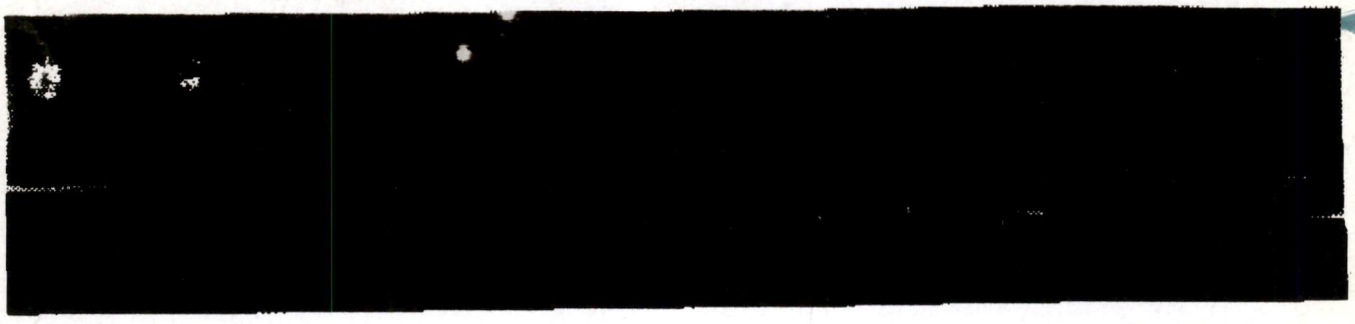
R- Proposal Going to Jap on Wedn- Jack asked that you call John Kerin Wedn Afternoon- You'll able to. OK?



A

P.S. Jack will send you the info you need for that call prior to it-

DIGITAL EQUIPMENT CORPORATION
8085 South Chester Street
Englewood, Colorado 80112
303-649-3000

TO: Andrea Wilkins

COMPANY: Digital

FAX PHONE: 297-1407 **VOICE PHONE** 264-6210

DATE: 11/8/93 **PAGES TO FOLLOW** 16

COMMENTS

A- feel Jack
① too long to read
② I'm worried client going around keeley without telling him.
③ Who is the decision maker?

Standard & Poor's Proposal for Russ Gullotti Review ← John & 3 other execs

FROM Jack Wachtler **PHONE** DTN 553-3376

FAX NUMBER: 303-649-3579
DTN: 553-3579

11-08-93 06:19PM P01

[redacted]

November 8, 1993

Michael G. Keller
Vice President, Technology
Standard & Poor's Compustat Services, Inc.
7400 S. Alton Court
Englewood, CO. 80112

Dear Mike:

Enclosed is Digital's revised Section V (Proposed Solution) and Section XII (Financial Information) to our proposal in support of your requirements for a Relational Database Processing Platform.

I have also enclosed a summary showing our performance on the VAX cluster benchmark last week and a comparison of CPU time on the VAX versus the Alpha platforms on the MT5 benchmark suite which was the only test which was run on both platforms. We are pleased with the way the VAX cluster performed and the way that Oracle multiprocessing and parallel server scaled on the VAX VMS tests. We believe the benchmark results support our contention that an Alpha Ready VAX cluster will support your needs until Oracle support of the proposed Alpha configuration is ready. Please note that the additional VAX nodes will be provided as a loan until the Alpha solution is fully operational to your satisfaction.

We appreciate the time of your staff in working with us during the benchmarks and in discussions regarding your configuration requirements.

Thank you for the consideration you have given our proposal. We look forward to a successful long-term relationship with Standard & Poor's Compustat Services.

If I can answer any further questions please call me at 649-3376.

Sincerely,

Jack Wachtler

Jack Wachtler
Senior Sales Representative

Section V - Proposed Solution

Objective

This section revises our configuration and implementation recommendations to take into consideration the information gathered during benchmarks and restates the reasons why Digital and the Alpha AXP architecture is the best choice for Compustat Services as a long term business investment.

Alpha's suitability for Compustat processing requirements

As outlined in the RFP, Standard & Poor's Compustat Services requires a scalable system platform that can grow vertically through addition of CPUs to the system cabinet and horizontally by clustering multiple system cabinets. The ability to support multiprocessing and clustering insures that CPU capacity is not limited to a single system's capacity. Digital has supported these features for years on VAX and is now offering the same support on Alpha.

The benchmark results and our interviews with the project team have proven to us how extremely compute intensive Compustat's workload will be. The user community is made up of computer literate "power users" who repeatedly make huge data base extracts to support the production of a large number of data products. The compute intensity and the frequency of these processing requests against the database appear to us to have no limits. As a result, it appears that users will use all of the CPU power Compustat can afford to provide them.

In the benchmark of the single Alpha processor we proved that Alpha had the fastest performance in "single user" jobs. However many of the typical database processing requests took approximately one hour of CPU time to run even on Alpha. Since it will not be uncommon for 20 database requests of this size to be running concurrently, it has become apparent to us that a multiprocessor Alpha solution is the only feasible way to increase the number of CPU hours available for processing in a given day to meet the demands of users.

Digital's current support for multiprocessing and clustering make it an ideal candidate for Compustat's business over the long haul. Although Oracle supports these features on VAX, they have not yet completed the work to extend this support to Alpha. However, Oracle is working hard to release multiprocessing and parallel server (clustering) on the Alpha systems which they see as a strategic platform with a long life ahead. In addition, Digital will continue to roll out faster versions of the Alpha CPU boards which will help keep up with the demands of Compustat users.

Oracle and Digital have done joint testing with prereleased multiprocessing software on Alpha, and have announced a record setting TPC-A benchmark on

the DEC 7660 with Oracle7, however the software is not yet ready for volume customer distribution.

The " Alpha Ready" VAX 7000 provides Digital a vehicle by which we can offer multiprocessor systems today and upgrade them to Alpha systems in the future when Oracle support is available.

Compustat project schedule

Compustat's project implementation starts before Oracle's scheduled release dates for multiprocessing and clustering support on Alpha. In January, Compustat database loading and validation begins which will involve CPU intensive database requests similar to the benchmark. In addition, tape mastering will require 150 tape product pulls per week which are also very CPU intensive.

Digital's recommended configuration and implementation plan

Digital's recommended Alpha configuration for Compustat is two DEC 7000 Model 650 AXP systems clustered and running Oracle Parallel Server Option. This provides a total of 10 Alpha processors which will provide a large capacity for multi-user workloads.

Figure 1 illustrates this configuration.

Initially we would install four Alpha Ready VAX 7000 Model 660s in January (see Figure 2) which makes available VAX processors in four Alpha Ready system cabinets. Once Oracle support of multiprocessing on Alpha is ready, ample time will be provided to migrate from VAX to Alpha by phasing in the replacement of the VAX CPU boards with Alpha CPU boards and making any software and tuning changes needed for Oracle in the Alpha environment. This phase-in is facilitated by Digital's support of "mixed clusters" of VAX and Alpha systems (see Figure 3). Digital will develop a detailed migration plan which allows the migration and testing to take place without interruption of production work. This migration plan will be developed in conjunction with and will be approved by the Compustat Denver project team. Any loaner VAX systems will not be shipped back to Digital until after migration is deemed complete by Compustat Denver management .

Our price for the equipment will be the price of the final Alpha configuration. The additional VAX processors will be provided on a loaner basis until Oracle multiprocessing software on Alpha is ready.

All other peripheral equipment installed with the Alpha Ready VAX plugs and plays with both VAX and Alpha.

Proposed Solution

Two DEC 7000/650 AXP
Two Five Processors Nodes Clustered With RAID
10 Alpha Processors, 240 Alpha CPU Hours Per Day Capacity

