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BUSINESS PLAN DRAFT

RELATIONAL DATABASE SYSTEMS, INC.

August 27, 1981

PROPRIETARY DATA

Contents

1. The Assumptions

For decades computers costing over $50,000 have formed the base of the multi-billion dollar data processing industry. Before the 1970's, meaningful business computing power meant either a million dollar investment or buying computer time from a service bureau. Minicomputers became accepted through the 1970's, and provided a computer ownership solution that would often cost below $100,000.

During the end of the 1970's, microcomputers became popular as "personal computers" with a price below $5,000. However, even with the disk drives and printers required of a business data processing machine these computers have been slow to invade the potentially huge small business systems market.

The major factors for the slow market penetration are the differences between these microcomputers and the more usable minicomputers. The minicomputers usually have fast, large volume "hard" disk drives, as opposed to the microcomputer's slow, low volume "floppy" disk drives. The minicomputers usually have tape drives to provide speedy and convenient data backup, whereas the microcomputers do not. The micros are rarely upgradable to multiple-user computers, whereas the minicomputers are almost always multiple-user machines. Finally, the minicomputers can run larger programs and handle larger databases of information easily. This has led to an established base of professional quality database management and application software. The lack of good business software has gravely impeded the capture of the small business market by microcomputers.

One of the major factors that made the microcomputer revolution possible was the invention of the microprocessor chip. The fabrication of a large amount of computer architecture into one conveniently packaged part has allowed several fairly uncapitalized companies to bootstrap their way up to being significant computer companies. A great deal of the research and development needed to design and build a computer was already done for them. Although some electrical design was still needed, these companies made money more by figuring out how to assemble prefabricated components than by designing original computer circuits.

The microprocessor chips that were produced by the semiconductor companies for the computer companies to use in the microcomputers were not as powerful as the custom-designed processors of the minicomuters. The microprocessors of the 1970's, such as the Apple and Radio Shack machines, were based upon what is called an "8-bit" architecture. That is to say, they were built with an 8-bit

processor. The minicomputers, such as the HP 3000 and the Digital Equipment PDP 11/70 were based upon "16-bit" architecture.

The two-fold increase in the number of bits the processor uses does not imply two-fold performance. The architecture of "16-bit" processors can more reasonably handle several users at once and more peripheral devices, such as hard disk drives and tape drives. Computers based on 16-bit processors can also run larger programs and can handle larger databases with reasonable response time.

The major computer semiconductor houses, such as Motorola, Intel and Zilog have all announced 16-bit microprocessors. These chips will allow microcomputer manufacturers to build machines that have minicomputer capabilities. The products from Intel and Zilog have already been delivered and are being used in computers that are being successfully marketed, such as the Onyx C8002.

Personal and business computers are always sold with certain essential software which is known as an "operating system." Most of the microcomputer manufacturers chose to buy the operating system software from software companies instead of developing it themselves. This is consistent with their philosophy of using prefabricated components. Most of these companies bought the CP/M operating system from Digital Research of Pacific Grove, California. This allowed other software companies to build database, accounting and more specific software packages on top of the CP/M operating system. Thus these software packages could be sold on many 8-bit computers, because there was a standard operating system.

Over the last four years this operating system has become such an accepted standard that even Xerox, Hewlett-Packard and IBM are now compelled to build computers to run CP/M. This is because the family of CP/M-compatible software is so enormous and valuable to a hardware manufacturer. Their computer is immediately usable after coming off the assembly line, with relatively little software research and development needed.

The major premise of RDS is that the new breed of microcomputers will contain 16-bit processors, have hard disk drives (and tape cartridges in most cases), will support one or several users, will run sophisticated database software and will be virtually indistinguishable from minicomputers in the above $50,000 price range. These new microcomputers will cost more than the personal computers, probably ranging from $10,000 to $30,000 in 1982. The Onyx 16-bit computer has been out for a year, has sold over 500 units, and currently retails for about $20,000. There are currently other offerings from Zilog and Tymshare.

The next major premise is that there will be a standard operating system for this class of computers. The operating system will not be CP/M or its multiple-user version, MP/M, but will be UNIX. UNIX was developed by Bell Labs, the research arm of AT&T, during the 1970's. Nearly all of the companies currently marketing 16-bit microcomputers are using

UNIX, including Onyx, Zilog and Tymshare. Many more are going to be using UNIX for their 16-bit machines (see Section 3, Current Marketing Prospects).

Now that the major computer companies have decided to use standard operating systems for their small computers and leave the bulk of the software market to software houses, it is clear that successful software houses that build products for these standard operating systems will have tremendous opportunities. The CP/M market is already fairly well established, and limited to single-user computers in the under $5,000 range. The evidence that UNIX will be the multi-user operating system to become the industry standard is overwhelming.

For RDS to do well, packaged software must continue to do well on this multi-user small business computer. The trend favoring packaged software was established almost with the birth of the industry and has never done better than in recent times. All computer users but the very biggest prefer to buy software that is already written, tested, packaged and documented than develop their own. However, since buying pre-written software usually involves some compromising on the part of the user, the more flexible and customizable the software package, the more marketable it is.

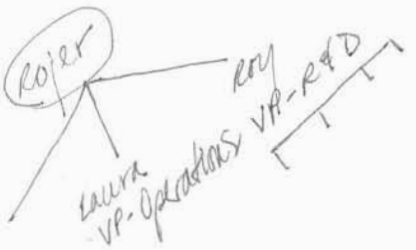
RDS's MARATHON package is a database management system that a computer user can employ to build his specific software system with significantly less cost than starting to program from scratch. MARATHON, and products like it, are considered an essential adjunct to operating system software. We are depending on MARATHON to be used by consultants and programmers who are building specific applications. We are also depending on other software houses to use MARATHON as the base of their more specific software packages, such as blood banking systems, mailing list packages, accounting packages, travel agent office management and other "vertical" application systems. Using a general-purpose database system such as MARATHON as the base of the more specific packages will allow more flexibility in the resulting product, and thus make it easier to sell.

