

02-Aug-1991

BILL KEATING

Roger,

I had a conversation with Win regarding the attached memo from Bill Keating. Bill is on vacation until Monday, August 5. Win would like for you to call Bill to tell him that he has misinterpreted the word "presentation."

No presentations were given to The Research Board when they visited. The presenter of the software portion of The Research Board interview when they visited was David Stone, and Bill should talk with David directly if he has questions about that interview.

If he is talking about specific customer visit presentations, then he should know that The Research Board only gave Win general feedback on customer visits--nothing specific. They only had observations that they shared with him--not a specific visit.

I'm certain a memo from you would also be just fine since I know you will not be in the office on Monday. Attached is the memo from Bill Keating that was forwarded to you.

Donna

Donna —

Calling didn't work so I sent an AI to Bill Keating answering his question — you will see a c.c. in Win's account.

Thanks
Roger

Printed by Win Hindle

I N T E R O F F I C E M E M O R A N D U M

Doc. No: 023020
Date: 22-Jul-1991 02:44pm EDT
From: VMSMail User KEATING
KEATING@PIPE@MRGATE
Dept:
Tel No:

TO: HINDLE@CORMTS@MRGATE

CC: KEATING@PIPE@MRGATE

CC: SEGAL@PIPE@MRGATE

Subject: Presentation made to research board

We would appreciate knowing who did the presentation you referred to.
I will then get a copy. Thanks, Win.

/Bill Keating

From: BANANA::KLEIN 18-JUL-1991 09:09:48.88
To: PIPE::KEATING
CC:
Subj: RE: A Perception. FYI. /Bill

What presentation was made to the research board? Sounds like we should
have a copy of at least the software portion (if we don't already???)

Thanks,
L

THE RESEARCH BOARD

INCORPORATED

220 EAST 61st STREET · NEW YORK, N.Y. 10021 · (212) 486-9240

RECEIVED

AUG 8 1991

BILL JOHNSON

August 6, 1991

Dear B.J.:

Ernie and I are delighted that you'll be able to address the Associate Board meeting in Chicago on September 12th. Our topic will be "Revitalization of the IT Organization," but we thought this a critical moment for you to discuss the revitalization of Digital Equipment as the company resolves long-standing questions concerning hardware, software, sales, organization and management metrics. We were impressed and relieved by our visit, as you'll have gathered from the electronic mail message we sent to all the RB members in July. And we know that these IT Executives will be as well.

The Associate Board Principals consist of twenty-five senior executives responsible for information technologies in a cross-section of large companies including Citibank, Hartford Insurance, Corning, Levi Strauss, Federal Express and Merrill Lynch. The format of their meetings you may remember from your visit three years ago: we invite our guest to make prepared remarks for perhaps forty minutes, leaving an equal amount of time for questions and an informal exchange. Everyone will have seen the electronic mail message on Digital. So you can use that as a backdrop. Or ignore it, and proceed however you please to discuss the company's strategy.

The meeting in Chicago will be held at the Union League Club (65 West Jackson Boulevard), where we've also reserved accommodations for you the prior evening. Dinner for the group is at the Metropolitan Club (233 South Wacker Drive) just a few blocks away; we'd love to have you join all of us. And we have scheduled your session for 1:30 p.m. to 3:00 p.m. on Thursday.

Please call me or Sarah Piper, our Vice President for Client Services, if you have any questions. Meanwhile, everyone looks forward to your presentation at this turning point; of course, we hope the discussion will be worthwhile for you as well.

Sincerely,

Naomi

Naomi O. Seligman

Mr. William R. Johnson, Jr.
Vice President, Corporate
Marketing Planning
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

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I N T E R O F F I C E M E M O R A N D U M

Date: 14-Aug-1991 05:42pm EST
From: VMSMail User frank
FRANK@UNIX@ZPOVC@MRGATE
Dept:
Tel No:

TO: See Below

Subject: Trip Report from Interex - The HP Users Conference

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+-----+

I N T E R O F F I C E M E M O

TO: Distribution DATE: 14 August 1991
 FROM: Frank Kettenstock
 DEPT: USS Software Competitive Analysis
 DTN: 264-3645
 LOC: TTB1-5/G06
 NET: unix::frank

SUBJECT: Trip Report from Interex - The HP Users Conference

Interex, which is Hewlett Packard's Users Group, held their annual conference from August 5-8, 1991 in San Diego. I attended this conference and the following is a review of what happened. It covers the keynote speakers, HP sessions and seminars, and the HP booth from the Exhibit Show.

Highlights:

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I thought the Conference was a good show of HP's products. I was very impressed with the coherence and clarity of their message. Their overall strategy was clearly stated and was reflected in most presentations. Each group within HP was telling the same overall message, even their overhead slides in their presentations looked very similar in most cases. HP definitely has all the wood behind one arrowhead. In the main product presentations, customer benefits were always stressed. They started by telling you what benefits their products gave you and how they

can help your business. Some went into technical details later. In most cases, both the benefits and technical parts were very easy to follow and understand, probably could be given by most of their sales reps, and could be understood by most non-technical users.

Another interesting note from HP is that they will be VERY aggressive in their promotions/selling techniques in product comparison versus the competition. It seems that HP will continue to pursue the aggressive comparative advertising like their current ad comparing their Series 700 workstation against a Sun SPARCstation with the caption reading - "What happened to the old SPARC?"

HP's top priority is to continue to provide the "hottest" hardware. No big surprise here.

HP has set up an Ease of Use task force and they want to incorporate easy of use into every part of their business.

HP will release an OSF/1 based operating system on the Series 700 workstation in the Jan/Feb 1992 time frame. HP-UX binary compatibility expected in 1993. HP-UX will still be the strategic operating systems until 1993.

HP will soon announce their Open Software Environment program. Through this program, HP consultants will help customers build Open Systems by helping them define their guidelines.

HP is looking to strenghten their low end desktop position by shipping a low end workstation, setting up a Desktop Productivity Group to look at getting PC productivity tools over to HP-UX, and by offering a NewWave developers kit on the Series 700 workstations this Fall.

Notes from the Conference

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Keynote Speaker

Lewis Platt, Executive VP and head of the Computer Systems Organization

Platt first talked about the successful decisions that HP has made in the past (1980s)

- 1) Investing in RISC Technology
 - only vendor to provide a **scalable RISC** line for technical and commercial customers

- 2) **Leadership in Open Systems**
 - based on worldwide standards
 - HP has the best multi-vendor networking in the industry

3) Ease of Use

- NewWave
- Helped develop OSF/Motif
- HP-VUE
- HP Softbench
- HP Open View

4) Distributed Architectures

- Acquired Apollo
 - * that decision is looking better and better each day
 - * discovered a wealth of technologies like NCS

Platt then talked about HP's agenda for the future - (1990's)

1) Continue to provide the "hottest" hardware

- fundamental basis for competition
- more important that software
- HP has the best RISC and CMOS technology

2) Continue to emphasize client/server

- pre-configured client/server systems
- more efficient use of systems
- HP has the best client/server products

3) Continue development of OpenView network management

- integrates tools to do different things
- allows integration of third party tools
- distributed management
- open design for open systems / multi-vendor
 - * runs on Sun
 - * IBM licensed it

4) Preserve leadership in Open Systems

- support the creation of standards
- base HP innovations on top of standards
- where standards don't exist, make HP innovations open to all and drive them into standards
- work with others in the industry

5) Will address "Ease of Use" in a broad and systematic manner

- Ease of Use is more than just a GUI
- Will be a core competency
- HP set up a Ease of Use task force with a "OILUS" focus
 - O - Ordering HP products easily
 - I - Installing them easily
 - L - Learning them quickly
 - U - Using them easily
 - S - Support that is readily available
- HP wants to be easy to do business with
- HP wants industry-leading customer satisfaction

6) Installed base satisfaction

- not taken for granted
- will expand the life of HP's products

- build on them with exciting innovations

He ended by stating that in the year 2000, you will conclude that HP has made the right choices and that you have made the right choice in having HP as your computing partner.

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Protecting Your Investments Through HP Open Systems

Bill Murphy, Director of Marketing, Computer Systems

HP so far this year

- HP RISC Workstation established clear **Price/Performance**
- HP Servers grew by 100%
- more aggressive with advertisements
 - * taking competitors head-on
 - * explaining HP advantages; proud of their accomplishments
 - * "What happened to the old SPARC" an example of how HP will promote in the future
- HP moved from 38th to 29th on the Fortune 500 list
 - * passed DEC in total revenues
 - * "... putting them (DEC) in their proper position, in our rear view mirror."
- Transition to client/server based on open systems

Investments Protection record quite good so far

- HP/Apollo 9000/400 runs both Domain/OS and HP-UX
- maintain object code and peripheral capability through MPE to MPE V. Offered 3000 upgrades.
- Toughest test is when we changed architectures (to PA-RISC)
 - * "DEC VAX is 13 years old and getting a little long in the tooth."
 - * HP saw the need for RISC earlier
 - * HP continued investment protection through architecture change - MPE (on CISC) to MPE XL (on RISC) has compatibility across architectures
 - * could have made it incompatible
 - * "I'm interested to see how DEC will do it with their RISC."

Looking Ahead

- offering upgrades and compatibility
- RISC was it in the 80s; Open System will be it in the 90s
- interoperability
 - * machines really working together
- application portability
- vendor independence
 - * other vendors try to lock you in and change you a lot

Open Systems

- are based on standards
- others think standards stifle innovation; HP will promote, not

discourage innovation on standards

- * Murphy then made an analogy of computer standards with that of the standard phone jack. There is a standard interface but there are many different innovative products that use the phone jack (different type of phones, modems, FAXs, etc.)
- HP will work with competitors to set standards
 - * like with Sun on the OMG
 - * "Even though we worked with Sun with our OMG submission, we still consider Sun to be the dark side of the force."
- Open Systems are more than UNIX, UNIX is only part of it

Clear Direction to OSF/1

- "HP will be the first to provide a stable, high quality OSF/1 operating system."

Summary

- we believe we are in excellent shape
- HP will continue to protect your investment

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State of the Product Line

Rich Sevcik, General Systems Manager, Commercial Systems Division

Sevcik began by praising the RISC technology developed by HP

- "We are causing quite a stir (in the industry)"
- "HP belongs at the head of the computer pack"
- HP has the only RISC family of systems for both the technical and the commercial market
- Only HP has RISC systems from desktop to mainframe with object code compatibility
- "The Powershift is on! The Powershift is to HP!"

For the datacenter, HP has

- 99.95% availability, which equals 4 hours downtime per year
- disk mirroring
- automated processor backup (SwitchOver/UX)
- 20% performance enhancement with each new HP-UX OS release
- high speed unattended backup and restore
- new 3 way MP on the 980/300, which is board upgradable
- 4 way MP coming next year
- new high end printer; 5000
 - * 100 pages per minute
 - * HP LaserJet II compatibility
- new mainframe class disk drives
 - * 5 GB; over 300 GB maximum
 - * some error/fault detection

Regional Distributed Computing

- Series 800s are object code compatible with Series 700s
- HP-PA RISC technology will be moved into the HP 1000
 - * PA RISC will be in every product line

HP 9000 Series 800

- #1 market share in UNIX multi-user
- 1.5 to 2 times the price/performance of the RS/6000
 - * "maybe the RS/6000 isn't so hot"
- 1 to 1000 users
- object code compatible, same PA RISC architecture

Workstations

- Series 700 - industry performance and price/performance leader
- object code compatible with Series 800
- OSF/1 support in the near future
- "We have the hottest boxes in the industry"

SNA Support

- "We don't encourage SNA, but if your stuck with it, we will connect to it"

OpenView

- integrate management of WANs and LANs
- integrate with system management
- troubleshooting, monitoring, and control
- remote or local management
- IBM licensed it
- Open System network and system management
 - * established as the market leader

In conclusion, Sevcik remarked, "This is an exciting time to be in the HP camp. You should be proud. You made the right choice when you purchased HP. And HP is proud to be of service to you."

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HP Booth

I asked a booth staff member showing the 700 Series workstations about OSF/1 and HP-UX. He responded by saying I asked the right person the right question since he was a systems engineer on the task force to determine migration/transition issues. In summary he said that:

- Domain OS - will be supported by HP for at least 10 more years
 - further development will likely be done by third parties. HP is now talking to third parties to take Domain development over
 - Migration tools to HP-UX are available

OSF/1 and HP-UX

- OSF/1 first release in the Jan/Feb timeframe
- HP-UX binary compatibility mode on OSF/1 in 1993 - will be able to run HP-UX and OSF/1 binaries at the same time. Uses indirection for HP-UX libraries and it should not be much of a performance hit
- HP-UX will be the strategic OS until the 1993 timeframe when the binary compatibility and other

1993

HP-UX features get moved over to OSF/1 and HP-UX and OSF/1 will be merged

- Both source and binary migration tools will be supplied to move applications from HP-UX to OSF/1

This was in-line with other comments about OSF/1 made by others and talked about later in this report. I do feel that this plan is engraved in concrete and will continually be evaluated based on the success of OSF/1, market demand, and HP's competitive advantages.

I asked a NewWave booth staff member about NewWave on UNIX and he said that a developers kit for NewWave client support on the 700 Series workstations will be available this Fall. OS/2 support is due in mid 1992.

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HP Strategy: OSF

Rose O'Donnell - HP OS guru and former project lead of OSF/1

- OSF/1 importance - commonalty between different vendors products - she specifically pointed out HP, DEC, and IBM - and that this commonalty will be a huge benefit to users
- investment protection
 - wide choice of standards
 - future ability to combine/interchange software
 - universal management tools
 - universal port for ISVs with ANDF

Technical Market - reliability features aren't as important as the commercial market and is not cost competitive

Commercial Market - users are willing to pay more money for reliability/high availability due to higher costs of downtime

She then made an analogy between the commercial and technical markets to that of transportation. Technical workstations are like cars, they carry few people at one time and most accidents are quick, easy to fix fender benders. Most accidents don't cause much damage. Commercial servers are like airplanes, they carry many people at one time and any accident usually causes much damage. OSF/1 is like a car, HP-UX is like an airplane, and MPE is like the SST or a rocketship. OSF/1 is currently best suited for the technical, HP-UX for the commercial.

I then asked her if that is how HP plans to position their two OSs. She replies not really, HP-UX is good for the technical market as well and that the decision of which OS to sell will depend on the customer. In a very roundabout way, she said that HP-UX was the strategic one and OSF/1 in the short term (2-3 years???) will be for people who want OSF/1 for it's technology (developer's platform???). Later, OSF/1 will have HP-UX binary compatibility and other HP-UX features like OLTP, high availability, reliability, and ease of use. She said that HP plans to work in concert



with OSF to get these features on OSF/1.

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Workstation Strategy

Mark Tolliver, Marketing Manager, Workstation Group

Today's PA-RISC Architecture

- leading price/performance on the desktop
- highest performing desktop workstation
- unparalleled expandability and compatibility

HP's workstation systems are:

ALL RISC + ALL UNIX = ALL COMPATIBLE

(compatible with the 800 Series servers too)

Series 700 was HP's first attack on the workstation market. Internal memory will double on the 700s later this year (approx. 400 Mb)

PA-RISC Workstation Directions

GOAL: To be the workstation performance leader at every price point!

Increases in performance come from efficiency and speed:

Performance = efficiency + speed

HP is working on improving both these areas

Speed (Clock Rate)

- increase VLSI density - 1 micron today (IBM is .5 micron); HP can improve here with relative ease
- advanced multi-chip module packaging
- faster memory SRAMS
- advanced CMOS/BICMOS technology (working with Hitachi here)

Efficiency (Hardware)

- higher VLSI integration
 - * Parallel functional units
 - * Superscalar
- higher pin count packaging
- advanced, more efficient circuit design

Efficiency (Software)

- Architecture
 - * medium grained parallelism
 - * out-of-order instruction execution
- Compiler Enhancements
 - * improved instruction scheduling
 - * support for superscalar and multi-processing

Multi-Processing

- optimizing compilers
- 2 -> 4 way MP
- I asked him about the time frame of MP and he said not in the

short term and he couldn't be more specific

System Performance

- faster I/O
 - * SCSI II
- faster networking I/O: FDDI
 - * fiber-based first
 - * copper twisted pair later

Disk Array Technology

- capacity
 - * up to 220 Gb in the short term
- performance
 - * disk striping
 - o up to 9 Mb per sec
 - o up to 120 I/Os per sec
- reliability
- availability

Graphics

A system level graphics approach (no separate graphics accelerators????) supported within the architecture, integrated into the CPU with high memory bandwidth.

Extended to provide new functionality

- low cost surface rendering
- 24 color planes
- accelerated surface rendering
 - * Z buffer anti-aliasing

Multimedia

- shared windows (or Shared X) - an X window appearing on 2 workstation simultaneously
- audio/video
- compound documents
- FAX
- collaborative tools

Lower Cost Implementations

- scalable
 - * cache size
 - * processor speed
- single board system
- single chip PA-RISC
 - * CPU only
 - * CPU plus system functions
- Alliances
 - * low cost manufacturing techniques (Hitachi, Samsung)
 - * vertical integration

Anticipated Future Performance

	1991	1992	1993	1994
MIPS	57-76	50-110	35-220	50-400
SPECS	55-72	45-100	35-200	40-400

Future Products (in the next 12 months)

Greater than 40 Specs
Greater than 500k vectors per sec
small footprint
Less than \$10,000

Approx. 100 SPEC on desktop
Greater than 1.5 M vectors per sec
upgrades to existing 700 Series products

Mid 1990s
500 SPEC processor
Greater than 1 Billion instructions per sec
4 GB disk array on a card

PC Applications

- moving high visibility, market leader PC applications to HP-UX
- SoftPC at high speeds (approx. 33 MHz 386 system)
- next version of SoftPC (around September)
 - * Windows 3.0 support
 - * NewWave
 - * 3.5 floppy drive support
 - * LaserJet card for printing

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HP 9000 Series 800 UNIX Strategy Update

Bernard Guidon, General Manager, General Systems Division

HP is the market leader in commercial UNIX. HP commercial UNIX grew 62% in 1990 with the Series 800. This growth resulted in more commercial UNIX investment by HP (more than any other company), and more commercial applications running on HP-UX.

Goals:

- Open Systems Leadership
 - * based on standards for portability and interoperability
 - * HP is the leader in driving standards
- Broadest Systems Offering
 - * scalable servers with workstation, PC, and X-Terminal clients
- Rich Commercial Environment
 - * optimized performance
 - * OLTP
 - * Integrated CASE (Softbench)
 - * Network and System Management (OpenView)
 - * NewWave
 - o Information Integration
 - o Office Productivity
- Superior Integrated Solutions
 - * Industry-focused applications - working hard to be a solution provider, not just a system provider

- Premier Customer Service
 - * worldwide, world class support (currently #1 ranked)
- Standards
 - * Highest degree of application portability
 - * HP technologies drive/evolve into standards
- Multi-Vendor Connectivity
 - * via defacto standards
 - * highest degree of interoperability
 - * investment protection
- Top UNIX-based systems manufacturer
 - * HP is the safe choice

Leading RISC technology with PA-RISC

- HP was one of the first companies to recognized RISC
- HP has the most RISC experience
- can move applications from workstation clients to deskside servers and/or to data center servers
 - * same architecture
 - * binary compatibility
- flexibility to evolve your applications or strategy, can centralize or decentralize. No one else can do this like HP can

Computing Environment

- High Availability / Data Integrity
 - * powerfail autostart
 - * disk mirroring
 - * automatic processor recovery (SwitchOver/UX)
 - * fault tolerance
 - o Sequoia fault tolerance systems running Topix
 - o Topix applications can be source compatible with HP-UX with HP compilers in Topix
- Commercial Processing Design
 - * superior batch processing
 - * OLTP tuning
 - * transaction monitoring
 - * 3 GLs and 4 GLs
 - * range of RDBMS
 - * database tuning (work closely with DB companies; HP best selling platform for Informix, Ingress, Oracle, Sybase)
 - * complete CASE tools
- Information Integration
 - * information distribution
 - * resource sharing
 - * information access
 - * image management
 - * NewWave environment
 - * networked PC management
- Enhanced System/Network Management
 - * performance monitoring and forecasting tools
 - * output spooling
 - * C2 level security
 - * network backup

- * instant ignition
- * simplified user interfaces
- * ease of administration (SAM)

Strong Value-Added Business Program

- #1 Platform - Wide Availability
 - * over 3,000 commercial UNIX applications on HP-UX (this sounds to high but he insisted this is true)
 - * applications growing at 60/month
 - * wide industry coverage
- Robust Software Foundation - Enhanced Usability
 - * CASE
 - * system management
 - * networking
 - * client / server
- Mainframe Solutions - Industrial Strength Solutions
 - * Computer Associates applications
 - o system and DB management, business applications to HP-UX
 - * Information Builders
 - * Software AG
 - * CGI, Softlab
- Close Work with RDBMS suppliers
 - * first phase port on HP-UX
 - * optimization teams work with DB suppliers
 - * co-development with DB suppliers
 - * best time to market, high performance

The Open Software Environment (OSE)

Raj Bhargava, Worldwide Program Manager for OSE

OSE is a new program that will be introduced by HP in the US in the Fall of 1991. It has been rolled out in other parts of the world. In a nutshell, OSE attempts to solve the problem that Open Systems aren't bought, they built. Well, HP is going to help their users build Open Systems. HP will act as consultants and bring in not only computing expertise, but expertise in the user's industry. The following are excerpts from Raj's presentation.

Why Open Systems

- Lower Cost
- Flexibility
- Quicker access to new technology
- Solutions Availability
 - * quantity
 - * time to market
- Vendor Independence

Roadblocks to Open Systems

- Leveraging current investment
- Choosing the right products and standards (lots of choices)

- Software Integration (lots of different suppliers so they aren't always integrated)
- Avoiding software lock-ins
- Incorporating new technologies

Two Approaches to clear roadblocks

- give you an architecture and a set of products
- you define the software architecture and then buy products that fit into it, based on your end business goal

- HP
Open Software Approach
- consultative
 - customized
 - modular
 - vendor independence

- The "Other" Guys
A Prescription Software Approach
- prescriptive
 - one solution fits all
 - product list approach
 - vendor lock-in

OSE Is...

an open software approach for building open systems solutions... today

HP will not start with a blank paper, we will come with industry expertise

Not just hardware independence, but software independence as well

OSE delivers

- customer specific application architecture
- guidelines for selecting products and standards
- guidelines for incorporating new technologies
- a roadmap to Open Systems
 - * fast start since we will help you and we have experience building Open Systems
 - * customer optimized
 - * investment protection



OSE is delivered through HP consultants, who have experience delivering Open Systems

- recommend both ISV and HP products
- help select the right standards for you; or help you decide what to do if no standards exist in an area
- help design guidelines for old architectures, present architectures, and what to do to be ready for future technologies
- ensure investment protection
- offer a complete framework

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Improving HP-UX for OLTP

Roland Luk, General Systems Division

OLTP Market Requirements

- Performance
- High Availability

- Scalability
- Distributability
- Data Integrity
- Recovery
- Security
- Ease of Use in network, systems, and user administration
- CASE tools for OLTP applications
- Connectivity - LANs, WANs, SNA, and PCs

OLTP Weaknesses of UNIX

- reliability
- file system
- data integrity
- process management
- memory management

HP Performance and Price/Performance

- HP-UX and Database Tuning
 - * faster IPC mechanism which optimizes the number of context switches
 - * asynchronous I/O to disk
 - * raw I/O disk feature - can create your own file system
 - * HP has close ties with RDBMS vendors to optimize even further in the future with things like disk striping

HP High Availability

- Sequoia fault tolerant systems
- HP's standard systems and disk drives achieve 99% reliability
- power-fail recovery and battery backup
- disk mirroring
- processor fail-over (SwitchOver/UX)
- hardened file systems - allows a file system to maintain higher reliability such that the reboot time involved in file system checking is greatly reduced

HP's Scalability

- broad family of PA-RISC systems
- powerful processors with high-end performance

Distributability

- key technologies for distributing computing are appearing on UNIX (OSF/DCE???)

