such tasks as analyzing potential markets and competitive offerings, gauging product acceptance, etc. Tel-ATHENA also offers flexibility for the multi-project telemarketing environment. Non-technical staffs are able to design and implement call guides, create customized screens, input and manage files, perform logic and calculations, and produce user-defined reports without programmer assistance. Extensive list segmentation capabilities enable the user to target specific respondents by any number of characteristics. Pre-packaged systems are available for users who do not wish to create their initial campaigns.
CONTACT DATA: Larry Matte □ Senior Vice President □ CRC Information Systems, Inc. □ 435 Hudson Street □ New York, NY 10014 □ TELE. 212-620-5678
PRICING: $25,000.00 plus $1,200.00/user License
P24804

TELEMAGIC
PLATFORMS: AT&T 6300; Apple Macintosh; IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; NCR PC; Radio Shack/Tandy 1000 thru 4000 □ MAC OS - System 6, MAC OS - System 7, PC-DOS, OS/2, TRSDOS, MS-DOS
LANGUAGES: Assembler, BASIC, C Language
NUMBER OF CLIENTS/USERS: 710,000
DESCRIPTION: TELEMAGIC is a versatile telemarketing/sales package. The base package is a menu driven, structured data base which is easy to use and learn. Provided are built in Invoicing, Word processing, Multiple Field Sorting, Autodialing, unlimited Note Pad space, Scripting, and 22 standard and user-defined fields (expandable). The package also provides statistical Information such as number of calls, total/average phone time by operator or group for any time period and more. The TELEMAGIC Call Staging Device (CSD) extended feature provides a Pacing feature which automatically stages outbound calls for a network of operators. The Pacing feature adds significant calling efficiency and management control.
SPECIAL CONFIGURATION REQUIREMENTS: 640K minimum; 1MB hard disk required; Appletalk and Ethernet are supported
CONTACT DATA: William W. Sultan □ Vice President of Marketing □ ME-DI-CO, Inc. □ 2233-F Northwestern □ Waukegan, IL 60087 □ TELE. 708-249-1213
PRICING: $495.00 Single User; $1,995.00 Network; $6,000.00 — $40,000.00 Site Corporate License
P36141

Telemagic Pacer
PLATFORMS: Apple Macintosh; IBM AS/400, System/36, System/38, PC, PC-XT, PC-AT, PS/2 Series; Intel 808X, 80386, 80286; MS-DOS-based Hardware; NCR Tower, PC □ MAC OS

DESCRIPTION: The basic function of the Pacer is to provide management control, and the pacing to the Telemagic package. The manager can set call lengths, number of rings for no answer, and designate the call file or campaign. The sales or customer service Rep touches "S" to start. The first number is automatically selected and dials, if answered the screen displays the record. The Rep is notified by Beeps when the call is nearing time out. The Rep can manually override the time out and can delay the auto-start of the next call. All manual overrides are saved for management review and statistical analysis.
SPECIAL CONFIGURATION REQUIREMENTS: 640K; single floppy or hard disk
CONTACT DATA: William W. Sultan Jr. □ Vice President of Marketing □ ME-DI-CO, Inc. □ 2233-F Northwestern Avenue □ Waukegon, IL 60087 □ TELE. 708-249-1213
PRICING: $495.00/Single; $1,995.00/Network
P40578

TeleMagic!
PLATFORMS: AT&T 6300; IBM PC, PC-XT, PC-AT, PS/2 Series; Intel 80286, 80386, 808X; MS-DOS-based Hardware; Radio Shack/Tandy 1000 thru 4000 □ PC-DOS, OS/2, MS-DOS, XENIX
LANGUAGES: dBase, Clipper, FoxBASE
NUMBER OF CLIENTS/USERS: 25,000+
DESCRIPTION: This is a program for people who want to get things done efficiently, easily, on schedule at the least possible cost. It was originally written for telemarketing salespeople who need to produce the greatest possible results in the least amount of time, keeping manual paperwork at a minimum. Some special features include: 1) automatic dialer; 2) customizable reports; 3) extra large notepad; 4) macros; 5) pop-up calculator; 6) accounting software interface; 7) import/export; 8) scripting; 9) word processor with mail merge; 10) order entry/quote preparation; 11) alarm; 12) electronic mail; 13) file conversion; and 14) user defined filtering capability.
SPECIAL CONFIGURATION REQUIREMENTS: 640K memory recommended; math coprocessor required
CONTACT DATA: Barbara Nuegaard □ Director of Marketing □ Remote Control International □ 5928 Pascal Court □ Suite 150 □ Carlsbad, CA 92008 □ TELE. 619-431-4000, FAX: 619-431-4006
PRICING: $495.00/Single; $1,995.00/Network
P33254

Telemarketing
PLATFORMS: IBM AS/400, PS/2 Series □ OS/400, PC-DOS
LANGUAGES: RPG III/400
DESCRIPTION: Products and services include software applications that organize, integrate and automate the entire processes of lead generation, account management, mail fulfillment, marketing campaigns, script management, telemarketing, field sales management, telephony, applications, management reporting and customer service. Products address both business-to-business and business-to-customer marketing. Key features of the products are the ability of end users to tailor the database to their own data requirements, and the ease with which external database information may be merged into the system. The AS/400 product is a family of online, integrated applications that is sold on a modular basis. The vendor also provides marketing consulting services that assist the end user in setting up a prospect database, and in the training of a sales organization to optimize the flexibility and power of the software application.
CONTACT DATA: Larry Diaz □ Vice President/General Manager □ lawrence-ray □ 265 S. Anita Drive □ Suite 230 □ Orange, CA 92807 □ TELE. 714-939-9704
PRICING: $25,000.00—$100,000.00
P35029

Telemarketing On-Line
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: C Language
NUMBER OF CLIENTS/USERS: 6
DESCRIPTION: Telemarketing On-Line is a system for IBM PCs as stand-alone systems, in networks or as workstations to larger IBM host computers. Features include: flexible informational guides and scripts with response branching for control of calling process; rapid terminal response to ensure a smooth conversational flow; multiple windows of information available to the telephone representative; interaction with database for information entry and retrieval; ability to fit in with existing data processing systems; and use as an effective training vehicle for new products, campaigns and representatives.

September 1991

ICP SOFTWARE DIRECTORY — Business & Financial Management
International Computer Programs, Inc.

117

SPECIAL CONFIGURATION REQUIREMENTS: 256K memory
CONTACT DATA: E. Whelan □ President □ Whelan Associates Incorporated □ 425 Main Street □ Harleysville, PA 19438 □ **TELE.** 215-643-7470
PRICING: Price Upon Request
P27169

TelemarketingCONTROL

PLATFORMS: IBM PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware □ PC-DOS, MS-DOS
DESCRIPTION: TelemarketingCONTROL is a script and menu building program that works with SalesCONTROL 2. Scripting can include both branching and logic. Instant access to product features, competitor information and objections handling suggestions. Screens can be menus, text, questions, and answers. Linking of scripts with multiple choice answers or fill in the blanks. Inbound telemarketing — look up customers/prospects and switch between script and previously stored data instantly. Outbound telemarketing — guide less experienced or well-trained telemarketers through scripts to gather key information about prospects capability. Management reporting — access individual telemarketer performance and better schedule the most productive hours for telemarketing. Autodialer is provided. Networking with IBM Token Ring, Novell and 3Com networks.
SPECIAL CONFIGURATION REQUIREMENTS: 384K memory, hard disk
CONTACT DATA: Bob Moir □ Sales Executive □ Sales & Marketing Systems, Inc. □ 1950 Old Gallows Road □ Suite 300 □ Vienna, VA 22180 □ **TELE.** 703-790-3422 or 800-832-0030
PRICING: $495.00 Single User; $1,995.00 Multi-User
P34213

TELEMATION

PLATFORMS: DEC VAX; Prime; UNIX-based Hardware □ VMS, PRIMOS, UNIX
LANGUAGES: FORTRAN
NUMBER OF CLIENTS/USERS: 12
DESCRIPTION: TELEMATION is an automated telemarketing system. It enables the Telemarketing Representative to capture prospect information, update this information while conversing with the prospect, and perform a number of telemarketing tasks such as processing orders and sending literature. TELEMATION is able to meet the needs of a wide range of industries and companies as well as adapt to growth and change. A wide range of functions are provided to effectively manage a customer/prospect base, no matter how large or small.
CONTACT DATA: Jerry Pizet □ Senior Vice President □ Database Systems Corp. □ 1118 E. Missouri Avenue □ Phoenix, AZ 85014-2710 □ **TELE.** 602-265-5968
PRICING: $16,500.00— $243,400.00
P33951

TelePro

PLATFORMS: AT&T 6300; IBM PC-AT, PS/2 Series; Intel 80286, 80386; MS-DOS-based Hardware; Radio Shack/Tandy 1000 thru 4000 □ PC-DOS, MS-DOS
LANGUAGES: Pascal, C Language
DESCRIPTION: TelePro is a full featured telemarketing and direct marketing package. TelePro provides inbound/outbound telemarketing, call tracking, scripting and scripted data entry, targeting/segmentation, agent productivity reporting, fulfillment production/tracking, and more. TelePro, designed by sales and marketing professionals, combines the latest technology with time-proven direct marketing and telemarketing concepts.
SPECIAL CONFIGURATION REQUIREMENTS: Novell NetWare, Banyan VINES
CONTACT DATA: Travis DataTrak □ 42 Pleasant Street □ Watertown, MA 21072 □ **TELE.** 617-926-2929
PRICING: $1,500.00 and Up
P36186

TelePrompt™

PLATFORMS: Apple Macintosh □ MAC OS - System 6, MAC OS - System 7
LANGUAGES: Omnis
NUMBER OF CLIENTS/USERS: 17
DESCRIPTION: TelePrompt is a single or multi-user automated telemarketing system which handles Lead Tracking, Order Entry, and Sales Followup. Maintains a catalog of products and prices, accounts for dealer discounts, and allows manual override of cost at time of order entry. Callback date fields provide automatic tickler function for leads to be contacted periodically. Orders can be processed semi-manually through the use of

printed Picking Lists, or fully automatically online. When orders are actually processed (filled), TelePrompt can be integrated with the EXC Receivables module.
SPECIAL CONFIGURATION REQUIREMENTS: 1MB minimum memory, 2MB recommended; color monitor recommended; 40MB hard disk required; AppleTalk and Ethernet are supported; math coprocessor recommended
CONTACT DATA: John Huberty □ Director of Marketing □ Excelver Corporation □ 14688 County Road 79 □ Elk River, MN 55330 □ **TELE.** 612-441-8166, FAX: 612-441-6457
PRICING: $950.00
P40268

Territory Management System (TMS)

PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware □ PC-DOS, MS-DOS
LANGUAGES: BASIC
NUMBER OF CLIENTS/USERS: 32
DESCRIPTION: TMS helps the sales person control the territory and sales management to control the sales force. Easy to learn, use and understand. Includes call reports, forecasts, expense reports, account profiles and lists, action reminders, call totals and summaries, contact lists, sales summaries and call lists. Designed by sales professionals for use by field sales professionals.
SPECIAL CONFIGURATION REQUIREMENTS: Two 5-1/4 inch floppies or hard disk
CONTACT DATA: John Schacht □ President □ Sudor Corporation □ 6251 N. Camino Esquina □ Tucson, AZ 85718 □ **TELE.** 602-299-0651
PRICING: $220.00— $260.00 License
P36449

TOLAS SALESTREAM™

PLATFORMS: DEC VAX □ VMS
LANGUAGES: BASIC
DESCRIPTION: TOLAS SALESTREAM is an extension of the standard TOLAS system for distribution management and financial control. SALESTREAM provides enhanced communication capabilities that allow each TOLAS user to shape appropriate information with key business partners such as top management, field sales personnel, select customers and major vendors. With SALESTREAM, companies can increase sales volume and reduce overhead through the use of customer and salesman remote access and vendor interface. Each implementation of SALESTREAM is custom tailored to reflect each user's information management requirements. This custom tailoring typically involves the specific functionality and information provided to the various business partners. Each TOLAS module can stand alone or work together as a completely integrated system.
CONTACT DATA: Sales Department □ GSI Transcomm □ 1380 Old Freeport Road □ Pittsburgh, PA 15238 □ **TELE.** 412-963-6770
PRICING: Price Upon Request
P24750

TOLAS TELESTREAM

PLATFORMS: DEC VAX □ VMS
LANGUAGES: BASIC
DESCRIPTION: TELESTREAM is designed to counsel and assist telemarketing and inside sales employees during sales encounters. TELESTREAM is comprised of mini-expert systems or knowledge sources, representing managers from various company departments such as sales, inventory, purchasing and promotions, all interacting simultaneously via a special process known as "blackboarding." Each of these various experts has the ability to post information on a central blackboard pertaining to their specific business domain. The information posted by each expert is then reviewed and analyzed by a single "controller" and a sales response that represents a particular company goal is formulated.
CONTACT DATA: Sales Department □ GSI Transcomm □ 1380 Old Freeport Road □ Pittsburgh, PA 15238 □ **TELE.** 412-963-6770
PRICING: Price Upon Request
P31674