Of the several different types of database management software, RDS has chosen to build a "relational" system. This is currently the most talked about database software architecture, and we are depending on seeing it become the accepted architecture over the next few years. Its inherently superior technical aspects will certainly help in this regard, but its integration into accepted languages like COBOL are seen as important.

IBM's recent release of a relational software product for some of its more expensive machines is seen as a harbinger of a more obvious industry acceptance. The success of the relational database system and report writer built by Tandem for their machines has also helped.

Finally, when a computer system is sold, the ratio of money spent on software versus hardware should continue to increase. Labor cost will continue to get more expensive, and electronics will continue to get cheaper. Packaged

software, and software tools, will continue to be more popular. The profit margins for software products should remain high.



2. The Company

History

Relational Database Systems, Inc. was formed in March of 1980 to build and sell software systems to perform general purpose data management functions on microcomputers. The company was formed by Roger J. Sippl, its current president. Mr. Sippl had previously been in charge of database product development in the research and development department of Cromemco, Inc., a successful microcomputer manufacturer.

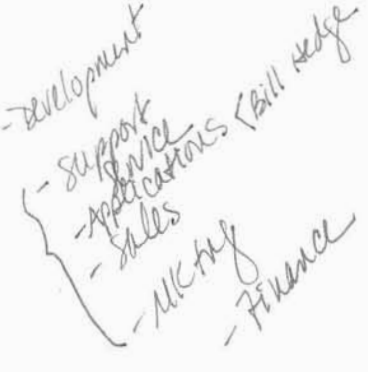
Bill Hedge joined the firm as a research and development programmer shortly after the company was formed. Laura King, who was named the company's vice president upon its formation, joined RDS as a full-time employee in November of 1980.

Roy Harrington recently joined the firm from Cromemco, Incorporated. Mr. Harrington brings a most significant technical ability with him. He created the CROMIX operating system while at Cromemco. CROMIX is a UNIX look-a-like product. It will soon allow the MARATHON system to operate on Cromemco computers.

The company was initially capitalized meagerly ($20,000) in anticipation of an imminent large contract with Cromemco. A number of small contracts with Cromemco and other firms were landed instead. The large contract that was to more fully capitalize the company is still being discussed.

The company has successfully built and begun selling a microcomputer software product, the MARATHON Relational Database Management System. This product and the collection of talented people the company has brought together are its greatest assets. During the year and a half that was required to build this system the company has lost money every quarter except one. An additional $48,000 was raised by selling stock to sponsor the development effort of the product, which the company is now beginning to sell.

The functional roles filled by the people in the company has recently undergone segregation. Mr. Sippl and Ms. King are now responsible for marketing, product planning and customer support. Mr. Harrington and Mr. Hedge are now responsible for product development and enhancement.



Present Product Status

The MARATHON Relational Database Management System contains software for creating and maintaining a database of information in a computer. This includes interactive programs that allow users to add, delete, update and find records in computer files, as well as selectively query the database. This system sells for $4,000 on 16-bit microcomputers, $6,000 on medium and large minicomputers, and $8,000 on very large (32 bit) minicomputers such as the DEC VAX and the Perkin Elmer machines that run UNIX. Dealer discounts begin at 40%.

The ACE Report Writing Language Compiler is an additional product which allows selected contents of the database to be printed on the computer's printing devices in a customized format. The language is capable of performing sorting and arithmetic calculations. This product sells for half the price of the database system as an add on.

MARATHON has been completed and installed on the ONYX C8002 16-bit microcomputer which runs the UNIX operating system. Most of the ACE product is completed, and pre-release versions are now in beta test sites.

Future Product Plans

Database management software such as MARATHON and its report writers are tools of software implementors. Often times they can be easily customized into a particular application. For example, the task of maintaining mailing lists in a computer is a very straight-forward database application. The construction of a mailing list package would primarily be a matter of writing a manual on how to use the database for this purpose.

Where as software developers like to acquire tools to make their efforts more effective, users demand solutions. Software packages that are tailored to perform specific functions are viewed by users as such solutions. The Visicalc program that runs primarily on the Apple microcomputers is the most visible example of how a relatively small software system can generate millions of dollars because it provided a solution to a widespread problem.

In the case of Visicalc, the problem solved was financial forcasting. Given a budget and a number of figures that can be varied, such as advertising and projected sales, Visicalc will compute the multi-year projections over and over again as the user changes the variables. This provides the answer to the "what if" questions that managers avoid pondering because of the paperwork of recalculating all of the projections.

However, Visicalc is not coupled with a database management system. The amount of data that can be used in a Visicalc model is limited by the willingness of a manager to type in pre-summarized historical information from which projections can be made. On larger computers, managers are more accustomed to having their data processing departments custom program financial forcasting reports using the information in the corporate database. However, this custom programming can be prohibitively expensive.

A financial forcasting software package for UNIX, built to work in conjunction with a relational database system would allow manager's to manage their forcasting data more easily. However, a larger and more likely market exists in the traditional field of financial accounting software. Usually computing systems that manage a company's general ledger, accounts payable, accounts receivable and payroll cause the user to suffer through a conversion of accounting methodology. This is because the software system does things one way and the company's accountants do them another.

If such an accounting package were based upon a flexible database system such as MARATHON then the software system could be sold as a much more customizable package than the competitor's packages. Currently there is only one known vendor of accounting systems with any part of their system operational on the UNIX operating system, although this is likely to change soon.

Inventory control, manufacturing control and material requirements planning are three opportunities for packages with even less competition than general accounting systems. These packages are likely options to the basic accounting package.

All of these software products can be built on top of the MARATHON database system. Together with MARATHON, a family of products is formed. All of these packages are currently being considered as future products.