Distributed Transaction Processing Monitor

- HP will use Transarc's OLTP Monitor
 - * based on the OSF/DCE
 - * compliant with X/Open's distributed transaction model and the XA interface
 - * modular design; portable
 - * key endorsements for other major OLTP players
 - * HP has OEMed Transarc's technology and will be integrating it with HP-UX by the first half of 1992

Productivity

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HP-UX Technical Roundtable

The HP-UX Gurus

Users complained about HP's System Administration Manager (SAM) in version 7.0 that is worked very poorly, usually returning meaningless error codes. HP admitted that SAM 7.0 had problems but that 8.0 is much improved. SAM 8.0 also contains a logging mechanism to see what SAM has done when performing tasks but that the format of this log will change in the next release so don't write programs to parse through and analyze the log.

The paging and swapping memory management is new in HP-UX V8.0.

It is not planned that the Series 700 workstations will get the commercial added value features available on the Series 800 servers like powerfail and SwitchOver/UX. This upset some users at the roundtable but the users were invited to present their wish-lists to HP for these features.

The Series 700 workstations come with 2 or 8 user licenses. HP counts users by the physical connections to the CPU as logins.

HP will have a Network License Server in the future which bases license fees upon average usage.

Realtime performance in HP-UX 7.0 was such that 99% of the time the response speed would be under 10 milliseconds. In HP-UX 8.0, some pre-emption points were taken out so the response time isn't as good. HP will be tracking the POSIX standard but said they might not implement all of it, and they are not sure which parts they may not implement.

I asked about OSF/1 positioning against HP-UX. They said that OSF/1 would be available on the Series 700 in the first part of 1992, mainly as a development platform for applications. Long term plans are to merge HP-UX and OSF/1 like they did in HP-UX 6.0 when they merged System V UNIX and BSD UNIX.

Someone asked about future functionality is HP-UX 9.0. They really didn't want to answer this one and gave only some vague responses:

- integrate more system management products together and with network management (products like Omniback which isn't integrated today)
- improve high end system performance
- I/O and filesystem tuning
- roll in some PC technologies
- bring in OSF technologies as they become available
 - * parts of ANDF maybe
 - * DME is beyond 9.0 timeframe
- some multi-media features
- networking

- * FDDI
- XPG branding for COBOL
- C++ from AT&T

HP 9000 Networking Update

Glen Matsuda, Product Line Manager, Information Networks Division

Develop Products in Three Areas

- TCP/IP
- OSI
- SNA - can't compete in the commercial market without it

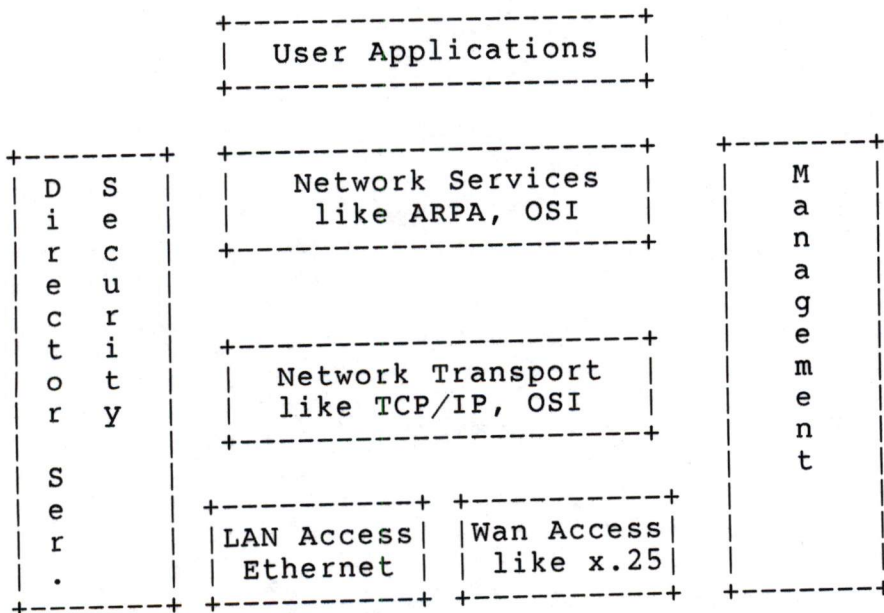
Components of Integrated Network Solutions

- multi-vendor connectivity
 - network applications
 - management
 - support
- Ease of Use

Goal:

Come up with a common API so things will be portable
(this makes sense with their OMG submission with Sun)

Open Network Components



TCP/IP Leadership

- 802.3, X.25
- Standard Services
 - * virtual terminal
 - * file transfer
 - * remote program execution

- * interprocess communication
- Transparent file access (NFS)
- Distributed Computing

New Products

- FDDI for the 700 on the EISA bus November 1991
- FDDI for the 800 on the NIO bus April 1992
- Token Ring on TCP/IP for the 700 December 1991
- Token Ring on TCP/IP for the 800 Q1 1992
- X.500 Fall 1991
- IBM Connectivity in 1992
 - * HP's UNIX growth in commercial market is generating critical needs for advanced SNA capabilities
 - * Targeting IBM in the commercial market
 - * SNA over Token Ring
 - * QLLC (X.25)
 - * 3270 Enhancements
 - o extended HLLAPI
 - o color
 - o multiple sessions
 - * Motif
 - * LUA (LU0)
 - * NetView API
- Series 800 in 1992
 - * NFS 4.0/4.1 Q4 1992
 - * streams Q4 1992
 - * CMIS Q4 1992

=====

Desktop Productivity Solutions for Workstations

Chris Woodward, VAB Manager, Desktop Productivity Group

Workstations are now price competitive with PCs. As the price of workstation changed, the use of workstations have changed with it. With the new GUIs making UNIX workstations easier to use, along with the porting of PC applications, UNIX workstations are now being used to run productivity software as well.

Chris then talked about how HP has gotten, or will get, the industry leading PC (or non-PC) solutions in the following areas:

- graphical desk managers - like HP VUE, Looking Glass, ...
- word processing - like WordPerfect, ...
- spreadsheets - like Lotus, 20/20, ...
- multimedia - like Clarity Rapport, Applix Asterix, ...
- office integration - like UniPlex, Rapport, ...
- business graphics - like Island Graphics, Wingz, ...
- tools - like Norton Utilities, Synchronize, ...
- HP products - like Shared X, SoftPC, OpenMail, ...

Workstations vs. PCs

- UNIX workstations-based products give better workgroup productivity through better distributed computing

- UNIX workstations having a multi-tasking operating system
- OSF/Motif
- UNIX Workstations can run all your tasks, like vertical applications like CAD-CAM but also everyday productivity software and graphics. This solves the problem users have experienced in the past of having to put two systems on their desks - workstations for specialized applications and PCs for productivity software.

=====

PC LANs and HP Business Systems and Servers

Gregg Kornfeld, Product Line Manager, Information Networks Division

HP's Strategy

- Bring together the PC and UNIX workstation and server environments together while building on each of their strengths
- Provide the foundation on which current HP Host applications can exist in a PC network
- Minimize the impact on existing applications
- Protect investment in client software - the ability to run things together so you don't have to replace the client software
 - * for example, ARPA 2.1 for Novell Netware loads TCP/IP on a PC, while permitting Netware to run simultaneously
- Provide existing client/server applications a path towards scalable platforms (i.e. move them to 9000 systems). HP wants to provide APIs like NetIPC, Berkeley Sockets, Named Pipes, and SPX to exist on PCs and UNIX systems so you can move your applications easily from one to the other.
- Choice of solutions, HP provides both Netware and LAN Manager/X as well as continually working on Apple connectivity with products from Pacer Software.

Products

- Netware for the HP 3000 and HP 9000
- NS and ARPA 2.1 for Novell Netware
- LAN Manager /X for the HP 3000 and HP 9000
- HP ARPA Services 2.1

===== RFC 822 Headers =====

Date: Wed, 14 Aug 91 16:47:20 -0400

Distribution:

TO: @UNIX@MRGATE

TO: @MRGATE

TO: @MRGATE

TO: NEWBERG@
AKOCSA@MRGATE

TO: @MRGATE

Fogon - Chicago

Sept 11. - Wed

United 45% discount

3:48p - 5:15p

6:38p - 8:15p

7:50p. - 9:23p

4pm or later @ Thursday Sept 12
Chicago - Boston

5:00 - 8:25p United

6:30 - 9:51p

8:00 - 11:15p

file TRB
(Win does not need to review - he approved this approach)
(answer.)
Hk 8/6/91

Printed by Win Hindle

DIGITAL INTERNAL USE ONLY Document

I N T E R O F F I C E M E M O R A N D U M

Doc. No: 023349
Date: 08-Aug-1991 10:45am EDT
From: Roger Rose @ CORE
ROSE.ROGER
Dept: Administration
Tel No: 223-3843

TO: Remote Addressee (BILL KEATING @ZKO)
CC: Win Hindle (HINDLE.WIN)
CC: Roger Rose @ CORE (ROSE.ROGER)

Subject: The Research Board--Your Request

Background attached

Bill, you recently sent a note to Win Hindle inquiring about the "presentations" that were given to The Research Board. I tried to phone your office but with staff meetings, etc. it seemed that a note would save telephone tag issues. A brief response is that there were no "presentations" given to the three members of The Research Board team. There were a series of "one on three" interactions with selected senior Digital management including Win, K.O., Jack Smith, David Stone, Bob Palmer, etc.. These were all more of a personal and conversational tone. The Research Board clearly drew their own conclusions from these talks which, I understand, were fairly positive. In terms of the specific discussions regarding software, you would need to talk with David.

If I can offer further input, please call or send a note.

Regards,
Roger Rose
Executive Assistant to Win Hindle

DIGITAL INTERNAL USE ONLY Document

DIGITAL INTERNAL USE ONLY Document

I N T E R O F F I C E M E M O R A N D U M

Date: 16-Sep-1991 04:11pm EDT
From: RYDER
RYDER@ABACUS@MRGATE@SAMWIS@MKO
Dept:
Tel No:

TO: Win Hindle@MLO

Subject: re Research Board visit 7/9

From your memo of 10-July about "THE RESEARCH BOARD VISIT JULY 9, 1991"

>> We leave visitors with the impression that we
>> are going out of the base products business and becoming a
>> service and systems integration company.

Interesting that you should regard this as a false impression of
the visitors. This is my own impression, and I'm an old DECie.

I have had a conversation on the topic with a friend who is a Sales
Exec, and it is his personal impression as well, although there
are subtle differences between us in our views.

Except for the bright hope I see in Dave Stone's group, I see the
company moving to become a reseller more than anything else. The
parallel that comes to mind is the Sears Roebuck re-direction that
started a few years ago. I felt it was a mistake for Sears; I
believe it would be a mistake for us.

Your memo implies that I am very wrong, and I absolutely trust you.
If I have been so far off the mark, perhaps there are many others.
Would a DVN broadcast on the topic be appropriate?

Alton Ryder

DIGITAL INTERNAL USE ONLY Document

From: USCTR2::STHOMAS 3-SEP-1991 09:34:27.11
To: SACMAN::JOHNSON
CC:
Subj: OSF AND ACE POSITIONING - FOR YOUR FEEDBACK

FUT

1

I N T E R O F F I C E M E M O R A N D U M

Date: 03-Sep-1991 08:37am EDT
From: Steve Thomas @MRO
THOMAS.STEVE
Dept: US PRODUCT SALES
Tel No: DTN: 297-6093

TO: See Below

Subject: OSF AND ACE POSITIONING - FOR YOUR FEEDBACK

Recently I was stumped on a sales call about OSF and ACE and ALPHA. I asked my people to do some work on positioning these issues. Attached is a good start. It's clear and understandable.

I know Peter Conklin's group is working hard on this issue, but we all need to help. I believe our customer base is waiting on clear answers before moving ahead on current projects. I would be surprised if the issue doesn't arise when BJ visits the Research Board.

Please send Mary Murphy your feedback while she attempts to distill this message for the US. Please don't criticize; write a better one. A good idea rarely appears fully formed--usually they develop communally from unsuitable ideas.

Regards,

Distribution:

TO: Remote Addressee (BARRY BRAUNSTEIN @MRO)
TO: Remote Addressee (RON BUNKER @AKO)
TO: Remote Addressee (FRANK FORTUNATO @AKO)
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TO: Remote Addressee (BARBARA MARX @MLO)
TO: Remote Addressee (AL MCGUIRE @MRO)
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TO: Remote Addressee (BARRY NAY @GEO)
TO: Remote Addressee (DEB NICHOLLS @CORE)
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TO: Remote Addressee (STEVE THOMAS @MRO)
TO: Remote Addressee (ROD TUTTLE @OFO)
TO: Remote Addressee (PETER ZOTTO @CORE)
TO: Remote Addressee (_A1VAX::RUDY)
TO: Remote Addressee (_AKOV13::HUSSEY)
TO: Remote Addressee (_DELNI::BLANEY)
TO: Remote Addressee (_DELNI::G_WILLIAMS)
TO: Remote Addressee (_DELNI::DANIELS)

TO: Remote Addressee (_GWYNED::BASKINS)
TO: Remote Addressee (_HYEND::WHITMAN)
TO: Remote Addressee (_ICS::JOHNSONJ)
TO: Remote Addressee (_LEDS::LEMOS)
TO: Remote Addressee (_LEDS::FARESTEN)
TO: Remote Addressee (_MEMORY::FREDERICK)
TO: Remote Addressee (_MEMORY::SEBASTIAN)
TO: Remote Addressee (_MILPND::RESNICK)
TO: Remote Addressee (_MSBCS::SWANTON)
TO: Remote Addressee (_SACMAN::STEVENSON)
TO: Remote Addressee (_SACMAN::JOHNSON)
TO: Remote Addressee (_SPCTRM::L_GROSS)

CC: Remote Addressee (ED MUTH @ACI)
CC: Remote Addressee (MARY MURPHY @TTB)
CC: Remote Addressee (RICK FRAZIER @CLO)

I N T E R O F F I C E M E M O R A N D U M

Date: 29-Aug-1991 08:33am EDT
From: MARY MURPHY @TTB
MURPHY.MARY AT A1 at NUTMEG at
Dept: DSS
Tel No: (603) 884-1403

TO: STEVE THOMAS @MRO

CC: ANNE COPP @OGO

CC: ED MUTH @ACI

Subject: OSF VERSUS ACE

Per the attachment, I have developed a response to the questions the customer posed you, and a positioning paper which is designed to help the field understand (without getting into too much of the "bits and bytes") how OSF and ACE are similar and different. Please let me know if you feel this is sufficient detail, or if more information is required.

In response to the customer's attempts to use the "train analogy," I would say that their analogy is flawed. Speed alone does not make for a successful journey, and a train may not take me to my desired destination. Furthermore, it is highly doubtful that the trains of the future will have any rails at all. No one can predict what future needs and technologies will exist, and therefore, the more experience we can obtain in integrating multi-vendor hardware, software (including multiple operating environment), and networks, the more flexible we can be in responding to customer requirements as new technologies are introduced in the future.

There are thousands of applications available for UNIX and VMS, and tens of thousands of applications available for DOS and MS-Windows. Digital is focusing its engineering resources on improving the customer's ability to access or run these applications from their (not our mandated) choice of desktop devices. We are concentrating on providing network-based (device independent) services which increase application interoperability, and add functionality to these applications (NAS). We are helping customers integrate multi-vendor hardware, software, and networking environments so that they benefit from choice without the trade off of interoperability problems. This allows users to choose the best and most appropriate tool for the task, without having to worry about the technology. Speed will not help you if the application you require is not available on your system, or if you are unable to access and share information inside and outside your organization.

Digital's rationale for outsourcing our OSF/1 Application Development Kit (OSF/1 ADK) to SCO was to enable our engineering resources to turn their attention to adding value (yet maintaining compatibility with OSF/1 via extensions). This "added value" is in the form of providing large system features in ODT, compatibility for ULTRIX and System V applications, developing commercial operating system features, improving system management, and adding features such as real-time, file system features for OLTP, etc. Far from abandoning OSF, Digital will continue to work with SCO on OSF/1 kernel development activities, but will also initiate parallel efforts to increase the functionality of the Digital ODT OSF/1 extensions.

Digital's UNIX strategy is ACE ODT--a compatible superset of OSF/1. Which brings me to the ALPHA question. . .

Since ACE provides standards for both hardware and software operating environments, one could respond that ALPHA is, and is not, "ACE compliant." ALPHA is a Digital-developed 64-bit RISC VAX. It does not utilize either the MIPS or Intel processors, and is therefore, not compliant with the ACE ARC specifications.

However, ALPHA has been architected to run either VAX VMS, RISC VMS, or RISC ULTRIX. RISC VMS supports POSIX integrated applications, and ALPHA will support DECwindows (MOTIF). Therefore, applications developed for ACE ODT should be able to be run in a RISC VMS environment after recompilation. (Some application tuning may be required.)

OSF VS ACE POSITIONING PAPER

KEY DIFFERENTIATORS BETWEEN OSF AND ACE:

- ACE offers an OSF/1-based operating system, and is therefore supportive of this Open Software Foundation industry standard. SCO's Open Desktop utilizes Digital's OSF/1 Application Development Toolkit as its base, and supports MOTIF (X/Open) and POSIX industry standards. Compatibility with OSF will continue to be maintained by SCO and Digital in behalf of the consortium.
- OSF's objective is to provide a completely open software environment to which vendors can conform. (OSF/1 will provide primarily source code standardization--the ability to run an application on multiple hardware platforms running OSF/1-based UNIX, after recompilation.) (One UNIX-derived operating system--running on many different RISC hardware architectures/processors.)
- ACE's objective is to provide an equally open software environment, and to additionally provide a standard hardware architecture to enable binary standardization. Binary standardization (which requires processor standardization) will ensure that a given application will run on a given processor family without recompilation. This offers a higher degree of application compatibility and transportability than source standardization alone, and provides the customer with the ability to run any application on any hardware platform from any vendor who complies with the hardware and software standards. The closest analogy in the computer market today is MS-DOS and the Intel processor-based personal computers.

ACE provides customers with a choice of operating system standards--OSF/1-based ODT or Microsoft's OS/2 V3.0 (commonly referred to as NT). ACE also provides customers with a choice of two standard hardware architectures: RISC (MIPS) or X86 (Intel). Since ACE also supports POSIX in both operating systems (ODT and NT), applications which use the POSIX API will be source compatible across the two operating systems and hardware architectures. Investments in both hardware and software applications can be protected as requirements change.

WHAT ARE OSF AND ACE?

- OSF (Open Software Foundation) was formed by a group of vendors with the goal of developing specifications and a source version for a completely open software environment to which vendors can conform. OSF is an independent corporation; it is not a consortium. OSF addresses the software environment only, and is expected to result in source (application development toolkit) for a standards-based operating system. OSF does not specify a standard hardware architecture.
- ACE (Advanced Computing Environment) is a consortium of over 60 vendors which was formed with the purpose of providing customers with the widest choice of new and existing off-the-shelf applications which can run on a wide

range of computers supplied by multiple vendors. ACE offers customer a choice of OSF/1-based operating system with value added (but compatible) extensions (SCO's Open Desktop), or a next generation operating system which includes POSIX, and is designed to offer a migration path for MS-DOS and MS-Windows applications users. Through ACE's adoption of the OSF/1-based ODT operating system, OSF will benefit by the commitment of over 60 vendors to OSF/1. The IBM/Apple and SUN/HP relationships will probably result in non-standards based operating environments which will attempt to compete with the ACE NT operating environment (e.g. IBM's Patriot Partners/Apple "Pink" effort). The SUN/AT&T alliance will result in a single proprietary hardware standard controlled by SUN (SPARC), and a single proprietary UNIX operating system (System V) controlled by AT&T.

DIFFERENCES:

OSF	ACE
- OSF/1, POSIX, MOTIF	- OSF/1, POSIX, MOTIF, OS/2 V3.0, MS-Win 32
- No hardware standard	- MIPS and INTEL Processor Standards
- Applications are Source Compatible Only	- Applications can be both source and binary Compatible
- Thousands of Applications	- Tens of Thousands of Applications
- New Operating System Standard	- Provides growth path for SCO UNIX, ULTRIX MS-DOS, and MS-Windows Applications Users.

I N T E R O F F I C E M E M O R A N D U M

Date: 18-Aug-1991 12:36pm EDT
From: Edmund Muth @ACI
MUTH.EDMUND AT A1 at POBOX at
Dept: US Product Sales
Tel No: 708-806-5112

TO: MARY MURPHY @TTB

CC: ANNE COPP @OGO

Subject: Please develop a response to Steve ASAP - thanks!

I N T E R O F F I C E M E M O R A N D U M

Date: 16-Aug-1991 04:32pm EDT
From: Steve Thomas @MRO
THOMAS.STEVE AT A1 AT USCTR2 A
Dept: US PRODUCT SALES
Tel No: DTN: 297-6093

TO: See Below

Subject: MARKETING QUESTIONS FOR THE WEEKEND

Recently, I had a customer ask me to position OSF vs. ACE. I was stumped. Their perception was that we would abandon OSF and that ACE was just the new strategy.

ACTION: Ed, I would like Mary to lead and exercise that compares and contrasts OSF and ACE. Due Date = August 30th

The next issue that the customer asked was whether ALPHA would be ACE compliant.

ACTION: Rick, You need a crisp message developed to answer this question. DUE DATE = August 30th

The customer went on to build an analogy about our product strategy and trains. The question was does your train run on a single rail or a dual rail. They then pointed out to me that everyone knows which rail systems produces the very high speed train.

Rick, Peter Conklin visited BJ's staff meeting today. He was attempting to develop messages for ALPHA, ACE, OSF, Open, Standards, NAS, and other such topics. Clearly some good work has been done to date but it needs your help before it goes to the US Field. My perspective was that the current message raises more questions than it answers. Please get with Peter and get involved in this process. Call me on Tuesday to update me on this process.

Regards,

Distribution:

BOB WELZEL @KYO
DENNIS SCHNEIDER @MKO
KATHLEEN POWER @MRO
PETER PARSONS @MRO
ED MUTH @ACI
STEVE MORGAN @MKO
AJ Michalewicz @MRO
Celeste Langlois
BARRIE HUNTER @OGO
GARY HOPPE @MRO
ERIC HENDERSON @MRO
RICK FRAZIER @CLO
MIKE COLE @ALF

(MICHALEWICZ.AJ AT A1 AT USCTR2 AT MRO)
(LANGLOIS.CELESTE AT A1 AT USCTR2 AT MRO)

Union League Club of Chicago

September 12th

Dear Mr. Johnson,

We're looking forward to seeing you
at noon for lunch. Would you like to
join us outside the meeting room of
710?

Hope you had a good trip.