TrackStar™

PLATFORMS: IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware; NCR PC; Radio Shack/Tandy 1000 thru 4000; Unisys PC □ PC-DOS, OS/2, MS-DOS
DESCRIPTION: TrackStar is a comprehensive sales tracking and management reporting system. For the sales manager, TrackStar provides standard and customized reports and for the marketing representative, it is a

daily sales tool. Analysis of sales efforts and sales results is performed on product, officer, department and branch level. A built-in tickler for sales calls, and a built-in word processor for customized correspondence provide an organized and effective sales follow-up procedure.
SPECIAL CONFIGURATION REQUIREMENTS: 512KB minimum memory, hard disk drive, 4MB minimum disk storage
CONTACT DATA: Hugh K. Manning ☐ President ☐ Manning Professional Services ☐ 1525 Caird Way ☐ Palm Harbor, FL 34683 ☐ **TELE.** 813-785-6337
PRICING: $2,495.00
P35141

Trade Show Controller, The
PLATFORMS: AT&T 7300; Altos; NCR Tower; UNIX-based Hardware ☐ UNIX, XENIX
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 1
DESCRIPTION: Designed for the trade show decorator, it maintains booth and items reservation list, prints show packing list, and prints show product distribution list. Maintains show history, generates invoices and interacts with General Ledger and Accounts Receivable.
SPECIAL CONFIGURATION REQUIREMENTS: RAM/COBOL, hard disk
CONTACT DATA: Al Langsenkamp ☐ Sigma/Micro Corporation ☐ 1238 N. Pennsylvania ☐ Indianapolis, IN 46202 ☐ **TELE.** 317-631-0907 or 800-227-4462
PRICING: $8,000.00 License
P31033

TrAid-Names™
PLATFORMS: Apple Macintosh; IBM PC, PC-XT, PC-AT, PS/2 Series; MS-DOS-based Hardware ☐ MAC OS, PC-DOS, OS/2, MS-DOS
LANGUAGES: Pascal
DESCRIPTION: TrAid-Names is an interactive tool for the development of new product, business, or service names. Lists of names are generated based on user input taken from descriptive information about the product, business, or service. The user controls the way names are generated, including the ability to place particularly desired syllables. Lists of names can be printed for later review and selection.
SPECIAL CONFIGURATION REQUIREMENTS: 512K minimum
CONTACT DATA: George E. Bittner ☐ President ☐ Applied Systems and Technologies, Inc. ☐ 227M Hallenbeck Road ☐ Cleveland, NY 13042 ☐ **TELE.** 315-675-8584
PRICING: $159.00
P35826

Trendware CLIENT™
PLATFORMS: Apple Macintosh ☐ MAC OS - System 6, MAC OS - System 7
LANGUAGES: Pascal, Hypermedia
NUMBER OF CLIENTS/USERS: 500+
DESCRIPTION: Trendware CLIENT is a personal client management system that can be customized easily to track the information needed. CLIENT can be an indispensable tool for maintaining customers, addresses, phone numbers, product or business interests, financial information and contact history. Maintain information about business associates, clients and prospective clients by customizing the information cards to suit the user's needs. CLIENT combines easy-to-use Macintosh graphics with intuitive features to allow even novice computer users to be productive quickly. CLIENT also includes a tickler function to organize follow-up activities, powerful searching and reporting capabilities, mail labels and print custom reports.
SPECIAL CONFIGURATION REQUIREMENTS: 1MB minimum memory, 2MB recommended; .5MB hard disk required
CONTACT DATA: Carol Diblasi ☐ Office Manager ☐ Trendware Corporation ☐ P.O. Box 2285 ☐ Huntington, CT 06484 ☐ **TELE.** 203-926-1116, FAX: 206-926-9423
PRICING: $195.00
P40873

Waters Sales Analysis
PLATFORMS: IBM System/34, System/38, System/36 ☐ CPF, SSP
LANGUAGES: RPG II/III/400
DESCRIPTION: The Waters Sales Analysis software module interfaces directly with MAPICS to track historical sales data by customer and product with the transfer being automatic and user defined. This menu-driven

program permits analysis against 130 data fields, including customer market profiles, current sales territories and sales quotas. It also provides product quota, sales summary reports, sales territory profiles, and a virtually unlimited array of other reports to support sales and marketing decision making. A one-time license fee is available.
CONTACT DATA: Ines P. Spalvins ☐ Vice President of Sales and Marketing ☐ Waters Business Systems, Inc. ☐ 47 New York Avenue ☐ Framingham, MA 01701 ☐ **TELE.** 617-879-2503
PRICING: $5,000.00/Mo.
P25735

Words That Ring™
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
DESCRIPTION: Words That Ring helps the user select telephone numbers/words that describe the service provided (PET-CARE vs. 728-2273), select an action for the caller to take (GET-HELP instead of 438-4357), or emphasize an important product characteristic (COMFORT vs. 266-3678). The program features a 240 plus page directory of telephone numbers that form words, a supplemental diskette containing a 37,000 plus word/telephone number database, and three programs: NUMWORD (finds words for a given telephone number); WORDNUM (converts a word into a phone number); and CONVERTA (converts the databases into ASCII format).
SPECIAL CONFIGURATION REQUIREMENTS: 256K RAM, DOS Version 2.1 or later
CONTACT DATA: Mike Car ☐ President ☐ The Salinon Corporation ☐ 7424 Greenville Avenue ☐ Suite 115 ☐ Dallas, TX 75231 ☐ **TELE.** 214-692-9091
PRICING: $99.00
P36118

XY-MARKET
PLATFORMS: IBM System/370, 30XX Series, 43XX Series, 9370 Series ☐ DOS/VSE, OS/VS1, MVS
LANGUAGES: COBOL
NUMBER OF CLIENTS/USERS: 2
DESCRIPTION: A direct mail solicitation and tracking system which uses third party demographic and psychographic databanks to enhance a company's prospecting and solicitation marketing capabilities.
CONTACT DATA: Betty Sellers ☐ Vice President of Administration ☐ Xycor, Inc. ☐ 10640 Scripps Ranch Boulevard ☐ San Diego, CA 92131 ☐ **TELE.** 619-530-1900, 800-228-9026 (U.S.), 800-553-5336 (in CA), 800-634-2905 (Canada)
PRICING: Price Upon Request
P39246

ZIPCODER
PLATFORMS: IBM PC, PC-XT, PC-AT; MS-DOS-based Hardware ☐ PC-DOS, MS-DOS
LANGUAGES: FORTRAN
DESCRIPTION: ZIPCODER is for identifying sales territories by zip code.
CONTACT DATA: Richard W. Erschik ☐ President ☐ Advantage Marketing Communications ☐ P.O. Box 8373 ☐ Bartlett, IL 60103 ☐ **TELE.** 708-830-6610
PRICING: $79.00
P35819

31.7.3 Market Research

Address Management MailWare — Demographics Data File
PLATFORMS: Hardware Not Applicable ☐ Operating System Not Applicable
LANGUAGES: Not Applicable
NUMBER OF CLIENTS/USERS: 3
DESCRIPTION: The Demographics Data File is a collection of over 300 1980 and 1988 demographic variables derived from the 1980 census and Claritas Corporation. The data, when linked with the user's geocode information, provides efficient and effective target marketing, site selection, pricing, merchandising and response analysis. This information is supplied at three geographic levels: by ZIP Code, Census Tract and Block Group/Enumeration. The types of demographic information included on the file include age, education, home value, household, household size, income, marital status

October 29, 1992

Mr. Phil Moore
Sterling Software, Inc.
8080 N. Central Expressway
Suite 1100
Dallas, Texas 75206

Dear Phil:

Thanks again from Hugh Williams, Carol Anne Ances and me for the
fine dinner which you hosted on September 30 in Washington, D.C.

Now, the results from our participation in the SPA conference. The
meeting was well attended, with a large number of people from small
companies. The participants were very frank and open in the cross-
talk sessions and I presume even more so in the boot camps.
Clearly, this would be a way to make contact with many of the small
companies who are just starting out. Of the total 900 members of
SPA, only 450 are business oriented; the rest are in education or
consumer software. I have joined SPA and will share any information
which I receive, including the membership list.

We ordered a few of the SPA conference audio tapes and also some of
the ITAA tapes, both for us to review and for you to listen to
regarding new technologies. Enclosed is a list of these tapes
(Attachment A) and the tapes themselves. Carol Anne attended a
number of the SPA sessions (and I attended one cross-talk session).
Our notes are enclosed as Attachments B-1 through B-4. Carol Anne
attended other cross-talk sessions which did not provide any
material of relevance to Sterling.

Also, while we were visiting Hugh Williams on the Eastern Shore, we
met with him and his work associate of many years, Lou Ruffino, to
discuss the office systems area and the status of hardware (and
software) technology. Enclosed are brief notes I took at this
meeting (Attachment C). I found Ruffino very knowledgeable,
particularly on scanning equipment and on Sharp and other hand-held
devices. It would be worthwhile for you to meet him; he's a real
idea generator.

Hugh put together some notes for us on what functions would be
needed for an integrated office system (Attachment D). Based on his
work on Office Vision and his current view of the market and

ITAA

technology, he previously wrote up his concept of "Integrated Messaging." I am enclosing another copy of this as Attachment E.

I also saw two articles in Business Week which seemed relevant to our Advanced Office Systems discussions. They are enclosed as Attachments F-1 and F-2.

Finally, I picked up a handout on Groupware (enclosed as Attachment G) at the SPA meeting which seemed to make sense (from Electronic Mail and Micro Systems).

OK, this cleans up the backlog on the SPA meeting, etc. Now, what I am working on is a brief report to you on my proposed concept of the Advanced Office Systems market opportunity, possible positioning for Sterling, companies of potential interest and a proposed action plan. This should be ready by November 5.

In addition, I am going back to my original assignments on EOP with the grids, areas of high interest, etc. I'll discuss this with you by November 5 to agree on your priorities and the depth desired.

Sincerely,

Burton Grad
BG:8483

List of New Technology Tapes

SPA

92SPA F14   New Technologies: How should we integrate them?

92SPA F34   New Image Models: Implications for Applications
            Developers

92SPA F19   Data Linking Standards for Software Products

92SPA F26   Mobile Computing

ITAA

E263-10   Document Imaging: Integrators' Tool for Real Solutions

E263-20   Enterprise Integration Networks

E263-12   The Next Generation of Operating Systems

E263-18   How Downsizing Impacts Us

E263-23   Electronic Software Licensing and Distribution as an
          Effective Marketing Differentiator

Data Linking Standards for Software Products

Carol Anne Ances
10/27/92

Speakers:

    Gerald Huff, Avantos Corp. (Chair)
    David Ceres, Microsoft Corp.
    Ken Einstein, Borland
    Dr. Gursharan Sidhu, Apple Computer

Data linking allows a user to embed data from one application into
another. For example, a user might want to incorporate spreadsheet
data into a word processing document.

Originally, this could be done only by copying the data from the
spreadsheet into something like an ASCII file, and then copying it
into the new document. With Windows and the Mac, users can "cut and
paste" data from one application to another. With this approach,
however, there is no link between the two applications. If the
underlying spreadsheet data changes, the copy of the data in the
document does not change.

Microsoft Status

With Windows OLE (Object Linking and Embedding), a user can link
data from one application to another. As a result, if the
underlying data changes, it will simultaneously change in the
application it is linked to. The advantages of this are obvious:

-   Data will be consistent across documents.

-   The receiving application user doesn't have to maintain the
    data, or even use the original application.

This approach can be used on a standalone micro (the same user is
responsible for both applications), or on a network. It is possible
for data linking to be utilized on a peer-to-peer network; this
requires that both users be on the network simultaneously. A better
solution, and one that is being used more and more, is for the data
to be stored on a central file server with everyone having equal
access.

With current object-oriented technology, the data would be stored as
part of an object. As a result, the object is capable of
"displaying" itself. However, this causes problems since the
receiving application doesn't always want the data to be displayed
in "native" format. For example, assume again the spreadsheet data
is embedded in a word processing document. The user may want to use
special formatting (bold, unique fonts, etc.) for the part of the
document that contains the spreadsheet data. With most current
implementations of OLE, the embedded object will not take on the

characteristics of the receiving application; instead, it keeps its "native" formatting characteristics.

Improvements that are in the works from Microsoft OLE 2.0 include:

- in-place editing of objects (users must use source application to edit)

- object link tracking and management (this is relatively weak or non-existent now)

- application version control and upgrading (ability to update the application within an object)

- more efficient hierarchical storage of objects

In the future (beyond OLE V2.0) Microsoft is planning:

- ability to distribute objects on multiple platforms (user asks for object and system finds the data, regardless of where it is)

- enabling technologies for such services as:

  . data base services
  . address book
  . real time data sources (such as Dow Jones, etc.)
  . messaging
  . work group applications

- ability to exploit hierarchical storage for optimization and query-based retrieval

Apple Macintosh Status

According to Apple, the Macintosh was designed to isolate the application program from the dynamics of data exchange architecture. With the Mac, the operating system determines where the data is, where the requester is, and handles the interaction, whether it is local or remote.