One definite future product is actually part of the MARATHON package, sold as a separate entity. The indexed storage and retrieval system of MARATHON will be sold separately as a general-purpose Indexed Sequential Access Method (ISAM) product for UNIX.

Another very likely package is a screen-oriented transaction processing system to interact with the user during data capture and modification in the packages previously discussed.

Products which are being considered, but less seriously, are report writing languages to produce output in the form of inferential statistical reports, color graphics (for business reports) and video images of various kinds. Graphic output report writers would allow the automation of pie charts, bar charts and line graphs, based upon information stored in a company's databases. The storage and retrieval of video images would allow database users who are keeping track of an inventory of diamonds or pieces in museums to store a picture of the item on digital media along with the computer-code information describing the item. All of these products have been requested more than once, but will probably not be pursued unless a serious customer is found to sponsor their development and integration into MARATHON.

Present Marketing Status

No formal marketing or advertising has yet been done. The Cortney/Wilson advertising agency has recently been retained to begin a campaign by sending out press releases and plan a magazine advertising campaign for 1982.

Through conventions and UNIX user group meetings the company has begun to make itself known and has established several valuable contacts and sales leads. These leads are detailed in Section 3 of the business plan (Current Marketing Prospects).

Initial contact for the sales that have been made were by either word-of-mouth or mention of the company and product in industry publications. From this meager exposure a database of over 300 sales leads has been built. Over 20 manuals have been sold independently of software for $75. These are bought for evaluation purposes and are expected to lead to sales in many cases. Six copies of the database system and two copies of the report writer have been sold for cash. With discounts these sales have raised $19,600. The cost of materials and handling to produce and ship a copy of the product is under $100.

A demonstration version of the product has just been introduced for $100. In addition, timesharing facilities are being established so some users may evaluate the product by using it in a production mode or perform more extensive testing than the demonstration version allows.

3. Current Marketing Prospects

The companies known to be marketing or developing computers to run UNIX or UNIX-like operating systems are listed here in summary, and explained more fully below. Some non-UNIX companies that are considered to have market potential for RDS database products for some other reason are also listed.

Onyx Systems, Inc. (A division of the now public Dorado Microsystems)
Digital Equipment PDP 11's running standard Bell UNIX
Digital Equipment PDP 11's running Microsoft's XENIX
Cromemco, Inc.
Siemans
Codata Systems running XENIX
Altos running XENIX
Ithaca Intersystems running the UNIX look-a-like, COHERENT
Century Data
Tricom
Apollo
Personal Software, Inc.
The Wollongong Group's version of UNIX for Perkin Elmer
Bolt, Beranak and Newman's C Machine, running Bell UNIX
Amdahl, running UNIX in a partition of a mainframe computer
Fortune Systems
Plexus running Bell UNIX
Tymshare DYNIX version of UNIX
Computhink
Convergent Technology
Microsoft
Cincom
Signetics
Computer Consoles
Artelonics
Point 4 Data Corporation
Wicat Systems
Zilog
Honeywell
Texas Instruments
IBM
Intel

Onyx Systems, Inc.

Onyx Systems built the first 8-bit microcomputer designed to work without a floppy disk. The machine sold for under $10,000 and contained a high-speed, high-capacity hard disk drive and a reliable high capacity cassette tape drive for backup. Onyx also built the first 16-bit microcomputer to run the UNIX operating system. The system was based upon the Z8000 microprocessor, the IMI hard disk drive, and a tape drive that utilized a compact and easy to handle tape cartridge. This machine costs between $18,000 and $25,000, and is selling quite successfully.

In the fall and winter, IMI changed its name to Dorado Microsystems, acquired Onyx and some other interests and went public, raising between fifteen and twenty million dollars.

Digital Equipment PDP 11's running standard Bell UNIX

There are several thousand commercial, educational and governmental machines running UNIX, not counting the phone company itself. MARATHON will cost $4,000 on the smaller PDP 11's, $6,000 on the larger machines, such as the 11/70, and $8,000 on the VAX.

Digital Equipment PDP 11's running Microsoft XENIX

Microsoft's first installation target for their version of UNIX was a supported replacement for Bell Labs UNIX on the PDP 11 computers. It is not known how effective they have been in this endeavor. Current estimates range from 10 to 50 installations.

It is known that they are installing XENIX for several manufacturers to use as their operating system for their 16 bit microcomputers. These manufacturers include Codata and Altos.

Cromemco, Inc.

Cromemco has contracted with RDS to have an ISAM-like retrieval method installed on their 8-bit microcomputer running the UNIX look-a-like, CROMIX.

This retrieval method has an interface similiar to the retrieval method RDS has used as the underpinnings of MARATHON. Originally, RDS's funding was somewhat predicated upon an $80,000 contract with Cromemco for MARATHON, which has yet to come to fruition, but negotiations have become more encouraging in the last several months.

Siemans

This giant West German manufacturer is planning to build a 16-bit microcomputer to run UNIX. A company RDS has worked with in the past which is currently doing business with Siemans has discussed our product with them. A

representative of Siemans has been given a demonstration of MARATHON and was enthusiastic.

Codata Systems

Codata has built a 16-bit microcomputer to run UNIX. The machine was demonstrated recently by Microsoft running the XENIX version of UNIX.

Altos

Altos has been a successful 8-bit microcomputer builder who is now reportedly building a 16-bit microcomputer to run UNIX. They have supposedly contracted with Microsoft to supply XENIX.

Ithaca Intersystems

Ithaca has been successful at selling 8-bit microcomputers and contacted RDS in February expressing their interest in a relational database management system for a 16-bit microcomputer to run UNIX. They started marketing the machine this summer, packaged with the COHERENT operating system, which is a UNIX look-a-like. Recent discussions with them indicate that they are interested in marketing a machine with the database software packaged with it, to be sold as a machine specifically for database management.