Sarah Pugh

The Research Board

September 12, 1991

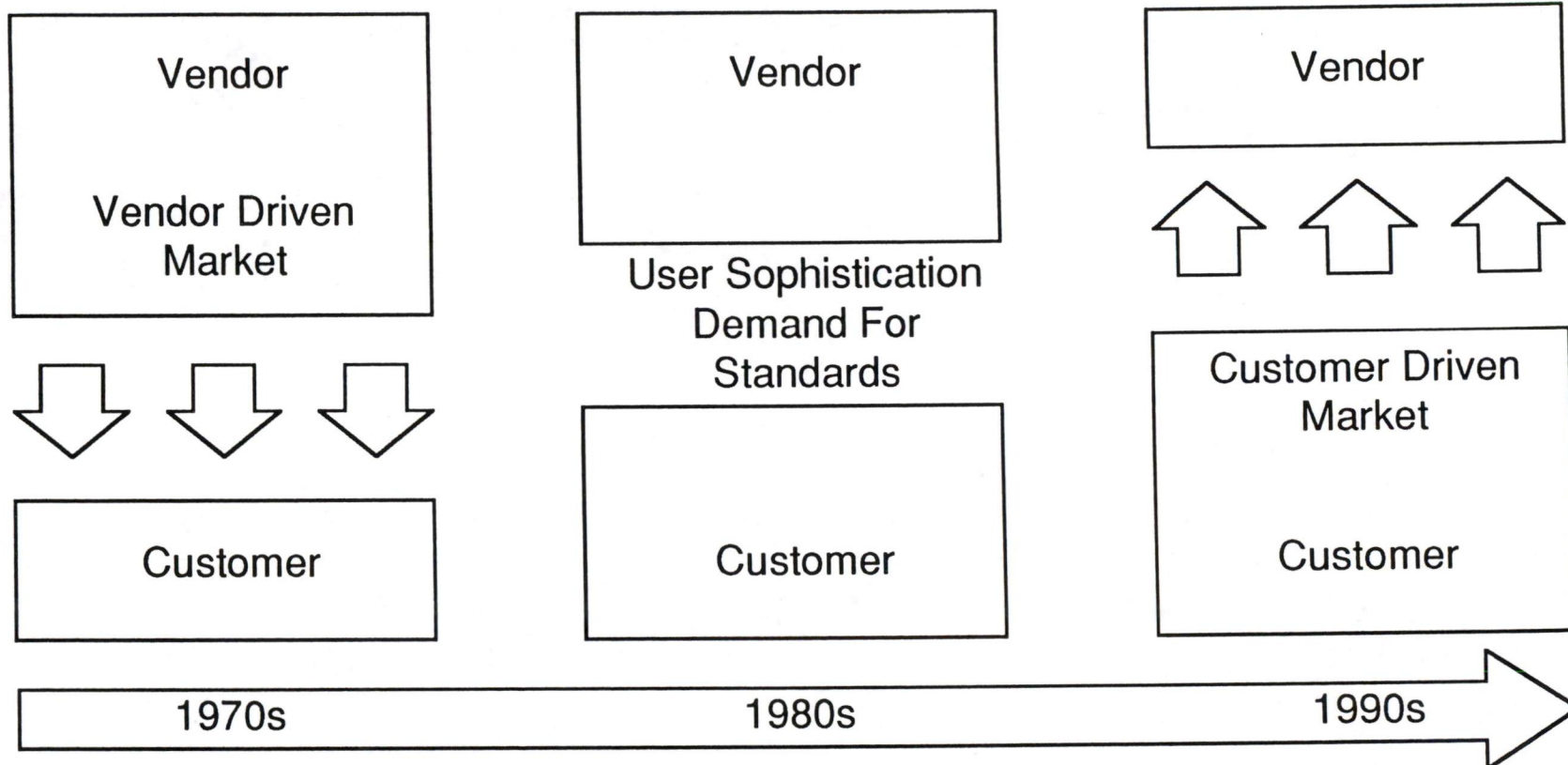
Bill Johnson

Issue:

ALL Vendors Sound The Same

The Research Board
September 12, 1991
Bill Johnson

A Changing Industry



The Research Board
September 12, 1991
Bill Johnson

Open Computing \neq Vendor Independence

Open = Power To Use

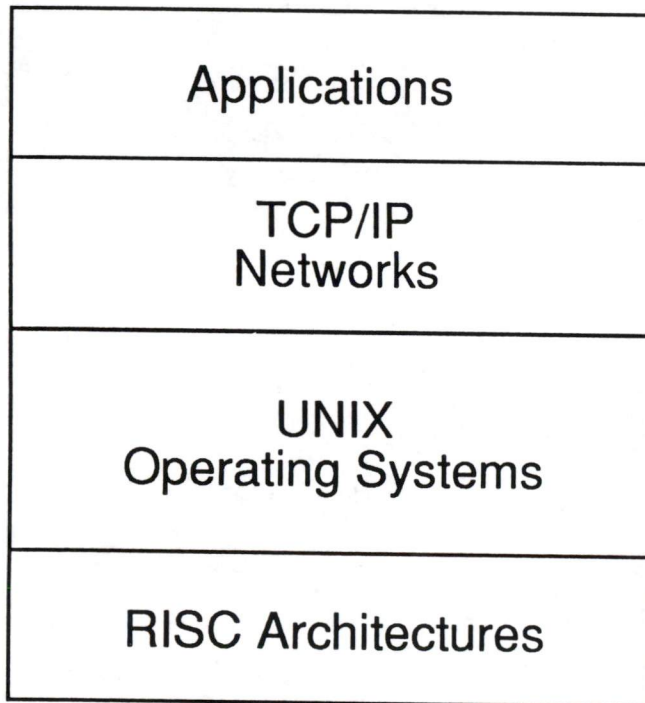
The Research Board
September 12, 1991
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**Either/Or
To
And/With**

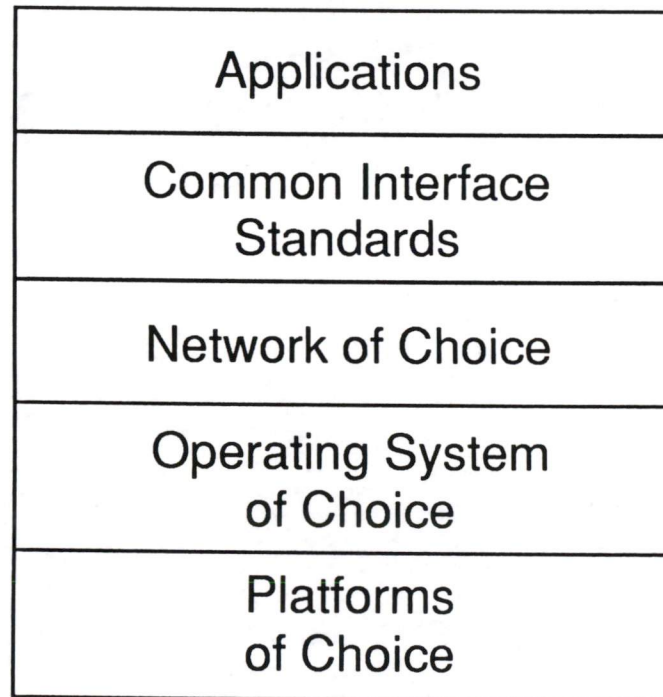
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Open Systems: An Evolution

Open Systems in the '80s



Open Systems in the '90s

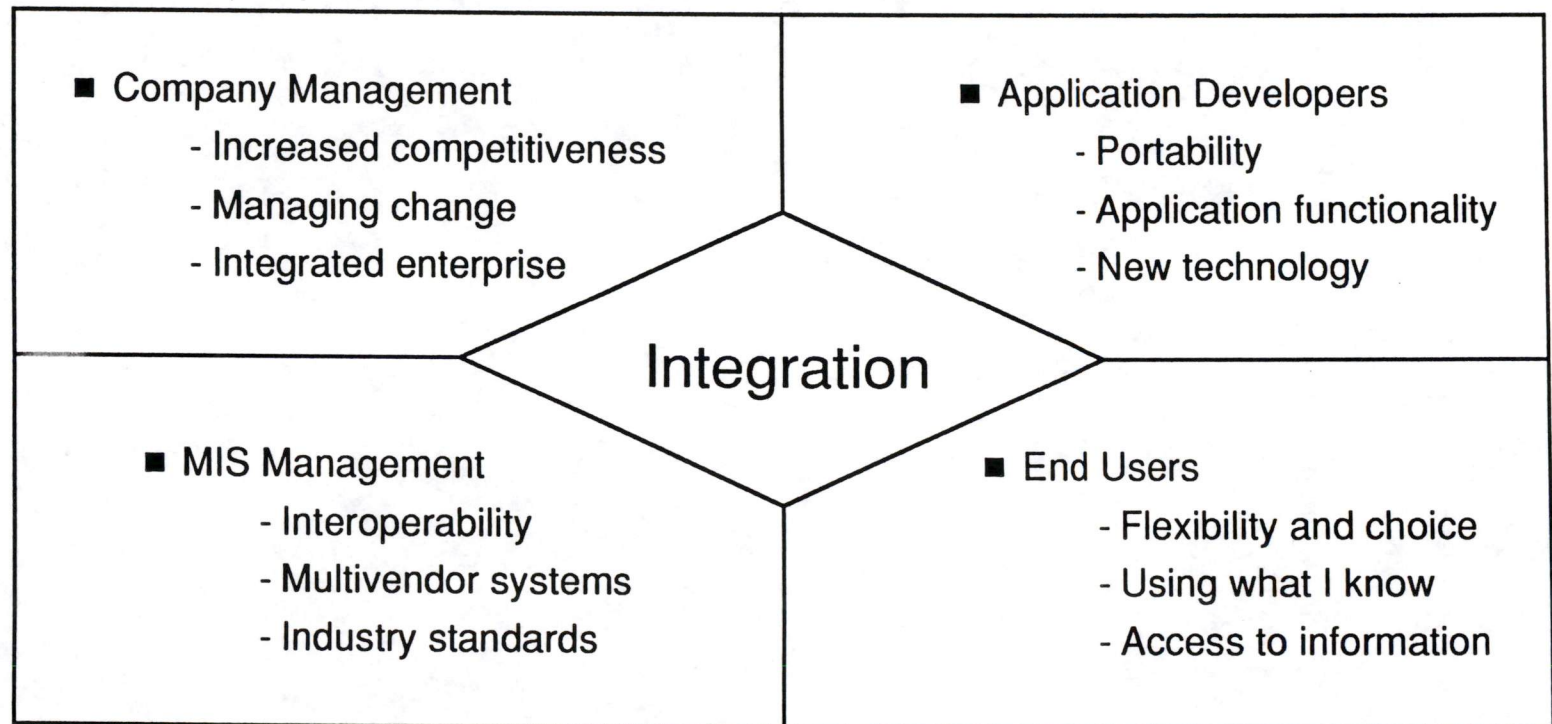


e.g., POSIX
X.400
SQL



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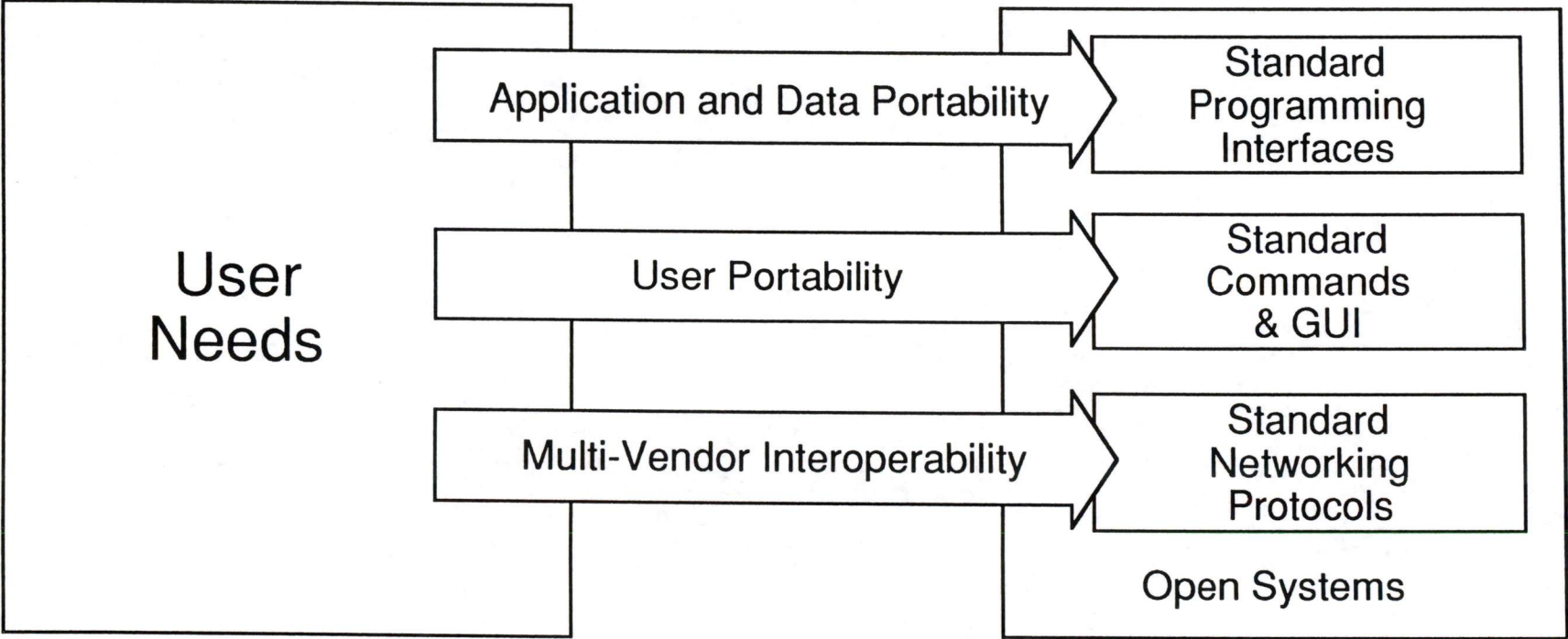
Concerns



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September 12, 1991
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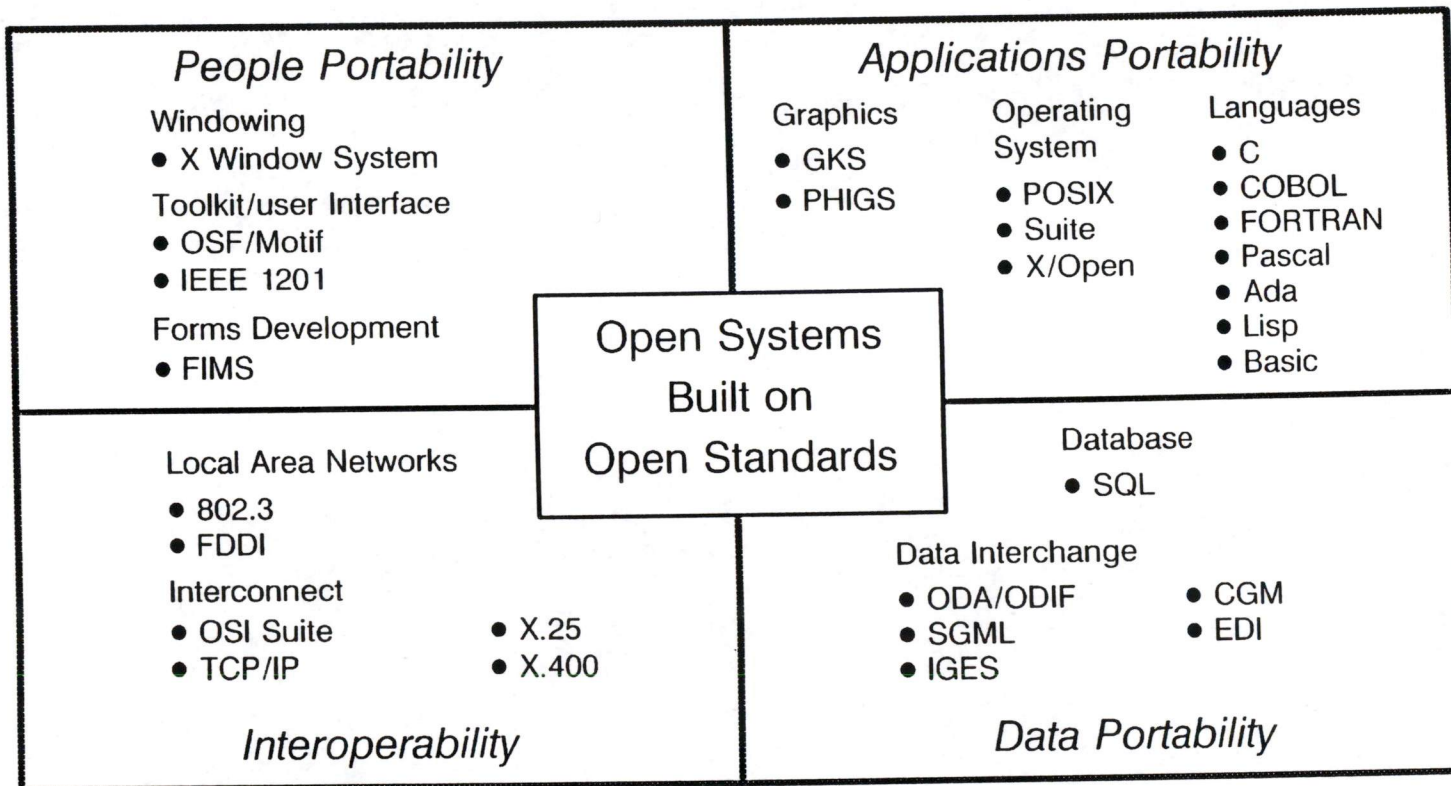
What Is An Open System?

Based On Standards



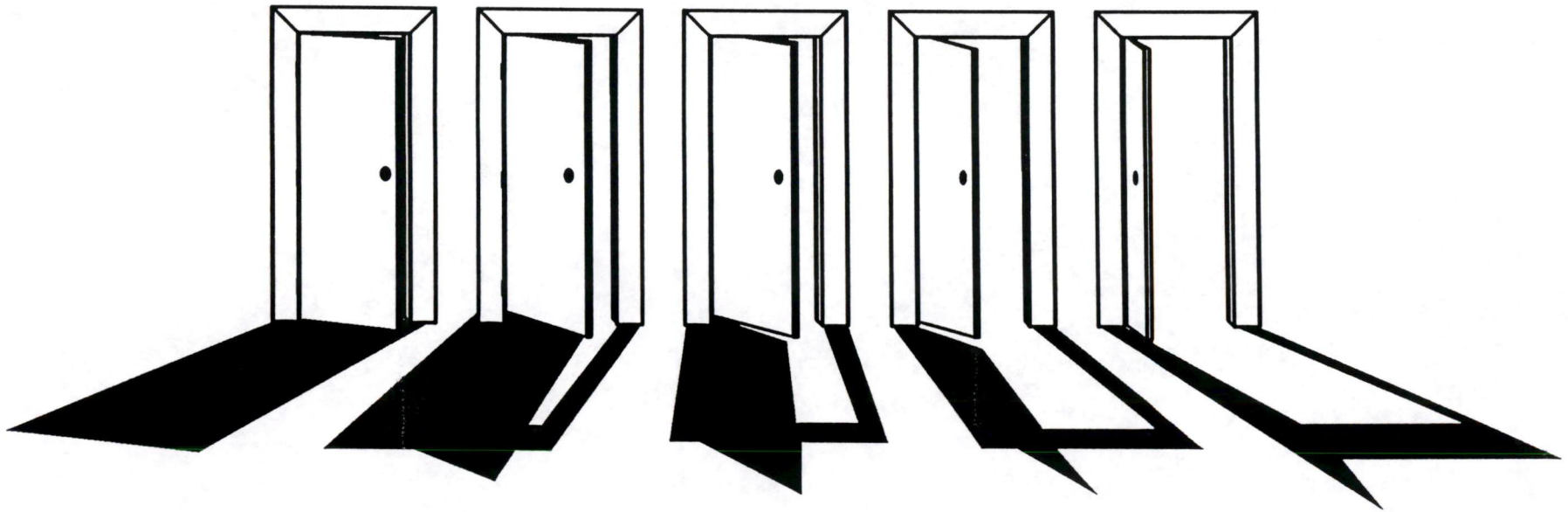
Digital's Open System Strategy

The Research Board
September 12, 1991
Bill Johnson



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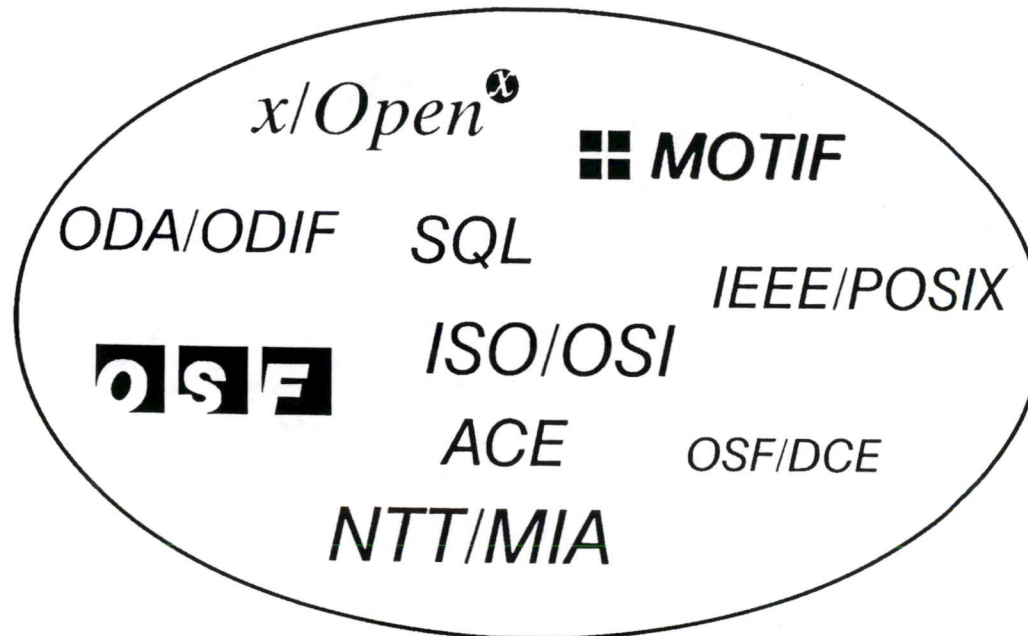
Open Systems



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View Of Open Systems

Open Systems = Standards



Open Systems > UNIX[®]
Standardization

The Research Board
September 12, 1991
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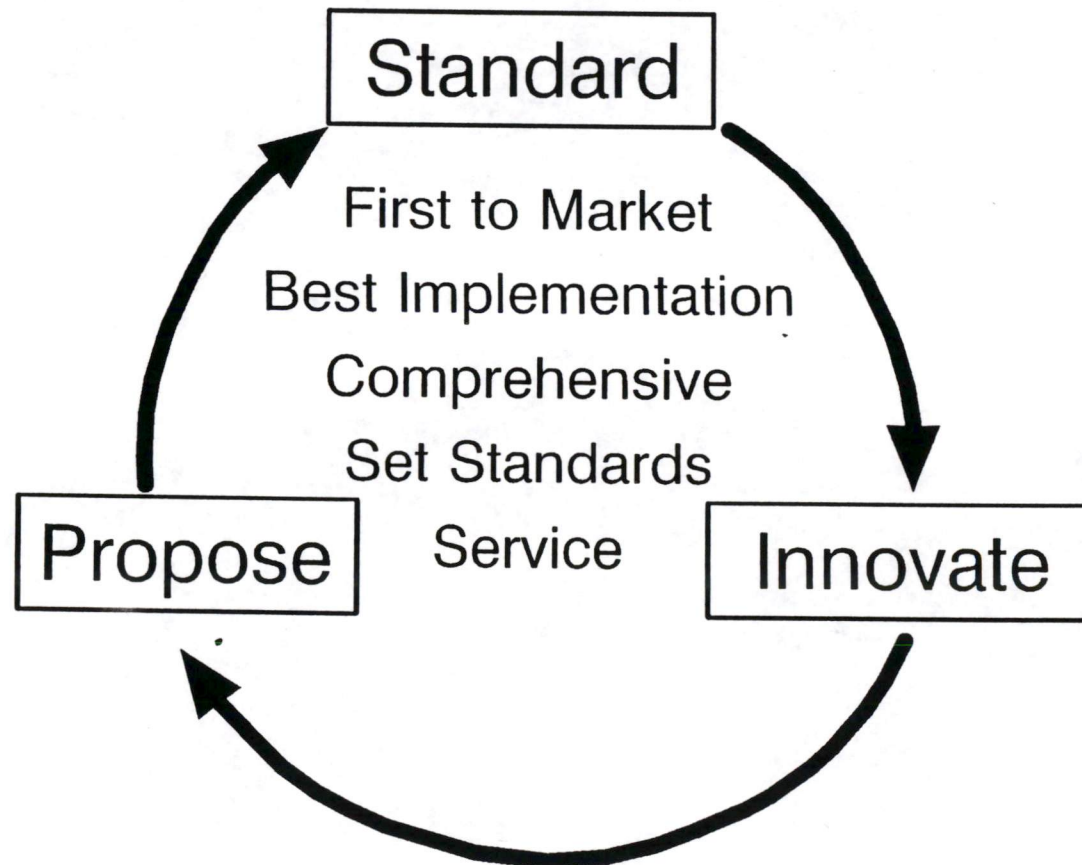
You Don't BUY Open Systems