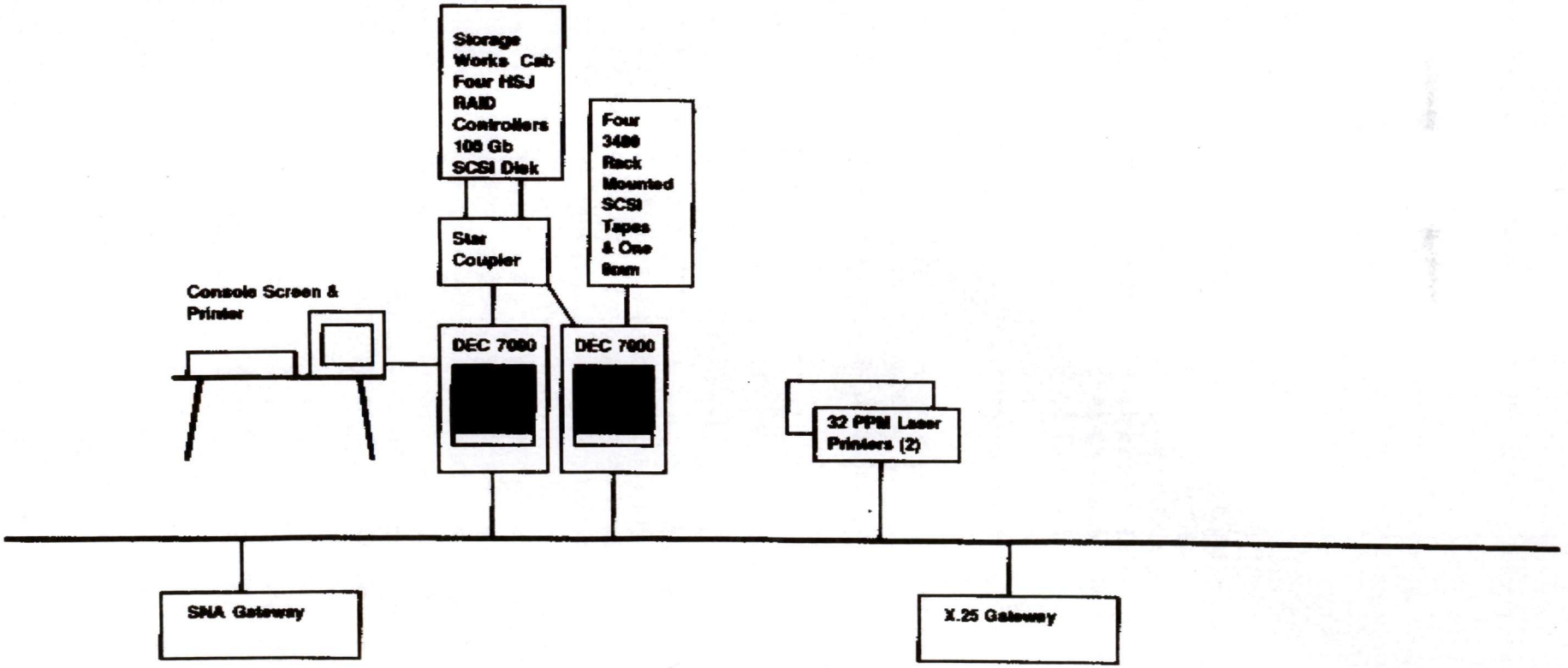


Figure 1 - Proposed Solution

Initial Implementation

Four "Alpha-Ready" VAX 7000/660 Systems Clustered With RAID
24 VAX Processors, 576 VAX CPU Hours Per Day Capacity
Also includes 10 Alpha Upgrade Processors

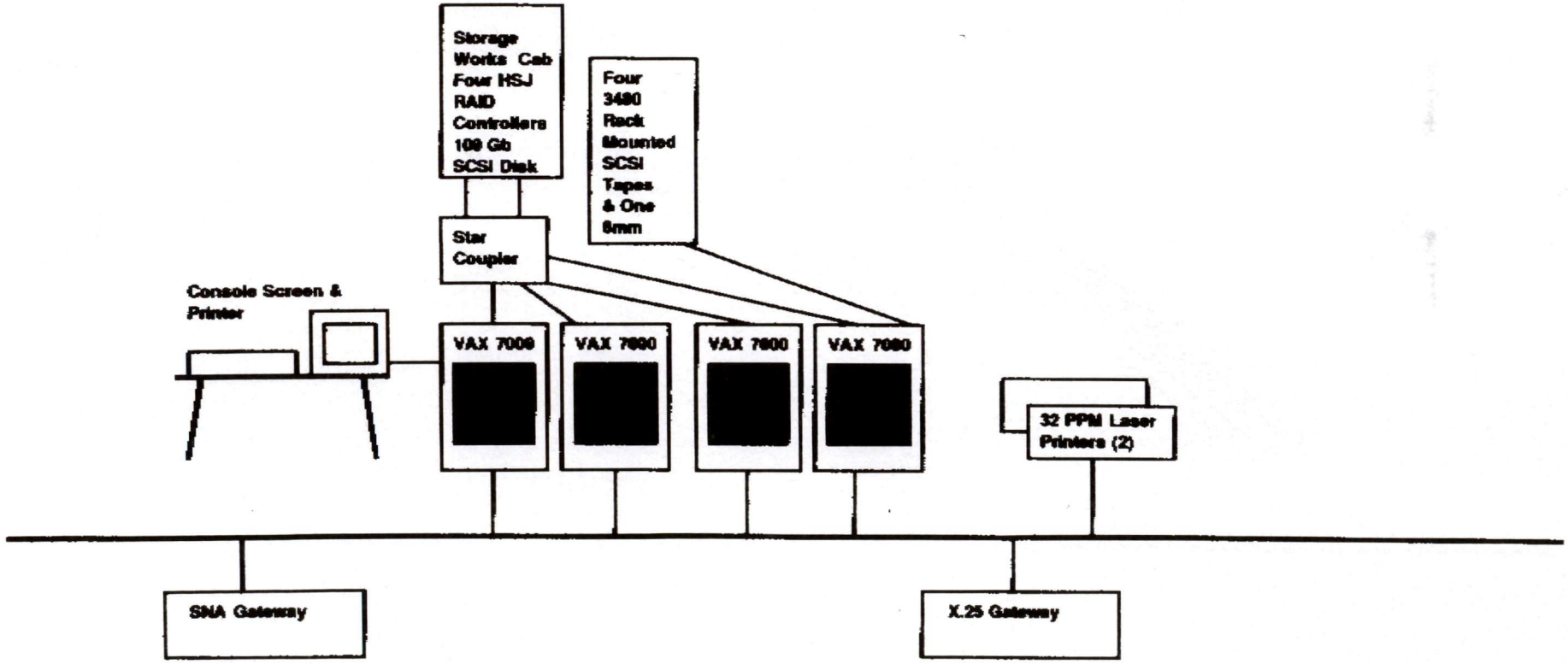


Figure 2 - Initial Implementation

Phasing in Alpha with Mixed Cluster

Three VAX (18 CPUs) and One Alpha (5 CPUs) in Mixed Cluster going against the same database

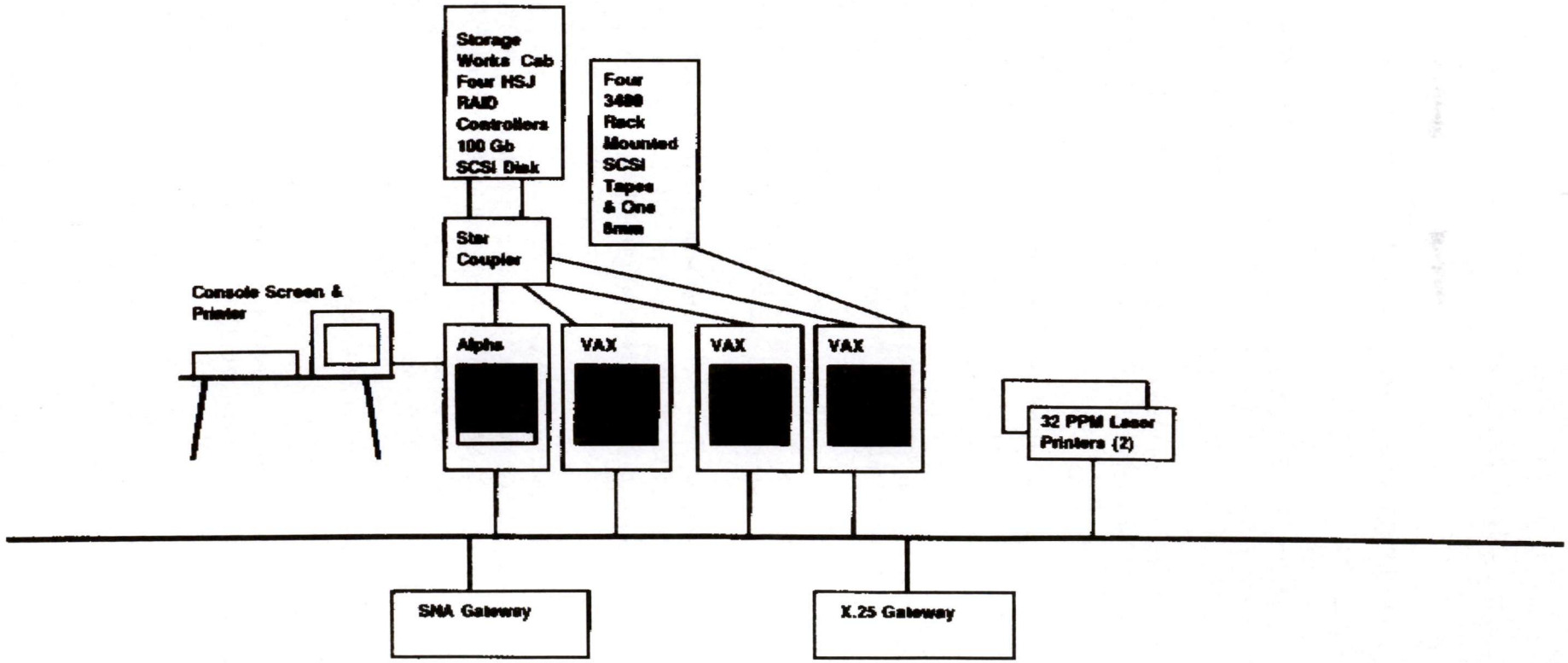


Figure 3 - Mixed Cluster Capability

We believe you will find that the price performance of our recommended Alpha solution will be very competitive.

Digital's role in providing OpenVMS expertise and implementation assistance

Digital recognizes and appreciates Compustat's aggressive implementation schedule and commitment to replace the mainframe system. Digital is committed to assist Compustat to complete the project to unplug the mainframe on time.

We appreciate that most of the Denver project team's experience is with UNIX and are proposing services to make the transition to OpenVMS easy for the Denver team.