Century Data

Century has only sold computer circuit boards that are used as components by other manufacturers, but has been rumored to be building a 16-bit microcomputer to run UNIX. They have not yet been contacted.

Tricom

Little is currently known about this company, other than a rumor that they are building a 16-bit microcomputer to run UNIX.

Apollo

Apollo is a new startup company which is building a desktop 16-bit computer to run UNIX. The founder of the company is reported to be the same man who founded Prime Computers in 1972.

Personal Software, Inc.

Personal Software is not a computer manufacturer but a software publisher. They are the most successful software publisher, mostly due to their distribution of the most successful personal software product, Visicalc. They market their products only on the 8-bit single user machines, such

as the Apple, Radio Shack and Atari computers, but have revenues between one and two million dollars per month. They have acquired a quarter million dollar Digital Equipment computer, running UNIX, to be used as their development and support environment.

They are actively seeking a relational database system to market as an individual product, as well as serve as the base of a line of products that manage information on floppy disks. They have approached RDS and the project managers, marketing managers, and the chairman of the board have received demonstrations.

The Wollongong Group

The Wollongong University of Australia has transported UNIX to the new Perkin Elmer high-end minicomputers and a new company in Palo Alto, The Wollongong Group, is currently marketing UNIX for that environment. Direct participation from Perkin-Elmer in the UNIX market is expected.

The Wollongong Group has approached RDS and offered free computer time for the transporation of MARATHON to this environment. RDS expressed willingness to transport MARATHON if an initial customer could be found by The Wollongong Group or Perkin-Elmer.

Bolt, Beranak and Newman

This well-established east coast firm has built a medium-sized minicomputer specially designed to execute programs written in the programming language C, the language that was used to build UNIX and MARATHON. The operating system for the machine is of course UNIX. The machine is currently being sold, how successfully is not known.

Amdahl

Amdahl recently started marketing UNIX to run as one of many tasks on one of its IBM mainframe look-a-likes, as well as IBM computers.

Fortune Systems

This is a new company that was founded to build a 16-bit microcomputer to run the UNIX operating system. They are located in the bay area.

Plexus Computers

Bob Marsh and Kip Myers, founders of Onyx, started Plexus Computers to build a 16-bit microcomputer to run the UNIX operating system. It is estimated that they will provide a viable MARATHON market in early 1982.

Tymshare

The Tymshare Corporation, a long-time vendor of computer time-sharing services, has had UNIX adopted to a specially modified version of a PDP 11/23 minicomputer, which they are now marketing.

Computhink

This Sunnyvale computer manufacturer has recently announced August availability of a 16-bit microcomputer running the UNIX operating system.

Convergent Technology

This relatively new company is a candidate for database software for their 16-bit microcomputer.

Microsoft

Although this company is potential competition, they are also a potential sales outlet for MARATHON in that it helps them sell copies of their XENIX version of UNIX. The fact that they recently began referring sales leads to RDS suggests that they have no immediate plans for a product of their own.

Cincom

Cincom is an established and successful vendor of database products on mainframe computers and high-end microcomputers. They are a potential competitor, but it is likely that they would be more interested in acquiring rights to an already operational system than develop their own. They are currently evaluating database software for the microcomputer marketplace.

Signetics

This semi-conductor chip manufacturer is currently evaluating database software to run on a computer running UNIX or UNIX-like software. They have received a demonstration of MARATHON.

Computer Consoles

This company is developing a hardware/software package based on UNIX and has contacted RDS with interest in MARATHON.

Artelonics

This computer company currently markets systems with some database capability but has contacted RDS with an interest in MARATHON.

Point 4 Data Corporation

Point 4 is a successful minicomputer company that has recently shown an interest in UNIX and has inquired about the possibility of transporting MARATHON and other database products to operate on their next generation of computers.

Wicat Systems

This company has been reported to be developing UNIX-like software for a 16-bit microcomputer.

Zilog

This semi-conductor chip manufacturer is currently selling a microcomputer that runs the UNIX operating system, and has expressed interest in database software.

Honeywell

Honeywell is reported to have a version of UNIX running internally, most likely for evaluation.

Texas Instruments

TI is reported to be currently evaluating UNIX as the operating system for their 16-bit microcomputers.

IBM

IBM is reported to have had contracted with Interactive Systems of Santa Monica to transport the UNIX operating system to the new 4300 series of mainframes.

Intel

Intel is reportedly considering using UNIX as the operating system for a line of microcomputers it is considering.

4. Market Objectives

The original marketing plan was based upon the existence of many computer manufacturers that needed software products to help them sell their hardware. A marketing agreement to sell copies of the database software would be struck with these manufacturers. In most cases, pre-purchase of a number of copies or some other initial payment would be involved. A successful manufacturer arrangement was envisioned as bringing in about $250,000 in two year's time for the database system alone.

This basic model is still valid. However, it is now clear that to interest the manufacturers sufficiently to insure success with this approach, significant distributor, dealer and end-user sales must be undertaken as well. Of course to accomplish this, a full marketing and advertising program must be implemented.

The original marketing plan called for product line expansion to include more varied and sophisticated report writers, database features and add-ons, and possibly accounting packages based on MARATHON. This again is still a valid plan, but the integration of the product into other company's products, such as COBOL compilers and other language translators, is now seen as important.

It is now accepted that some manufacturers will not buy the product until it is proven on their machine and in their marketplace by selling it to their customers. However, it is expected that these manufacturers will assist in this effort in that MARATHON's availability aids them in selling their own products.

It is also accepted that in some situations there is less of a market for such a general-purpose tool, and the sales of the database software can best be accomplished by arranging for other companies to base their packages on our product, such that RDS has sales by association with completed applications packages. This concept is linked with the integration of the product into languages such as COBOL.