You BUILD THEM

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13a

Standards And Differentiation

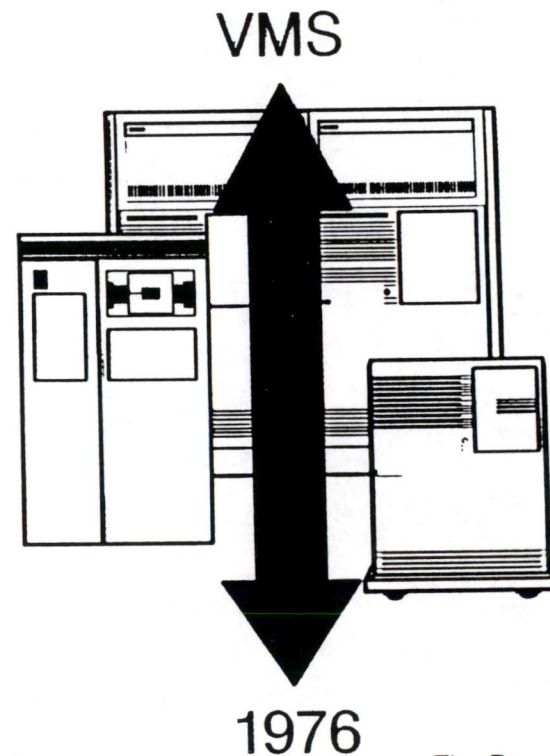


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Digital's Evolving Strategy

Many Levels Of Computer

- One H/W architecture
- One S/W architecture
- One network architecture
- One human interface

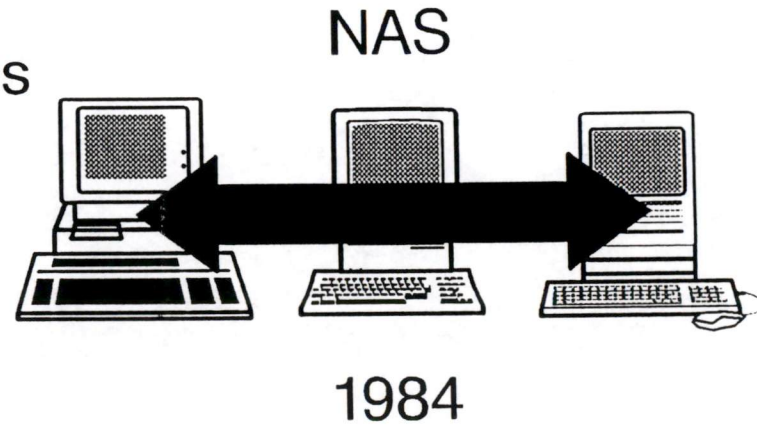


The Research Board
September 12, 1991
Bill Johnson

Digital's Evolving Strategy

Many Vendors Of Computer

- Applications based
- Multiple users (desktops)
- Multiple network protocols
- Multiple standards

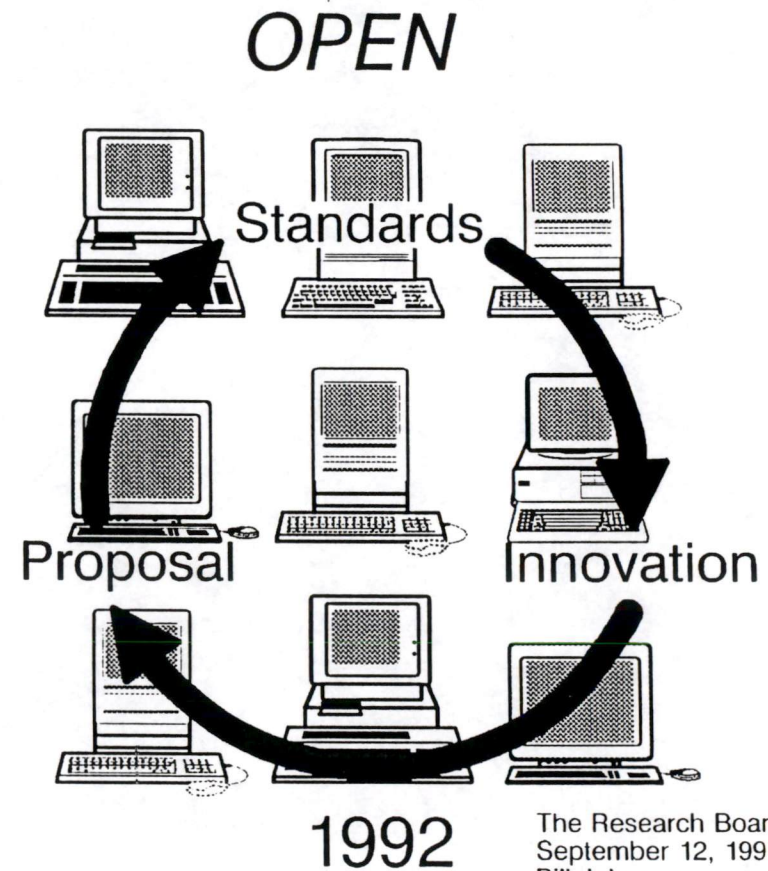


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September 12, 1991
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16a

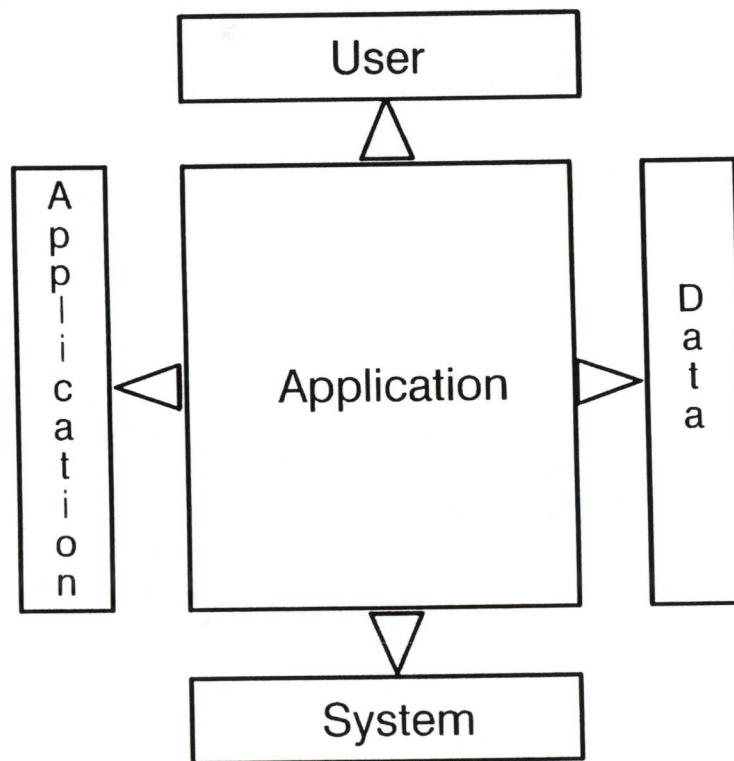
Digital's Evolving Strategy

- Open technology
- Open services
- Open business practices



The Research Board
September 12, 1991
Bill Johnson

Network Application Support (NAS)



Multivendor Application Integration

The Research Board
September 12, 1991
Bill Johnson

Levels Of Openness

Computing

Investment Optimization	Integrate Installed Base - Systems, Data, Applications			e.g. OSI SQL Motif POSIX	NAS EMA Advantage Networks Open/ VMS SCO/ODT DSSA OS/2 V3.0
	Maximize Existing Expertise and Training				
Flexibility	One Set of Standard Interfaces: Portability and Interoperability Across Multiple Hardware and Software Architectures from Multiple Vendors				
Vendor Independence	Single Software Architecture, Multiple Hardware Vendors		e.g. UNIX Oracle MS-DOS		ULTRIX/ OSF STDL MIPS Intel
	Single Hardware Architecture, Multiple Vendors	e.g. SPARC 360/X86			

The Research Board
September 12, 1991
Bill Johnson

NAS: Competitive Positioning

	Digital (NAS)	IBM (SAA)	HP (New Wave)	SUN
Applications	750 3rd Parties Shipping 1500 NAS-Based Products	200 3rd Parties Committed With 100 Applications Shipping	25 3rd Parties Now 65 for Near Future	1500+ UNIX Based Few Run Open Look
	Dozens from Digital	Office Vision V2.0 Still Not Available	2 Applications Now	
Industry Standards	Based on Industry Standards	Mostly Proprietary Committed to OSI	MS-DOS API's to Selected 3rd Parties UNIX API's - Not Public	UNIX API's Open Look Not an Industry Standard
Products	Included	Excludes: Compound Documents, Application Control, Messaging, POSIX	Excludes: Forms, Terminals, EDI, Data Access, Repository, File Sharing, Printing, No DECnet Equivalent	Standard UNIX Products Only (No CDA, Repository)
Systems	Includes: UNIX, MAC's, PC's Clones, IBM Systems, Terminals, OS/2, VMS	Excludes: UNIX (Even AIX); Non-IBM Systems; MS-DOS	Is Only an Extension to MS-DOS & Windows 2.0 Excludes: MAC (Terminal Only) UNIX in Field Test Only	Includes: UNIX System V/SPARC Excludes: Most Industry Standards

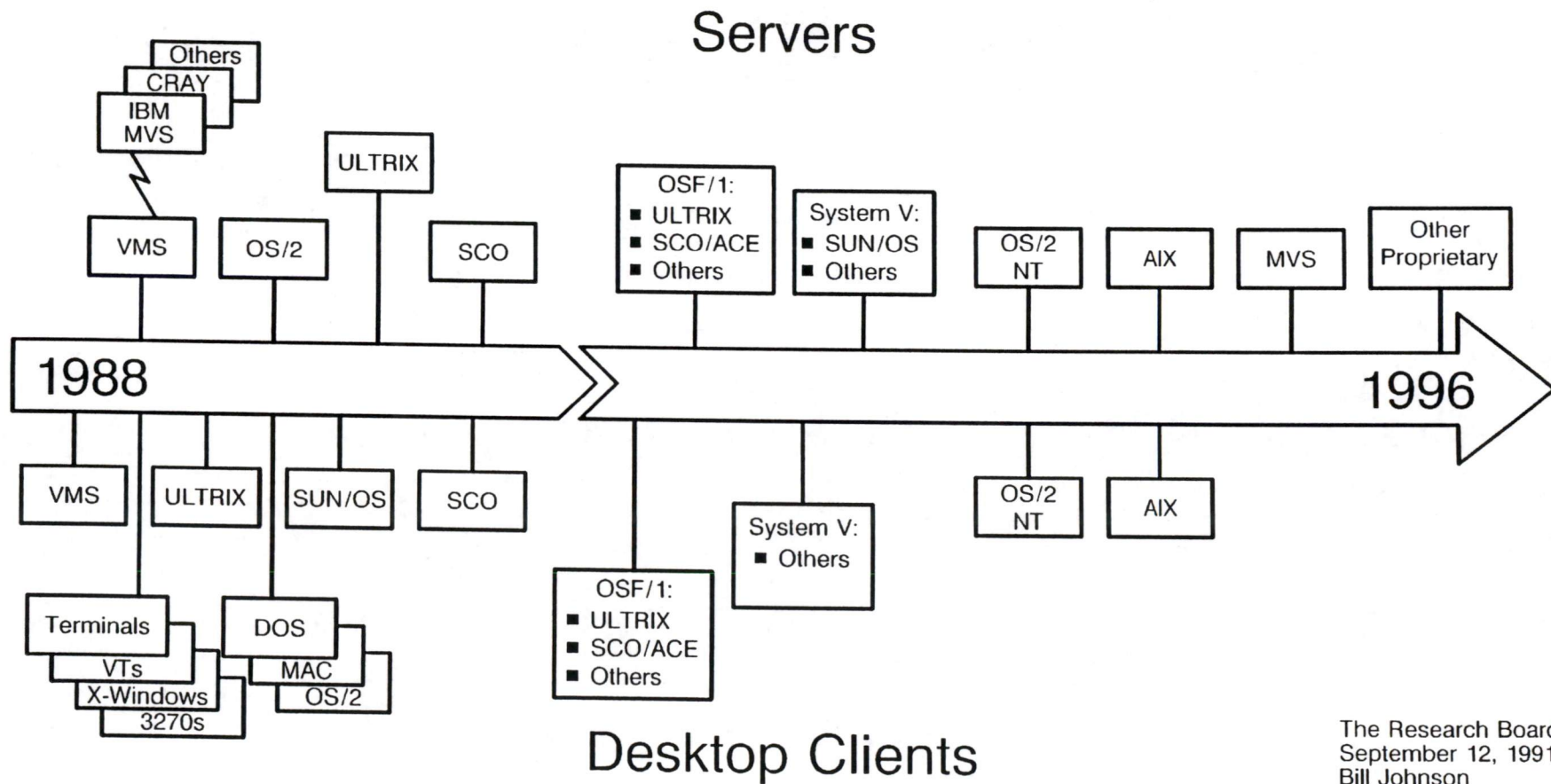
The Research Board
September 12, 1991
Bill Johnson

Product Availability

	VMS	ULTRIX	MS-DOS	OS/2	Mac
Windowing Services	Yes	Yes	Yes	Planned	Yes
Forms Services	Yes	Planned	Planned	Planned	Planned
Graphics Services	Yes	Yes	Yes*	Yes*	Yes*
Terminal Services	Yes	Yes	Yes	Yes	Yes
Mail Services	Yes	Yes	Yes	Planned	Yes
EDI Services	Yes	Planned	Planned	Planned	Planned
Interprocess Queuing Services	Yes	Yes	Yes	Yes	Planned
Application Control Services	Yes (Partial)	Yes (Partial)	Planned	Planned	Planned
CDA Services	Yes	Yes	Planned	Yes	Planned
SQL Services	Yes	Yes	Yes	Yes	Yes
Repository Services	Yes	Planned	Planned	Planned	Planned
File Sharing Services	Yes	Yes	Yes	Yes	Yes
Print Services	Yes	Yes	Yes	Yes	Yes
Distributed Computing Services	Yes (Partial)	Yes (Partial)			
Operating System Interface	Planned	Yes			
* = 3rd Party Solution					

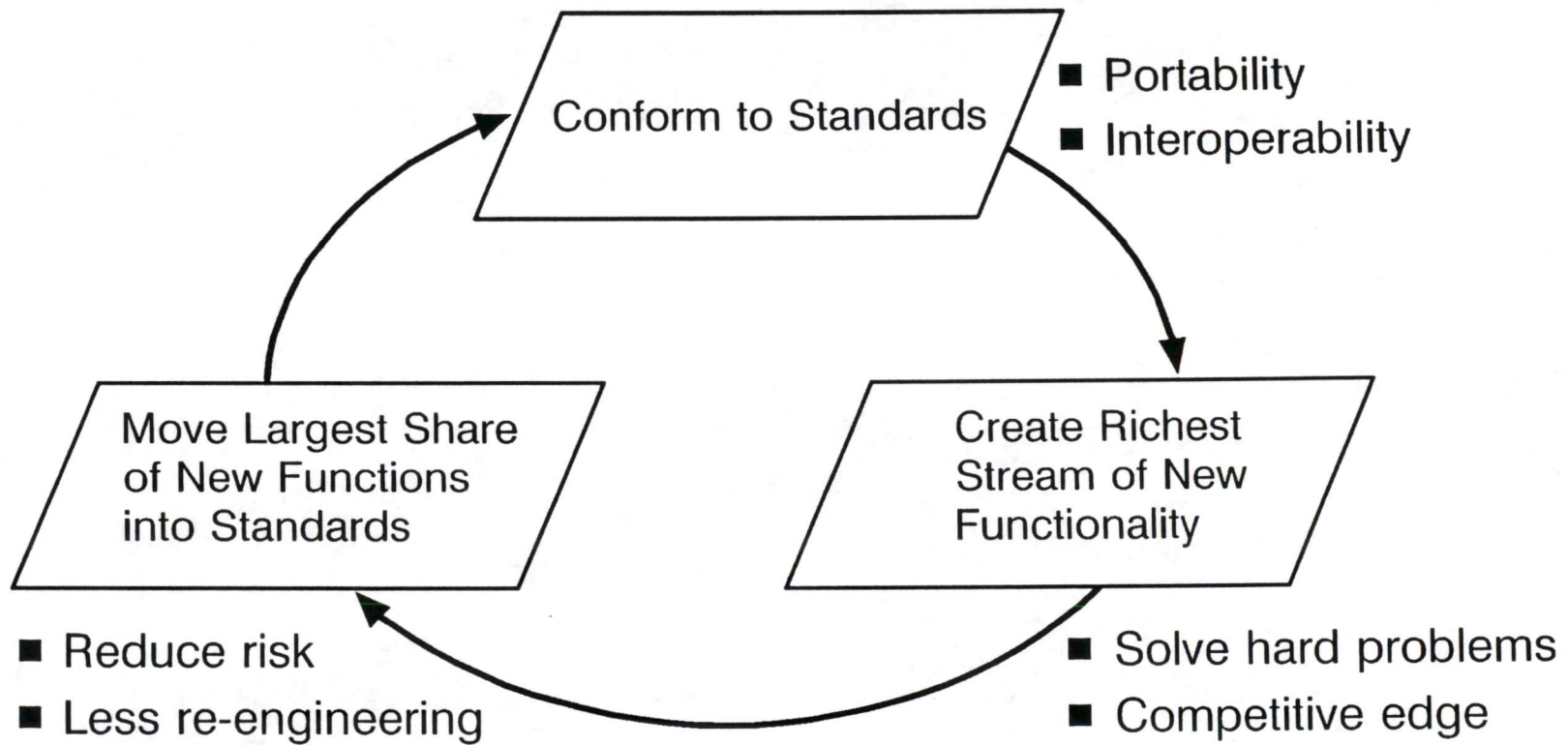
The Research Board
September 12, 1991
Bill Johnson

Five Year NAS Platform Vision



The Research Board
September 12, 1991
Bill Johnson

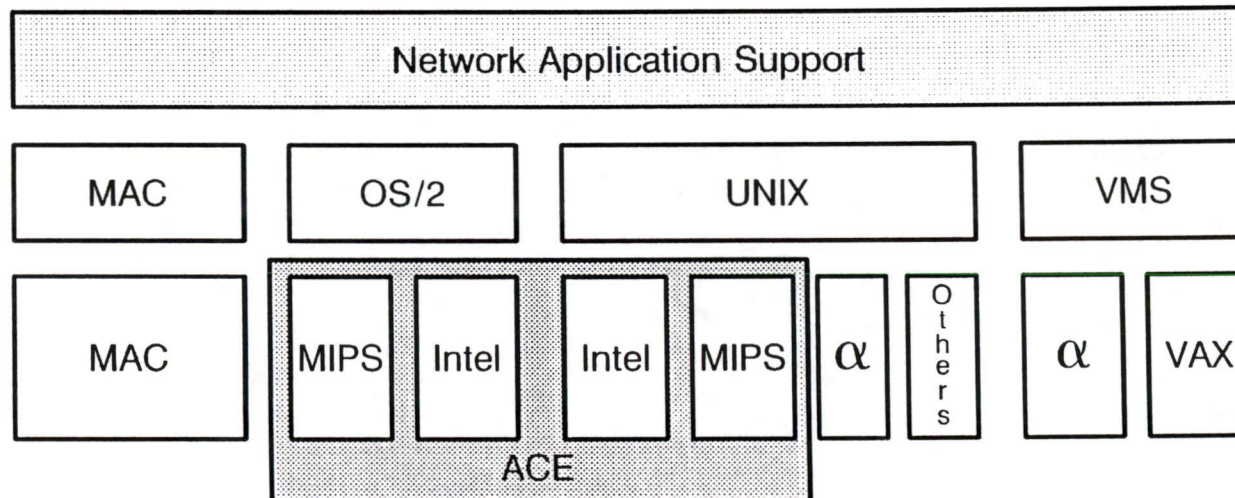
Open Business Practices



The Research Board
September 12, 1991
Bill Johnson

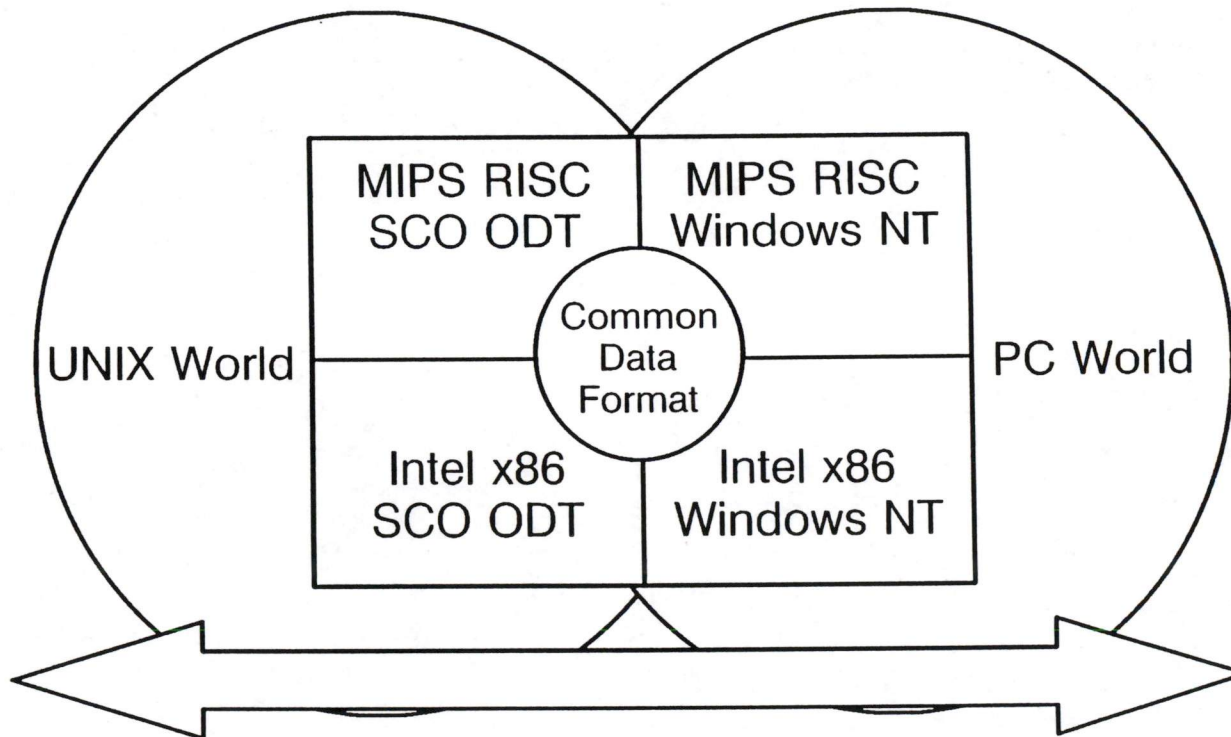
In The Context Of The Digital Computing Strategy

- As VAX/VMS was the one strategy for Digital in the 1980s, NAS is the one strategy for Digital for the 1990s
- Multiple operating systems and hardware platforms are a given in today's customer environment