Digital has included 1,000 man-hours of OpenVMS system consulting as a part of this proposal. Expertise would be provided at the beginning of the project by one or more resident consultants in the following areas:

- OpenVMS expertise in areas of system administration and network services to assist in training and in configuration of system and network resources in an OpenVMS environment.

- Oracle expertise on the OpenVMS platform to assist the Oracle DBA to understand OpenVMS/Oracle tuning and management issues.

- Training and programming services to assist the non-VMS programming staff to transition to the VMS environment. This could include assistance using DCL, the POSIX shell, Vi editors and programming utilities in the OpenVMS environment.

- VAX to Alpha Migration expertise from Digital and Oracle to assist in the installation, configuration and tuning of Oracle on Alpha and the gradual phasing in of the Alpha systems into the OpenVMS cluster environment.

To insure key members of the project team are adequately prepared to work productively with unfamiliar OpenVMS tools and to facilitate work with resident consultants, we are including six sets of OpenVMS programming and user documentation for free with this proposal.

Digital is committed to provide the necessary expertise to insure successful project completion regardless of whether the resources come from inside Digital or from a subcontractor such as Oracle.

Digital's resident consultant(s) would be expected to work as an integral member of the Compustat project team with full accountability to the Compustat project manager and the implementation schedule.

In addition to the resident(s), we have included an unlimited training subscription for 12 people to attend as many formal training courses as desired for one year from Digital's Open Learning Network curriculum. The Open Leaning Network curriculum includes Digital, Oracle, Novell and Microsoft training courses provided by Digital and non-Digital instructors in Denver and at other training locations. The project team can use the unlimited subscription to attend OpenVMS and Oracle training as well as other courses relevant to the implementation and management of the client-server environment. Attendance by members of the project team will also help to insure a smooth and timely implementation of the system.

Why Digital?

Although there are many business and technical criteria being weighed in the Standard & Poor's decision making process, we feel that two in particular are critical to long term viability of Compustat Services and long term successful results:

- Selection of a strong, long term business partner
- Selection of a system architecture with long life

Digital is the strongest business partner

The selection of a strong business partner is critical to Compustat Services because the computer system is the heart of your data services business. The investment you make today needs to pay off for many years into the future. This means that the partner you select must have the financial and technology resources in place to continue to enhance and protect the value of your investment in technology, people skills, and business processes over time.

Of the companies currently remaining under consideration, Digital is best positioned to meet your needs for a strong business partner. Digital is a conservatively managed company with a lot of cash. As a result we have been able to invest in high volume Alpha chip manufacturing facilities in Hudson to produce Alpha processors far into the future. This investment in 64-bit RISC chip technology cost over $1 billion dollars. Only an elite group of companies has the ability to design and manufacture a chip like Alpha today in volume. Another partner of Digital's with Alpha manufacturing capability is Mitsubishi in Japan. Between our two companies we have enormous chip manufacturing capacity which is critical supplying a large customer base at competitive prices. Since we

own the Alpha technology, we are in a position to enhance it, control it, and continue to increase the value to our customers.

As competitors continue to make advances in processor performance there will be a game of leap frog with Alpha leading now and others catching up for a brief time and then Alpha leaping out ahead again.

Although there will undoubtedly be gains in processor performance by others, our president Bob Palmer on October 12, committed that we would continue to lead the industry in "price-performance" no matter what our competitors come out with. We can make this commitment because we have already made the investments in Alpha technology while most other companies have not yet made the investment to go to 64-bit technology. With these investments behind us we are better positioned than any of our competitors to insure our customer's future and to protect their investments in hardware, software and expertise.

Digital's Alpha systems architecture has the brightest future

Selecting a technology for Compustat's data services should take into consideration the importance of "choice" and "longevity".

More than any other system architecture in the marketplace, Alpha was built to offer "choice". The Alpha systems offer a choice of compatible hardware platforms and a choice of three popular operating systems, Digital UNIX, OpenVMS and Microsoft Windows NT. Soon we will add Novell Netware to this list. No other modern system architecture offers this level of choice.

On October 12, Digital announced its intent to lead the industry in providing Open Client Server Solutions. Although Digital UNIX is an important part of this plan, it is only one element. Commitment to providing "middleware" allowing interoperability between many different operating systems and vendor platforms is even more important than UNIX itself.

Digital's announcement of CORBA (Common Object Request Broker Architecture) compliant object oriented middleware known as ObjectBroker is an example of the type of software that allows Digital systems to encapsulate and run legacy applications on PCs, Macs, UNIX systems and IBM mainframes from a Digital hosted application. This type of open interoperability is what will enable us to offer leading client server solutions on Alpha systems regardless of what operating system is deployed.

Systems purchased from niche UNIX suppliers offer you UNIX but do not insure maximum investment protection and interoperability of PCs and non-UNIX legacy systems. Vendor's offering these systems do not have the long track record of protecting customer's investments like Digital has with VAX.

Longevity of the system architecture is a key consideration of the vendor selection process for a company like Compustat. The Alpha architecture has been designed for a 25 year life. With other commercially available systems architectures, it is difficult to imagine anyhere near this kind of longevity, but it is a very credible claim for Digital given our track record with the VAX. The VAX was introduced in 1975 and is still being used extensively today, 18 years later. Customers who invested in the VAX have been able to run on each new generation of hardware without having to rewrite software or retrain people.

Summary and conclusions

In summary we believe that Standard & Poor's Compustat Services needs a strong business and technology partner in order to support customer product development and to provide responsive service to customers for many years into the future. Digital is in the best position of any vendor being evaluated to provide for a strong partnership and to protect your investments in people, business processes and technology for the long haul.

We believe Digital's Alpha architecture is perfect to provide the scalable high performance and reliability needed to support Compustat's data services business. Digital is willing to be extremely flexible and creative in our business practices in order to meet the aggressive project schedules by providing temporary loaner equipment until all of the features designed into the Alpha architecture are supported by Oracle, and all of the performance benefits of Alpha can be realized.

We believe that our historical relationship with Standard & Poor's in New York, our performance in supporting the benchmark, and our strong relationship with Oracle proves that we have the services capabilities needed to support your project team and insure a successful implementation. We have enjoyed the opportunity to support Standard & Poor's and McGraw-Hill business elsewhere and have appreciated the opportunity you have given us to compete for your business again.

Thank you for the consideration you have given our proposal. We look forward to a successful long-term relationship with Standard & Poor's Compustat Services.

Section XII - Financial Information

Executive Summary of Quote for SPCS Response	Purchase Price	Year 1 Maintenance	Year 2 Maintenance
Two Five Processor Alpha Systems	$615,310.90		
High Speed Network Laser Printers	$55,170.00		
100 Gb RAID Disk	$287,418.33		
Four 3480 and One 8mm Tapes	$82,200.10		
Software Licenses, Media and Documentation	$187,803.00		
X.25 Gateway	$13,276.70		
SNA Channel Attach Gateway	$61,120.60		
Miscellaneous Networking Components	$5,614.20		
Resident VMS System Manager	$131,000.00		
12 Person Unlimited Training Pass	$48,000.00		
Total	$1,486,913.83	$23,097.68	$160,320.00

Line Item Detail of Quote for SPCS Response

Item	Qty	Model	Description	Unit Selling Price	Item Gross Amount	Adjstmnt Percent	Adjstmnt Amount	Item Net Amount
Two Five Processor Alpha Systems							$37,484.00	$337,356.00
1	2	7HAME-HA	DEC 7000-610 OVMS 512MB 208V	$187,420.00	$374,840.00	10%	$25,811.20	$232,300.80
2	8	7HATA-MC	DEC 7000 Alpha OVMS CPU Upgrade	$32,264.00	$258,112.00	10%	$3,240.40	$29,163.60
3	2	CIXCD-AC	XMI-CI adapter	$16,202.00	$32,404.00	10%	$0.00	$10,963.00
4	1	SC008-AC	STAR COUPLER,8 NODE WITH CAB	$10,963.00	$10,963.00	0%	$345.50	$3,109.50
5	5	BNCIA-10	CI-BUS CABLE 10-METERS	$691.00	$3,455.00	10%	$0.00	$1,104.00
6	2	VT420-CA	MONO AMBER TERM USA	$552.00	$1,104.00	0%	$0.00	$1,314.00
7	2	LA75S-AA	Companion Printer,US , 120V	$657.00	$1,314.00	0%	$66,881.10	$615,310.90
		Alpha Systems Subtotal			$682,192.00			
High Speed Network Laser Printers							$0.00	$55,170.00
8	2	LPS32-CA	LPS32 Duplex 110V US/MEXICO	$27,585.00	$55,170.00	0%	$0.00	$55,170.00
		Network Laser Printers Subtotal			$55,170.00			
100 Gb RAID Disk							$0.00	$30,506.00
9	1	SW812-AA	12GB SW800 W/6 RZ28,60Hz/3-PH	$30,506.00	$30,506.00	0%	$0.00	$123,408.00
10	4	HSJ40-AD	HSJ40 W/16MB RD CACHE AND RAID	$30,852.00	$123,408.00	0%	$0.00	$3,075.87
11	7	BA350-SA	Storage shelf assy, 1/2 SCSI	$439.41	$3,075.87	0%	$0.00	$400.61
12	7	BA35X-RD	Rack Mount Kit, METRIC 150 mm	$57.23	$400.61	0%	$0.00	$2,739.28
13	8	BA35X-HA	131 W Univ AC In Power Supply	$342.41	$2,739.28	0%		