Also, some companies have expressed interest in buying rights to parts of the system customized for their own computer and non-UNIX operating systems that they manufacture and sell. Some companies have expressed interest in using part of the system in computer devices other than general-purpose machines, such as "back-end database" boxes.

The major market objective is still the sale of database software packages to computer manufacturers or software distributors inthe form of high-volume sales agreements or lump sum sales. Sales to low volume dealers and end users are seen as a secondary source of revenue. However, these

sales are required to establish the product in the market place.

5. Possible Competition

Informatics, Cullinane, Cincom, MRI-Intel
Relational Technology Incorporated
Relational Software Incorporated
Community Memory Project
Rhodnius
Academia
Major Manufacturers such as IBM
Microcomputer Manufacturers
Microsoft
Condor
International Database Systems
Ashton-Tate
Logical Software

Informatics, Cullinane, Cincom, MRI-Intel

All of the companies above successfully sold commercial database systems for many millions of dollars on a variety of mainframe and minicomputers during the 1960's and 1970's. Although Cincom has recently expressed some interest in the microcomputer marketplace, it is likely that these companies would be more inclined to be potential customers of MARATHON marketing rights than competitors.

Relational Technology, Inc.

RTI markets INGRES, a relational DBMS that was developed at UC Berkeley. It sells for $30,000 per copy to run on a high-end Digital Equipment Corporation computer. Although INGRES was developed on UNIX, it is currently being marketed on the standard DEC operating system. INGRES is designed to run on large computers and is not considered a potential threat in the microcomputer marketplace.

Relational Software, Inc.

RSI has been selling a version of a relational database system that was originally developed at IBM. This system is also only being currently sold on large machines.

The Community Memory Project

This new small company is developing a relational database system to run on the ONYX computer in direct competition with MARATHON. The exact nature of the product and its pricing are not yet known.

Rhodnius, Inc.

Like Relational Technology, this company was formed to market a relational DBMS that was constructed in academia. The University of Toronto has been distributing a system called MRS for $200 a copy (copying costs) for several years. There are reportedly over 200 MRS users. Some of these users requested commercial quality support from the University, in terms of bug fixes and extensions. The primary author of the system formed Rhodnius to market an improved version of MRS, called Mistress.

Academia

There are some other systems still being developed in

academia that could be placed in the public domain, picked up and marketed by a new venture.

Major Manufacturers

Manufacturers such as IBM are not considered a threat to the market MARATHON is attacking because they would only build a system to work on their own hardware. Major manufacturers tend not to build software that helps sell somebody else's hardware.

Microcomputer Manufacturers

A microcomputer manufacturer could build its own relational DBMS and then begin to market it as a general software product. However, they have the same problem as the mainframe manufacturers; they tend not to build software to sell other company's hardware.

Microsoft

Microsoft has already been mentioned as both a potential customer and a potential competitor. Since they market XENIX directly to computer manufacturers they are in a good position to market UNIX-compatible software as well. They currently market a database product under an agreement with International Database System, but this is not a relational database system. They have no relational products for UNIX at this time.

Condor

Condor has been successfully marketing a relational DBMS on the 8-bit microcomputers for the last two years. It sells for between $500 and $2,000. It is conceivable that they could upgrade their system to run on 16-bit multi-user operating systems.

International Database Systems

This company has been successfully marketing a CODASYL database system on both minicomputers and microcomputers. It is possible that they might transport this system to UNIX.

Ashton-Tate

This company has been marketing a relational database system for single-user, 8-bit microcomputers and could make it available on 16-bit microcomputers running UNIX.

Logical Software

This company is very recently formed to market a little known database management system for UNIX that was developed

at a university on the east coast. It appears that company currently has two employees.

6. Corporate Matters

Advisors and Board of Directors

The company's general counsel is Mr. Albert F. Knorp of Shearer, Lanctot, Walsh and Knorp, San Francisco, California. Copyright, patent and trademark matters are handled by Mr. Jerry Wright, of Flehr, Hohbach, Test, Albritton and Herbert, San Francisco, California. Mr. Dan Sully, of Sully and Associates, Inc., Half Moon Bay, California, serves as the company's general business advisor.

There are three seats on the Board of Directors which are currently held by Roger J. Sippl, the company's president, Laura L. King, vice president and Ronald M. Manson, the company's chief financial officer.

Current Capitalization

RDS has 250,000 shares authorized, of which 146,207 have been issued. Roger J. Sippl, the founder and president of the company, is the principle shareholder, with 64.6% of the outstanding shares. These shares were acquired by Mr. Sippl at the company's inception in exchange for designs and prototypes of the company's current product line, valued at $189,000.

There is an option outstanding on 6.7% of those shares, which is 4.3% of the total outstanding shares. This option was acquired by Roy Harrington upon joining the company in December of 1980. It expires on October 31, 1981. It can be exercised for $10,167, or $1.60 per share.

Sale of the other 51,707 shares has raised $68,845, at a price per share ranging from 80 cents to $2.00.

There are currently 13 shareholders. They are listed by name below, along with the number of shares they hold and the portion of the company these shares represent.