The consistent Mac user interface makes it easier for users to work with different applications. In addition, the System 7 operating system contains a messaging model which provides for data linking between systems, even if both systems are not simultaneously on line. This is appropriate when one of the users is working with a remote mobile computer that is not directly wired to the network.

The bottom line appears to be that since the Mac is built on a
unifying architecture, with all applications having a consistent
user interface, full data linking is more fully implemented now than
with DOS or Windows.

Summary

Data linking makes it possible for users to combine data from
different applications into one document or applications. At a more
sophisticated level, objects that are not just data can be embedded
in an application. For example, a customer information screen could
have objects embedded in it such as a phone directory, current
technical information, etc. This would allow the customer service
rep to access up-to-the-minute information without leaving the
application screen and without using a different application.

The facilities and architecture required to make data linking and
embedding truly available will probably be provided as part of the
next generation of operating systems. However, there is the
potential for third parties to provide significant programs in the
following areas:

.   programs to supplement operating system features. For
    example, the operating systems currently lack such features
    as:

    -   a full tracking system to monitor and manage use of the
        objects

    -   a full-fledged security system to provide for appropriate
        levels of access of the objects

    Although these may be provided at some level as part of future
    operating systems, there is potential for third-party products
    to fill the gap. This is similar to the situation in which
    third parties provided successful programs for file
    management, backup, printer sharing, print spooling, network
    printing, etc. that filled in for lacks in DOS, Windows and
    Netware.

.   end-user applications that make use of embedded objects

Smart Tech-Support Strategies -- Crosstalk Session

Carol Anne Ances
10/27/92

Facilitator:

Susan Craig, Peachtree Software (accounting applications)

Other Attendees (about 25 were there)

Joseph Jacoboni, CEO, Software Support (a company that provides support outsourcing)

Sally Edmark, CEO, Edmark (educational software and print materials)

Charles McCallan, Director Technical Support, Datastorm Technologies (produce ProComm, a very widely used communications package)

Mike Malone, Fifth Generation Systems

Ardine Thompson, Manager Online Tech Support, Hewlett-Packard

Summary

Most of the people attending the meeting were from relatively small companies -- this is indicated by the fact that many of the attendees were presidents, CEOs, etc. Many of the companies are three and four person shops.

Typically, these software companies have almost 1/3 of their employees in customer support. For example, Peachtree has forty support people in a company of 140 employees. In some small companies, every employee (even executives) rotates into doing customer support work.

Many of the companies have very rudimentary customer support application systems. They all stated they needed the following type of system:

- data base centered system

- system that fully integrates customer information, technical information and support history

- an automated call tracking and reporting system (to determine # calls, time on hold, # abandons, etc.)

- management reporting and analysis

Typical systems used were:

- home grown data base systems
- Folio Views (a data base and text retrieval system)
- Smart Text -- based on Lotus
- Service Man (general feeling was that it is not very good)
- Intellisystems (an automated support DB)

Another solution is providing support on an outsourcing basis, as provided by a company called Software Support. They provide people, services, etc. to fully support products.

The consensus was that none of the existing systems was very good. Many of the users had data bases but the support, customer data and technical data was not integrated. There was a high level of frustration and the feeling that the lack of integrated data was costing them time and money.

Note: Datastorm, provider of ProComm and other communications packages, seems like a successful company that has found a niche and is growing. Their product has an excellent reputation and provides very complete and complex communications services.

<u>Mobile Computing</u>

Carol Anne Ances
10/28/92

<u>Speakers</u>

Andrew Seybold, Dataquest, Inc. (Moderator)
Neal Selvin, Apple Computer, Inc.
Pat Sullivan, Contact Software
Dan Bricklan (developer of VisiCalc and industry guru)

Users of mobile computing have the following requirements:

- wireless communication
- remote roll-up of data
- facilities for:

  - EMAIL
  - FAX
  - ad hoc queries
  - calendar

- ability to tie into other applications (spreadsheet, word
  processing, etc.

Contact Management software product (ACT!) provides the following
functions:

- name, address phone
- day planner
- notes about people, meetings, etc.
- history (many years)
- ability to record multiple methods of communication (EMAIL,
  Fax, letter, phone, face to face
- connect to desktop (must be able to synchronize and merge
  data)
- provide management reports (select by day, customer, project,
  subject, etc.)
- provide same functionality/interface as on desktop

ACT! is one of the leading contact managers -- it has been around a
number of years and is a very full function and flexible product.

According to Sullivan, ACT! was developed with portable computing in
mind.

Major problems with mobile computers such as palmtops are:

- Pricing of software: Since users pay so little for the computer, they aren't willing to pay lot for software; but software development is same or more as for desktop.

- Physical distribution of software. Most palmtops don't have normal floppy drive--how to distribute initial software, upgrades, bug fixes?

- Limited memory/storage on palmtops. Typical PC code is bloated because hardware is cheap-developers write, assuming there is unlimited hardware. However, palmtop is more limited--takes more development effort to write tighter code. End users need same functionality and interface as on desktop--but hardware can't always support it.

PCMA is the mobile bus used for palmtops. PCMA cards (credit card size card that fits into slot on computer) will be used as software distribution medium. Problems are:

- cost: $20-$40 to distribute via card, vs $1 or less with floppy disk

- updating software is a problem

Solution is electronic distribution for initial distribution, bug fixes and updates. Alternative methods of electronic distribution:

- central repository such as CompuServe, Prodigy

- software distribution kiosks (in computer stores, hotels, airports) where users can plug in to get software for fee

An additional problem with mobile computing is the number of extra devices needed to make it fully functional: phone jack, modem, fax board, additional storage, etc. What is needed is a single device that will provide all of these functions.

Marketing and Selling LAN Software

Burton Grad
10/5/92

Leader Greg Gianforte -- Brightwork -- New Jersey
    (provider: Novell -- Network management tools)

Attendees:

- Jack Huisman -- Pioneer -- Data Access
- Willie Burgess -- DEC -- software licensing technology --
  Pathworks
- Karen Doyle -- Spinnaker
- Jim Auleda -- Command Tech -- editor for program editor (SPF-
  like)
- Steven Branard -- Cheyenne SW Utilities for Novell
- Darwin Dennisi -- DINE Systems
- Sherry Hillebrandt -- Artisoft (LANtastic)
- John Hurtis -- Texas Intruments (IEF)
- Linda Weave -- Chronologic
- Tony Nasca -- Nasca

Issues of Interest

Pricing for Networks
Which distribution channels
Customer service/support including tech support
Concurrent pricing
Site licensing

Pricing

Brightwork -- system management software
per pc didn't work
now price per server
use runtime protection ("magic cookie") (prevents 2nd install of
same software)
$400-$1000 breakpoint at 250 users
believes that LANs increase problems with piracy

Cheyenne
Free evaluation software
tiered pricing $900-$2000
5-25-50-250 are break points
50% discount for channel plus volumes discount for direct sales
force

Artisoft
starter kits -- $99 direct marketing
300 user license (but needs hardware)
startup kit for 2 users (including hardware)

Nasca
sell at 1 price per company
software metering tools
electronic auditing of hardware ad software on a machine
DEC pushing old VAX + ULTRIX tools to work on WANs and LANs
network management facilities are critical
may determine whether to buy Netware or OS/2

Channel Issues

Pioneer -- $299 -- discount over 25 copies
look for companies selling to market -- pay reseller fee (15% of net)
create specialized site license disk with limited # of copies
finder's fee should be 5%-10%
distributors get 50%

Artisoft -- over 500 employees
use resellers
use dealers
use reps
margins are greater for industry specialized distributors
Do resellers really sell the products?
    40% sell 60%
    30% sell 38%
    66% sell 2%
feels that reseller community has failed (disintegrated) in network market
customer driving the change to more direct sales

Support

Brightwork -- 4-5% of total cost for tech support
installed 4000 units/month
about 1/2 call per installation
people don't charge for support
shouldn't we be pushing to sell upgrades through support contracts

Integrated Office Systems

Lou Ruffino presentation of messaging concepts -- (discussion with Hugh Williams, Carol Anne Ances, Burton Grad)

Imagery -- multi-media (education)
         document representation
         compression - communications
                    - storage

Machine reading of envelopes (OCR) (for U.S. Post office)

CD ROM technology   600 meg - $1.50 per disk
                    200 meg - $ .50 per disk

With current compression techniques can put 20 minutes of full motion video on new small CD-ROM disks.

Interested in instruction delivery

Involves storing data, text, pictures, audio, moving pictures

Interested in wireless communication (radio frequencies) -- avoids telephone co. limitations; can use for LANs

Designed a pager associated with a WIZARD with Profs -- went to IBM in 87/88.

Sharp also involved in paging with WIZARD.

HP has equivalent paging product called "FAXTEL"

Form to form transformation; format to format transformation

Tiny radio-receiver/transmitter can send data, audio, video, or receive data, audio, video; can provide limited area coverage (up to 2 miles) with radio frequencies.

<u>Office Automation Functions</u>

Hugh Williams
10/7/92

Mail

    Notes/Messages
    Documents
    Voice mail
    FAX
    Image
    (full-motion video)

    Send, Reply, Comment, Annotate...
    CC, BCC, Acknowledgement...
    Access Control, Archive, Retention Management, Encryption,
      Backup...
    Distribution lists
    Topical and chrono file support
    Search capability (keyword, author, date...)

Remote Access

    Telephone: (Voice mail, In-basket (Audio), Text mail (Text-to-
      Speech Synthesis)
    Pocket device (e.g., Wizard): Urgent mail notification via pager
    Portable/Notebook: Mail notification via paging and full text
      support via data radio.

Directory

    Enterprise and Extended Enterprise
    Personal (Graphical rolodex)
    Tel #, Node ID, Fax #, Pager #, Voice mail #, Printer, Address...

Calendar

    Meeting scheduling
    Internodal support
    Conference room and facilities scheduling
    Access control (no access, view only, change)

Information Services

    Filtering via profile
    Bulletin board
    Publication announcement and ordering
    Product announcements
    Competitive analysis support
    Clipping service (image)
    News services (Dow Jones)
    Stock quotations

Travel Support

    Front-end airline reservation service
    Find most cost-effective travel plan
    Manage frequent-flyer points
    Hotel and city info
    Maps and directions to selected sites
    (Expert Reservationist)

Telephone Support

    Dial from work station
    Filter incoming calls
    Display calling number

Surrogate Support

    (Expert Secretary)

Word Processing

Spreadsheet

Presentation Graphics

Desk-top Publishing

Forms Generation

    Expense accounts
    Time cards
    Moving and living
    Moves and changes (office, telephone...)
    Equipment (capital) ordering
    Supply requisitioning

Organization

    Relationships maintained in enterprise directory
    Organization charts

Calculator

World-wide clock with alarm support

INTEGRATED MESSAGING   Hugh Williams
                                             9/11/92

<u>INTRODUCTION</u>

In the mid-eighties, following the acquisition of ROLM by
IBM, a number of initiatives were undertaken to integrate
better telephone/voice systems with data processing. One of
these addressed office systems, more specifically the
integration of ROLM's voice-mail system *PHONEMAIL* with IBM's
office software (*PROFS*, *DISOSS*, and the emerging
OfficeVision).

After discussions with customers with significant
investments in both E-mail and voice mail systems, an
"Integrated Messaging" approach was specified and approval
was obtained to build a prototype which would utilize a
Windows(V.2) front-end to *PROFS* and a "soon-to-be-available"
release of a new version of *PHONEMAIL*. The *PROFS* and
Windows code were completed and demo'ed to customers using
simulated voice mail (the new release of *PHONEMAIL* was not
available at the time).

Based on the success of the demo and customer feedback a
decision was made to incorporate integrated messaging in the
OfficeVision plan. The design was LAN-based with *PHONEMAIL*
acting as a Voice/Telephony server and the end-user
interface being provided through *OfficeVision* under OS 2.
During development the schedule for the required release of
PHONEMAIL was revised to a date past a reasonable horizon
and a decision was made to use a small voice-mail vendor who
agreed to build the required interface on an acceptable
schedule. Development was completed to the point that the
code was installed at several accounts for evaluation. With
the redirection of the OfficeVision plan, development was
terminated.

An alternative approach was evaluated, in conjunction with
Northern Telecom, where the voice/telephony server was to be
provided from the Telco central office and the end-user
interface through *OfficeVision*. Though this was found to be
technically feasible, neither Northern Telecom or NYNEX
opted to pursue this alternative. There were several
concerns but the overriding one (with perfect hindsight) was
whether *OfficeVision* would win marketplace acceptance.

INTEGRATED MESSAGING

APPLICATION DESCRIPTION

At the heart of the system are two fundamental ideas;

1) That a user should be enabled to deal with multiple messaging systems (Voice and text) through a single integrated interface and

2) That a user be allowed to freely choose and mix his messaging medium.