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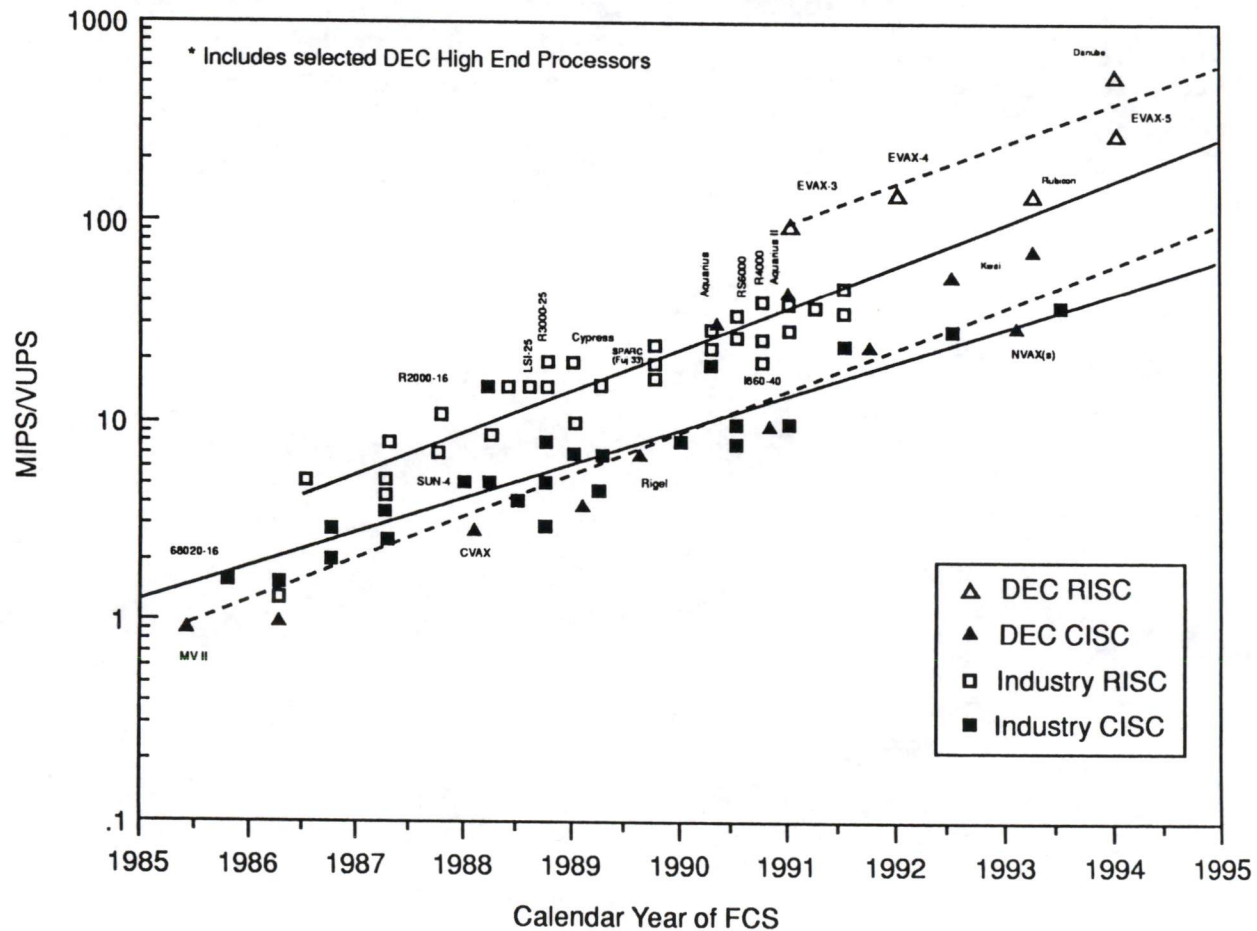
Advanced Computing Environment



Data And Application Interoperability

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September 12, 1991
Bill Johnson

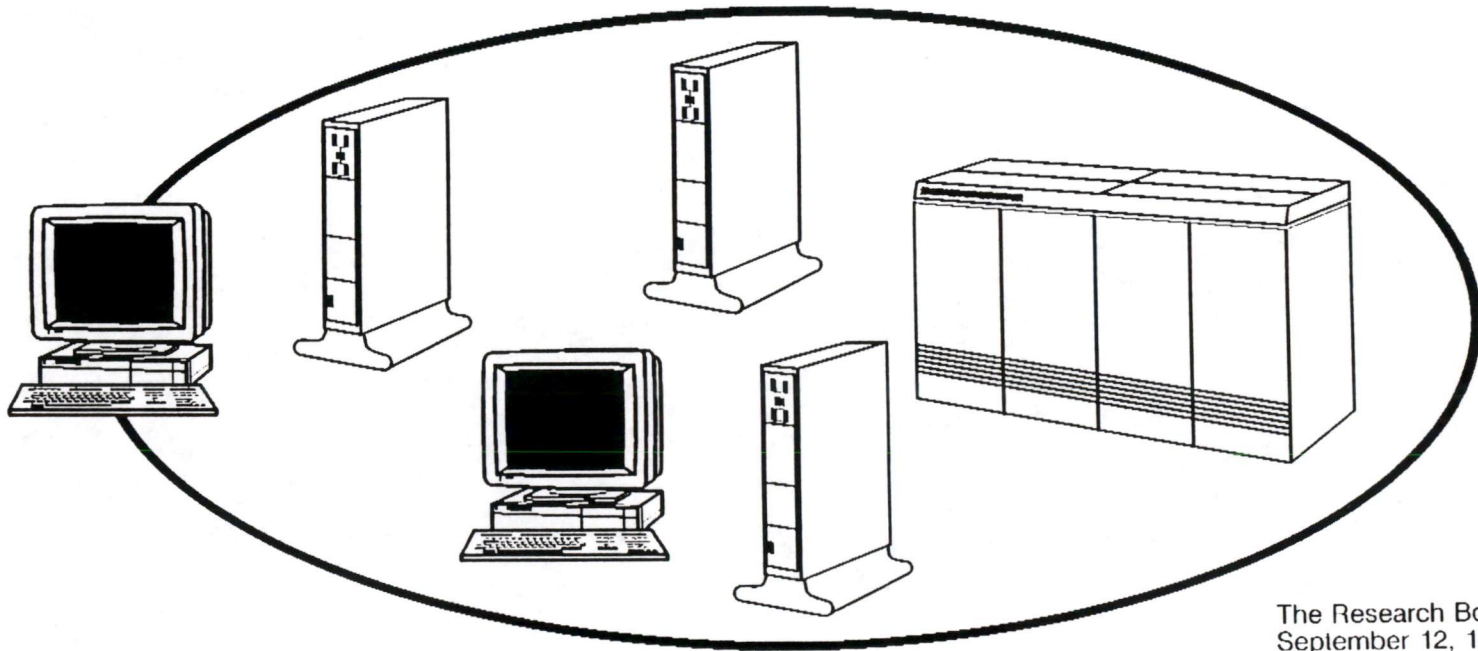
Microprocessor* Performance (MIPS) Trends (1985-1995)



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The Strategy:

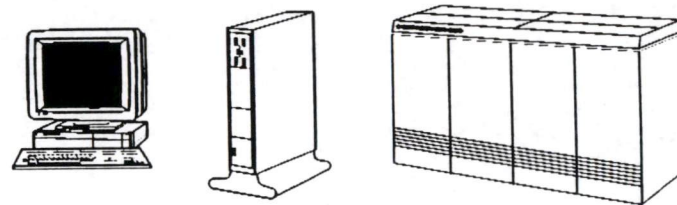
Systems ... And Systems Of Systems



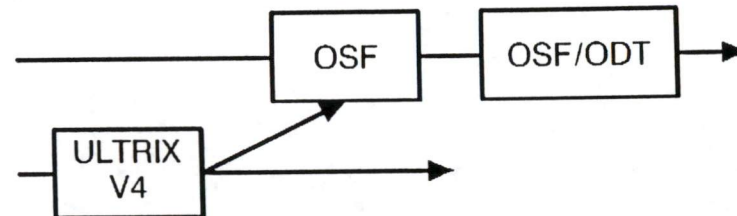
The Research Board
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Bill Johnson

Digital's RISC/UNIX Strategy

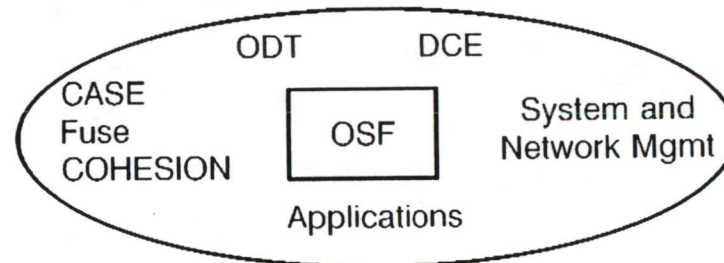
*Competitive Family
Of System Platforms*



ULTRIX → OSF/ODT



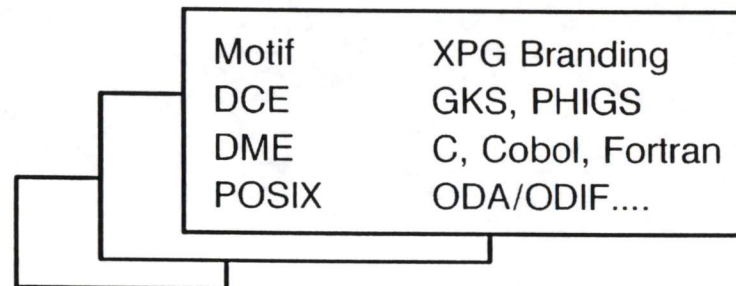
*Best UNIX
Environment*



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September 12, 1991
Bill Johnson

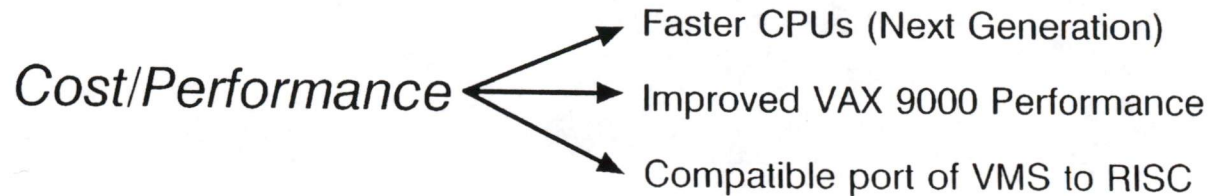
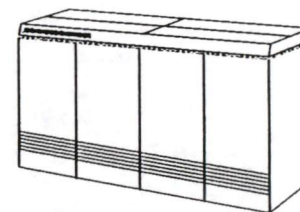
Digital's VAX/VMS Strategy

Open Systems



Commercial Strength

Availability/Recovery Features
EMA System Management
I/O and File System Services
Improved Storage Management



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Digital's PC Strategy

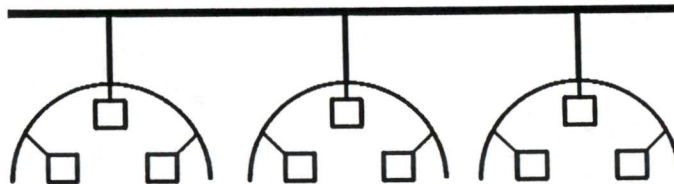
Competitive Family

- Full range of systems (entry level to high end)
- Intel architecture, including ACE
- Small business UNIX system (ApplicationDEC 433MP)

Operating Systems

- Support all major PC operating Systems:
MS-DOS OS/2 OS/2 V3 (NT)
Windows SCO UNIX

Superior Integration

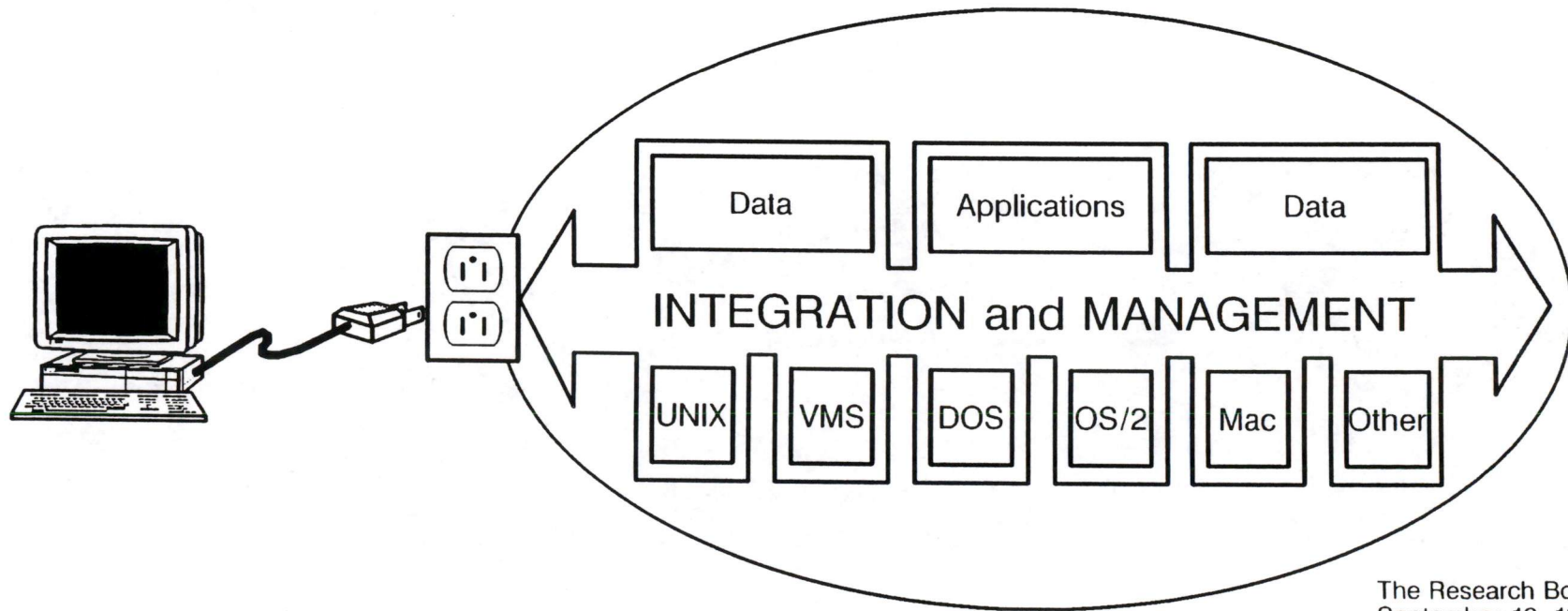


- Leadership LANs
- Leadership LAN interconnect
- Enterprise network interconnect
- Partner with PC software vendors

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Bill Johnson

The Solution:

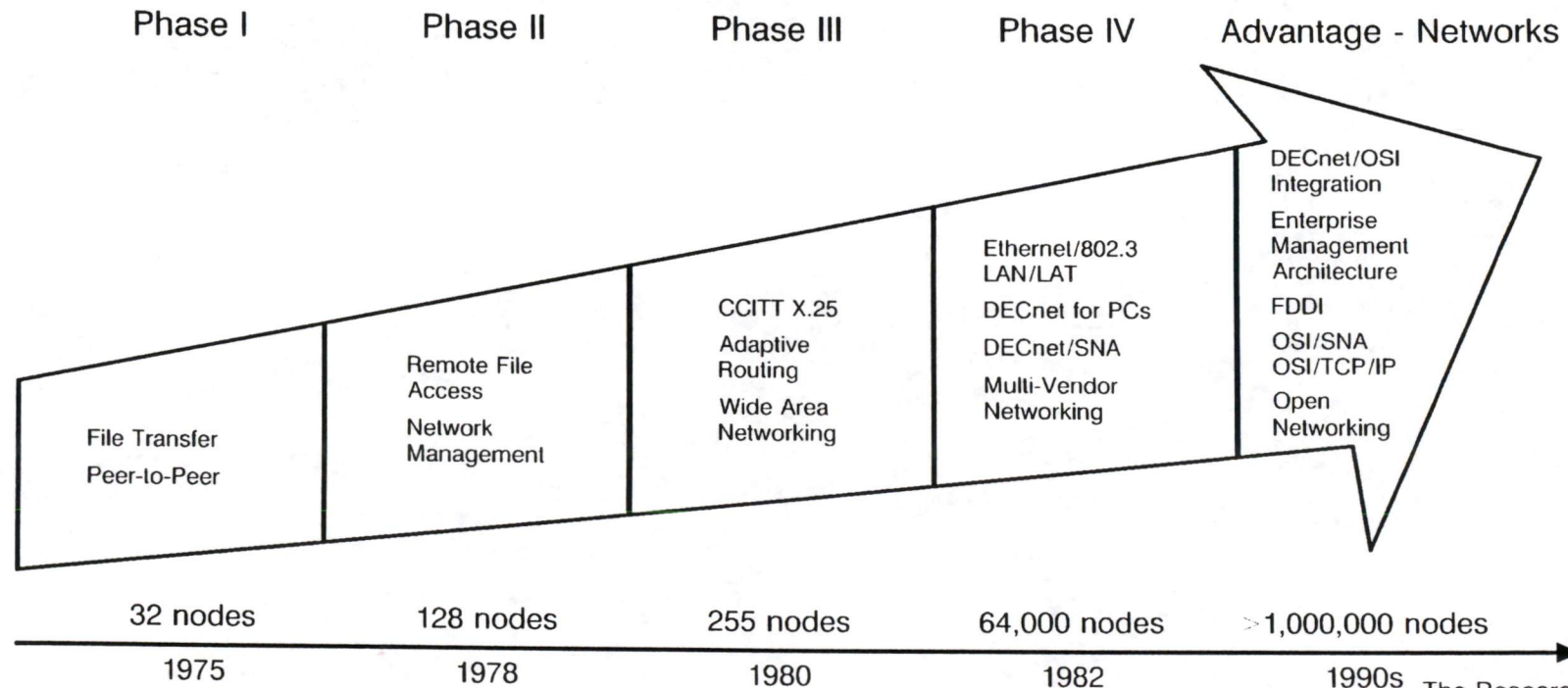
*Open Systems Built
On Standards*



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September 12, 1991
Bill Johnson

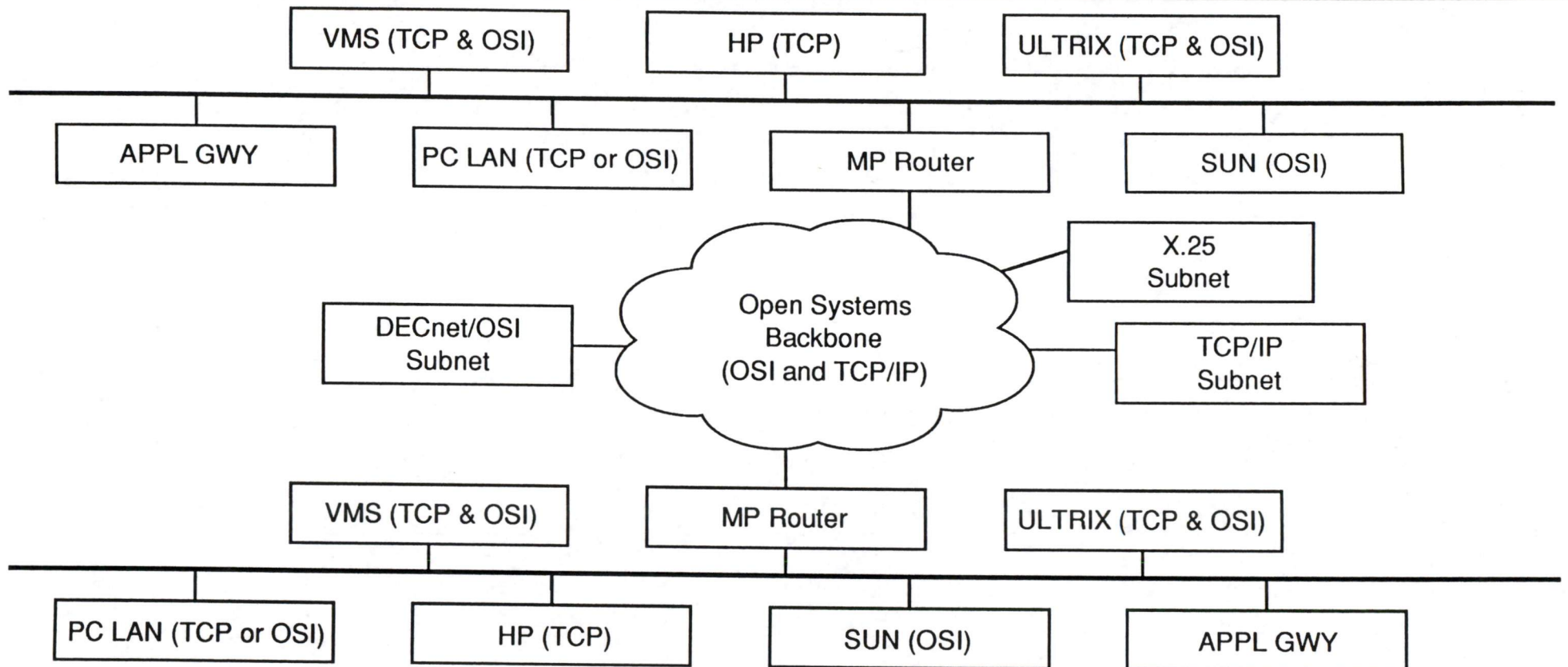
Digital's Evolution To Open Network Solutions

The Standards Based Network Framework

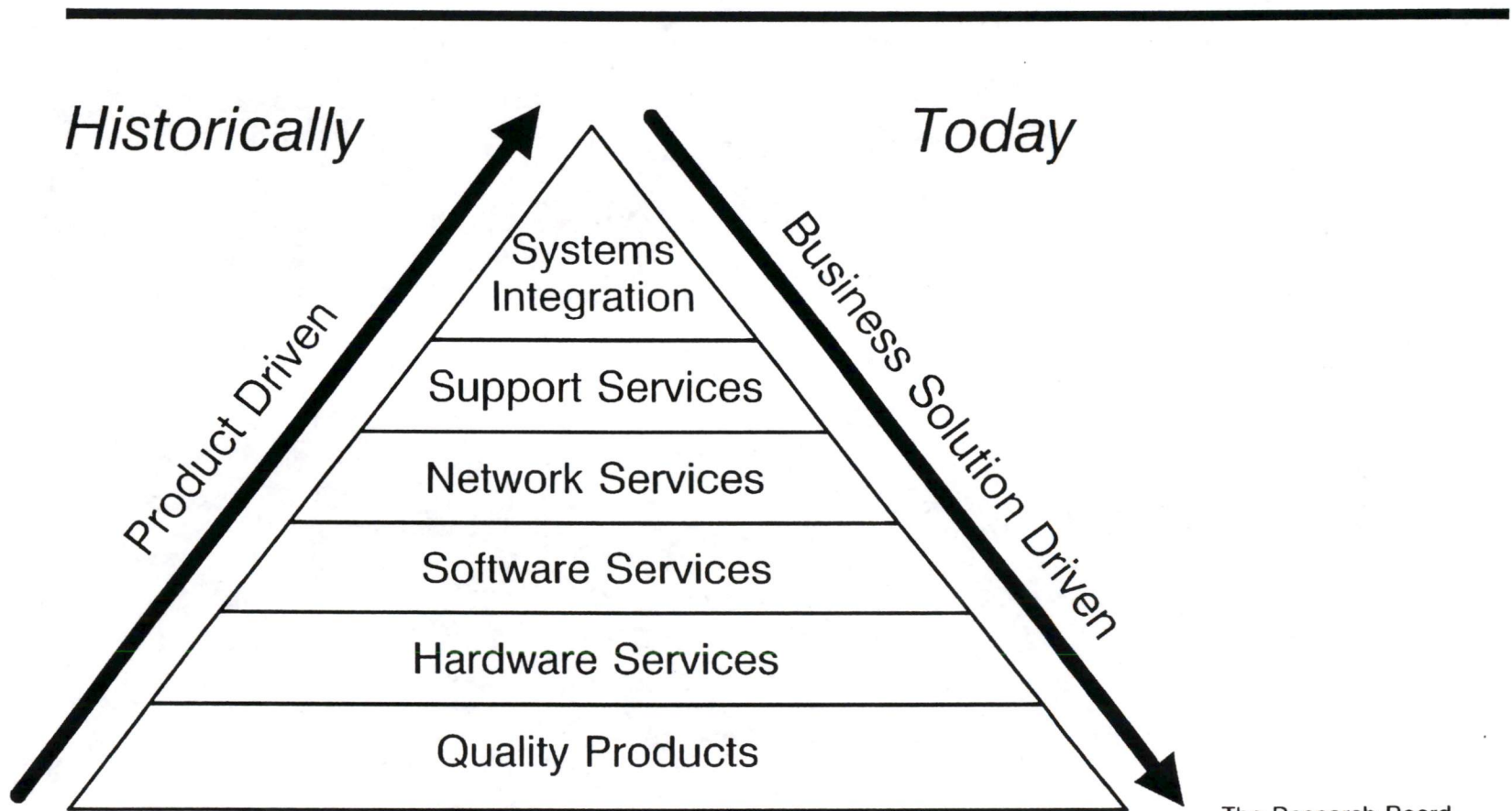


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Performance Leader In Open Networks