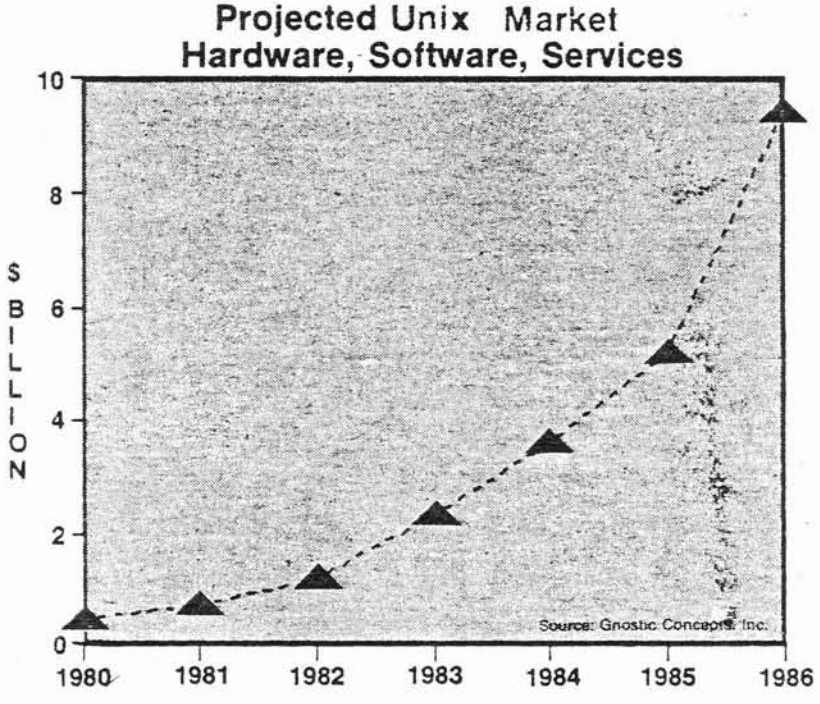
Roger J. Sippl	94,500	64.6%
Roy Harrington	12,720	8.7%
Elizabeth Salmon	10,556	7.2%
Dan Sully	7,310	5.0%
John L. deBenedetti	3,655	2.5%
Ronald Manson	3,250	2.2%
Robert Lanctot	3,093	2.1%
Albert Knorp	3,093	2.1%
Laura King	2,750	1.9%
Lawrence Lanctot	1,631	1.1%
Charles Sedelmeyer	1,500	1.0%
Bill Hedge	1,250	.9%
Margaret Kavalaris	899	.6%

Proposed Capitalization

As is shown in the financial figures in section 7, RDS is not yet profitable and currently has an overhead of $17,000 per month. Since the MARATHON product has recently been completed and is not yet being advertised, sales are expected to climb above this cost of operations.

The amount of capital which provides optimal advertising and product development is debatable. The major advantage that RDS has over its current and future competition is its current presence in the UNIX market.

The fact that there will be a UNIX market is now established in the computer industry. There is even some market currently. The estimates are that the UNIX hardware, software and services market is now about three hundred million dollars annually, and will grow to be over nine billion dollars by 1986 (see chart on next page).



Source: Gnostic Concepts, Inc., Menlo Park
Presented at July 1981 /usr/group
UNIX User's Group Meeting

It is clear that a meaningful advertising program must be undertaken to get the name of the product and company known to potential customers. It is also clear that direct sales and sales through dealers and distributors are needed to get the attention of major manufacturers to land the large and lucrative marketing agreements for MARATHON and the remainder of the product line.

However, something more is needed to take over the market. It is probably not more advertising or merely more money. RDS's database products must be integrated widely throughout the UNIX software community.

Data stored in MARATHON databases should be available to programmers regardless of what programming language they use. MARATHON should be the underpinnings of at least one successful general accounting, inventory control, financial forcasting, and manufacturing control system. It must be used by a significant number of software firms as the basis for their "vertical market" packages, whether they be document control systems, legal office systems, travel agency control products or any of the hundreds of other possibilities.

This implies that there is no particular time to spend a great deal of money. All through the early 1980's product line expansion must be coupled with integration into other company's products as RDS software sales, royalty situations or joint marketing agreements.

Over time RDS software must become the most widely used data storage and retrieval software. The linking of information stored in one software system to another should become a matter of MARATHON-compatability.

This program of software integration is now being started. Currently RDS is negotiating an agreement with a software manufacturer, Micro Focus, that will result in the direct integration of the MARATHON Database Management System into the world's most widely used business programming language, COBOL. COBOL ISAM files will actually be MARATHON database files. Resale agreements for Micro Focus COBOL have already been struck with over 20 manufacturers internationally. MARATHON compatability will aid Micro Focus in their UNIX COBOL sales effort, as well as open doors and increase the marketability of MARATHON, its report writers and associated software.

The installation of MARATHON on the Tymshare Dynix computer is now being negotiated with the aid of a third company, The Santa Cruz Operation. The Santa Cruz Operation installed UNIX on the PDP 11/23 for Tymshare, and helped Micro Focus install their COBOL compiler on UNIX. They have served as UNIX consultants to TRW for the past four years. Because of this deep involvement in the UNIX community they have developed an interest in MARATHON and are becoming more involved with it.

In general, the strategy will be not to buy the UNIX database market, which inherently involves the good chance for a timing error. Rather the strategy will be to acquire it by association with the key participants as the market

develops toward its projected exponential growth.

The next section contains historical financial statements as well as projections. These projections are based upon a modest but substantive advertising budget and gradual addition of marketing and technical staff. The projections assume additional funding of $105,000 in September of 1981. Other assumptions are discussed in the next section.

7. Financial Statements and Projections

This section of the business plan includes historical financial statements as well as projections through the end of 1984. The historical statements reflect operating losses during the development of the MARATHON system, which is now being sold. The bulk of the sales that are reflected in the historical sales figures are from various small contracts that were landed during the development of MARATHON to lessen the negative cash flow. The aggregate sales of software products have thus far totaled $18,000.

The proforma statements reflect many assumptions. They are discussed below.

1. Employment

Employees will be added roughly as follows:

Sec/Receptionist	one at $20,000,	1st Qt 1982
Marketing or Technical	one at $30,000,	2nd Qt 1982
Marketing or Technical	two at $30,000,	1st Qt 1983
Marketing or Technical	two at $35,000,	1st Qt 1984

2. Effects of Time

A twenty percent increase per year in salary and other employee-related expenses has been calculated into the forcasts. Since cost of goods sold is very small compared to the people-intensive aspects of the company, such as R & D, Sales and Administration, this assumed cost increase is the expected increase in costs due to inflation.