With regard to the first point, it is clear that a visual interface is the preferred way to manage mail. It allows one to see important mail at a glance and select it for processing in a non sequential manner unlike voice messaging and telephone answering machines. For this reason the primary interface was built on a PC.

With regard to the second, the selection of medium should be a function of both user preference and the type of message. The prototype inplemented voice and text.   Given today's state of the art in multi-media PCs and transmission technology, image should be considered for implementation at this time.

FIGURE A

IN BASKET

	DATE	TIME	FROM	NODE/NO	SUBJECT	TYPE
1	10/01/92	9:00AM	Smith, T.	VMVIENNA	Bulletin Board	TEXT
2	10/01/92	8:30AM	Jones, W.	Ext. 3333		VOICE
3	9/30/92	6:30PM	?????	??????		VOICE
4	10/01/92	12:30PM	Grad, B.	(914) 555-1234	Washington Meet	TEL

Figure A illustrates the above points. If Message 1 is selected, a standard text message will be displayed.   The user could reply to this message with text or if he preferred select the voice reply option and the system would turn on his speakerphone and record his message and send it to the appropriate address automatically.   Or he could forward to an associate with a voice comment such as "Please handle".

Message 2, if selected, would cause the user's speakerphone to be turned on and the associated message to be played. Again if the user preferred not to respond with voice, he could send text.

INTEGRATED MESSAGING

(Underlying the above functions is both an enterprise-wide
and a personal directory system which provides the
appropriate address for E-mail, voicemail, telephone calls,
FAX, Pager etc. for the given individual.)

FIGURE A

IN BASKET

	DATE	TIME	FROM	NODE/NO	SUBJECT	TYPE
1	10/01/92	9:00AM	Smith, T.	VMVIENNA	Bulletin Board	TEXT
2	10/01/92	8:30AM	Jones, W.	Ext. 3333		VOICE
3	9/30/92	6:30PM	?????	??????		VOICE
4	10/01/92	12:30PM	Grad, B.	(914) 555-1234	Washington Meet	TEL

Message 3 illustrates a voice message which came from
outside the enterprise and the identification of the calling
party cannot be known to the system. (With the advent of
ANI (Caller ID) coupled with the personal directory selected
integrated messaging functions could be implemented). If
selected, the voice message would be played but reply etc.
could not be automated as with message 2.

Message 4 shows a telephone call taken by a message center
and, via an interface to the system, inserted into the In
Basket. If selected, the system would telephone the calling
party. A trivial extension to the system would enable a FAX
center to send notification that a FAX had arrived for a
given individual.

Other Functions

Though primary access to the system was through a work
station in his office, secondary access was supported, both
from remote work stations as well as telephones. Text-to-
Speech synthesis was employed to "read" text messages over
the telephone.

To enable notification of urgent new mail, a prototype
interface to a nationwide paging system was implemented.
Short text messages were sent using this capability.

Selected telephone features, based on capabilities in the
ROLM CBX and telephones, such as call screening and display
of calling number were demonstrated.

The functions that were supported in the prototype were constrained by the functions already existing in *PROFS* and *PHONEMAIL*. Since these two systems were functionally rich (distribution lists, networking of messages etc.) the user had available to him a full menu of choices through the integrated interface. However differences between the two systems showed through. Ideally the next step would have been to converge the two systems to the point that the user would only have to learn and deal with a common interface to a multi-media messaging system.

Conclusion

It would seem that "Integrated Messaging" is an application which inevitably will be developed. In numerous discussions with customers, its importance in meeting the needs of the communication intensive office worker was underscored. The ingredients for its implementation are well understood. Perhaps, what is needed, is a customer (or customers) who, recognizing the importance of this requirement, would lead and potentially invest in its development.

THE NEW REALISM IN OFFICE SYSTEMS

COMPUTERS CAN'T TAKE THE PLACE OF GOOD MANAGEMENT—BUT THEY CAN HELP

When it comes to information technology, you won't find greater enthusiasts than executives of United Parcel Service Inc. With the fervor of converts, they rhapsodize about their five mainframe computers, 2.4 trillion bytes of data, their worldwide network, their computer-controlled conveyor belts whirring along at 500 feet per minute. The man with the plan, Chairman and Chief Executive Kent "Oz" Nelson, says there's a good reason to be bullish on all this technology: "We realized that the leader in information management will be the leader in international package distribution—period."

It wasn't always like this. For most of the 1980s, UPS was a dull, brown dinosaur that couldn't match Federal Express Corp. in technology and wasn't sure it should. While UPS experimented with every gizmo imaginable, its manual package handling was so efficient that "every time we applied technology, it slowed us down," Nelson recalls.

BIG SPENDERS. UPS was not alone. At many companies, information technology became a source of exasperation. Management consultants and computer makers told them they needed "strategic" information systems to gain a competitive edge. A new breed of computer managers, known as chief information officers, emerged, pushing technology as the preeminent business weapon. The search began for "killer apps," ingenious computer applications such as FedEx' package-tracking system, Merrill Lynch's Cash Management Account, Citibank's automated-teller machine network, and the granddaddy of them all, American Airlines' Sabre reservation system. Consultants noted that by the late 1980s, Sabre generated nearly $500 million annually for parent AMR Corp.

The corporate coffers sprang open. Budgets for information technology rose from 27.2% of corporate capital spending in 1980 to 35.2% by 1991, estimates Morgan Stanley & Co. economist Stephen S. Roach. In just the service sector of the

United Parcel Service

U. S. economy—banks, insurers, hotels—he estimates that $862 billion was plowed into information technology in the 10 years ending in 1991.

But guess what? Most of the investments never paid off on the bottom line. White-collar productivity actually declined for most of the 1980s. Few killer apps ever emerged, and many ambitious projects collapsed under their own weight. The result: Many CEOs feel seduced and abandoned by information technology. With the economy sputtering and corporate profits under pressure, they're putting a lid on computer budgets. Many are actually outsourcing—turning over management or even ownership of their information systems to outside professionals.

But now, more than ever, Corporate America needs information technology that works. It needs systems that can help get closer to

customers, create new products and services, and meet global competition. As companies shrink their payrolls, personal computers, networks, fax machines, and other information tools really do have to improve productivity. Technology must help fewer hands get the work done.

There are already signs that information technology is starting to make a difference. Since 1989, white-collar productivity has begun to rebound (chart, page 130), partly because of thinning ranks. Roach says that as the '90s wear on, productivity will continue to rise as corporations finally figure out how to apply information technology effectively.

How will they do it? The answer is deceptively simple: by taking a far more realistic approach. In the sober '90s, the vain hunt for killer apps has ended. Instead, smart CEOs are

stepping back and examining just what it is their companies and how their business processes can be changed to do it better. Only after they have clearly defined the task do they call in technology experts to rig information systems to help get it done.

'LIKE AIR.' The process is called "re-engineering," and it's how UPS's Nelson finally learned to love technology. Once he understood that the basic UPS system had to be redesigned—to compete with the likes of Federal Express rather than with the plodding U. S. Postal Service—it was easy to see which technologies would really pay off. That led to a decade of heavy but focused investment in everything from a new freight airline to development of a custom handheld computer that electronically captures customers' signatures. Thanks largely to its new capabilities, UPS's profits and revenue are rising (page 132).

The painful lesson of the 1980s is that even the sexiest technology isn't a substitute for clearheaded management. Information technology will be an important discipline for senior executives to master, but only one of many,

WHERE'S THAT BOX? When a United Parcel Service package went astray, finding out who signed for it used to mean rummaging through paper receipts. Now customers sign on a handheld computer. Once a day, drivers transmit the signatures to Mahwah, N.J., where they can be viewed the next day

THINK SMART: MAKING TECHNOLOGY WORK

HYATT

Challenge: Improve customer service by shortening check-in lines
Solution: Let guests check in by phone. To do that, Hyatt needed a toll-free operator center, data links to every Hyatt hotel, and identical software in each hotel so operators wouldn't have to learn multiple systems

WAL★MART

Challenge: Overcome cost advantages in purchasing and distribution that larger rival Kmart had in the early 1980s
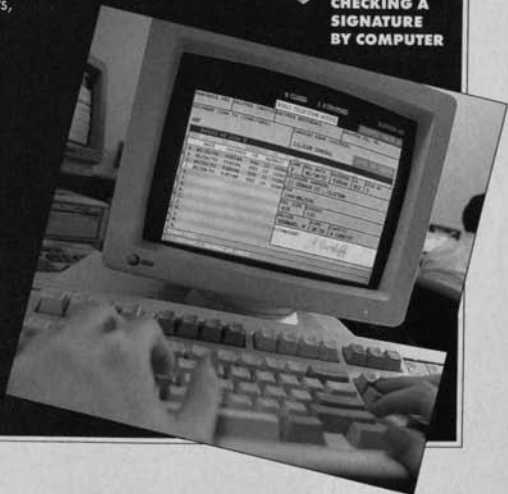**Solution:** Use computer networks to establish tight links between suppliers, warehouses, and stores. That way, Wal-Mart avoids excess inventories and keeps costs down

elf atochem
ATO

Challenge: Build wider internal support for re-engineering
Solution: Tackle a common annoyance—long waits for expense-account reimbursements —by letting sales people file forms electronically, paying balances into direct-deposit accounts, and auditing the paperwork afterward
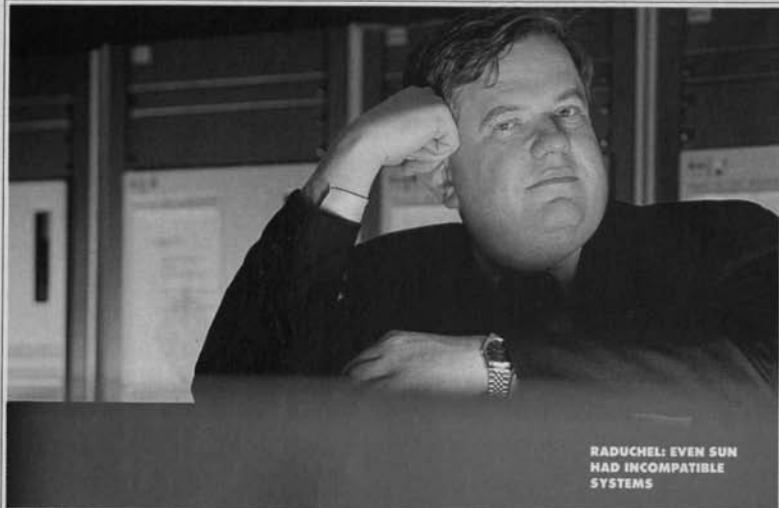
MasterCard

Challenge: Track transactions at stores around the world to reduce fraud. The ultimate solution, giving each a unique ID number, would have taken six years
Solution: Don't do it. The new tracking system was already such a big improvement, it shouldn't be delayed

CHECKING A SIGNATURE BY COMPUTER

RADUCHEL: EVEN SUN HAD INCOMPATIBLE SYSTEMS

alongside marketing, finance, and product development. "At good companies, information systems technology is like air," says consultant Peter G. W. Keen, executive director of the International Center for Information Technologies in Washington. "They hardly talk about it. It's just there."
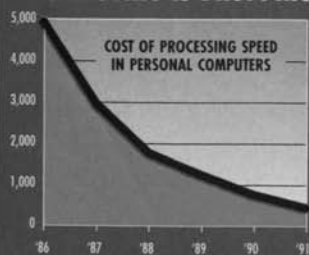
Even the CIOs are singing a different tune. Back in 1989, top computer systems managers surveyed by CSC Index, the consulting arm of systems integrator Computer Sciences Corp., said their No. 1 priority was using information systems for "competitive breakthroughs." This year, that ambitious goal has fallen to No. 14. The top priority now is more modest: "aligning information systems [with] corporate goals."

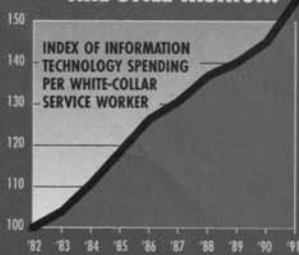That's certainly what the techies at Wal-Mart Stores Inc. have done. A decade ago, the Bentonville (Ark.) chain trailed Kmart in the discount-store market. With its greater purchasing power, Kmart could negotiate lower wholesale prices. But Wal-Mart saw a way for information systems to blunt Kmart's edge. By collecting and analyzing sales data from stores daily, Wal-Mart could immediately learn what merchandise was moving slowly and thus avoid overstocking and deep discounting.

SPECIAL TREATMENT. Wal-Mart executives understood early that while hot products come and go, a good delivery system is a joy forever. At its computerized warehouses, many goods enter at one loading dock and leave from another without ever resting on a shelf. And Wal-Mart wins special treatment from its suppliers because it gives them special treatment: Some 3,800 vendors now get daily sales data directly from Wal-Mart stores. And 1,500 have the same decision and analysis software that Wal-Mart's own buyers use to check how a
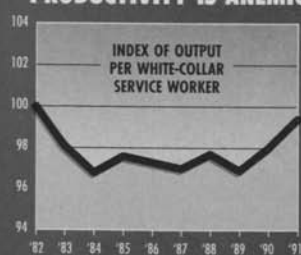
product performs in various markets.