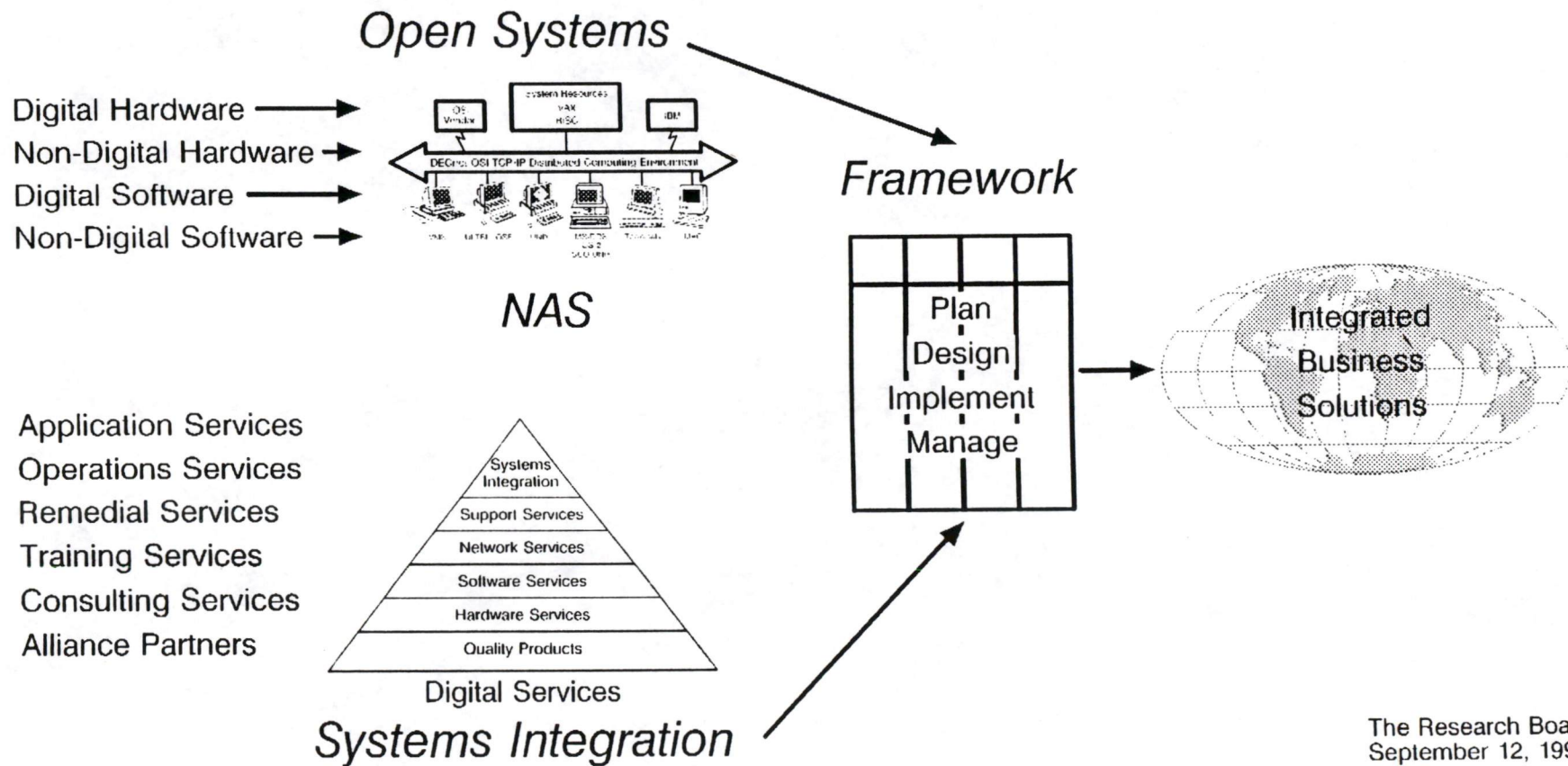


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Building On Open Systems



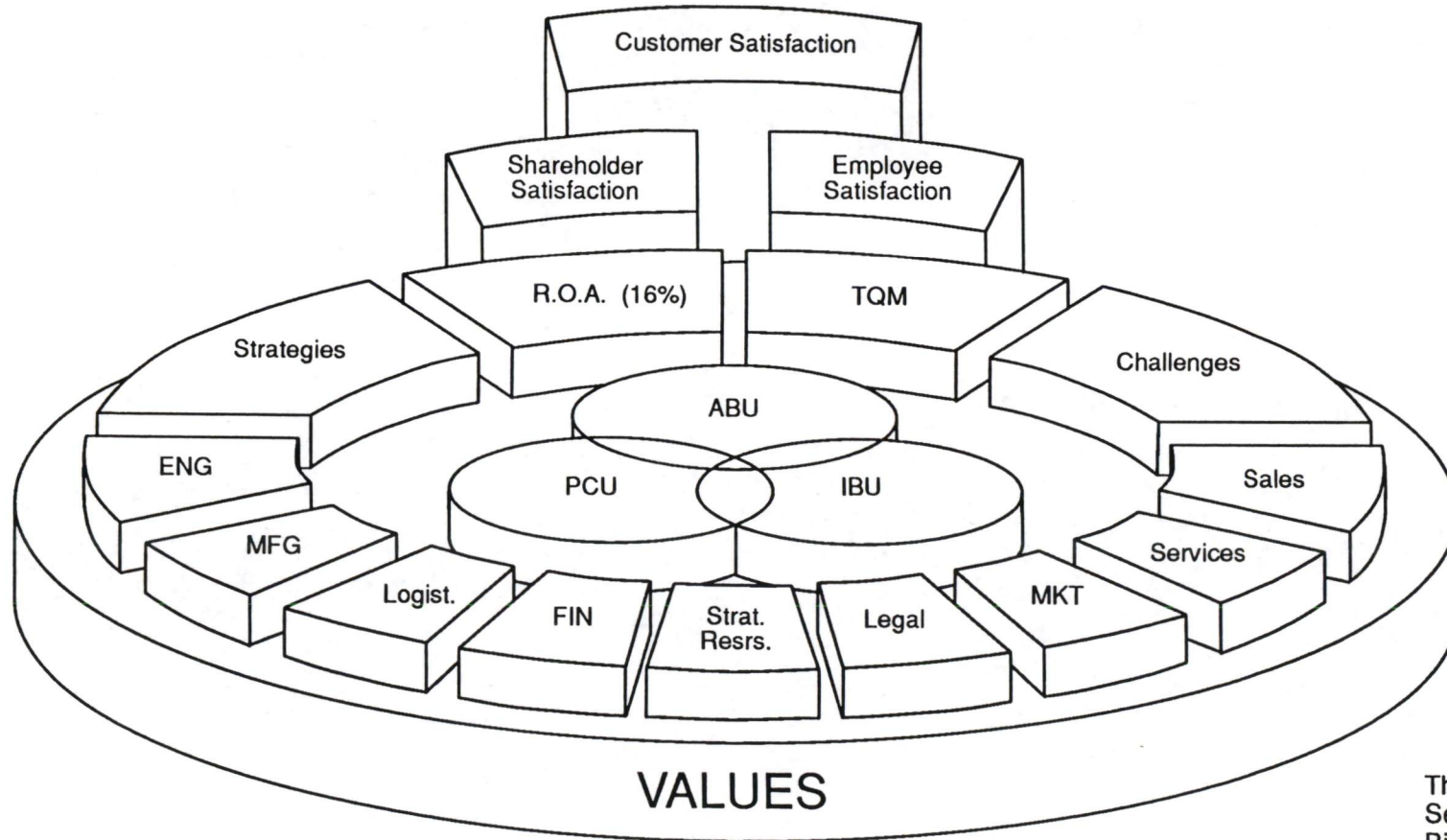
The Research Board
 September 12, 1991
 Bill Johnson

Increased Focus: Upstream Business Requirements

Plan	Design	Implement	Manage
Management Consulting	Information Architecture		Advisory Services
			Performance Tuning
	Applications Consulting		Start-Up Services
		Custom Products	Maintenance
	Technology Consulting		Operational Support
Vertical Market Expertise	Solutions Architecture		Customized Support
	Strategic Design		Security Services
		Physical Audit	Data Security
	IS Consulting		Training
		Network Services	
Digital Service Alliance Partners		Applications Review	
		Applications Architecture	
	Requirements Analysis		
	Design Analysis		

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The "New" Digital Big Picture



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The 4 DECs

Commodity

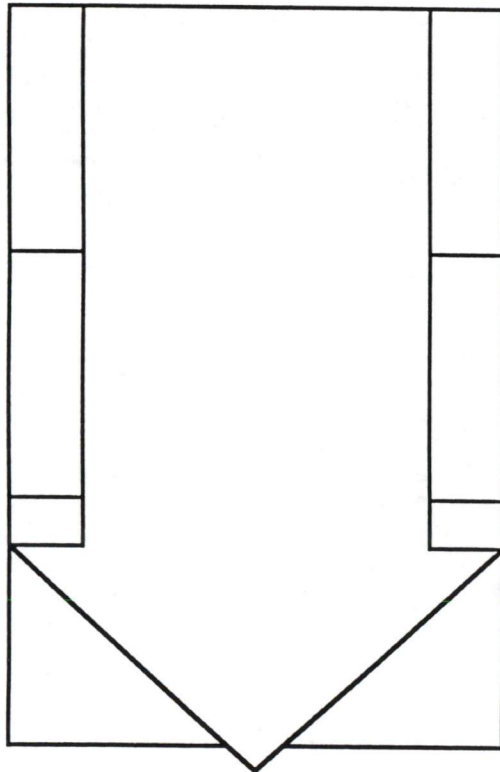
Solutions

Systems Integration

Services

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Bill Johnson

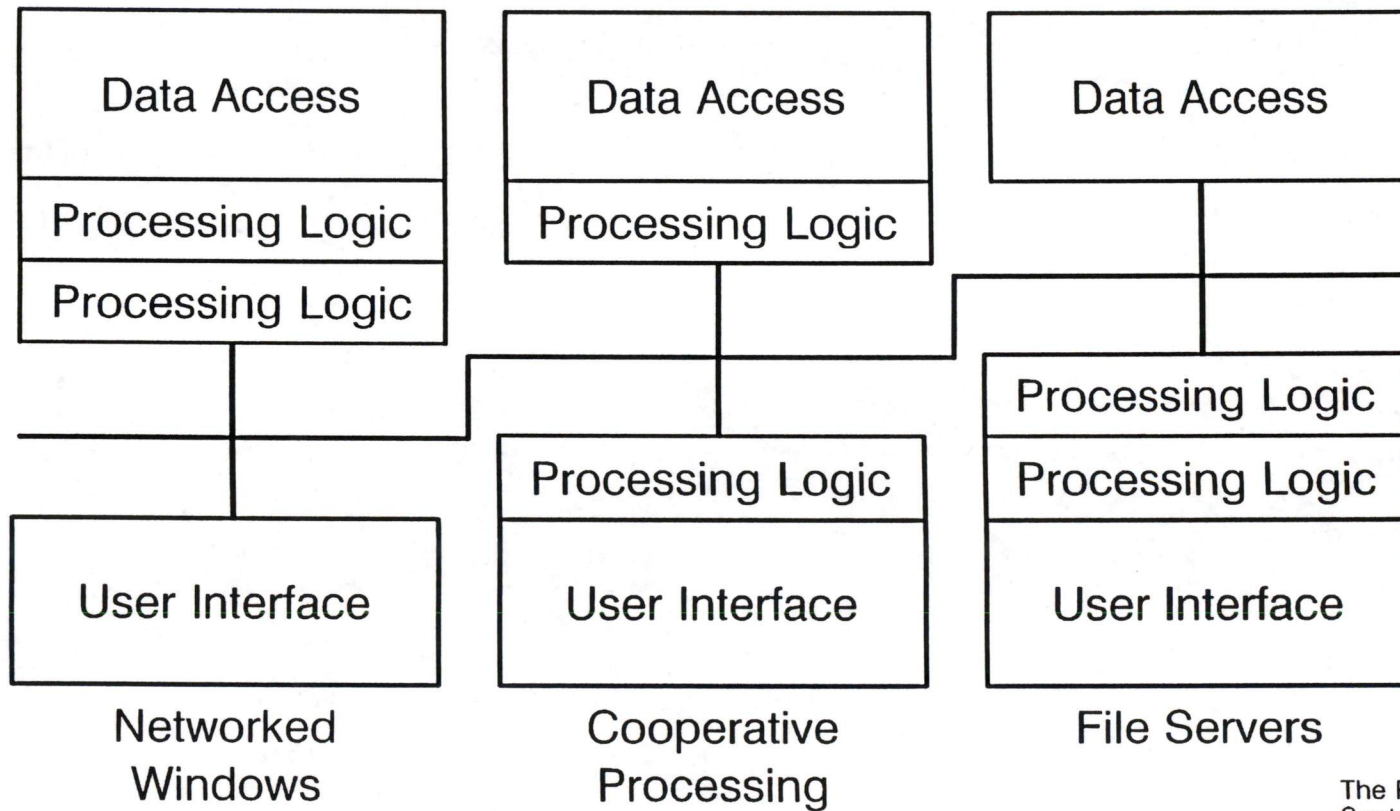
Investment Optimization



- Application stability by using standards
- System life is increased
- Training and support costs reduced
- Higher-level coding (API) of software reduces length/cost of software development
- Better return on investment

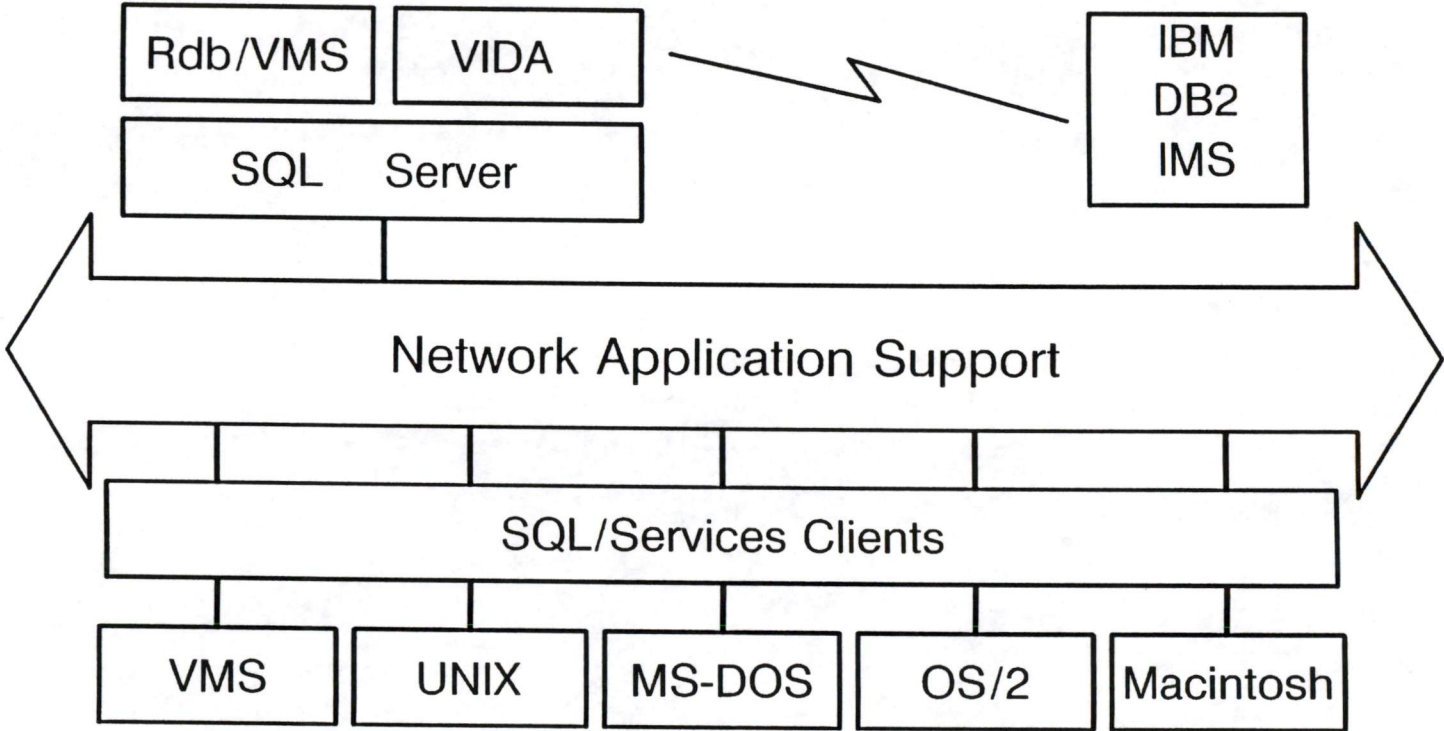
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September 12, 1991
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Networked Applications



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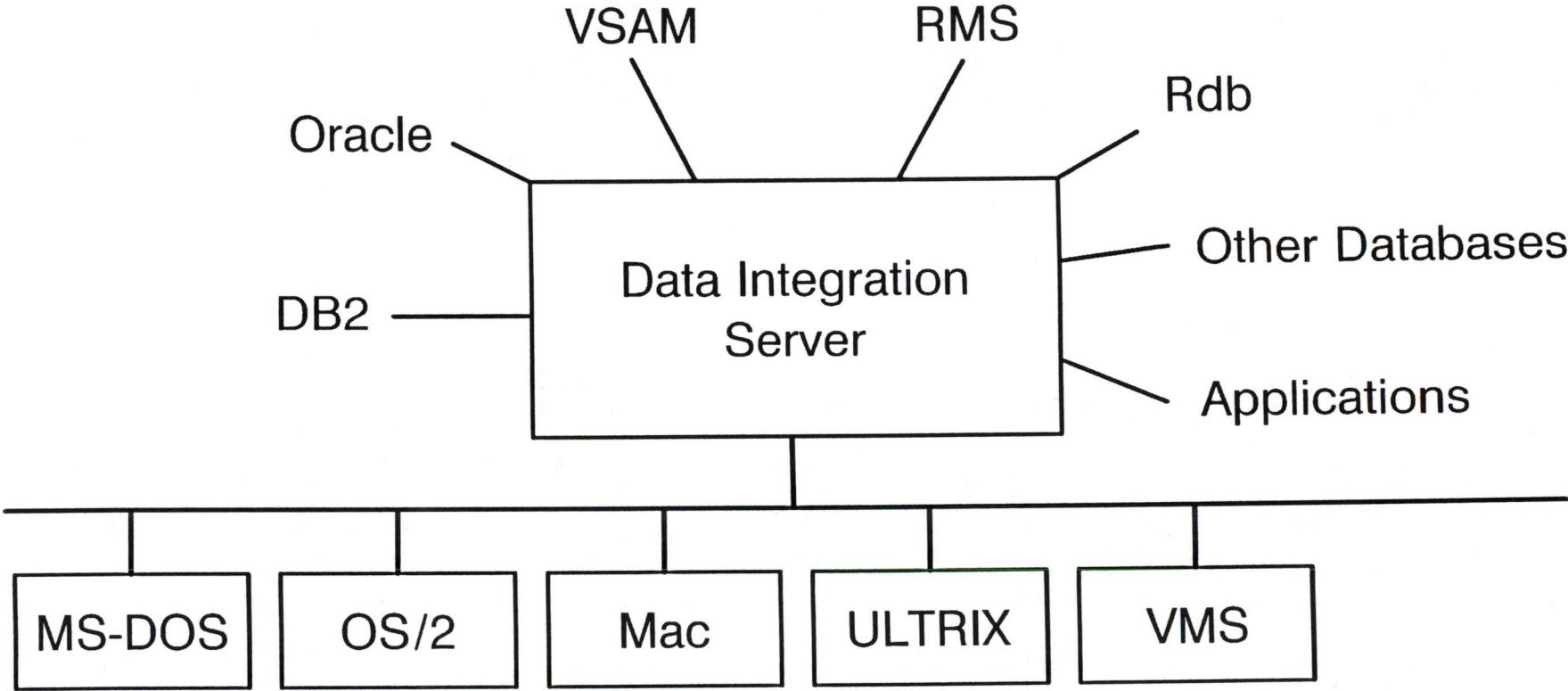
Interoperability



Common Access to Databases on Digital and IBM
Systems Using a Consistent User-Friendly Interface

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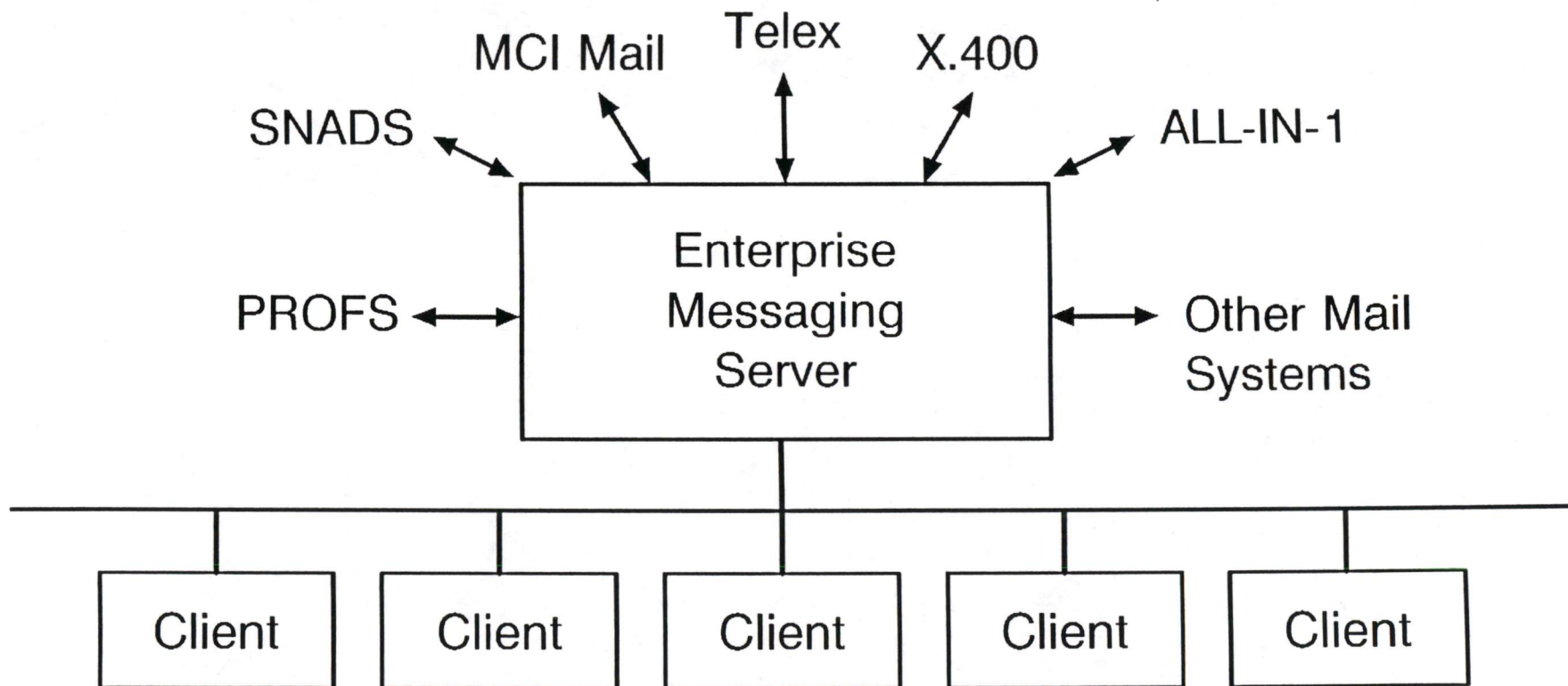
Data Integration