Also, the initial product line will age, and its marketability will lessen. The R & D expense figures have taken into consideration the costs of constant enhancements to the initial product line as it is expanded over time. These enhancements will keep the product continuously competitive, even though the value of the early versions of

the product will decline with time.

3. Loans

A $20,000 loan in July to be paid off in September is assumed.

4. Fixed Assets

The following additions are budgeted.

$1,000 in 4th Qt 1981
$1,000 in 1st Qt 1982
$20,000 in 1st Qt 1983

5. Advertising

10,000 in 4th Qt 1981
10,000 in 1st Qt 1982
16,000 in all subsequent quarters

6. Office Rent

10% increase per year through 1982
100% increase in 1983 (all leases expire then)

7. Sales

Sales are expected to increase as the product line becomes larger, broader and more well-known. Also, increased sales can be expected due to the additional marketing support and technical production capacity that will accompany the hiring discussed above.

Throughout 1982 sales are expected to increase about $15,000 to $20,000 per quarter, totalling 1982 sales at $345,000. Quarterly sales increases throughout 1983 are projected at $25,000, totalling annual sales of $650,000. By 1984 the quarterly growth rate of sales is expected to be $55,0000 per quarter, totalling sales of $1,350,000 for the year.

8. Other Factors

The benefits of a 25% tax credit for research and development, general rate reductions, and other significantly beneficial changes in the corporate tax law that are currently being considered by Congress have not been taken into consideration in these projections.

Financial History

	2nd Qt 1980	3rd Qt 1980	4th Qt 1980	Total 1980
Sales	6,807	10,956	26,893	44,656
Expenses				
C.O.G.S.	1,446	1,461	1,821	4,728
R & D	13,012	13,152	16,385	42,549
Sales	3,190	2,911	3,668	9,769
Gen & Admin	1,251	3,313	2,383	6,947
Income Bef. Tax	<12,092>	<9,881>	2,634	<19,339>
Tax	200	0	0	0
Income Aft. Tax	<12,292>	<9,881>	2,634	<19,539>
Assets				
Cash	2,065	0	5,899	
Other Current	11,830	8,822	18,302	
Non-Current	4,964	4,612	4,803	
Intangible*	189,000	189,000	189,000	
Total	207,859	202,434	217,994	
Liabilities				
Current	2,060	4,516	3,485	
Non-Current	0	2,000	2,240	
Total	2,060	6,516	5,725	
Owner's Eq.				
Common Stock	218,591	218,591	232,307	
Ret. Earnings	<12,292>	<22,173>	<19,537>	
Total Equity	206,299	196,418	212,770	
Liab. + O.E.	208,359	202,934	218,495	

* Assets acquired at incorporation, see page 24.

Financial History

	1st Qt 1981	2nd Qt 1981
Sales	25,305	22,319
Expenses		
C.O.G.S.	2,104	2,741
R & D	18,940	24,627
Sales	4,425	9,153
Gen & Admin	3,969	2,905
Income Bef. Tax	<4,113>	<17,228>
Tax	200	0
Income Aft. Tax	<4,335>	<17,228>
Assets		
Cash	2,031	12,644
Other Current	17,407	14,912
Non-Current	4,554	14,257
Intangible	189,000	189,000
Total	212,992	230,813
Liabilities		
Current	2,726	14,006
Non-Current	2,330	0
Total	5,056	14,066
Owner's Eq.		
Common Stock	232,307	258,345
Ret. Earnings	<23,870>	<41,098>
Total Equity	208,437	217,247
Liab. + O.E.	213,493	231,313

Projections for 1981 Remaining

PROFORMA - FOR INTERNAL USE ONLY

	3rd Qt 1981	4th Qt 1981	Total 1981
Sales	30,000	50,000	127,624
Interest Income	0	700	700
Expenses			
C.O.G.S.	3,716	3,720	12,281
R & D	33,442	33,483	110,537
Sales	12,171	20,970	46,719
Gen. and Admin.	4,608	4,609	16,091
Income Bef. Tax	23,937	12,082	57,380
Tax	0	0	200
Income Aft. Tax	<23,937>	<12,082>	<57,580>
Assets			
Cash	86,187	69,989	
Other Current	18,401	20,401	
Non-Current	13,667	13,683	
Intangible	189,000	189,000	
Total	307,225	293,173	
Liabilities			
Current	9,445	7,445	
Non-Current	0	0	
Total	9,445	7,445	
Owner's Eq.			
Common Stock	363,345	363,345	
Ret. Earn.	<65,035>	<77,117>	
Total Equity	298,310	286,228	
Liab. + O.E.	307,755	293,673	

Projections for 1982

PROFORMA - FOR INTERNAL USE ONLY

	1st Qt 1982	2nd Qt 1982	3rd Qt 1982	4th Qt 1982	Total 1982
Sales	65,000	80,000	95,000	105,000	345,000
Interest Income	620	470	430	520	2,040
Expenses					
C.O.G.S.	3,814	4,080	4,080	4,080	16,054
R & D	34,324	36,727	36,727	36,727	144,505
Sales Expense	32,234	39,542	39,542	39,542	150,860
Gen. & Admin.	9,702	9,776	9,588	5,400	34,446
Income Bef. Tax	<14,454>	<9,655>	5,493	19,771	1,155
Tax	200	0	0	111	311
Income Aft. Tax	<14,654>	<9,655>	5,493	19,660	844
Assets					
Cash	54,819	41,183	43,850	66,529	
Other Current	20,401	22,401	22,401	22,401	
Non-Current	12,699	12,680	11,661	10,642	
Intangible	189,000	189,000	189,000	189,000	
Total	276,919	265,264	268,912	288,572	
Liabilities					
Current	5,845	3,845	2,000	2,000	
Non-Current	0	0	0	0	
Total Liabilities	5,845	3,845	2,000	2,000	
Owner's Eq.					
Common Stock	363,345	363,345	363,345	363,345	
Retained Earnings	<91,771>	<101,426>	<95,933>	<76,273>	
Total Equity	271,574	261,919	267,412	287,072	
Liab. + O.E.	277,419	265,764	269,412	289,072	