Item	Qty	Model	Description	Unit Selling Price	Item Gross Amount	Adjstmnt Percent	Adjstmnt Amount	Item Net Amount
14	44	RZ28 -VA	2.1 Gb disk w/snap-in carrier	$2,818.83	$124,028.52	0%	$0.00	$124,028.52
15	2	BA350-MA	SWXXX CNTLR BASIC SHELF	$899.00	$1,798.00	0%	$0.00	$1,798.00
16	19	BN21H-02	2.0 M Cable, SCSI-2 A	$76.95	$1,462.05	0%	$0.00	$1,462.06
	100 Gb RAID Disk Subtotal				$287,418.33		$0.00	$287,418.33
Four 3480 and One 8mm Tapes							$535.70	$4,821.30
17	1	H9602-MK	60 CABINET, 2 877-DA - 120V	$5,357.00	$5,357.00	10%	$0.00	$5,745.00
18	1	KZMSA-AB	XMI to SCSI Adapter Option	$5,745.00	$5,745.00	0%	$37.20	$334.80
19	1	CK-KZMSA-LA	XMI to SCSI Single Host Kit	$372.00	$372.00	10%	$0.00	$59,824.00
20	4	2R-TKZ60-AC	3480 DR. RKMNTABLE KIT, 120V	$14,956.00	$59,824.00	0%	$0.00	$2,400.00
21	4	2R-TK60R-AA	TKZ60 19 RACKMOUNT KIT	$600.00	$2,400.00	0%	$0.00	$2,000.00
22	4	2R-TK60K-BB	4-PACK 10 SLOT MAG TK60 DRIVE	$500.00	$2,000.00	0%	$0.00	$6,312.00
23	1	TKZ09-BA	8MM,5GB,TT TAPE SUBMSYSTEM	$6,312.00	$6,312.00	0%	$0.00	$763.00
24	1	2T-SHELF-DC	FIXED SHELF, 7.00 BEZEL/DOOR	$763.00	$763.00	0%	$572.90	$82,200.10
	Tapes Subtotal				$82,773.00			
Software Licenses, Media & Documentation							$3,485.20	$31,366.80
25	2	QL-MT2A9-BH	OpenVMS AXP IA Use 64 Users	$17,426.00	$34,852.00	10%	$27.90	$251.10
26	1	QA-MT1AA-H8	OVMS AXP Bin+Online Doc CDROM	$279.00	$279.00	10%	$160.00	$1,440.00
27	1	QA-MT1AA-GZ	OpenVMS AXP Standard Doc V1.5	$1,600.00	$1,600.00	10%	$55.80	$502.20
28	1	QA-03XAA-H8	SW Lib OVMS AXP LP's CDROM	$558.00	$558.00	10%	$3,244.00	$29,196.00
29	2	QL-MTGAN-AA	DECnet EF V/A License	$16,220.00	$32,440.00	10%	$2,990.40	$26,913.60
30	2	QL-0LXAN-AA	TCP/IP Services for OpenVMS License	$14,952.00	$29,904.00	10%	$2,082.40	$18,741.60
31	20	QL-2A1AA-3B	OpenVMS Volume Shadowing (per disk	$1,041.20	$20,824.00	10%	$5,228.80	$47,059.20
32	2	QL-MUZAN-AA	VMScluster OVMS/AXP License	$26,144.00	$52,288.00	10%	$1,540.50	$13,864.50
33	1	QL-MU7AN-AA	DEC C License	$15,405.00	$15,405.00	10%	$1,963.50	$17,671.50
34	1	QL-0HQAN-AA	DEC C++ License	$19,635.00	$19,635.00	10%	$22.50	$202.50
35	1	QA-0LXAA-GZ	TCP/IP Documentation	$225.00	$225.00	10%	$26.50	$238.50
36	1	QA-MU7AA-GZ	DEC C Documentation	$265.00	$265.00	10%	$39.50	$355.50
37	1	QA-0HQAA-GZ	DEC C++ Documentation	$395.00	$395.00	10%	$20,867.00	$187,803.00
	Software, Media & Documentation Subtotal				$208,670.00			

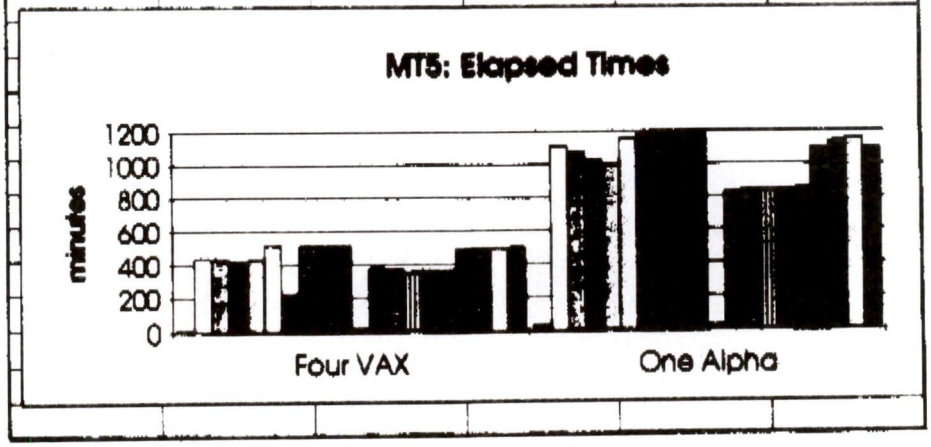
Item	Qty	Model	Description	Unit Selling Price	Item Gross Amount	Adjstmnt Percent	Adjstmnt Amount	Item Net Amount
X.25 Gateway							$0.00	$8,356.00
38	1	DEMSA-HA	DEC X25GATEWAY 500 US/CAN/JAP	$8,356.00	$8,356.00	0%	$0.00	$76.00
39	1	BNE4C-05	HIGH LOSS PVC AUI CBL ST CONN	$76.00	$76.00	0%	$474.30	$4,268.70
40	1	QL-0TWAN-AA	X.25 License for OpenVMS	$4,743.00	$4,743.00	10%	$64.00	$576.00
41	1	QA-0TWAA-GZ	X.25 Documentation for OpenVMS	$640.00	$640.00	10%	$538.30	$13,276.70
	X.25 Gateway Subtotal				$13,815.00			
SNA Channel Attach Gateway								
42	1	DESNB-DA	Channel Attach Gateway with DTF	$49,303.00	$49,303.00	0%	$0.00	$49,303.00
43	1	QA-1GQAA-HA	File Transfer Software for MVS Host	$394.00	$394.00	10%	$39.40	$354.60
44	1	QA-VEBAA-H5	File Transfer Software for VMS Host	$430.00	$430.00	10%	$43.00	$387.00
45	1	QSF08-SZ	SNA Gateway Implementation	$11,000.00	$11,000.00	0%	$0.00	$11,000.00
46	1	BNE4C-05	HIGH LOSS PVC AUI CBL ST CONN	$76.00	$76.00	0%	$0.00	$76.00
					$61,203.00		$82.40	$61,120.60
Miscellaneous Networking								
47	1	DSRVH-DA	DECserver 90M 1MB Flash US/CA	$2,427.00	$2,427.00	0%	$0.00	$2,427.00
48	1	QA-0LWAA-H5	DECserver 90M Software	$628.00	$628.00	10%	$62.80	$565.20
49	1	BNE4C-05	HIGH LOSS PVC AUI CBL ST CONN	$76.00	$76.00	0%	$0.00	$76.00
50	1	DEFAR-AA	DECrepeater 90FA, US, CAN, JA	$854.00	$854.00	0%	$0.00	$854.00

Item	Qty	Model	Description	Unit Selling Price	Item Gross Amount	Adjstmnt Percent	Adjstmnt Amount	Item Net Amount
51	1	BNE4C-05	HIGH LOSS PVC AUI CBL ST CONN	$76.00	$76.00	0%	$0.00	$76.00
52	1	BC16M-30	RG58 THINWIRE CABLE PVC	$29.00	$29.00	0%	$0.00	$29.00
53	1	DELNI-BA	LOCAL NETWORK INTERCONNECT US	$1,435.00	$1,435.00	0%	$0.00	$1,435.00
54	2	BNE4D-05	HIGH LOSS PVC AUI CBL RA CONN	$76.00	$152.00	0%	$0.00	$152.00
	Miscellaneous Networking Subtotal				$5,677.00		$62.80	$5,614.20
Resident VMS System Manager								
55	1000	QS-96PA9-T2	SR SYSTEMS ENG (900-1799 HRS)	$131.00	$131,000.00	0%	$0.00	$131,000.00
12 Person Unlimited Training Pass								
56	1	EY-UNLTD-12	UNLIMITED TRNG/1YR TERM/12MAX	$48,000.00	$48,000.00	0%	$0.00	$48,000.00
			Totals:		$1,514,715.33			$1,486,913.83
			Installation:					
			Grand Totals:					

11-08-93 06:19PM P16

MT5: VAX vs Alpha AXP

	Elapsed(min)		Cpu(min)		
	Four VAX	One Alpha	VAX		Alpha
pb1001	16	36	3	1	33%
pb1002	436	1110	99	57	58%
pb1003	435	1075	99	56	57%
pb1004	418	1019	96	57	59%
pb1005	424	991	96	56	58%
pb1006	514	1155	144	76	53%
pb1007	223	1193	49	78	159%
pb1008	510	1197	151	78	52%
pb1009	518	1178	149	82	55%
pb1010	512	1194	152	86	57%
pb2001	19	28	3	1	33%
pb2002	372	826	79	49	62%
pb2003	369	845	79	50	63%
pb2004	351	837	77	49	64%
pb2005	360	838	77	49	64%
pb2006	360	849	77	49	64%
pb2007	489	1096	134	74	55%
pb2008	492	1135	134	80	60%
pb2009	492	1155	135	74	55%
pb2010	496	1091	135	74	55%



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Customer
help
Standard + Poors

Doc. No:	064481
Date:	15-Nov-1993 11:45am EST
From:	Jack Wachtler WACHTLER.JACK AT A1 at DV780 at DVO
Dept:	
Tel No:	303/649-3376

TO: See Below

Subject: S&P Reference - ITT Hartford

Terry,

I have been trying to come up with some VMS/Oracle/Client-Server reference accounts to use with Standard & Poor's.