In all, Wal-Mart has invested $600 million over the past five years in computers, satellite dishes, and the other hardware and software it uses to orchestrate supply and demand. Along the way, it has become the world's largest and most profitable retailer.

Wal-Mart's success shows how important it is to get the strategy right before laying on the information technology. But being smart about technology itself is equally important. Take Hyatt Corp. Like other chains, it has a computerized reservation system, but Hyatt's has a technological advantage: Guests can check into any Hyatt in the U. S. by calling a toll-free number in Omaha where an operator starts a bill, assigns a room, and even describes the view. On arrival, guests just present their credit cards for verification and pick up the keys.

That's not done easily. By the end of the year, all Hyatt hotels will have expensive, 24-hour data hookups to the Omaha center. And all will have the same on-premises software, so the Omaha operators can check guests in by remote control without having to navigate different systems at each hotel. Because Hyatt manages all its hotels, it can enforce those standards without worrying about balky franchisees.

The payoff: Guests spend less time in line, a point Hyatt trumpets in its advertising. And according to Gordon S. Kerr, Hyatt's senior vice-president for management information systems, the same network eventually will be used to centralize such functions as accounting,

EVEN THOUGH THE COST OF COMPUTING IS DROPPING...

COST OF PROCESSING SPEED IN PERSONAL COMPUTERS

5,000
4,000
3,000
2,000
1,000
0

'86 '87 '88 '89 '90 '91

▲ DOLLARS PER MILLIONS OF INSTRUCTIONS PER SECOND

DATA: DATAQUEST INC.

...COMPUTER BUDGETS ARE STILL RISING...

INDEX OF INFORMATION TECHNOLOGY SPENDING PER WHITE-COLLAR SERVICE WORKER

150
140
130
120
110
100

'82 '83 '84 '85 '86 '87 '88 '89 '90 '91

▲ INDEX: 1982 = 100

DATA: MORGAN STANLEY & CO.

...AND WHITE-COLLAR PRODUCTIVITY IS ANEMIC

INDEX OF OUTPUT PER WHITE-COLLAR SERVICE WORKER

104
102
100
98
96
94

'82 '83 '84 '85 '86 '87 '88 '89 '90 '91

▲ INDEX: 1982 = 100

DATA: MORGAN STANLEY & CO.

PHOTOGRAPH BY ROBERT HOLMGREN; CHARTS BY JAYME BEAUCHAMP/BW

which are now done at each hotel. That could produce savings of tens of millions of dollars. Says Kerr: "You can't make a bed from 200 miles away, but you can do a lot of other things."

Even computer makers are taking a more levelheaded approach to using information technology these days. Sun Microsystems Inc., the leading workstation maker, was a true believer in technology. As it grew from a startup into a $2.5 billion company from 1982 to 1990, the need for new systems and software was hardly questioned, and there was little coordination of purchasing. But a couple of years ago, management became alarmed that many systems couldn't easily communicate with one another—an embarrassing plight for one of the world's premier networking companies. Even today, after 1½ years of enforcing companywide standards, says William J. Raduchel, vice-president for corporate planning and development, "my system architecture is a bowl of noodles thrown up in the air."

KNOW-IT-ALLS. Bit by bit, though, Sun is untangling its electronic pasta. Now, when an order for a workstation is taken at its Japanese subsidiary, it's entered into a computer once and relayed to other machines that need to know about it, instead of being entered up to 10 times on different, incompatible systems. In Europe, Sun is going from low-tech warehouses in 11 countries to a single one in Montfort, the Netherlands, that is networked to sales offices in the 11 countries and to a Sun factory in Linlithgow, Scotland.

A strengthened communications network saves time and cuts down on the need to carry expensive inventory. That helped Sun work down its manufacturing-cycle time to six months from eight, freeing $500 million in cash on its balance sheet, says Raduchel. "There weren't any grand strategies here, it was all nuts-and-bolts stuff," he says. "You just have to go and work with people every single day."

One of the toughest challenges for technologists is dealing with the great washed masses of white-collar workers. "Every white-collar person thinks they're a professional and they know best. It's like getting a group of doctors

to agree on something," says Thomas M. Hout, a vice-president at Boston Consulting Group. Gaining their support early is essential, says Jerrold J. Eisen, a consultant at Goldstein Golub Kessler & Co., a New York accounting firm. Otherwise, "they sit there in the bushes with the guns loaded, waiting to shoot."

Case in point: the insurance industry. It's an intensely white-collar business, and insurers have been among the biggest buyers of information technology. Yet the insurance industry racked up one of the worst productivity records in the 1980s. According to Morgan Stanley's Roach, despite doubling investment in computer systems, communications, and other office technologies as a share of its capital stock, the industry still has nearly 47% of its work force pushing paper in back offices, scarcely down from 49% a decade ago.

One reason for insurance's lousy performance is that old processes were never killed off when new automated methods were introduced, says Ray Caron, president of Cigna Systems Corp., the computer unit of Philadelphia-based insurer Cigna Corp. "You started to layer systems on top of one another," he says. "For example, the independent agents would do some work, and our people would do it over again, just to be sure they did it right."

Now, Cigna is starting to get things right with such methods as prototyping, in which rough drafts of new software are tried out with real employees before money is sunk into industrial-strength

versions. Cigna's bosses are insisting on fundamental change: Caron says that heads of one unit, skittish about wholesale changes, asked the re-engineering team to estimate the cost and impact of making just 75% of the proposed changes. But the re-engineering team refused, insisting on all or nothing. At Cigna RE, the reinsurance unit, a re-engineering effort slashed the 225-person payroll nearly in half while speeding document handling.

SELF-SERVICE. Bureaucratic infighting can tangle up even the best information-technology plans. Take the Texas Employment Commission. It spent 12 years on a new system for state unemployment taxes. The tax collectors blamed data-processing people for taking too long, while the computer jocks complained that the tax collectors constantly asked for new things. In 1990, the commission brought in Andersen Consulting, which helped create a dispute-settling steering committee that included the commission's chairman, administrator, and the top managers from both sides. The panel ended one long-simmering dispute by ordering tax collectors to swallow their pride and enter certain tax-status changes into the computer themselves instead of sending slips of paper to clerks. That should save money and time. Back on track, the tax system will go into operation on Oct. 1.

At the extreme, a poorly managed computer project can threaten a company's life. Consider Blue Cross & Blue Shield of Massachusetts. Two years ago, the health insurer faced shrinking membership, rising health care costs, and a lid on rate increases. On top of that, an ambitious computer system, years late, was millions over budget because of inadequate supervision and constant requests for modifications. That contributed to a financial crisis that briefly drove the company to the brink of insolvency. Early this year, Blue Cross withdrew life support from the computer project and turned over its data center to General Motors Corp.'s Electronic Data Systems Corp. (page 133).

Even the military can't simply order its troops to embrace new information systems. "Many of the procedures have existed for decades. You have people

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SECRETS OF SUCCESSFUL INFORMATION-TECHNOLOGY PROJECTS

DO

▶ Agree on goals, after first hashing out a model of how your company works

▶ Ask stupid questions about how things are done

▶ Postpone automation until processes are redesigned

▶ Start by fixing a small but annoying problem to win friends

▶ Structure big projects so there are visible payoffs along the way

▶ Try out rough prototypes of new systems to get early feedback from the people who will use them

▶ Select your best people for project teams, even if it disrupts your day-to-day operations

▶ Settle for 80% solutions

DON'T

▶ Set vague objectives such as 'improving productivity'

▶ Design your project to minimize conflict within the organization

▶ Assign project management to someone who's technically proficient but unskilled in negotiation

▶ Assume that interviewing computer users will reveal exactly what they need from the new system

▶ Start your effort by looking for places to apply the hottest new information technologies

▶ Leave technology for last, or you'll overlook opportunities for using it

▶ Emphasize incremental improvement if what you really need is fundamental change

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UPS: UP FROM THE STONE AGE

NELSON: A BIG INTERNAL SALES JOB

onsidering the obstacles United Parcel Service Inc. faced, it's easy to see why so many companies fail at re-engineering. At UPS, the decade-long transformation from a low-tech outfit to an effective user of information technology required heavy spending, endless patience, and—above all—a giant internal sales job.

In the early 1980s, most UPS employees were in no mood to dabble in technology. The 3,000-strong industrial engineering department had so perfected manual package handling that UPS had the industry's lowest costs. Sure, Federal Express Corp. had wireless terminals for its couriers. But to UPS management, those were bells and whistles. After all, UPS profits kept setting records.

NO TECHIE. But customers kept getting choosier, rivals stronger, and computers cheaper. By 1983, it dawned on management that it could no longer keep ahead by tweaking manual processes. Kent C. "Oz" Nelson, then senior vice-president, created a task force to plot an information-technology strategy. Although no techie—he has a BS in business from Ball State University—Nelson knew that computer-based systems would someday identify, route, and track packages better than any human being.

With deep pockets and patient employee shareholders, UPS went on a spending spree: $50 million for a global data network; $100 million for a data center in Mahwah, N. J.; and $350 million for the Delivery Information Acquisition Device (DIAD), a handheld computer for drivers. It's also spending $150 million on a cellular data net and creating a machine-readable label that holds more data than bar codes.

The biggest challenges have been managerial. Gene Hughes, strategic planning manager, says that some managers feared that technology would be inflexible, expensive, and prone to failure. Instead of quashing dissent, the company diffused it by picking respected managers and sending them to school to learn technology. That turned them from bashers into boosters. Nelson says that forming a priority-setting steering committee made up of the No. 1 or No. 2 person from each department was "one of the best decisions we made."

There were mistakes, too. Nelson, chairman and CEO since 1989, says at first the company focused too much on hardware and too little on what customers wanted. FedEx, for instance, was devising systems to automate customer mailrooms. UPS also goofed by not leaving enough people behind to fine-tune newly installed projects, and by ignoring off-the-shelf technology.

The costs of automation and overseas expansion crimped profits in the late 1980s, but UPS earnings are rebounding—up 18% in 1991, to $705 million, on a 10% revenue gain to $15 billion. At FedEx, Alan B. Graf Jr., chief financial officer, says: "Long-term, it's Federal Express vs. UPS. They're tough competitors." You can bet FedEx would not be so respectful if UPS were still treating computers and communications as so many bells and whistles.

By Peter Coy in New York, with Chuck Hawkins in Atlanta

who 'own' processes," says Deputy Assistant Defense Secretary Paul A. Strassman. And thanks to military employment rules, "if I have a colonel in charge of logistics, I can't take him out to the parking lot and fire him." So Strassman, a former Xerox Corp. executive, relies on the power of a clearly explained idea to rally support.

As CIO for the world's largest computer user, Strassman faces an urgent deadline: He has orders to cut $36 billion in spending between fiscal years 1991 and 1997. By consolidating data centers, the Defense Dept. is not only saving money but also eliminating discrepancies in data that cropped up through duplication. And the Pentagon is creating an information "utility" that will sell data processing for a fee to internal military users. "If we do not succeed with re-engineering, we will have to take down more fighter planes, more ships, and more tanks," Strassman warns.

BREEDING 'ZEALOTS.' If the problem is people, not technology, what's the solution? Before upsetting a lot of apple carts, it's often wise to tackle a small job that shows how computers really can help. Solve the annoying, obvious little problems first, even if they have little effect on the bottom line, suggests Robert M. Rubin, vice-president for information services at Elf Atochem North America, a Philadelphia-based chemical manufacturer. Rubin is working on a system that will reimburse salespeople for expense accounts right away and check their math and receipts later. That should win him some credibility for future initiatives that could demand sacrifices from employees.

Sometimes the winning strategy is to forget about the state of the art and settle for what can be completed. MasterCard International Inc. is in the midst of a five-year, $65 million effort to retool its worldwide network. A key goal is to slash losses from fraud by giving card-issuing banks more up-to-date information on cardholders and merchants. To do that, Philip Verdi, executive vice-president for operations, hoped to assign a unique ID number to each of 9.6 million merchants in the world. That way, MasterCard could follow them even if they switched banks, making it easier to spot a store that had high losses from fraud. But getting some 3,000 banks to adopt a worldwide numbering scheme and building the data base would have taken an estimated six years.

This April, Verdi decided to jettison the cumbersome feature so the project could move ahead. By the end of the year, MasterCard will be giving banks reports of suspicious activity within 24 hours—say, usage of a card more than

five times in a day. Within about two years, MasterCard hopes to have that data available almost instantly, so a thief could be foiled on the very day he stole the card. With fraud losses topping $1 billion a year worldwide, Master-Card's banks don't want anything to delay those capabilities. "You've got to deliver something. You've got to make them taste it," says Verdi. "Then they become zealots, and they really help you get the job done."