Projections for 1983

PROFORMA - FOR INTERNAL USE ONLY

	1st Qt 1983	2nd Qt 1983	3rd Qt 1983	4th Qt 1983	Total 1983
Sales	125,000	150,000	175,000	200,000	650,000
Interest Income	600	2,160	3,489	4,890	11,139
Expenses					
C.O.G.S.	6,480	6,480	6,480	6,480	25,920
R & D	58,320	58,320	58,320	58,320	233,280
Sales Expense	37,700	37,700	37,700	37,700	150,800
Gen. & Admin.	9,750	9,750	9,750	11,000	40,250
Income Bef. Tax	13,350	39,910	66,239	91,390	210,889
Tax	1,482	3,831	18,986	46,000	70,399
Income Aft. Tax	11,868	36,079	47,253	45,390	140,590
Assets					
Cash	58,397	91,499	141,172	185,562	
Other Current	22,401	24,400	25,000	27,000	
Non-Current	30,642	29,620	28,600	27,600	
Intangible	189,000	189,000	189,000	189,000	
Total	300,440	336,519	383,772	429,162	
Liabilities					
Current	2,000	2,000	2,000	2,000	
Non-Current	0	0	0	0	
Total Liabilities	2,000	2,000	2,000	2,000	
Owner's Eq.					
Common Stock	363,345	363,345	363,345	363,345	
Retained Earnings	<64,405>	<28,326>	18,927	64,317	
Total Equity	298,940	335,019	382,272	427,662	
Liab. + O.E.	300,940	337,019	384,272	429,662	

Projections for 1984

PROFORMA - FOR INTERNAL USE ONLY

	1st Qt 1984	2nd Qt 1984	3rd Qt 1984	4th Qt 1984	Total 1984
Sales	255,000	310,000	365,000	420,000	1,350,000
Interest Income	6,495	8,565	11,394	14,787	41,241
Expenses					
C.O.G.S.	9,320	9,740	9,740	10,240	39,040
R & D	83,880	87,660	87,660	92,160	351,360
Sales Expense	45,000	47,500	47,500	51,000	191,000
Gen. & Admin.	11,000	13,500	13,500	16,500	54,500
Income Bef. Tax	112,295	160,165	217,994	264,887	755,341
Tax	57,624	84,239	116,392	142,465	400,720
Income Aft. Tax	54,617	75,926	101,602	122,422	354,621
Assets					
Cash	237,333	317,259	415,861	538,283	
Other Current	31,000	31,000	31,000	31,000	
Non-Current	26,500	25,500	25,500	25,500	
Intangible	189,000	189,000	189,000	189,000	
Total	483,833	562,759	661,361	783,783	
Liabilities					
Current	2,000	2,000	2,000	2,000	
Non-Current	0	0	0	0	
Total Liabilities	2,000	2,000	2,000	2,000	
Owner's Eq.					
Common Stock	363,345	363,345	363,345	363,345	
Retained Earnings	118,988	194,914	296,516	418,938	
Total Equity	482,333	558,259	659,861	782,283	
Liab. + O.E.	484,333	560,259	661,861	784,283	

Projected Profitability Summary

PROFORMA - FOR INTERNAL USE ONLY

	1981	1982	1983	1984
Profit	<57,580>	844	140,590	354,621
Period Beginning Owner's Equity	23,270	96,728	97,572	238,162
Profit/Period Beg. Owner's Equity	<2.47>	0.01	1.44	1.49
Capital Stock (dollars)	363,345	363,345	363,345	363,345
Profit/Capital Stock	<0.16>	0.02	0.39	0.98
Shares Outstanding	172,008	172,008	172,008	172,008
Earnings Per Share	<0.34>	<0.01>	0.82	2.06

8. Personnel

Roger Sippl

Mr. Sippl holds a B.A. degree from the University of California at Berkeley in computer science. He has worked as a database application consultant in San Francisco for many clients including Bechtel Engineering and Wells Fargo Bank. He spent two years in the research and development department of Cromemco, Inc., building the DBR Database Report Writing Language and overseeing the development of a KSAM product to provide multi-user indexed files on the CROMIX operating system. He formed Relational Database Systems, Inc., in the spring of 1980 and is the company's current president.

Laura King

Ms. King worked with Mr. Sippl as a database application consultant for Bechtel Engineering and then while employed at Cromemco, Inc., she built the CROMIX KSAM product described above. She joined RDS in the Fall of 1980 and was a principle author of the MARATHON DBMS. She is currently the company's vice president of software products, and will be involved in product marketing, planning and customer support.

Roy Harrington

Mr. Harrington currently holds a B.S. in electrical engineering from MIT and a masters degee in computer science from Stanford University. Mr. Harrington has four years of experience as a research and development programmer while working at Watkins-Johnson and an additional three years while working at Cromemco, Inc. He is the principle author of Cromemco's CROMIX operating system, which is a UNIX-like product.

Bill Hedge

Mr. Hedge holds a B.A. degree from the California State University at Northridge. Before coming to RDS he was employed as a programmer/analyst working on insurance company databases for Avco Financial Services. While at RDS he has been active as a database design consultant for the company's outside clients, has been an author of the MARATHON database system and is more recently the principle author of the ACE Report Writing Language Compiler for MARATHON.

Ron Manson

Mr. Manson holds a B.A. degree in Accounting from the California State University at San Jose and has most recently been an in-charge accountant with Coopers and Lybrand. He is currently the chief financial officer of RDS.