SQL Clients

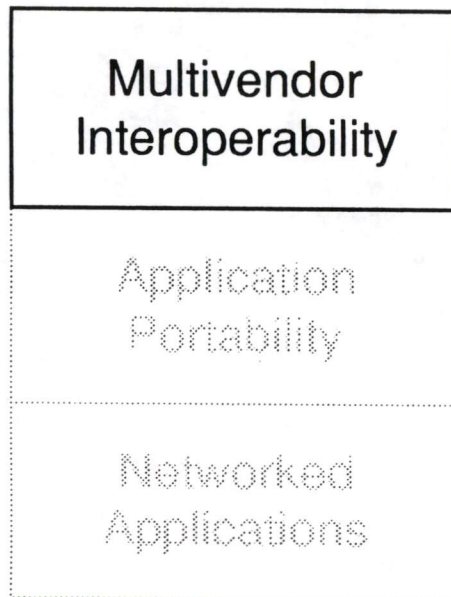
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Enterprise Messaging Server



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Bill Johnson

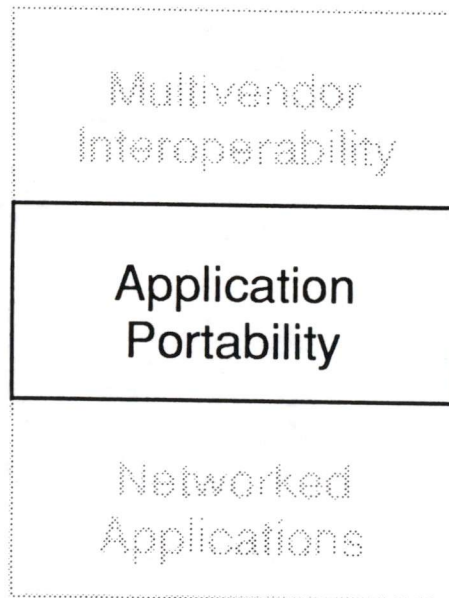
Vendor Independence



- Stable, published interfaces for starting and controlling applications
- Common data representation
- Guidelines and conventions
- Results:
 - Share data and applications across different platforms
 - Applications work together without modification
 - Mix and match systems
 - Easier to operate and manage

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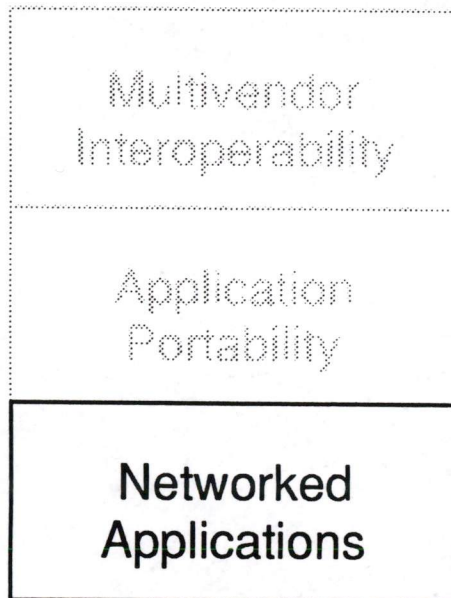
Vendor Independence



- Applications are highly portable across standards-compliant platforms
- Results:
 - More applications sooner on new platforms
 - Develop software once, run on many platforms
 - Lower costs for software development
 - Preserve skills
 - Fewer support issues
 - Leverage on price

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Vendor Independence

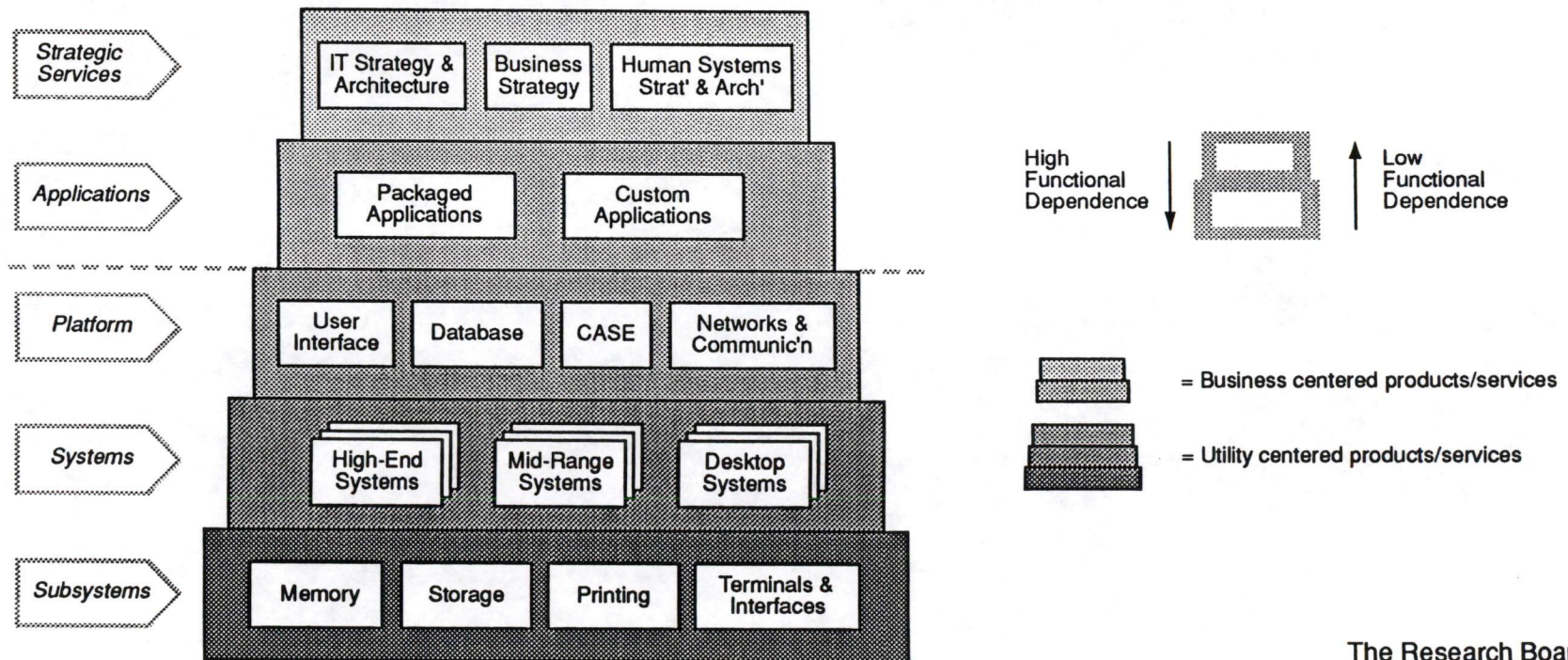


- Ability to partition an application
- Permits flexible distribution and, optionally, dynamic load balancing
- Results:
 - Enhanced user productivity
 - Platform optimization
 - Reduced cost of computing
 - Ability to adapt to dynamic business changes

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September 12, 1991
Bill Johnson

The IT Value-Added Model

Segmenting IT Into 5 Strategic Levels And 16 Building Blocks



The Research Board
September 12, 1991
Bill Johnson

THE RESEARCH BOARD

INCORPORATED

220 EAST 61st STREET · NEW YORK, N.Y. 10021 · (212) 486-9240

Handwritten: 9/24
TO: Bob Hughes
FBI &
ACTION.

cc Win
Tom # 2 really
interuently
BJ
9/24

To: Don's
PCT-
DP
Your thoughts
on 2nd paragraph

September 17, 1991

7

Dear B.J.:

Thanks another one thousand times for taking time from all your chores and travels to meet with the Associate Board last week. The RBers thought it important to clarify the Digital strategy with major customers regarding open systems. More important, the Board members concluded that you did a terrific job of defining the practicable limits of openness and transfer - much to their collective relief as long-time customers of a company they believed lost in a self blown fog. Until recently.

Also a strongly positive reaction to the new management system and its linkage of business revenues to account team size. The only fine-tuning might involve the customer's ability to suggest downsizing the account team or reconstituting its skill set even when purchase levels are high. The era of thinking that customers equate the number of vendor bodies with the amount of vendor service is over. As they themselves downsize, customers simply have fewer people to meet with vendors. Obvious, you say.

As you know better than we, these are difficult times when it often seems risky and thankless to push an unconventional sounding message. However conventional it would be if the rest of the computer industry were more truthful. Two observations: (1) Honesty is the brightest hallmark of Steady Grey in its strongest days. (2) Don't leave the message to the amateurs and flacks who may be hanging around Maynard these days. This is tough stuff. It must be said directly, preferably by someone with your grasp of the issues and confidence.

Anyway, it was great to see you. The session went very well despite our noisy questions. Good to see a good company doing well!

Sincerely,

Naomi and Ernie
Ernest M. von Simson
Naomi O. Seligman

RECEIVED

OCT 29 1991

ROBERT C. HUGHES

Mr. William R. Johnson, Jr.
Vice President, Corporate
Marketing Planning
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

RECEIVED

SEP 23 1991

BILL JOHNSON

Printed by Win Hindle

DIGITAL INTERNAL USE ONLY Document

I N T E R O F F I C E M E M O R A N D U M

Doc. No: 024231
Date: 19-Sep-1991 02:14pm EDT
From: Win Hindle
HINDLE.WIN
Dept: Administration
Tel No: 223-2338

TO: Remote Addressee

(ALTON RYDER @MKO)

BC: *Roger Rose*

Subject: THE RESEARCH BOARD VISIT 7/9

I am dedicated to writing a statement that describes our strategy and mission, because I think it is essential that our customers and employees understand our direction.

smv

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KO Visit *Said by fax*
The Research Board *Relevant to Com.*

d	i	g	i	t	a	l
---	---	---	---	---	---	---

INTEROFFICE MEMORANDUM

TO: Pier Carlo Falotti ✓
CC: Ann Jenkins

DATE: 19-Sep-1991
FROM: Win Hindle *WH ps.*
DEPT: Administration
EXT : 223-2338
LOC : MLO12-1/A53

SUBJECT: KEN OLSEN'S VISIT WITH THE EUROPEAN RESEARCH BOARD

Ken Olsen is planning to spend ¹⁴time in London with the European Research Board November 13. Attached is the list of European members.

Each account manager should send a very short briefing to Ken to alert him to issues.

smv
Attachment

THE RESEARCH BOARD

INCORPORATED

220 EAST 61st STREET · NEW YORK, N.Y. 10021 · (212) 486-9240

EUROPEAN MEMBERS

Heinz Prokop
Member of the Board
Allianz Versicherungs AG

Michael Behrens
Bereichsvorstand
Zentrale Informationsverarbeitung
Bertelsmann

John O. Watson
Director
Information Management
British Airways

Fabio Zappa
Vice President
Information Technology
Ciba-Geigy

Graham T. Gooding
Director - Systems Office
Ford of Europe Incorporated

Dr. Johann Friederichs
Direktor
Informatik und Kommunikation
Hoechst AG

Sijbren Kramer
General Manager
Information Systems & Automation
Hoogovens IJmuiden

Jean-Daniel Kahn
Directeur de l'Organisation
L'OREAL

John Sacher
Director
Marks & Spencer PLC

H.E. Lockhart
Chief Executive
U.K. Banking & Group Operations
Midland Bank PLC

Jean Claude Dispaux
Senior Vice President
Management Information
Systems and Logistics
Nestec Ltd.

Jean-Serge Bertoncini
Directeur de l'Informatique
Peugeot S.A.

Ulrich Kiel
Member of the Board
Grossversandhaus Quelle
Gustav Schickedanz KG

Louis-Noël Joly
Directeur Général Adjoint
Société Générale

Michael W. Johnson
Head of Information Technology
Unilever PLC

Jean-Marie Levau
Directeur du Département
de l'Informatique
Union des Assurances de Paris

Niklaus Meyer
Senior Vice President
Group Information Systems
Zurich Insurance Company

The Research B.

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I N T E R O F F I C E M E M O R A N D U M

Doc. No: 024296
Date: 20-Sep-1991 04:35pm EDT
From: Win Hindle
HINDLE.WIN
Dept: Administration
Tel No: 223-2338

TO: Bob Hughes

(HUGHES.BOB)

BC: Roger

Subject: ACCOUNT TEAM COMPOSITION

I talked today with Naomi Seligman of The Research Board about their large clients' view of Digital. As background, Naomi and Ernie von Simson visited here several months ago and left feeling good about our product strategy. BJ recently visited one of their Board meetings to present the company strategy, and it went very well. Ken Olsen will go to the European Research Board meeting in November. Naomi believes we are making good progress in helping our major accounts understand our strategy.

In my conversation with Naomi, she made a very interesting observation about how large accounts would like to help us to shape our account teams. She claims that they know we are downsizing (they are downsizing, too, and are sympathetic). They also believe they can get by with a smaller number of Digital sales and support people, but would like to shape the skill set of the people on the account (sales vs. support). What this means to me is that our large accounts want to work more closely with us to shape our business together.

We need to ask for and listen to this help.

smv

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INCORPORATED

220 EAST 61st STREET · NEW YORK, N.Y. 10021 · (212) 486-9240

✓ Wier -
F/I

(I gave the
original letter
to ann.)

Rec'd 9/26
WRH

September 24, 1991

Dear Ken:

We are honored and delighted that you will be joining the European Research Board at its meeting in London on the morning of November 14th. In profile and position, these RB members are very much like the core leadership in the U.S., with whom you visited several years ago. All are Information Systems Executives in huge corporations; almost all are also members of their main corporate board. I think you know Louis-Noël Joly of Société Générale, Graham Gooding of Ford Europe, Sijbren Kramer of Hoogovens, Dr. Johann Friederichs of Hoechst, and Mike Johnson of Unilever (who is hosting the sessions). And in case you asked, the command of English in the group is excellent.

For the past two meetings, we have been discussing the restructuring of the computer industry and its major participants. Including the miasma about open systems "versus" proprietary; the importance (or not) of RISC, and especially where all this leaves the group's three remaining strategic vendors - most especially Digital. As you know, Ernie and I were very uncertain about the last point before our visit to Maynard last summer. The e-mail message we wrote at the time attracted considerable attention, among the Europeans as well as the North Americans. So this is a particularly auspicious moment for your visit.

Our usual format is to ask our guest for formal remarks for about forty minutes, followed by an equal amount of time for questions and an informal exchange. We've scheduled your remarks from 11:30 a.m. to 1:00 p.m., which should best accommodate your plans. And perhaps you will also be able to join the members for the usual glorious European lunch - if your schedule permits. Our sessions are being held at Unilever House (New Bridge Street, Blackfriars, London) in the Guinea Conference Center. The meeting room will be set like a Boardroom, with one large table which is the most comfortable arrangement for discussion purposes. But the format and timing are entirely yours.

If you wish, hotel accommodations will be reserved for November 13th at Dukes (St. James's Place); just have your office let us know. And please have your office call me or Sarah Piper, our Vice President for Client Services, if there are questions, comments or help required with logistical details.

All of the members really look forward to your remarks. It is extraordinarily timely. In the interim, Ernie and I would like to repeat our thanks to you, Win and all your colleagues for both extraordinary patience and hospitality during our visit in July.

Sincerely,

Naomi O. Seligman

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Printed by Win Hindle

I N T E R O F F I C E M E M O R A N D U M

Doc. No: 024390
Date: 25-Sep-1991 04:06pm EDT
From: NORM ERWIN @RCO
ERWIN.NORM AT A1 at USRCV1 at
Dept: KODAK CORPORATE ACCOUNTS
Tel No: 252-7037

SHR

TO: WIN HINDLE @CORE

Subject: RESEARCH BOARD IMPRESSIONS

WIN,

attached

I SAW YOUR NOTE RE: NAOMI AND ERNIE'S TOUGH MESSAGES. RE: #1, CONDUCTING AN IDENTICAL SESSION FOR OUR CUSTOMERS - I WOULD LIKE TO MAKE SURE THAT HAPPENS FOR KODAK.

DO YOU REMEMBER WHO SET IT UP FOR THE RESEARCH BOARD?

REGARDS,
NORM ERWIN

We did!
Call + Tell Norm
that - I don't
think Win
Needs to see
This unless
he comes
back w/
more questions.

Ps -
Called Nancy
in Norm's
office

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I N T E R O F F I C E M E M O R A N D U M

Date: 27-Sep-1991 04:31pm EDT
From: Bob Hughes
HUGHES.BOB AT A1 at CORA @ CORE
Dept: U.S. Sales
Tel No: 264-SELL

TO: WIN HINDLE @MLO

CC: CHRIS SIEBERT @MKO

CC: PETER ROBOHM @MKO

CC: DON ZERESKI @MRO

Subject: RE ACCOUNT TEAM COMPOSITION

This is terrific support. I would like to forward this to the Account Vice Presidents and ask them to make this the subject of their executive calls.

Is Naomi suggesting a way of expediting this process for the Research Board members?

rch

/jml

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TRB

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I N T E R O F F I C E M E M O R A N D U M

Doc. No: 024511
Date: 01-Oct-1991 11:31am EDT
From: Win Hindle
HINDLE.WIN
Dept: Administration
Tel No: 223-2338

TO: Bob Hughes

(HUGHES.BOB)

CC: Don Zereski

(ZERESKI.DONALD)

Re: Rogov Rase
Subject: ACCOUNT TEAM COMPOSITION

I support the idea of having AVPs discuss downsizing the account teams with accounts during their executive calls. However, it should not be presented as a Research Board idea--it should be a Digital idea. Naomi Seligman did not suggest a particular process to approach this issue. We should use our own judgment.

ps

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Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754-2571

digital

October 2, 1991

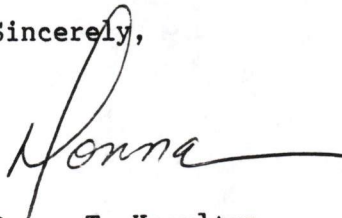
Ms. Sarah Piper
Vice President for Client Services
The Research Board
220 East 61st Street
New York, NY 10021

Dear Sarah:

Enclosed is Mr. Olsen's biography in preparation for his participation at the European Research Board meeting in London on the morning of November 14.

If you need any further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Donna". The signature is written in black ink and is positioned above the typed name.

Donna T. Knowlton
Senior Executive Secretary to
Winston R. Hindle, Jr.

ps

BIOGRAPHICAL INFORMATION



KENNETH H. OLSEN

President

KENNETH H. OLSEN, 65, founded Digital Equipment Corporation in 1957 and has served as its president since that time.

Under his direction, Digital has grown from three employees in 8,500 square feet of leased space in a corner of an old woolen mill to become the world's leading manufacturer of network computer systems and associated peripheral equipment and the leader in systems integration with its networks, communications and software products. Today, Digital has 121,100 employees and 44 million square feet of space in over 1,200 locations throughout the world.

Prior to founding Digital, Olsen was on the staff of the Massachusetts Institute of Technology's Digital Computer Laboratory for seven years. His activities there included serving as a leader of the section of MIT Lincoln Laboratory that designed and built the MTC computer used in the SAGE Air Defense Computer design program, and supervised the building of the high performance transistorized digital computers, the TX-0 and TX-2, which set the standard of comparison for transistor circuit performance.

A native of Stratford, Connecticut, Olsen earned his bachelor of science and master of science degrees in Electrical Engineering from Massachusetts Institute of Technology.

Biographical Information
KENNETH H. OLSEN
Page 2

He is a member of the board of directors of Polaroid Corporation and Ford Motor Company; the Corporation of MIT, Cambridge, MA.; board of trustees, Gordon College, Wenham, MA.; and of the Corporation of Wentworth Institute, Boston, MA.

Olsen is also a member of the Corporation and advisory vice president of the Joslin Diabetes Foundation, Inc., Boston, MA.; a member of the Corporation of the Museum of Science, Boston, MA.; and a deacon of the Park Street Church, Boston, MA.

He has served on the Computer Science and Engineering Board of the National Academy of Sciences, Washington, D.C. and the President's Science Advisory Committee.

A World War II U.S. Navy veteran, Olsen is a fellow of the Institute of Electrical and Electronics Engineers, Inc., and the American Academy of Arts and Sciences, Boston, MA.; and is a member of the National Academy of Engineering.

He was named "Young Electrical Engineer of the Year" in 1960 by Eta Kappa Nu, the electrical engineering honorary fraternity and "Businessman of the Year" in 1970 by Bay State Business World. Olsen was designated "Executive of the Year" in 1970 by the Society for the Advancement of Management, Boston Chapter, and was the first person to receive the "President's Award" presented by the New England Chapter of the Electronic Representatives Association. He also received the "New Englander of the Year"

Biographical Information
KENNETH H. OLSEN
Page 3

award from the New England Council in 1977; and in 1978 Olsen was elected to the "Entrepreneurial Hall of Fame" of Babson College and received the Business/Statesman Award from Columbia Business School Club of Boston. In 1980 he was the recipient of the Vermilye Medal from Franklin Institute. He is also the 1986 recipient of the New England Award from the Engineering Societies of New England; the first IEEE Engineering Leadership Award; the first IEEE Computer Society Entrepreneur Award; and the 1986 Yale School of Management Award for Entrepreneurial Excellence. In 1988, Olsen received the John Ericsson Award from the American Society of Swedish Engineers, and was named "American Manager of the Year" by the National Management Association.

#

June 1991

*Background
attached.*

I N T E R O F F I C E M E M O R A N D U M

Doc No.: 003277

Date: 15-Oct-1991 04:17am EDT
From: Pier Carlo FALOTTI @GEO
FALOTTI AT AMISA1 @EHQMTS @GEO
Dept: EUROPE
Tel No: 821-4961/Public:(41)22 7094961

TO: WIN HINDLE @CORE

CC: Donna KNOWLTON @MLO

CC: Daniele CHERBULIEZ @GEO

(CHERBULIEZ.DANIELE AT AMISA1 @EHQMTS

Subject: Re: KO at Research Board 14 NOV (Acct Info Request)

On November 14, Ken Olsen will be speaking at the RESEARCH BOARD meeting in London, from 11:30 - 1pm.

I will be accompanying Ken.

Therefore, I do not think it is necessary to ask each Account mgr of the companies present at the Research Board to send a short briefing on issues to Ken (as suggested by your memo of 19 September 1991). I will be able to handle questions.

Regards.
PCF/mjh

Win,

do you agree w/ this approach? Y/N-

To: PCF

Does Naomi Seligman know that you will accompany Ken to the Research Board Meeting on Nov. 14? She guards the guest list carefully so we should be sure you are welcome.

DIGITAL INTERNAL USE ONLY Document

I N T E R O F F I C E M E M O R A N D U M

Date: 15-Oct-1991 04:17am EDT
From: Pier Carlo FALOTTI @GEO
FALOTTI AT AMISA1 @EHQMTS @GEO
Dept: EUROPE
Tel No: 821-4961/Public:(41)22 7094961

TO: WIN HINDLE @CORE

CC: Donna KNOWLTON @MLO

CC: Daniele CHERBULIEZ @GEO
(@GEO)

(CHERBULIEZ.DANIELE AT AMISA1 @EHQMTS

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Regards.
PCF/mjh

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I N T E R O F F I C E M E M O R A N D U M

Date: 16-Oct-1991 01:11pm EST
From: Win Hindle
HINDLE.WIN AT A1 at CORA @ COR
Dept: Administration
Tel No: 223-2338

E

TO: PIER CARLO FALOTTI @GEO

Subject: RE: KO AT THE RESEARCH BOARD 14 NOV. (ACCT INFO REQUEST)

Does Naomi Seligman know that you will accompany Ken to The Research Board meeting on November 14? She guards the guest list carefully, so we should be sure you are welcome.

smv

Win to see PCF

Printed by Win Hindle

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I N T E R O F F I C E M E M O R A N D U M

Doc. No: 024871
Date: 16-Oct-1991 02:11pm EDT
From: Win Hindle
HINDLE.WIN
Dept: Administration
Tel No: 223-2338

TO: Remote Addressee

(PIER CARLO FALOTTI @GEO)

Subject: RE: KO AT THE RESEARCH BOARD 14 NOV. (ACCT INFO REQUEST)

Does Naomi Seligman know that you will accompany Ken to The Research Board meeting on November 14? She guards the guest list carefully, so we should be sure you are welcome.

smv

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Copy



Unilever

Call Vamm Schizman
PCF attend
No Natty Gritty questions

RECEIVED
OCT 22 1991
Winston Hill

Unilever House Blackfriars London EC4P 4BQ
Telephone 071-822 5252 Telex 28395 Facsimile 071-822 5951/5898

Mr W R Hindle
Digital Equipment Corporation
146 Main Street
ML012-1/A50
Maynard, MA 01754
U S A

direct line 071-822 5158
facsimile 071-822 5996
ref. \wmj577

16 October 1991

Dear Win

Thank you for the good wishes contained in your letter of 10 October and confirm that I am making a rapid recovery. Please forgive me for asking for further clarification on the issue of VMS compliance to OSF/AES. The attachment to your letter defines what part of the OSF/AES interfaces will be included in VMS but I think it would be helpful to understand also what parts of OSF/AES including extensions will not be included in VMS. I notice, for example, that you did not mention XWindows/Motif which surprises and disappoints me.