Another approach is to break the big overhauls into manageable pieces. Says Pennzoil Co. CIO R. Britton Mayo: "One of our rules on projects is if we can't do it in nine months, we don't do it." Mayo does leave himself room to fudge: Some projects do take more than nine months, they're just divided into shorter phases. He insists, though, that each phase produce some tangible benefits.

MICRO MISMANAGEMENT. Of course, being too timid carries a risk. By focusing on little stuff, companies can convince themselves they're making the needed improvements in their processes. But they may never get around to asking the basic questions that might point up the need for a more thorough re-engineering. "Companies have a temptation to break down things into 96 subprocesses and optimize each of those," says Rudy Puryear, a managing partner at Andersen Consulting. "What they end up with is 96 optimized subprocesses, and they haven't redesigned the business."

That, warns one information technology consultant, is precisely the downside of "total quality management," the hottest management fad of the 1990s. TQM programs encourage employees to make steady, incremental improvements in how they do their own jobs. But that may keep an organization from addressing more basic issues, says Larry DeJarnett, a vice-president at A.T. Kearney Inc. consultants. To use information systems effectively, management needs to throw out the old assumptions about how things are done, then build new processes. It isn't easy, says DeJarnett: "If people aren't willing to undergo some pain and strain, you should not embark on business-process re-engineering."

The new religion is spreading. As it does, the U.S. economy promises to become more efficient. That's good news for the eroding standard of living. Computers won't do it alone. But companies that get the whole package right—computers and all—will still outperform those that don't.

By Peter Coy in New York, with bureau reports

THE COMPUTER SYSTEM THAT NEARLY HOSPITALIZED AN INSURER
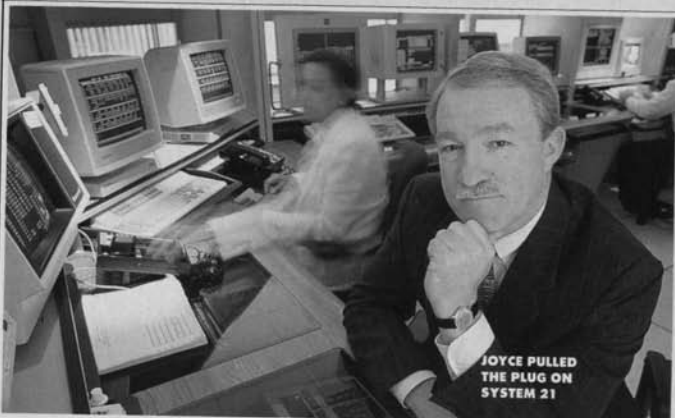
JOYCE PULLED THE PLUG ON SYSTEM 21

It was a failure of the first order. Blue Cross & Blue Shield of Massachusetts spent six years and $120 million developing a computer system that would be cheaper and more responsive to customers. System 21 was trumpeted as "the future of Blue Cross." But early this year, behind schedule and over budget, the project was scrapped and the company turned over its computer operation to an outside contractor, Electronic Data Systems Corp. "We couldn't face the board and ask them for another $120 million," says Martin V. Joyce Jr., a consultant hired last year as the Blues' senior vice-president of operations.

Train wrecks like that are rare. But with information systems gobbling up capital budgets, it's easy to see how devastating a botched computer project can be—especially for a company that already had other problems. A 1990 study by New York-based consultant Cresap-Tillinghast slammed Blue Cross of Massachusetts management for being inefficient and bureaucratic and missing the boat on managed health care. The company lost a third of its 3 million subscribers between 1985 and last year. In 1990, it came close to insolvency—partly because of cost overruns on the computer project.

BLIND FAITH. Where Blue Cross erred was in leaving technology too much to the technologists. After funding the huge project and approving an independent contractor to develop software, top management let nature take its course. The contractor, later bought by Policy Management Systems Corp. in Columbia, S.C., began writing programs for claims processing, billing, and enrollment. But, Joyce says, Blue Cross failed to give PMSC a firm set of priorities stating which features were essential and which programs had to be done first. Also, he says, supervision broke down because the insurer hadn't appointed a single executive to manage the project. So, when PMSC showed off the finished claims-processing software, various Blue Cross managers chimed in with requests for changes that delayed the whole project and led to cost overruns.

The delays were nearly as painful as the rising costs. By the time it launched System 21, Blue Cross was trailing other insurers in systems to manage the swelling load of paperwork. It had nine different claims-processing systems on hardware dating back to the early 1970s, and an internal task force in 1985 had recommended turning over data processing to EDS. But management refused, saying EDS was charging too much and lacked some key technology. Meanwhile, Blue Cross was proving incapable of creating new systems itself.

The Cresap-Tillinghast study triggered big changes. Blue Cross of Massachusetts immediately cut costs 15%, axed its money-draining computer project, trimmed layers of management, and got into managed care. The result: It earned $39 million last year.

System 21 exists only as a painful lesson. Its IBM computers were taken over by EDS. And six years of programming has been tossed out. The operation was a failure, but the patient lived.

By Geoffrey Smith in Boston

BRIAN SMITH

YOUR DIGITAL FUTURE

SOON, A HOST OF GADGETS WILL ALTER WORK AND PLAY—AND RESHAPE FAMILIAR INDUSTRIES

George's family is home for the night. The office won't need to know his whereabouts, so George unpins the "active badge" that tells his employer's computer network where to reach him. In the family room, he settles in to watch *Terminator 6*, which the kids have programmed the high-definition "Compu-TV" to fetch over the 500-channel cable system. George hollers to his son, Elroy, to join him, but he has a midterm tomorrow and is hunched over his "electronic book," tapping the screen to get video clips of the body's inner workings as he reads an anatomy text.

George's wife, Jane, is busy, too. After a day of sales calls, she's back in her home office. She grabs her notepad-size "personal digital assistant" and with the push of one button zaps all the day's sales data, contacts, and "to-do" items into her computer. Writing instructions on a screen embedded in her desk, she checks off the tasks she has completed. She then speaks to the computer, telling it to collect all her electronic mail and memos from the office. Now, if she really hustles, she might finish that multimedia sales report in time to join George for a 30-minute "virtual trip" down the Nile. With earphones, special glasses, and motion seats, the Compu-TV will whisk the couple away.

COMING SOON. This home of the future may sound like something torn from an Isaac Asimov novel, and certainly nothing close to it exists today. But five years or so from now, George and Jane's home may be the one next door. Seriously. While many folks are still fretting over whether to trust automated teller machines, a new wave of technology is building that has the potential to alter fundamentally the ways in which we entertain ourselves, educate our children, and get our work done.

The catalyst: digitization. Just as vinyl LPs gave way to digital compact disks in the 1980s, in the 1990s more and more of the information around us will be converted to digital bits, the 0's and 1's that are the language of computers. Everything from the analog waves of telephone calls, radio, and television to the images of movies, photos, and paintings is going digital. Once all this information has been converted to bits, it can be manipulated just like data in a computer.
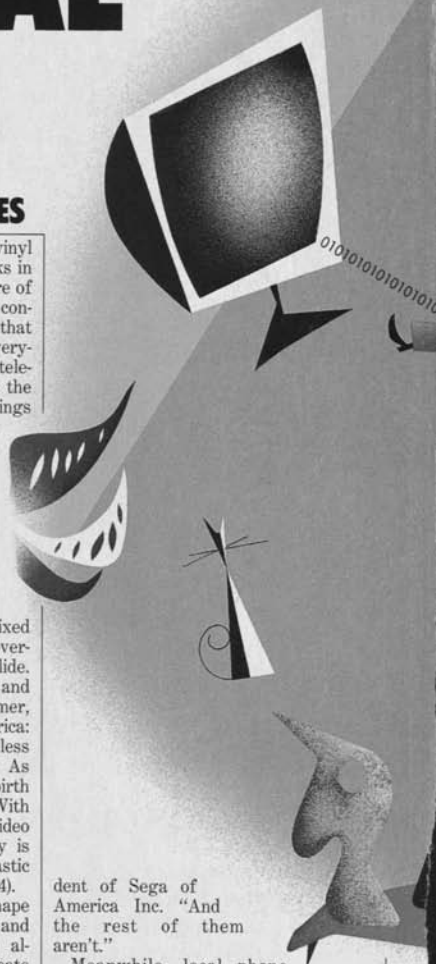
It's far from clear how this digital flood will be harnessed. But the prospect already portends a dramatic reordering of the computer, consumer electronics, entertainment, and information industries.

MATING DANCE. As information is mixed and matched, some industries will overlap. If they don't overlap, they'll collide. Old industrial empires may topple, and new ones may rise. Says Ron Sommer, president of Sony Corp. of America: "Where a company comes from is less important than where it is going. As boundaries are erased, corporate birth certificates won't count for much." With grounding in consumer electronics, video equipment, and entertainment, Sony is naturally one of the most enthusiastic promoters of the new order (page 64).

But everyone is scrambling to shape the digital future. The computer and consumer-electronics industries are already locked in a mating dance to create the boxes that will manage the digital flow. Will they be like TVs? Personal computers? Video games? Game kings Sega Enterprises Inc. and Nintendo Co. are trying to get an edge on the PC crowd with new video-game systems that use CD-ROM disks (page 34), offering stereo sound and movie-like video of real actors. "We and Nintendo really are the players," boasts Thomas Kalinske, president of Sega of America Inc. "And the rest of them aren't."

Meanwhile, local phone companies, cable TV operators, direct-satellite broadcasters, cellular-phone companies, and even water and gas utilities are battling to be the digital highways into homes, schools, and offices. Publishers, movie studios, and broadcasters are seeing dollar signs in converting vast libraries of books, reference works, films, and video footage into digital cash cows.

TERRY ALLEN

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HIGH TECH AT HOME

But to get at the cash, they must first overcome some major technical and marketing barriers. For instance, there's no standard format for digitizing and manipulating all this information. Given the difficulties of forging standards within any one of these industries, says Intel Corp. President Andrew S. Grove, the idea of easily creating a lingua franca for the digital world is "naive beyond belief."

Even if you can solve that one, the compression technology needed to squeeze those bits onto the digital highways is still evolving. Then there are the most fundamental questions: Who's going to buy this stuff? Why? When? For how much?

BEST GUESSES. O. K., so there are a few wrinkles to be ironed out. But that's not stopping anybody from trying to lay claim to this Brave New Digital World.

The motivations are clear: Profits in many of these industries, especially consumer electronics and computers, are dwindling.

The opportunity could be huge. Apple Computer Inc. Chairman John Sculley estimates the size of the digital market at more than $3 trillion by the year 2000. Sculley's tempting vision is based on the assumption that computers, consumer electronics, telecommunications, and entertainment will overlap as they go digital, giving old players new markets. "What's motivating all of us is greed," says Intel's Grove.

So the greedy are charging ahead with their best guesses about the digital future. Time Warner Inc. sees interactive supercable systems that offer 500 channels. Apple, says Sculley, sees a chance to become the software king in a market of new consumer gadgets—a sort of Microsoft Corp. of the digital world. Hewlett-Packard Co. is looking at

LET'S DO LUNCH

To shape the digital future, computer, consumer-electronics, entertainment, and media companies are collaborating in a series of deals

DEALS STILL AT THE LUNCH STAGE

Apple Computer
Is talking to Hollywood superagent Michael Ovitz, Japanese consumer-electronics companies including Fujitsu, and media and telecommunications companies

Showtime
Has approached four Bell operating companies

Microsoft
Is dealing with Japanese consumer-electronics companies, U.S. cable companies

IBM
In talks with Time Warner, Comcast (cable operator), MCA, Disney, George Lucas, Steven Spielberg, Michael Ovitz

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ways to get into the Compu-TV business. And Sony is laying plans for products that use computing to entertain.

"The '90s are going to be a very confusing period with a lot of silly, distracting, important products being introduced," says Paul L. Saffo, a research fellow at the nonprofit Institute for the Future, a research foundation. "It may be that the winning industries at the end of the 1990s are none of the ones that dominate today."

TEAMING UP. It may also be that no single industry—or nation—will dominate the digital world. Since the risks are high and the territory uncharted, companies all over the globe are racing into alliances. Computer makers, for instance, need help in building low-cost, compact consumer electronics. Inevitably, that pushes them into deals with Japan's electronics companies. The Japanese companies need the knack for digital programming the Americans have.

Even with Japanese partners, computer makers face tough challenges in consumer markets. There are different sales channels, cost structures, design principles, and advertising methods. "I'm very skeptical about the PC guys," says Stephen Reynolds, an analyst with market researcher Link Resources Corp.