Jim Bosco of ITT Hartford Insurance has agreed to talk to the Standard & Poor's, let me know if you think this will help us in our approach with John Kerin. Jim can be reached at 203/843-8869. You probably should talk with John Kerin about the account before we call Jim. You might want to talk with Jim Bosco yourself before deciding to set up a conversation. We can talk more about this tommorrow evening if you want.

ITT Hartford has used Digital VMS and Oracle since 1987. They have 27 locations which are networked with headquarters. Each location has a small VAX and the headquarters has a VAX cluster. There are 2,000 users of the marketing data base, 1,000 of which are in the headquarters. They do all of their development in the Oracle environment. They have been able to increase their marketshare in a very competitive business, they believe that their distributed Oracle database and Digital network have a lot to do with that.

Although the LANs they have implemented are currently host/terminal based, they have an advanced development lab where they have been testing client-server configurations for about a year. The clients and configurations they have been testing include Mac, DOS, Windows and Xterminal. They have been testing Oracle Client/Server applications with TCP/IP and with DECnet and are satisfied with the results. The reason they aren't jumping right in to Oracle7 client-server in production is that they are wanting to make sure they understand the client configuration that works best before they leap in. The system they use now is mission critical, customer impacting and revenue impacting.

Hartford is an Oracle alliance partner, what they have learned in the advanced test lab about Oracle client-server, should be beneficial to Standard & Poor's.

If I had this customer talk with Mike Keller alone, I think Mike would focus on the fact that the customer is not using client-server in production NOW.

However, a discussion with John Kerin and this customer would probably help to strengthen our hand for a OpenVMS solution.

Jack Wachtler

a Resend to ~~John Hagel~~ immediately. I need to know if the ASC can be the single point of focus for calls about Oracle and VMS. I need an answer today. RFM

Distribution:

TO: terry mccauley @nyo

CC: russ gullotti @mko
CC: peter borbely @cxo
CC: ted schrafft @szo
CC: steve wittenberg @wro
CC: folkert koelman @rch

Printed by RUSS GULLOTTI @MKO

INTEROFFICE MEMORANDUM

Doc. No: 064443
Date: 12-Nov-1993 10:08pm EST
From: Jack Wachtler
WACHTLER.JACK AT A1 at DV780 at DVO
Dept:
Tel No: 303/649-3376

TO: terry mccauley @nyo

CC: russ gullotti @mko
CC: peter borbely @cxo
CC: ted schrafft @szo

Subject: S&P Briefing Package

(1) phone # for oracle/VMS
(2) who is EP for McGraw Hill
(3) reference accounts

Terry,

This is my assessment of what we will need to address in the call in New York.

This is from phone conversations with Mike Keller over the past two days while John Kerin was here.

I noticed Russ asked you to send a briefing packge on John Kerin. You probably want to get a good idea of John's agenda and issues for the meeting and get something to Russ right away.

My flight arrives at La Guardia Tuesday at 4pm.

We can plan on meeting Wednesday morning before.

We will talk again Monday.

Jack Wachtler

John Paget says the CSC is the perfect place for Oracle & VMS calls - all 1-800 calls that come into Digital flow through a VAXcluster & are handled by a team out of the CSCs -

A

RPM

Resend John Paget for immediate response

Can we use the CSC as the single point of focus for calls about Oracle and VMS?

I need a response today (Tuesday).

RPM @ response

RPM

MEETING DATE: November 17, 1993

MEETING TIME: 10:00 - 11:30

LOCATION: Standard & Poor's Equity Services
17th Floor
25 Broadway
New York

ATTENDEES:

STANDARD & POOR'S
John Kerin, Executive Vice President, Standard & Poor's, New York
Mike Keller, Vice President, Standard & Poor's Compustat Services, Denver

DIGITAL
Russ Gullotti, Vice President, US Area
Jack Wachtler, Denver Senior Sales Representative
Terry McCauley, New York Sales Executive

OBJECTIVES:
Understand the customer's issues relative to implementing a Digital solution.

Respond to the customer's issues to establish confidence that Digital has the best technology and support capability to address Standard & Poor's needs in Denver for a mission critical Client-Server Oracle system now and in the future.

BACKGROUND REVIEW:
The customer has delayed their decision date for the selection of their platform from November 15 to December 14. Digital and Pyramid are the two finalists.

Pyramid's proposal is a cluster with two UNIX multiprocessor systems. Digital's proposal is to provide a cluster of "Alpha Ready" VAX systems at implementation and convert them into a cluster of two Alpha systems when Oracle support for SMP and Clusters is available on OpenVMS. Digital's proposal also includes on site resident expertise to assist the UNIX oriented staff to learn system management, Oracle management and software development on OpenVMS.

In order to decide between the two finalists, the customer requested a meeting to discuss concerns and issues and a final benchmark to be done by both companies with their proposed system configurations.

John Kerin would very much like the chosen solution to be Digital OpenVMS. Mike Keller prefers UNIX and is uncomfortable with OpenVMS. John has more influence than Mike in the decision making process. Although Mike says that Pyramid "won" the benchmark, he says that Digital doesn't have to win the benchmark, to win the business. We have to prove that we can handle the workload in the early months of the implementation and provide adequate support so that they can complete their work on schedule and be successful long term in implementing a client-server environment.

We have tested the water with both executives on putting in a 3rd party UNIX multiprocessor solution until we can migrate it to DEC OSF/1 Alpha and it was met with a negative reaction by John Kerin. John Kerin is essential to Digital winning the business, so the only viable option from Digital is an OpenVMS proposal.

CUSTOMER ISSUES FOR DIGITAL:

1) Benchmark Performance. The customer has yet to run their benchmark through to completion on an OpenVMS system. We did an Alpha benchmark which could not complete because of the time limitations of running on one processor. We did a second benchmark on a VAX cluster which provided useful information, but this too was not a complete benchmark due to time and equipment constraints.

The way in which we can best address this is to successfully run the complete benchmark on a configuration as close to our proposed configuration as possible. We will need help to obtain all of the equipment needed in the benchmark center the week of November 29.

2) Concerns about support and responsiveness. According to Mike Keller, in dealing with Digital in the past, he, John Kerin and several of his staff have experienced problems with responsiveness to solving problems. The example cited by Mike was that a problem was brought up by John Kerin in New York at lunch with Digital management about not being able to use Digital's TCP/IP product to transfer files between the VAX cluster and a DECstation running Ultrix. This was a revenue impacting and customer impacting situation for New York S&P. Although we fixed the problem, it took us 3 weeks to get someone from engineering assigned to solve the problem and 3 more weeks before the fix could be put in place.

Mike has indicated that Pyramid has offered a single phone number for problem resolution whether the problem is a Pyramid or an Oracle issue. This type of service is viewed as a requirement, not an option.

Our response is to demonstrate that we understand and have the capability to support the single point of problem resolution in the Multivendor environment, that we provide "mission critical" support for large accounts like MCI and the RBOCS who have multibillion dollar revenue streams running through OpenVMS systems integrated with 3rd party hardware and software. We need to invite them to the Customer Support Center in Colorado Springs to meet with our "mission critical support team" and commit to the development of a tailored support plan that meets with their approval.

We also need to emphasize that we understand the importance of and will commit to be involved in "prestaging and stress testing" the OpenVMS server with the PC client environment before it is "turned on" in a revenue impacting and customer impacting production environment.

3) Concerns about installing an "older technology" (VAX) environment. Concerns about how long it will be before the Alpha environment will be supported by Oracle and the ease of migration from VAX without impacting production.

I think this issue is bigger with Mike Keller than with John Kerin, who runs on VAX now and was very satisfied with our proposal.

Our response needs to demonstrate that the "Alpha Ready" VAX systems will upgrade easily, and to demonstrate that we have done our homework with Oracle regarding Alpha migration. We need to remind them that we have proposed to develop a migration plan which does not impact production and which meets with their approval. We need to assure them that we have helped hundreds of third parties move their applications from VAX to Alpha without impacting production work.