The importance of this issue has increased as Ken Olsen will be talking to the European Research Board in November when according to Naomi, "He stands ready to answer our questions on Digital's two-pronged strategy for Open Systems with both proprietary and standard operating systems". Unilever has the honour of hosting this meeting and Iain Anderson is hoping that he will have the opportunity to meet Ken again.

I hope that the need for this level of detail is not frustrating to you but I do believe it will significantly help our understanding of where Unilever should be going in the future.

Yours sincerely

W M Johnson
Head of Information Technology

[Handwritten signature]

Printed by Win Hindle

I N T E R O F F I C E M E M O R A N D U M

Doc. No: 025163
Date: 01-Nov-1991 07:08am EST
From: Pier Carlo FALOTTI @GEO
FALOTTI AT AMISA1 @EHQMTS @GEO
Dept: EUROPE
Tel No: 821-4961/Public:(41)22 7094961

TO: WIN HINDLE @CORE

Subject: UA/ CONTACT RESEARCH BOARD re KO's visit Nov 14

Win,

Please, given your contact with Naomi and (I hope) the good contact I have with her, ask her if it is a problem.

I want (need) to listen to what Ken will say to be able to follow-up and inform the account managers for any "repercussions"

Thanks & regards
PCF/dc

PCF is responding to your question attached. apparently he is asking you to check w/ Naomi if it is a problem that he attend the European research Board with Ken.

Will you place a call to Naomi? Y-N-

~~DFG#~~
file TRB

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I N T E R O F F I C E M E M O R A N D U M

Doc. No: 025241
Date: 05-Nov-1991 05:52pm EST
From: Win Hindle
HINDLE.WIN
Dept: Administration
Tel No: 223-2338

TO: Remote Addressee (PIER CARLO FALOTTI @GEO)

CC: Ken Olsen (OLSEN.KEN)

Subject: RESEARCH BOARD VISIT BY KEN OLSEN

I spoke with Naomi Seligman about Ken's visit to The Research Board on November 14 in London. She is pleased that you will accompany him. She and her colleague, Ernie von Simson, are as concerned as we are that Mike Johnson of Unilever might use the occasion to start a VMS vs. UNIX debate among Research Board members. They have done several things to prevent this:

1. For the 30 minutes prior to Ken's appearance, they will present Digital's strategy using BJ's presentation to a Research Board meeting last month.
2. They have invited Ian Anderson, Mike Johnson's boss, to attend the meeting, which should keep Mike on his best behavior.
3. Naomi is meeting privately with Mike Johnson prior to this meeting to lay down the ground rules for Ken's visit, i.e., no "debates."

I believe, with all of these precautions, the visit will be very positive and Ken can discuss Digital's strategy without being drawn into an argument about VMS vs. UNIX. Naomi is committed to managing this discussion.

ps

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DIGITAL EQUIPMENT CORPORATION

Winston R. Hindle, Jr.
Senior Vice President

Maynard, Massachusetts
01754-2571

*2 separate
letters
sent
11/8/90*

November 7, 1990

Ms. Naomi O. Seligman
Mr. Ernest M. von Simson
The Research Board Inc.
220 East 61st Street
New York, NY 10021

Dear Naomi and Ernie:

We appreciate your thorough study of where Digital stands today in the eyes of your members. While your observations were not easy for us to hear, your analysis and report are invaluable to us.

Your suggestions for fixing our problems were useful. You are both very insightful. Thank you for your concern and obvious desire to help.

Sincerely,

smv
Copy to K. Olsen
J. Smith

Printed by Win Hindle

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I N T E R O F F I C E M E M O R A N D U M

Doc. No: 025297
Date: 08-Nov-1991 02:27pm EST
From: Win Hindle
HINDLE.WIN
Dept: Administration
Tel No: 223-2338

TO: Remote Addressee (PIER CARLO FALOTTI @GEO)

CC: Ken Olsen (OLSEN.KEN)

Subject: RESEARCH BOARD VISIT--NOVEMBER 14, 1991

I talked again today with Naomi Seligman about The Research Board meeting in London where Ken will be a guest. Mike Johnson (Unilever) has been confined to bed because of a bad back. Therefore, he will most likely not be at The Research Board meeting. Ian Anderson (Mike's boss who has met with Ken several times) will participate in the meeting as the Unilever representative. This means it is less likely that there will be UNIX/VMS debate at the meeting.

Ken will be the last speaker and luncheon guest on the program. Naomi specifically asked that you arrive a little early (given the unpredictability of London traffic). There is no flexibility at the end of the session (after lunch), so it is important to start on time.

ps

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THE RESEARCH BOARD

INCORPORATED

220 EAST 61st STREET · NEW YORK, N.Y. 10021 · (212) 486-9240

Copy with
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NOV 21 1991

Kenneth H. Olsen

November 18, 1991

Dear Ken:

We all want to thank you again for joining our colleagues in London last week. Without doubt, your measured and thoughtful exposition of Digital's product and business directions met everyone's expectations and more. Quite clearly, the strategy continues the proper emphasis on VMS as a viable proprietary operating system (particularly with a potent VAX follow-on independent of consortia or the Japanese). And equally reassuring, Digital has an unequivocal commitment to a flavor of open systems where it will surely take a leadership position. Certainly, this is a period of wrenching transition all across the computer industry, and no one is managing that transition more brilliantly.

Substance is critical, but only when supported by conviction and clarity. You excelled in all three, to the delight of your many admirers, customers, and new prospects in the room. And to ours as well. We have long valued Digital's strengths - were particularly glad to see them all so plainly in view and on track again. Our friends were fascinated by your many important insights, while we especially appreciated your taking time from other serious pursuits for the European RB meeting. Thanks again for a most impressive exposition.

Sincerely,

Naomi and Ernest

Naomi O. Seligman
Ernest M. von Simson

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
Main Street
Maynard, Massachusetts 01754

Copy
PCF
BJ
file-RB

Done 11/26/91

From: Ken Olsen

Copy Proc Card
Ken H. Olsen

19 NOV. '91 10:16 QUELLE VORST. LOGISTIK+DV NBG.

RECEIVED

NOV 19 1991

Kenneth H. Olsen

Ulrich Kiel

ULRICH KIEL
MITGLIED DES VORSTANDS

FAX

001-508-49 38 154

Mr.
Kenneth Olsen
President
Digital Equipment Corp.
146, Main Street

Maynard, MA 01754-2571
USA

November 18, 1991

Dear Mr. Olsen,

referring to our lunch-conversation with the Research Board in London on November 14th, I would like to thank you again for your interest in giving me advice on behalf of our big mail-order-factory, which is under construction in Leipzig.

I am eagerly looking forward to contact the person you will assign to assist us in designing our computer/workstation network within this computer-integrated plant.

Many thanks in advance.

Sincerely Yours

Ulrich Kiel

PS: Right you are: Never crown a prince as long as you are strong as king

To: Bob Hughes - cc: Don Zereshki

RECEIVED

We do not get Research Board Reports (except when they comment on Digital.) CIO's pay clearly for

DEC 04 1991

Winston Hindle

d i g i t a l

INTEROFFICE MEMORANDUM

the information. What Research Board written materials did you refer to in your note to Don.?

TO: DON ZERESKI

DATE: 21 November 1991

cc: Win Hindle

FROM: Robert C. Hughes

Bob es

DEPT: U.S. Sales

DTN: 264-SELL

LOC: MKO2-2/A14

Background attached

SUBJECT: RESEARCH BOARD REPORT

Don, my apologies for the delay in responding. Back when this report was being finalized, Win called me and we talked about these conclusions.

Rather than engage in a discussion with our customers to review our account team size, or even a limited effort just with Research Board members, Win thought it advisable just to let the AVPs know of the Research Board's concerns.

I did that in a memo in September. I asked the AVPs to be conscious of these findings and to engage customers in a dialogue of this sort if and when it was appropriate.

I'd love to find a way to get some of the Research Board written materials into the hands of the AVPs. The Research Board has a lot to say; they say it uniquely, and it would be a helpful insight for the AVPs. Is there any way that you know of where we can share some of this material?

/cs
Attachment

DIGITAL INTERNAL USE ONLY Document

I N T E R O F F I C E M E M O R A N D U M

Date: 12-Dec-1991 03:33pm EST
From: Win Hindle
HINDLE.WIN AT A1 at CORA @ COR
Dept: Administration
Tel No: 223-2338

E

TO: Bob Hughes

(HUGHES.BOB AT A1 at CORA @ CORE)

CC: Don Zereski

(ZERESKI.DONALD AT A1 at CORA @ CORE)

Subject: RESEARCH BOARD REPORT

We do not get Research Board Reports (except when they comment on Digital.) CIOs pay dearly for the information. What Research Board written materials did you refer to in your memo to Don dated November 21?

smv

DIGITAL INTERNAL USE ONLY Document

Research Board

Printed by Win Hindle

DIGITAL INTERNAL USE ONLY Document

I N T E R O F F I C E M E M O R A N D U M

Doc. No: 026046
Date: 23-Dec-1991 04:00pm EST
From: Bob Hughes
HUGHES.BOB AT A1 at CORA @ CORE
Dept: U.S. Sales
Tel No: 264-SELL

TO: WIN HINDLE @MLO

CC: DON ZERESKI @MRO

Subject: RE RESEARCH BOARD REPORT

It was a presumption on my part (based on previous experience)
that there was a written report.

rch

/jml

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I N T E R O F F I C E M E M O R A N D U M

Date: 26-Feb-1992 01:29am EST
From: SOOZIN WHITE
WHITE.SOOZIN AT A1 at DPD03 at
Dept: CORPORATE ACCOUNTS
Tel No: DTN 486-6546

DPD

TO: win hindle @core

Subject: Research Board/Honeywell

Dear Win,

Nick Simonds, CIO Honeywell, will be attending the forthcoming Research Board meeting. He will be seeking input from Naomi on our Alpha, Open Products, and Open Strategies.

Have we updated the Board on these offerings? Is Naomi giving us positive press? Is anyone from Digital attending this meeting? If so, would you please give me their name. I would like to assure that they take a few moments to chat with Nick.

Thank you in advance for your assistance.

Appreciatively,

Soozin

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I N T E R O F F I C E M E M O R A N D U M

Doc. No: 027162
Date: 27-Feb-1992 02:38pm EST
From: Win Hindle
HINDLE.WIN
Dept: Administration
Tel No: 223-2338

TO: Remote Addressee

(SOOZIN WHITE @DLO)

Subject: THE RESEARCH BOARD/HONEYWELL

Digital is not a Research Board member--they do not accept any members from the information industry. Last I checked, Naomi was giving us very positive reviews.

smv

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Call Naomi Seligman

26-Mar-1992 Thu 4 p.m.

Win,

Naomi Seligman called. She will be in her office for the rest of this afternoon, or you may return her call tomorrow. She will be in Europe next week.

I advised that I thought you would be returning to the office within the next 45 minutes and would be able to return to her call then.

Donna

Update 4:45 pm

I advised Naomi's office that you are running late from the Board meeting.

Naomi will be in her office until 6 pm tonight. Otherwise, you may call her tomorrow Am.

df

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I N T E R O F F I C E M E M O R A N D U M

Doc. No: 027738
Date: 31-Mar-1992 01:48pm EST
From: Win Hindle
HINDLE.WIN
Dept: Administration
Tel No: 223-2338

TO: Ken Olsen (OLSEN.KEN)
TO: Jack Smith (SMITH.JACK)
TO: Bill Johnson (JOHNSON.BILL)

Subject: THE RESEARCH BOARD

I received a call from Naomi Seligman of The Research Board alerting us to a customer who needs special attention. She also alerted us that in early March of 1993, The Research Board has asked for a study of how "restructuring" is affecting their major suppliers. Thus, they want to do another "in-depth" review (several days) of Digital next fall for presentation to their members.

The meeting, where the results of their in-depth review are reported, will be either March 3-4, 1993, or March 10-11, 1993. (She will let me know soon which date.) They will invite Ken, John Akers, and John Young to attend separately to give talks to their members. The location will be Santa Barbara, California, at ARCO's facility there. I said Ken would probably like to attend if his schedule permits.

dab

DIGITAL INTERNAL USE ONLY Document

R.B. March - 1993 -

Speakers - Ken, Ahn, Young -

What are the "majors" doing in re-structuring their org. -

at ARCO March 10, 11 or ~~17, 18~~ 3, 4
Santa Barbara -

Printed by Win Hindle

I N T E R O F F I C E M E M O R A N D U M

Doc. No: 027894
Date: 07-Apr-1992 11:15am EDT
From: THURK
THURK@DELNI@MRGATE@LKGMTS@LKG
Dept:
Tel No:

TO: win hindle@MLO

Subject: FYI/Catherine Loup/Partner Research Group

VMSmail To information: MTSS::"mlo::win hindle",MILPND::STRECKER,J_ADAMS,SNKERZ:
:STONE,BLUMON::CROSBY,A_CLAXTON

VMSmail CC information: THURK

Sender's personal name: Mike Thurk, LKG2-2/Q11, Time to Market is the Key

April 7, 1992

Catherine Loup
V.P. of Research
Partner Research Group
253 E. 61st. Street
N.Y., NY 10021

The Research Board

Dear Ms. Loup,

As follow-up to our telephone call, I believe the following people are the best people in Digital to discuss multi-vendor networking. As your research continues over the next month please feel free to call on me for any additional help you might require.

John Adams, V.P. Open Network Systems
David Stone, V.P. New Software Group
Dick Crosby, Group Manager, Network and System Management.
Allen Claxton, Group Manager, Corporate Backbone Networks

As I am sure you are aware, John Rose has resigned from Digital and when his replacement is named, that person should be added to the list to discuss PC Instrumentation and Pathworks.

I hope this is helpful.

Sincerely,

Mike Thurk
V.P. Networks and Communications

CC:: Win Hindle
Bill Strecker
John Adams
David Stone
Dick Crosby
Allen Claxton

Miscellaneous

To: Mike Thurk -
Thanks for helping with The Research Board. If you could assist
her in scheduling a visit, that would be useful. As you know, we
attempt to assist The Research Board in any way we can.

Printed by Win Hindle

I N T E R O F F I C E M E M O R A N D U M

Doc. No: 027985
Date: 10-Apr-1992 02:23pm EDT
From: THURK
THURK@DELNI@MRGATE@LKGMTS@LKG
Dept:
Tel No:

TO: win hindle@MLO

Subject: Background on ^{The} Research Board Request

VMSmail To information: MTS\$::"mlo::win hindle"

VMSmail CC information: THURK

Sender's personal name: Mike Thurk, LKG2-2/Q11, Time to Market is the Key

Win,

from The Research Board

Catherine Loup is doing a research project on multivendor networking
(in May timeframe). She called and asked to know who would be the best
people to discuss the subject from DEC's perspective. She has not
scheduled it, this was an exploratory conversation. there is no other
specific data. If there is anything else you need or would like to me
to handle let me know. (She referenced my discussions last year with
Naomi)

Mike

Win,

*Attached is a copy of a letter
Mike sent to Catherine giving
her the names of add'l people
she might call.*

R 4/13

Printed by Win Hindle

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I N T E R O F F I C E M E M O R A N D U M

Doc. No: 028037
Date: 14-Apr-1992 04:49pm EDT
From: Win Hindle
HINDLE.WIN
Dept: Administration
Tel No: 223-2338

TO: Mike Thurk

(THURK.MIKE)

Subject: THE RESEARCH BOARD REQUEST

Thanks for helping with The Research Board. If you could assist Catherine Loup in scheduling a visit, that would be useful. As you know, we attempt to assist The Research Board in any way we can.

smv

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Research Board

1. E.C.

#1 9/16/92

2. Copy Research Board

- Questions -
- Will downsizing hurt cust. service levels?
 - Will Gates be a comfortable partner?
 - How will you assure global service excellence?
 - Suppose Alpha is a bomb? - Does it have heat problems?
 - Desk business?
 - How will you get more ISV's?
 - Why do you build your own PC's & W.S.? Why not invest in more software?
 - What is your vision for customers?
 - We read all bad stuff about DEC, where do we find good stuff?
 - Can you support that many OS's effectively?
 - Do we have to move off VAX?
 - ~~Has~~ Has anyone ever let the Co. on a new architecture?
 - When will we have a UNIX Mainframe?

Cornig

A m Ex

Mormon Church

Exxon

Johnson Control

Max Medical

Net life

Scott Paper

UTC

Mellon Bank

CIT Group

12 Northern Trust

Questions

Research Board

#2 9/24/92

- 3 key differentiators for customers
- Alliances - are we serious?
- How to attract ISVs
- Are you down-sizing fast enough? (Wang example)
- Rather have you focus on applications, not industries -
- What are you going to stop doing?
- Why not be a software Co. only?
- How are you better than Andersen + EOS?

1. E.C.
2. Copy Research Board

Aetna

Alcoa

Sabre (AA)

Bank of Am.

Dow

Eaton

Hartford Ins.

Kraft

Levi Strauss

Mellihen

P & G

Royal Trust of Canada

SIAC

(13)

THE RESEARCH BOARD

INCORPORATED

220 EAST 61st STREET · NEW YORK, N.Y. 10021 · (212) 486-9240

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SEP 18 1992

Winston Hindle

September 14, 1992

Dear Ken:

As you close your career at Digital, we at the Research Board would like to express our admiration for the historic and defining influence you've had on the evolution of the computer industry. It is difficult to imagine personal computing arriving so quickly from any parent but the PDP. And impossible to imagine the successful expansion of the industry without the strong sense of ethic which you personally instilled in Digital. Which sometimes radiated from Digital to the best of its competitors.

These last few years have seen the departure of several industry giants. All were criticized in direct proportion to their accomplishments. That goes with gianting.

Best of luck from your countless admirers among the RB members. And from us: we will miss your thoughtful exuberance and your snorting impatience with the second rate.

With great affection,

Naomi O. Seligman
Ernest M. von Simson

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

✓ bcc: Winston R. Hindle

Research Board

THE RESEARCH BOARD

INCORPORATED

220 EAST 61st STREET · NEW YORK, N.Y. 10021 · (212) 486-9240

September 14, 1992

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With great affection,

Naomi O. Seligman
Ernest M. von Simson

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

bcc: Winston R. Hindle

THE RESEARCH BOARD

INCORPORATED

220 EAST 61st STREET · NEW YORK, N.Y. 10021 · (212) 486-9240

A.B.
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OCT 5 1992

Winston Hindle

September 28, 1992

Dear Win:

We would like to thank you again for taking the time to address both sections of the Associate Board in the past two weeks. "Vintage Win," remarked one of your long-time clients as the highest compliment to your forthrightness. Your remarks on the management succession, business and organizational trends, product strategy and potential services made enormous sense both to the members and to us.

After you left, there was a twenty minute discussion about Digital among the members. Lots of pros and cons, satisfaction and concerns as you might imagine in these difficult times. But to us, the striking point was the level of loyalty exhibited by existing DEC customers like Dow, Hartford, Mass Mutual, Milliken, Pratt & Whitney, Proctor & Gamble and some others. We all know Digital has had its share of gaffs, but it's good to have the successes recognized as well.

Thanks again for coming. It was a particularly auspicious launch, I think. We look forward to visiting Maynard soon.

Sincerely,

Naomi and Ernie

Naomi O. Seligman
Ernest M. von Simson

Mr. Winston R. Hindle
Senior Vice President,
Corporate Operations
Digital Equipment Corporation
146 Main Street
Maynard, MA 01754

THE RESEARCH BOARD

INCORPORATED

220 EAST 61st STREET · NEW YORK, N.Y. 10021 · (212) 486-9240

RESEARCH BOARD MEMBERS

John D. Loewenberg
Senior Vice President
Information Technology
Aetna Life & Casualty

Peter W.C. Mather
Vice President
Management Information Services
Air Products and Chemicals, Inc.

Dr. G. Keith Turnbull
Executive Vice President
Strategic Planning,
Quality & Information
Aluminum Company of America

Max D. Hopper
Senior Vice President
Information Systems
American Airlines, Inc.

B. Garland Cupp
Executive Vice President
American Express Company

John F. Coman
Manager of Networks
and Information Services
Atlantic Richfield Company

Martin A. Stein
Vice Chairman
BankAmerica Corporation

Michael Simmons
Executive Vice President
and Group Executive
Bank of Boston

Lloyd F. Darlington
Executive Vice President
Operations
Bank of Montreal

Keith W. Burrowes
Vice President & Manager
Information Systems & Services
Bechtel Corporation

Alex J. Gibbons
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TO: Bobby Choonavala
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 Bill Johnson
 Max Mayer
 Frank McCabe
 Bob Palmer
 Dick Poulsen
 Dennis Roberson
 Jack Smith
 Bill Strecker
 Mike Thurk

DATE: 29-Dec-1992
 FROM: Win Hindle
 DEPT: Administration
 EXT : 223-2338
 LOC : MLO12-1/A53

CC: Terry Fink

SUBJECT: THE RESEARCH BOARD VISIT JANUARY 7 AND 8, 1993

Naomi Seligman and Ernie von Simson, the two leaders of The Research Board staff, and Jim Roche, lead researcher, will spend 1 1/2 days with us on January 7 and until noon on January 8. They have specifically asked us to explain the Digital strategy to them. As always, they have asked that this not be a "marketing pitch" but an interactive discussion. Those of you who have met them before know that they are not only frank but also knowledgeable about our industry and our company. They want us to be direct and frank in return.

The questions that they will pursue are those of greatest interest to the 60 members of The Research Board (list attached), who are CIOs of very large international businesses. The key will be for us to get across the strategy in each business and function the long-term as well as the short-term goals. In their series of visits (which extend back to the early 80s), we have always found that they give fair and direct evaluations of each company in the industry.

Naomi, Ernie, and Jim want to be able to report to their members "where Digital is going." Some Research Board corporate members have been quite critical of Digital in the past few years, specifically on the question of strategy. This is our chance to be clear to them that we know where we are going.

Bob Palmer will be visiting and speaking to the entire membership of The Research Board in California in March after they have reported on Digital in writing. We will have a chance to read that report when it is completed.

Attached is the schedule for their visit. All meetings will take place in the Sitting Room at the Mill (MLO10-2) across from Bill Strecker's office. Thank you for agreeing to talk with them.

dk
Attachments

January 7, 1993

- 7:30- 8:30 - Willow Shire, Health Industries
- 8:45- 9:45 - Mike Thurk, Communications, Education and Entertainment Industries
- 10:00-11:00 - Dennis Roberson, Software Engineering
- 11:15- 12:15- Russ Gullotti, U.S. Area and Digital Services
- 12:15- 1:00 - Lunch
- 1:00- 2:00 Bill Johnson, Corporate Marketing
- 2:15- 3:15 - Jack Smith, Operations
- 3:30- 4:30 - Bill Strecker, Engineering
- 4:45- 5:45 - Max Mayer, Systems Integration and Network Services
- 6:00- 7:00 - Bobby Choonavala, General International Area

January 8, 1993

- 7:45- 8:45 - Dick Poulsen, Europe
- 9:00-10:00 - Frank McCabe, Discrete Manufacturing and Defense Industries
- 10:00-11:30 - Bob Palmer
- 11:30-12:00 - Win Hindle
- 12:00 - Leave Digital for New York

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