So everybody's dealing. Apple has teamed up with Sharp Electronics Corp. and Toshiba Corp. to build consumer products. Tandy has clinched a deal with Casio and GeoWorks, a maker of software. For many months, IBM has been negotiating with Time Warner to collaborate on advanced digital cable-TV technology and is now talking to Tele-Communications Inc., the largest U.S. cable operator, to develop a two-way information system. Those who have not put ink to paper are talking about it. In the digital world, everyone is out to lunch—talking deals. Sculley spends gobs of time in Hollywood with entertainment types, shuttles to New York for meetings with publishing executives, and flies to Tokyo to negotiate with consumer-electronics companies. Executives from Tele-Communications recently spent hours urging Sony Chairman Akio Morita and other Japanese executives to bet on cable as the ideal conduit for digital programming. Sega says every U.S. computer maker has knocked on its door. And Microsoft Chairman William H. Gates III is everywhere—talking with phone companies, cable companies, Hollywood studios, and video-game makers. Says Gates: "We buy a lot of very nice hot lunches."

Short term, all these lunches may do little more than drive up Bromo Seltzer sales. But while the dealmaking continues, the first products of the digital revolution are emerging. There are multimedia PCs that combine data, graphics, sound, and primitive video. Eastman Kodak Co.'s Photo CD system turns your old snapshots into digital images that are stored on CD-ROM disks and can be viewed on TVs and computers. Philips sells a $799 system called the Imagination Machine, a CD-ROM player that hooks into a TV set to display interactive games and educational programs that mix sound, graphics, photos, text, and, eventually, video. By Christmas, competition will be on the way, starting with Tandy Corp.'s $699 Video Information System. And by mid-1993, the Apple-Toshiba joint venture is expected to produce a multimedia player being developed under the code name Sweet Pea.

HANDHELD OFFICE. More intriguing, perhaps, is a new category of gadgets called Personal Digital Assistants, or PDAs. These handheld PCs are a hybrid: electronic datebook, Rolodex, notepad, and fax machine.

Apple has staked out the PDA turf with a product called Newton. The 6-by-8-inch device, to be built by Sharp, will do calculations, list phone numbers, and maintain schedules and to-do lists. It will also communicate via modem to send and receive faxes or collect data from computers back at the office.

Newton's chief virtue is software that makes it easy for even computerphobes to use. There are no computer files, codes, or even a keyboard. The user just writes plain English commands on Newton's screen. Write "Fax to Mary," and the device automatically looks up her fax number and sends the message.

By the time Newton ships—Apple says in early 1993—there may be all sorts of PDAs. This fall, IBM plans to

SIGNED DEALS AND PROJECTS UNDER WAY

Apple and IBM
Kaleida joint venture to create multimedia software

Apple and Sharp Electronics
Sharp will build Apple's Newton 'personal digital assistant' (PDA)

Apple and Toshiba
Collaborating on multimedia player

AT&T and GO Corp.
Develop a PDA

demonstrate one that will use radio or cellular-phone networks to pick up stock quotes, the latest news, and other data. Sony says it plans one. Tandy, Casio, and GeoWorks are teamed up to build a "personal information processor." American Telephone & Telegraph Co. and Go Corp., a maker of handwriting-recognition software, are working on a "personal communicator" that lets you send written notes. Hewlett-Packard is planning a new version of its 95LX handheld computer that "reads" hand printing.

Other PDAs on the horizon: travel guides that contain maps, restaurant guides, and foreign-language translation, and "My First PDA" for learning math, spelling, and penmanship.

While PDAs are being positioned largely as consumer products, these handheld information tools have obvious business applications, too. Would-be PDA makers are already noodling with job-specific PDAs, such as one under development in Apple's labs that would put all the specs for a Boeing 747—paper documents that take up 10 feet of shelf space—in an airline maintenance worker's hands. The manual would always be up to date, thanks to periodic updates via telecommunications.

Even books are being transformed by the new digital technologies (page 61). Several electronic book players are due out late this year or early in 1993. These machines will use the huge storage capacity of CD-ROM disks to pack digitized encyclopedia sets, novels, and textbooks into handheld machines. The idea is to have a handy little player that gives instant access to text, illustrations, and, one day, video clips.

The first such product, Sony's $549.95 Data Discman, never caught on with consumers in the U.S. But Sony will try again in September with a machine known internally as Bookman. In addition to presenting text, graphics, and sound stored on standard CD-ROM disks, the machine plays audio disks. And when hooked up to a TV, it can display stored images in 256 colors.

HANDHELD ASSISTANT: APPLE CEO SCULLEY WITH A PROTOTYPE OF THE NEWTON

Books are just the first in a series of familiar objects that are candidates for a techno-makeover. Phones, TVs, and even the art on your walls will undergo a digital metamorphosis. AT&T has been working for years on souped-up phones containing microprocessors, memory chips, and software that will give them the power of personal computers. The first such product, due out next year, is the AT&T Smart Phone, which includes a touch screen and programmable keys for functions such as checking your bank balance. Digitization could also perk up your tired decor. By decade's end, there could be large-format

flat-panel screens that hang on the wall, says Stephen D. Arnold, president of Interactive Home Systems Inc., a Redmond (Wash.) company that Microsoft's Gates is backing with his own money. When not being used to beam in those 500 cable channels, the screens could bring art to the masses. With the flick of a few buttons, digitized renderings of famous paintings could be summoned. Depressed? Try a Van Gogh. Or perhaps a soothing nature video. Interactive Home is working on such a system, and Gates plans to use a 46,000-square-foot home he is building as a test bed. "This will be in some homes at the end of the decade," Gates says. "It will be in my home a lot sooner."

BACKBONES. But even billionaire Gates can't buy all these futuristic gizmos until some foundations are laid. The most important is a high-speed digital pathway to zap all this information to homes and offices. The coaxial cable that now carries TV signals may give cable companies the edge in laying new digital highways. Cable has the capacity (bandwidth, the experts call it) to move 1 billion bits of data a second—enough to transmit the entire *Encyclopaedia Britannica* in about two seconds. To send that same material over regular phone lines takes 17 minutes. Cable companies have also spent millions of dollars installing fiber-optic "backbone" networks between regional transmission centers. These networks are able to move huge amounts of data at even higher speeds to neighborhood switches, where the signal is redirected over coaxial wiring.

But don't count the local phone com-

Comcast and Fleetcall
Digital cellular phone system

McCaw Cellular, IBM, and six Baby Bells
Setting cellular data standards

Kodak and Apple
Developing software for digital photography

Tandy, Casio, and GeoWorks
Develop a PDA

"THIS IS THE EQUIVALENT OF THE GOLDEN AGE OF TELEVISION": ACTRESS-PRODUCER DUVALL WITH HER INTERACTIVE GAME FOR KIDS

panies out. For starters, the cable companies lack the kind of computerized network monitoring and billing systems that all phone companies have. Cable operators also have little experience with two-way communications. And a decade of expansion that has eaten up 15% of their capital budgets in recent years leaves them in no financial position to lay fiber that last mile into the home.

In addition to having the right kind of billing systems, network monitors, and switches, the phone companies have deep pockets. Their problem is that their only connection to the home is "twisted pair" copper wiring, which is woefully low-capacity. Even using special chips and software to compress the data, copper wires can transmit only the equivalent of 1 million bits of information a second—not enough for digital video. The Baby Bells have estimated that it would cost more than $300 billion to rewire the local phone networks with high-capacity fiber-optic cable.

'INNATE DISTRUST.' One solution would be collaboration between cable TV and local phone companies. Such a union, says Robert L. Barada, vice-president for corporate strategy at Pacific Telesis Group, would combine the two-way capability of the phone system with the broadband capacity of cable. However,

Barada notes, regulatory restrictions on the Bell operating companies rule out such linkups now. Moreover, he warns, the two industries are unlikely to ally, since they're already eyeing each other's basic business. "There is a very deeply felt, innate distrust," he notes.

Another hurdle is compression technology. A Compu-TV won't be practical until video can be compressed by at least seven times the size it now requires. Today's compression still comes up short, but many companies, including Intel and Philips, are working on improving the quality and cutting the cost. E. Jane White, director of educational services for ABC Interactive News, predicts important compression breakthroughs within three years.

So once you have a Compu-TV, what will you do with it? Interact. Forget couch potatoes. Digitization lets you take charge. Trip Hawkins, president of SMSG, a joint venture between computer-game maker Electronic Arts and Time Warner, describes how you could, for example, enjoy an interactive version of *Wild Kingdom.* Interested in lions? Zoom in, and get a video clip of the lion hunting. Maybe you would like to see the jungle from the lion's perspective. A click on the button, and the camera angle changes to give you a lion's view.

Or try shopping. Tap into a fashion channel, narrow your choices, then replace the model on the screen with an image of yourself to see if that new Armani suit really is "you." If it is, use the remote control to order it. The cable system and your Compu-TV will work out the details. Says analyst Lee S. Isgur of Volpe, Welty & Co.: "Interactivity will result in profound changes in our lives. It will be akin to Rip Van Winkle awakening after a long sleep."

SELECTIVE SOFTWARE. Of course, navigating through hundreds of channels of interactive TV could make programming your VCR seem simple. That's where computer and software makers see their entrée into the home—a market where their traditional wares have yet to make a big impact. Apple and Microsoft are both developing software that would aid in sorting through the channels and would come up with just what you want.

For an early glimpse of the power of Compu-TV, check out today's multimedia PCs, which combine text, video, photos, and sound. Multimedia is still the province of computer aficionados—only 3% of PCs are equipped with CD-ROM drives for multimedia software. But new titles are being published daily, and the cost of CD-ROM drives has dropped to

SCROLLED ANY GOOD BOOKS LATELY?

The idea of putting literary works on computers may seem like blasphemy to avid readers. After all, who would trade the sublime experience of a few hours with a perfectly user-friendly paperback for an afternoon with a laptop computer? Isn't it unthinkable to reduce *Bleak House* or *Othello* to a series of electrical impulses flickering on a personal-computer screen?

Perhaps. But a growing number of publishers are throwing tradition to the wind. They are betting that consumers will succumb to electronic books when they see how the technology adds to the printed word a whole new dimension—interaction. By marrying software and text, readers of electronic books are able to call up footnotes, illustrations, music, and whatever else they might want at any spot in their reading.

'WATERSHED.' For some, all those digitized atmospherics might spoil the taut narrative of the latest Le Carré. In nonfiction works, however, electronic books are nothing short of "a watershed in publishing," says Michael Mellin, head of reference works for Random House Inc. Many researchers and students who must deal with massive tomes are eagerly embracing electronic versions that allow them to navigate text quickly.

So electronic publishing looks to be one of the hottest high-tech opportunities around. Consider the sales explosion in CD-ROM disks, which look like music CDs but store huge amounts of data—text, graphics, photos, and sound. About 2 million disks will be sold this year, up from 100,000 in 1988, says the Bureau of Electronic Publishing Inc., a Parsippany (N. J.) distributor of CD-ROM titles. That's equal to worldwide retail sales of $600 million, growing at 80% per year for much of the decade, the bureau predicts.

Leading this new realm of publishing are electronic encyclopedias, which already outsell their printed counterparts in school libraries. The top-selling CD-ROM editions from Grolier Electronic Publishing Inc. and Compton's New-Media, a division of 224-year-old Encyclopaedia Britannica Inc., cost about the same as the shelfload of books they replace. But by typing in keywords, students can instantly browse through articles, illustrations, photos, and even brief animations—showing the functioning of a heart valve, for example. This fall, Microsoft Corp. plans to introduce its own multimedia encyclopedia, based on content licensed from Funk & Wagnalls.

The success of electronic encyclope-

dias has inspired dozens of other types of electronic books. Medical references, atlases, technical manuals, film guides, and children's stories are all ripe for digitization. Says Susan Boeschen, vice-president of Microsoft's Consumer Div.: "Serious reference works and entertaining educational titles will drive the market into the home."

And into classrooms. Electronic foreign-language texts offer interactive drill-and-practice routines. And Mc-Graw-Hill Inc., publisher of BUSINESS WEEK, has prepared a CD-ROM that offers interactive lessons in human anatomy. The technology promises to make history come to life—almost literally.

ABC Interactive News, the network's four-year-old electronic-publishing arm, is supplying publishers of electronic history books with news footage of events, such as men walking on the moon. Video will become "mandatory" in textbooks, predicts E. Jane White, ABC Interactive's director of educational services.

NOVEL USE. It's still not clear who will capitalize most on this new market—the publishers that own the content or the software companies that know how to create snazzy, interactive programs. So far, Sony Electronic Publishing Co. and Britannica's Compton's 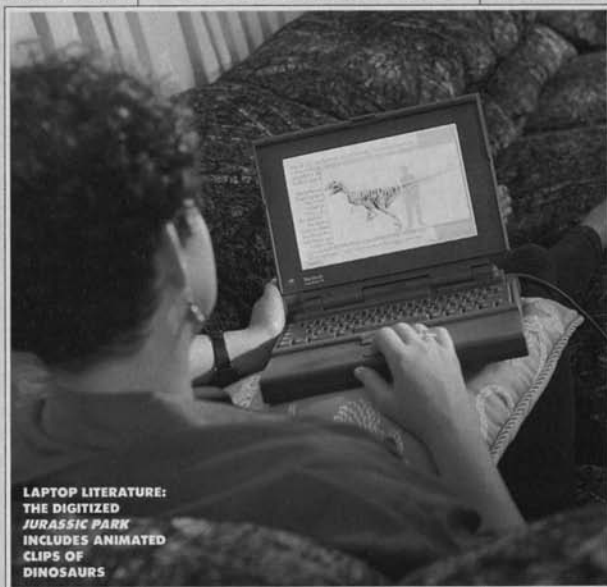NewMedia unit are among the most aggressive. In addition to creating their own titles, they are signing up dozens of smaller publishers as affiliates. By controlling hundreds of titles, they should gain clout in distribution channels.