4) Concerns about interoperability. Mike is concerned that Digital's support of open client server is weaker with OpenVMS than with UNIX and needs assurance that he will not suffer revenue or customer impacting delays when running an OpenVMS Server environment with 300 or so PC users using Oracle Client-Server on an OpenVMS Server.

The problems with Digital TCP/IP in New York, where we had trouble communicating between a Digital OpenVMS and a Digital Ultrix system is a warning flag for them.

The way to address this is to identify reference accounts running Oracle Client Server with OpenVMS servers and PC clients with great success and to make sure the Digital TCP/IP system has run reliably since it was fixed.

We are trying to identify with Oracle the best reference accounts to use.

KEY MESSAGES:

- We will be a key player in the Open Client Server environment with OpenVMS which is where most of our customer base is.

- Although UNIX is important to Digital, OpenVMS will not take a back seat to UNIX in Open Client Server.

- We will provide on site support during the implementation phase and ongoing telephone support which will provide a single point for problem resolution whether the problem is Digital or Oracle related.

- We are committed to the Denver production schedule and will have the services in place to enable them to be successful.

ROLES IN THE CALL:

I expect John Kerin to take the lead in opening the call and leading the discussion of issues. Mike Keller will be most concerned about questions of support and interoperability. Jack Wachtler will address specific issues relating to the Digital proposal and benchmark. Terry McCauley and Jack Wachtler will support Russ Gullotti on questions of support, alpha migration, interoperability and customer references. Russ Gullotti will deliver messages which show Digital's committment to Client-Server on OpenVMS, Digital's committment to Oracle partnership, Digital's committment to multivendor "mission-critical" service, and Russ's support of the Digital proposal and the Digital support team for Standard & Poor's.

Home - 212-689-3160

Printed by RUSS GULLOTTI @MKO

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

Doc. No: 064557
Date: 15-Nov-1993 10:43pm EST
From: TERRY MCCAULEY @ NYO
MCCAULEY.TERRY AT A1 at HOCUS

at PCO

Dept: NYD Sales
Tel No: 212-856-2443

Carol

TO: See Below

Subject: S&P/Compustat Meeting, 11/17
Subject:

Team:

As far as John Kerin is concerned, our performance in the Denver area has been abominable (his words). We know that the roots of this feeling are in past account coverages, but Mike Keller is playing off of that and anything else he can dig up about DEC. John Kerin's main purpose for this meeting is to voice his personal concerns about the S&P/Digital relationship. He feels he needs to say it to the responsible sales executive within Digital.

We should be prepared to accept his criticism...for the most part (in my judgment) it's deserved. There are two issues:

1) SERVICE RESPONSIVENESS: Digital did not respond with a sense of urgency to fix a revenue impacting problem with our software (TCP/IP for OpenVMS). They requested that we bring our engineering resources on site to do problem determination and it took us the better part of a month to finally get someone on site. The problem was isolated and fixed within a week, once we were there. I'll handle this issue if it comes up. John already voiced his concern on this to Al Hall. We have not had the opportunity to demonstrate that we have fixed this lack of urgency.

2) LESS THAN PROFESSIONAL EFFORT TO WIN COMPETITIVE BUSINESS: We have had two opportunities to demonstrate that we can do the Compustat application in Denver. Both benchmarks were incomplete. He has given us a third and final chance to "do a professional job" on the benchmark. John will probably review past experiences in the Denver as it relates to the McGraw-Hill relationship to Digital.

Kerin's second purpose for the meeting is to tell us what we have to do to win this business:

Run the Compustat benchmark from end to end on whatever Digital system is required to show that we can meet their 1994 needs. If we are a PROVEN viable solution...WE WIN!

We don't have to be the fastest, we don't have to be the most OPEN, we don't have to be the most economical (but we better be close). We have to show that we can deliver the goods.

That was the essence of my conversation with John Kerin yesterday.

John will do most of the talking at the meeting and will direct it to you, Russ.

Meeting strategy:
1. Listen to what the customer has to say.
2. Acknowledge without being defensive.
3. Get agreement on the Compustat success factors... what do we have to do to win?
4. Present a schedule of our action plan.
5. Close with sincerity and conviction that we are the best long term solution for S&P for this application and as a technology partner of McGraw-Hill.

The meeting will be congenial, and John will be careful not to paint too bleak a picture...we are doing a lot of things right. He is deeply interested in fostering a closer relationship with Digital and it is for this reason that we are having a third chance at this. As far as he is concerned, I am the National Account Manager, and he doesn't understand why I haven't been more of an influence at the remote sights: he holds me responsible for Digital's actions, as he should. In the meeting, reinforce the concept of a single account team.

We will have a few minutes tomorrow morning to address the above in more detail, if necessary. I'll be in the lobby of 25 Broadway at 8:00.

Distribution:

TO: Russ Gullotti @ mko
TO: Jack Wachtler @ dvo

CC: CHRISTOPHER WEBBER @NYO (WEBBER.CHRISTOPHER AT A1 at HOCUS at CPCO)
CC: steve mahoney @ mko
CC: Peter Borbely @ cxo
CC: Ted Schrafft @ szo

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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: 064533
Date: 15-Nov-1993 06:49pm EST
From: Jack Wachtler
WACHTLER.JACK AT A1 at DV780 a
t DVO
Dept:
Tel No: 303/649-3376

TO: russ gullotti @mko
TO: terry mccauley @nyo

CC: peter borbely @cxo

Subject: Points for S&P

Concerns which may be brought up by Mike Keller regarding our proposal.

Concern: VAX is an older technology platform, therefore there is greater risk in going with it than a newer UNIX box like Pyramid.

* According to Oracle, VAX VMS is the largest install base for Oracle and the second largest selling platform accounting for 12.5% of revenue. Pyramid is barely in the top 20.

* Oracle's VAX VMS revenue grew 15% last quarter.

* Alpha Ready VAX systems can be converted easily to Alpha systems and Alpha's and VAX systems can work together in a "mixed cluster". Mayo Clinic in Minnesota has a cluster consisting of 21 VAX and 3 Alpha systems.

* According to Oracle, the only thing that will need to be changed when you add an Alpha system to a VAX cluster is to install VMS and Oracle on the Alpha and recompile any C programs. No databases need to be unloaded or reloaded.

Concern: VMS won't work as well on the client-server environment as a UNIX server.

* According to Oracle their first client-server implementation was on VMS and DECnet in 1985. Both DECnet and TCP/IP transports for VMS are supported by Oracle today.

* Our Pathworks client-server software which Oracle SQL*NET uses was first introduced in 1987 and is now in Version 5. There are tens of thousands of Pathworks users.

* Digital is Microsoft's largest VAR for LAN manager, and Microsoft is a user VAX VMS Server technology for client-server applications.

* We have Oracle accounts like Hartford Insurance, Coors Brewing, and Church of Latter Day Saints who have very large investments in VMS Oracle databases. These customers are betting on Digital VMS servers for their client-server implementations.

Concern: Digital's customer support will only address problems with Digital products while Pyramid will resolve problems without "finger pointing" whether they are Oracle or Digital problems.

* Digital understands that problems with your system can be customer impacting and revenue impacting.

* We have the capability through our "mission critical support service" to be the problem manager for problems phoned in even if the problem is caused by a non-Digital product. We have the call handling procedures, problem diagnosis and problem tracking systems in place to solve Oracle, Digital or other issues. All we have to do is set up the support plan as a part of your maintenance contract.

* We are currently providing this capability to telecommunications customers who have multibillion dollar revenue streams going through our equipment and that of third parties.

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DIGITAL CONFIDENTIAL Document

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

Doc. No: 064700
Date: 17-Nov-1993 03:20pm EST
From: RUSS GULLOTTI @MKO
GULLOTTI
Dept: U.S. AREA
Tel No: 264-6209

TO: Remote Addressee (bill strecker @mlo)
TO: Remote Addressee (ED LUCENTE @MLO)

CC: Remote Addressee (BOB PALMER @MLO)

Subject: STANDARD & POORS

I have good news and bad news. First, the bad news; I made a commitment to the CIO of Standard & Poors (John Kerin) that I would show the three of you the results of an S&P evaluation on their selection of a vendor for their Compustat System. (Bob Palmer, rather than flood you with paper, I am only sending this cover memo to you. If you'd like to see the package let me know).

The package says we came in fourth out of 5 vendors for the short list of 2. The reasons for our "failure" were:

1. Our UNIX on Alpha could not run the desired benchmarks. We don't have SMP.

2. Oracle on our UNIX/SMP cannot be tested.

3. We can't cluster our UNIX

4. Our technical/sales people are not UNIX "smart"

6. We are not customer focused. We never have been but when we had great products that was OK.

7. They sense a decommit from VAX/VMS.

This particular opportunity is for $3-4M but will grow as they grow (they're doing quite well).

Bill Strecker, this is the best customer direct feedback we can get. Please review the package. I'll be glad to discuss the details with you.

Now the good news. After our visit we are back on the short list of "3" instead of 2. We will have the opportunity to run on Alpha Ready VAX/VMS benchmark in December. If it meets the benchmark requirements (it will) and I can convince them that we are committed to VAX/VMS and a UNIX that works (I can); we could win this business.