To some, even the electronic novel isn't farfetched. Random House and Voyager Co., an electronic-book specialist in Santa Monica, Calif., have collaborated on adapting for Apple Computer Inc.'s PowerBook notebook computer more than 20 titles, ranging from classics such as *Moby Dick* and *Crime and Punishment* to *Jurassic Park*, Michael Crichton's 1990 thriller. The plot revolves around dinosaurs brought to life via gene-splicing. Readers can call up scientific data or animated clips of dinosaurs.

That may not be enough to get most readers to opt for a computer screen instead of pages that they can touch and turn. But Voyager President Robert Stein says thousands have so far bought into the concept. "Everybody finds their own reason for it," he says. For some, a stack of diskettes is easier to carry. Others say the bright screen of the PowerBook means you can read in bed with the lights out. And, of course, electronic books save trees. "Ink on paper," Stein says, "isn't the only way anymore."

By Evan I. Schwartz in New York

LAPTOP LITERATURE: THE DIGITIZED *JURASSIC PARK* INCLUDES ANIMATED CLIPS OF DINOSAURS

Sure is quiet in here.

And roomy. And comfortable. And if that isn't impressive enough, consider the new, bigger engine,

about $300, from $700 two years ago.

Hollywood is intrigued by the new technology. There are dozens of projects under way to crank out glitzy multimedia titles for entertainment, education, and the hybrid "edutainment." Says actress-producer Shelley Duvall: "This is the equivalent of the Golden Age of television. And the early bird gets the worm." Duvall, working with a Canadian company, Sanctuary Woods, is producing an interactive kids' game called "It's a Bird's Life." Click on a parrot, and a box appears describing its natural habitat or how it got from the Amazon jungle to Los Angeles. *Star Wars* producer George Lucas is converting the

Young Indiana Jones Chronicles TV series to digital format so he can create multimedia spin-offs such as games and educational programs.

Hollywood's music industry is also in on the act. Teen music stars Kriss Kross and C&C Music Factory have helped Sony develop a CD game that lets you make your own music videos. Songwriter Allee Willis, who is working on interactive CDs, says Hollywood from multimedia from death by boredom. "This needs to have that warmth and feeling," she says. "And I think it's going to come from artists."

The truth is, no one really knows which person, company, or industry will

shape the new digital world. The vision is information anytime, anywhere—the George-and-Jane lifestyle with a Compu-TV in the home, a PDA in the pocket, and an office where computers are as easy to use as phones. But will it really materialize before 2000? Says Dave Nagel, head of Apple's Advanced Technology Group: "Right now, the industry is throwing lots of things against the wall. What will stick isn't clear." The only thing that is clear is that this digital revolution will be televised.

By Kathy Rebello in San Francisco, with Richard Brandt in San Francisco, Peter Coy in New York, Mark Lewyn in Washington, and bureau reports

SONY'S RECIPE: ONE PART HARDWARE, ONE PART SOFTWARE

In Japan, *champon* is a popular stew brimming with makings that eventually come together in robust harmony. Right now, Sony Corp. boasts a fuller cupboard of ingredients than any other company trying to cook up a digital stew.

No one can deny Sony's strengths in compact disks, integrated circuits, and audio and video hardware. It also excels in making electronics that are portable and user-friendly. But Sony is trying for another edge in the digital future—by selling the latest gadgets as well as the software they use. The digital future is simply "computing plus entertainment," says Michael P. Schulhof, vice-chairman of Sony Corp. of America. So the key software is movies and music, which is one reason why Sony bought Columbia Pictures Inc. (page 76) and CBS Records Inc. "I spent $8 billion of Sony's money developing this strategy," says Shulhof. The result? "We're the best-positioned company in the world." Indeed, only rival Matsushita Electric Industrial Co., owner of MCA Inc., now comes close to matching Sony's mix of digital hardware and entertainment software.

It all comes together in a series of interactive gadgets equipped with optical disks storing images with full color, motion, and sound. The machines will

do much more. "Our new CD medium will be used for everything: entertainment, computing, data storage, and telecommunications," says Nobuyuki Idei, a Sony board member.

Idei figures the technology will evolve over 10 years. In the meantime, Sony is focusing on what Ron Sommer, president of Sony America, calls the "three P's" of the digital revolution:

A DATA DISCMAN SERVES AS THE REPAIR MANUAL FOR NORTHERN TELECOM

personal entertainment, personal information, and personal communications. The first gadget is Data Discman, a hand-held electronic book player. About 200,000 have been sold in two years.

Data Discman's forte isn't flipping electronic pages in the latest potboiler but helping dig information out of reference tomes. Now, when a technician from Northern Telecom Ltd. makes a

call, a Data Discman goes along, carrying the equivalent of 18,000 pages of manuals on disk. By using keywords, technicians instantly flip to the "page" describing the repair procedure.

OUTTAKES. More digital gadgets are due out this fall, including the "Bookman," a more powerful electronic book player. Also coming soon are the first digital spin-offs from Sony's entertainment group: CD-ROM-based video games. This is where owning a movie studio is beginning to give Sony an edge, says Olaf Olafsson, president of Sony Electronic Publishing Co. While producing movies, he says, Sony can shoot extra footage for use in interactive video games. The technique is being tried with *Dracula*, a fall film release, and with Columbia Television's production of *Journey to the Center of the Earth*.

But entertainment alone does not a digital future make. Despite numerous attempts, Sony has never succeeded in computers or telecommunications. "Of course, we have to learn a lot about computers and processors," says Idei. To help in telecommunications, Olafsson says Sony would like to work out a partnership with a phone company. Even a master chef needs help in cooking up a digital stew.

By Robert Neff in Tokyo, with Evan I. Schwartz in New York

SPECIAL REPORT

THE GANG PLAYS CATCH-UP WITH GROUPWARE

By Stephen A. Caswell, Contributing Editor
Electronic Mail & Micro Systems

We've been looking quite closely at groupware lately, and have
some observations that we think our readers will find quite
interesting.

Background: Before the observations, we should first start with
the basics of groupware. Much like electronic mail, the
definition of groupware is in the eye of the beholder. In the
early 1980s, for example, most e-mail practitioners adopted a
broad definition that made e-mail a genus and its constituent
technologies the species. Using this definition, technologies
like fax, computer mailbox systems, telex, etc. were all examples
of e-mail.

The same thing is now developing for groupware, especially among
companies that really don't have any groupware products. A good
exmaple comes from a recent interview with Microsoft chairman
Bill Gates, in Network World, on groupware. Gates said that
groupware "in its most generalized use encompasses any software
product that provides for multiuser interaction."

This is much like how the early e-mailers defined e-mail. In
fact, e-mail is a key species of groupware if one uses this
definition.

How The Market Will Define Groupware: The early e-mailers and
Bill Gates are quite correct to use broad definitions of
groupware. EMMS, in fact, defined groupware a while back using
the same type of broad definition. While it may be
intellectually correct to use a broad definition of groupware,
the reality of how the market will define groupware will probably
be much different.

While the early e-mailers may have been right about groupware
intellectually, the market never wants fine intellectual
distinctions; it wants concrete, easy-to-understand differences.
E-mail became the definition for computer mailbox systems, which
the market considered very distinct from fax machines and telex,
etc.

On numerous occassions, for example, people would comment to us
that fax was beating the pants off e-mail as if there were really
a competition. In reality, fax and "e-mail" are technologies,
not live people competing. Both have developed their niches and
are obviously headed for integration.

In groupware, something very similar will develop. The market is
going to ignore the intellectual approach and focus on a set of

concrete products that it defines as groupware. These products
will most likely include e-mail as a key component, but go one or
more steps beyond to include shared database access and discrete
application development.

The Haves Can Define It; The Wanna-Haves Can't: Right now, Bill
Gates defines groupware broadly because his company isn't yet
offering a distinct groupware product, such as Lotus Notes. In
fact, Gates maintains that in five years groupware will be a
meaningless term that will never develop into a separate
category.

Instead, Gates views the world as developing via improved
interconnections from the separate products that exist today.
The architecture will have APIs at its heart, so that various
programs can exchange information in a meaningful fashion. (APIs
are Applications Programming Interfaces used by a programmer to
link the groupware to applications programs.)

While we don't want to quibble with Gastes, particularly since
there's a lot of potential truth in what he says, we want to
point out that he would likely be saying something VERY different
if he had developed Notes instead of Lotus. Instead of saying
that groupware really does not exist, except in a general sense,
he'd be saying that groupware is a new category beyond basic e-
mail and that he's the leader of the pack.

In short, definitions of groupware will almost certainly depend
upon who has real products versus who is madly trying to develop
such products. Intriguingly, the current list of vendors with
real groupware products is very short, and only one of these
vendors is a market leader.

Mitch Kapor's Groupware Vision: We all know that Kapor, founder
of Lotus Development, had the vision to develop the wildly
successful spreadsheet program 1-2-3. Actually, he parlayed his
experience developing Visicalc add-on modules to the obvious
conclusion that an integrated product would work on the 16-bit
personal computer that had just hit the market from IBM.

What's not well known is that he also had the vision to invest in
groupware years ago. Back in the early 1980s, just after 1-2-3
was taking off, a very sharp software developer, Ray Ozzie, who
had worked on the PLATO education system at the University of
Illinois, struck a deal with Kapor. Ozzie agreed to expand 1-2-3
into a product called Symphony if Kapor agreed to fund him in a
start-up venture to develop a product that would be an
interconnected workgroup environment.

Kapor agreed, and in 1984, after Symphony was finished (at least
Version 1), Ozzie launched Iris Associates with funding and a
marketing agreement from Lotus. Iris Associates developed Notes,
which Kapor and subsequent Lotus CEO Jim Manzi had the vision to
keep funding.

<u>The Big Lead</u>: The bottom line is that while companies like
Micorsoft, Software Associates, Borland, Oracle, and the other
software houses of the 1980s were barely discovering e-mail,
Lotus was funding a product whose concept went well beyond a
basic e-mail system. Today, while those companies talk in
generalities about groupware, Lotus points its finger to
customers and says, "This is it."

The move is starting to look quite brilliant from a long-term
viewpoint, although Lotus has invested a huge sum of money to
make Notes into a real product. Nanzi estimates that Lotus has
put $80 to $90 million into Notes, which has so far generated
about 150,000 users (representing perhaps $50 million at the
retail level and $30 million wholesale).

The brilliance is that Notes is an extremely sophisticated
product that takes a huge investment in both software and market
development. It is, however, a discrete product that goes well
beyond basic e-mail product, which puts Lotus way ahead in the
groupware race.

If Bill Gates is right, of course, Lotus will have invested in
Notes largely for nothing, Notes will become the equivalent of
the integrated applications products that never quite exploded
into the market because they didn't do enough in each specific
application category. If Gates is wrong, however, Notes will
become the next 1-2-3 style success story and will grab an
enormous share of the software market in the 1990s.

<u>User Programming Makes Notes Unique</u>: While lots of people say
groupware is hard to describe, that isn't really true. Notes is
quite easy to describe. It combines e-mail, conferencing and
data base access into a shared communications product. In
particular, Notes has an ultra-high-level programming language
that allows customized data sharing applications to develop.

The language is the equivalent of the macro languages that added
immensely to the popularity of spreadsheets. Notes'
programmability is a key factor in its potential success because
the language is easy enough for non-programmers to access.
Simple applications that might have taken a couple of weeks using
a language like C can be developed in one or two days using
Notes. Programmers need not apply.

This customizability adds strongly to Notes' uniqueness, and
opens the door to hundreds of functional applications. Already,
Lotus is releasing a number of these applications to users,
complete with source code so they can be customized to meet the
user's specific needs.

<u>Summary</u>: Lotus has developed a huge lead in what may be the
critical software category of the 1990s. Again, while Bill Gates
may be very right that a Notes-type product isn't required, just
a cursory look at Notes shows why he may be very wrong.

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Eric Arnum, editor of EMMS since 1985, is the author of the book "Delivering cc:Mail." He helped to launch the data networking section of Communications Week and has written articles about the e-mail industry for numerous trade magazines; he also wrote the EEMA Briefing. Arnum is a frequent speaker at seminars and conferences, and is a participant in panel discussions on electronic mail in the U.S. and abroad.

Arnum's experience benefits you in every page if EMMS. Anyone could tell you about July's National Office Machine Dealers Association meeting ... but only EMMS gives you the reason for "fear etched in exhibitors' faces," or tells you why Xerox officials seemed "all charged up."

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