Please do not distribute or copy the attachment. No other vendor saw

it and it is S&P company confidential. I have permission to show it to the three of you only.

Russ

DIGITAL CONFIDENTIAL Document

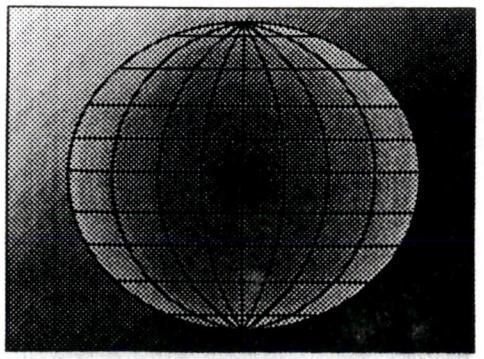
— Confidential
DO not copy —

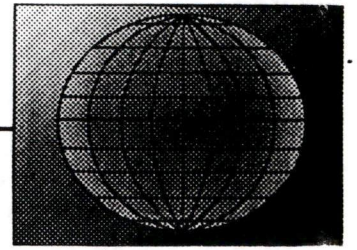
S&P Compustat

The Technology Project

RFP Benchmark Results, Vendor Evaluations, and Recommendation

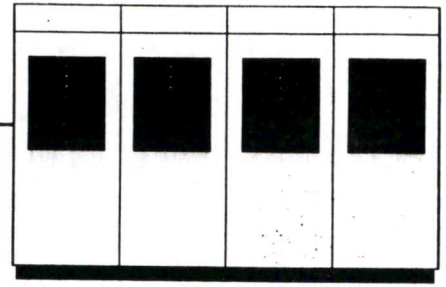
A New World of RDBMS





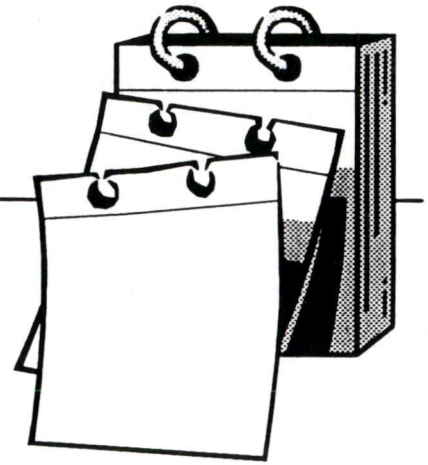
Agenda

- Introduction
- Goals of the RFP
- Benchmark Results
- Proposed Configurations and Pricing
- Vendor Strengths and Weaknesses
- Vendor Key Criteria Evaluation
- Vendor Recommendation



Goals of the RFP

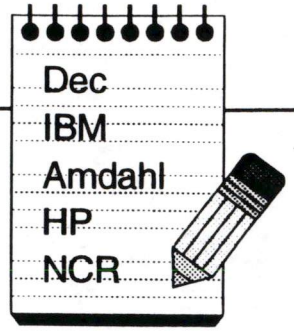
- Select the best Oracle7 RDBMS platform to meet SPCS requirements and strategic business needs
- Symmetric Multi-Processing (SMP), Massively Parallel Processing (MPP), clustered or high availability hardware configuration
- Evaluation based on vendor stability, customer support, technology, configuration growth capability, scalability, performance, and price
- Open systems approach - vendor independence, industry standards, interoperability, portability
- Client/Server architecture
- RFP process, benchmark tests, and vendor selection complete to insure 1993 delivery of new system



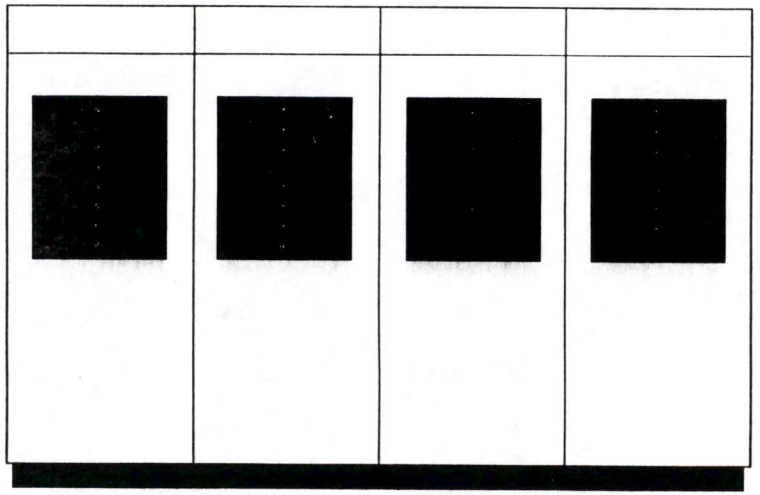
RFP Schedule

Date	Event
6/11	Issue of RFP to vendor list (11 vendors)
6/14-6/25	Individual vendor 2-hour conferences to review RFP, present preliminary information (10 vendors)
8/9-8/13	Vendor proposal submission and presentations (8 vendors)
8/16-8/20	Evaluation of vendor proposals. Selection of finalists for SPC benchmark
8/23	Benchmark tape with programs and scripts distributed to vendors
8/23 - 10/1	Vendor benchmarks
10/4 - 10/13	Final Vendor Presentations
10/14 - 11/5	Benchmark result evaluation, Corporate Visits
11/8 - 11/12	Best and Final Offers Received
11/15	Notification of award to vendor, contract negotiation, submission of PO to vendor
12/15-12/31	Delivery of system, installation and acceptance test at SPC

Vendor List - Initial

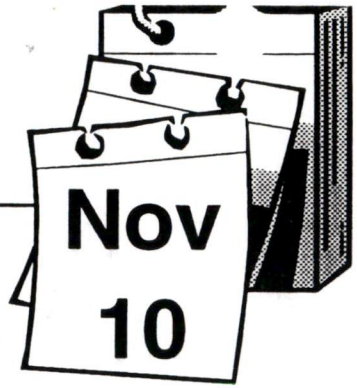


- DEC
- IBM
- Amdahl
- HP
- NCR
- Sequent
- Pyramid Technology
- Sun Microsystems
- Encore
- nCube
- Tandem



RFP Response Outline

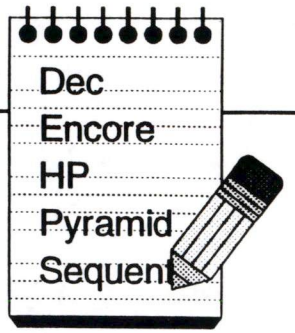
I.	Executive Summary
II.	Introduction
III.	Vendor Information and Qualifications
IV.	Technology Overview
V.	Proposed Solution
VI.	Response to General Questions
VII.	Response to Evaluation Criteria
VIII.	Transition Plan and Migration Services
IX.	Delivery
X.	Warranty, Maintenance, and Technical Assistance
XI.	Education and Training
XII.	Financial Information and Quotation
Appendices	Hardware Product Information Software Product Information Purchase, License, Service Agreements Benchmark Information



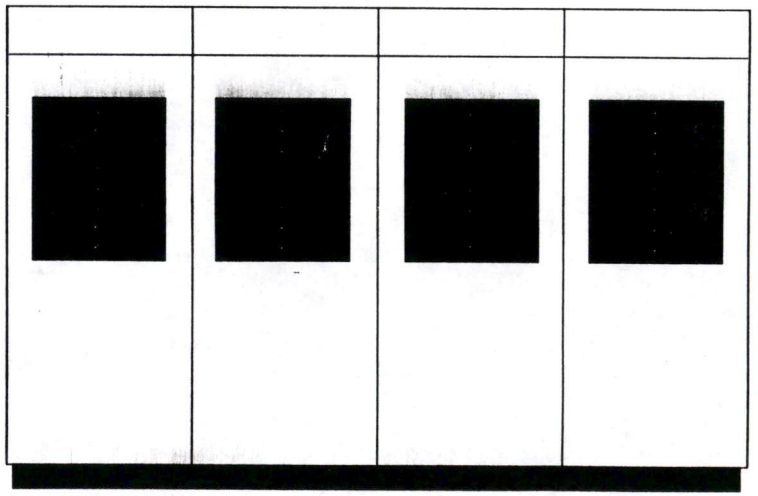
RFP Current Status

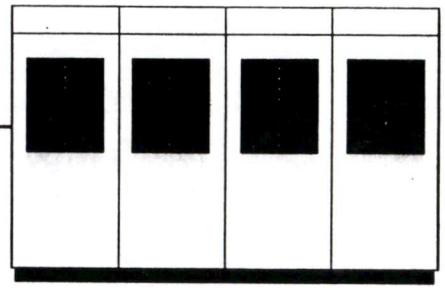
- Corporate visit to Sequent on 10/29, Pyramid Technology on 11/2
- Additional benchmark test conducted on a DEC VAX/VMS cluster 11/2 - 11/4
- Benchmark evaluation report complete
- Best and final offers received from vendors and reviewed
- Recommendation prepared

Vendor List - Finalists



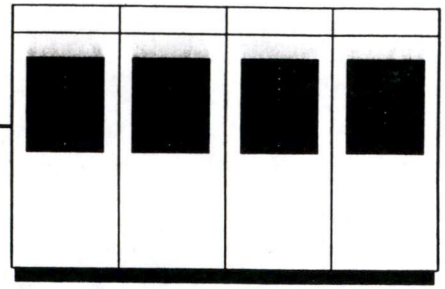
- DEC
- Encore
- HP
- Pyramid Technology
- Sequent





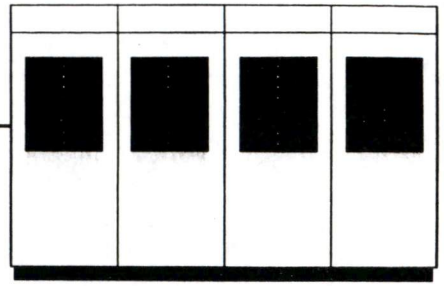
Benchmark - Vendor Configurations

- DEC: (1) 7000/610 - single node, 1 Alpha processor 182 Mhz, OpenVMS operating system. (2) 3-node VAX/VMS cluster, 7000/640, 7000/630, 6000/660.
- Encore: 6-GPC (4-processors each) for applications, 2-GPIO (4-processors each) for I/O. (Motorola 88100 25 Mhz)
- HP : 9000 Series 800 Model 892/200, single node, 2-processor
- Pyramid Technology: (1) single node, 6-processor (2) single node 10-processor (R4400 100Mhz)
- Sequent: Symmetry 2000/997 cluster, 10-processor and 8-processor (Pentium 60Mhz)



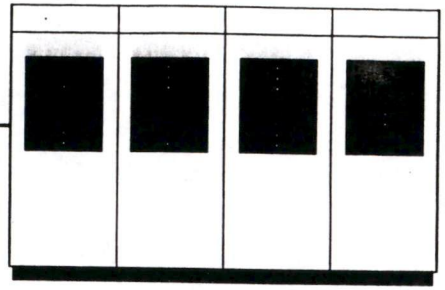
Benchmark Notes

- DEC was unable to run all tests on the single processor Alpha configuration due to long run times. Support for OpenVMS or OSF/1 SMP or cluster configurations is not currently available. DEC later ran a partial benchmark on a VAX/VMS cluster in order to present an interim proposal.
- Encore ran its MPP configuration with a total of 24 application processors and 8 I/O processors with Oracle OPS.
- HP completed the benchmark after the required due date. After an initial examination of results which were poor, it was decided not to perform a full analysis.
- Pyramid ran the benchmark with 3 different configurations, first on its old architecture 16-processor ES system, then on its new Nile architecture with 6 & 10 processor configurations using the 100Mhz R4400. Proposal is for systems with 150Mhz R4400 processor.
- Sequent performed the benchmark with a 2-node cluster running Oracle OPS but ran the 2 nodes as separate systems.



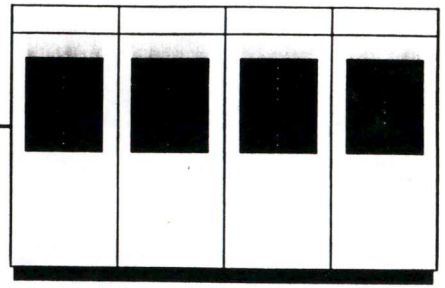
Benchmark Tests

- **Based on 6 key applications:**
  - Product Extract (PB1) 500 companies, 20 years, 400 data items
  - Product Extract Composite (PB2) summaries of financial data for group of companies across a range of years
  - Daily Price Extract (PB3) 500 companies, 1.3 equity securities per company, 11 years daily prices. Even/Odd tests (users) adjusted prices with cumulative adjustment factors or raw data only
  - On-line Queries (PB4) predefined with varying complexity from moderately difficult to extremely complex
  - Financial Data Insert (Fin)
  - Daily Price Load (Pri) inserts 13,000 daily price records attached to appropriate stock issues



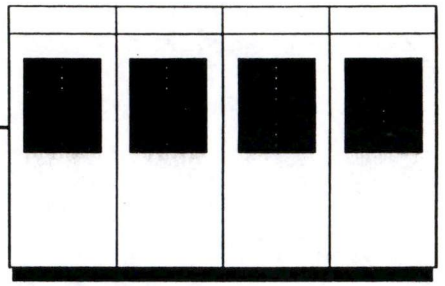
Benchmark Definitions

- *User:* usually represents a single batch extract process during a test like a 20-user test.
- *Elapsed time:* Measure of the wall clock time for a user to complete a test.
- *User time:* Measure of the amount of CPU time consumed by the user process. Usually the faster the CPU chip speed, the less the user time.
- *System time:* Measure of the amount of CPU time consumed by the system for OS overhead and tasks such as context switching. Usually the faster the CPU chip, the less the system time.



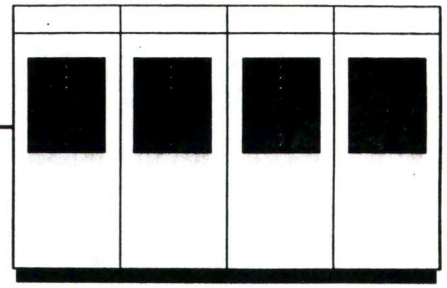
Benchmark Results

- *Description:* MT3 - 20 concurrent Daily Price Extracts (PB3). Even users adjusted prices, odd users raw prices
- *Results:*
  - 1st - Encore
  - 2nd - Sequent (10-processor)
  - 3rd - Pyramid (6-processor)
- *Analysis:*
  - DEC did not perform test
  - User time - On raw prices, Pentium took 20% more time than R4400, on adjusted prices 70% more time. Possible problem with joins.
  - System time - On raw prices Pentium took 50-100% more time than R4400, on adjusted 400% more time. Pyramid - 3-20% more time for adjusted, Sequent - 300% more time for adjusted
  - Sequent and Pyramid elapsed time very close, Sequent may have been impacted by high system time



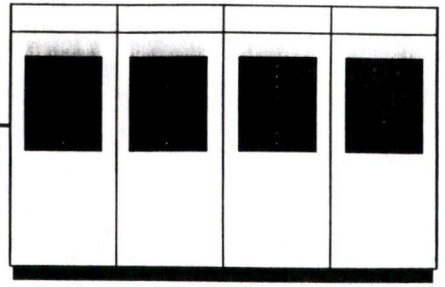
Benchmark Results

- *Description:* MT2 - 20 concurrent product extracts (PB2) to produce composites
- *Results:*
  - 1st - Sequent (10-processor)
  - 2nd - Encore
  - 3rd - Pyramid (6-processor)
- *Analysis:*
  - DEC did not perform test
  - 6-processor Pyramid does not perform as well as 10-processor Sequent or Encore
  - Sequent system time 3-4 times Pyramid, but did not adversely affect test



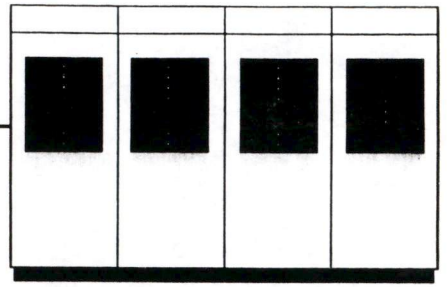
Benchmark Results

- *Description:* MT4 - 20 concurrent ad hoc query sessions (PB4)
- *Results:*
  - 1st - Sequent (10-processor)
  - 2nd - Encore
  - 3rd - Pyramid (6-processor)
- *Analysis:*
  - DEC did not perform test
  - Sequent appears to be better tuned for on-line query as opposed to batch extracts
  - User time - R4400 was generally 5-25% faster than Pentium



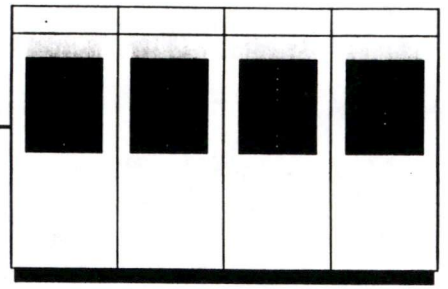
Benchmark Results

- *Description:* MT5 - 21 concurrent users: 10 product extracts (PB1), 10 composite product extracts (PB2), and one daily price load (Pri)
- *Results:*
  - 1st Pyramid (10-processor)
  - 2nd - Encore
  - 3rd - Sequent (8-processor)
  - 4th - DEC VAX 7640 (4-processor)
  - 5th - DEC Alpha (1-processor)
- *Analysis:*
  - DEC VAX configuration was twice as fast as Alpha, but Pyramid 4-5 times as fast as Alpha
  - Under heavy load with a variety of jobs, Pyramid and Encore perform best
  - System time for Sequent is 4-5 times more than Pyramid. Sequent consumes much more system .ne with heavy batch



Benchmark Results

- *Description:* MT6 - 30 concurrent users: 10 product extracts (PB1), 10 composite product extracts (PB2), 10 daily price extracts (PB3)
- *Results:*
  - 1st - Encore
  - 2nd - Pyramid (10-processor)
  - 3rd - Sequent (8-processor)
- *Analysis:*
  - DEC did not perform test
  - Sequent's performance was significantly slower than both Encore and Pyramid
  - System time: Sequent was 5-7 times more than Pyramid. As processing load gets heavier, Sequent seems to consume more and more system resource
  - For daily price, Pyramid was faster than Encore in most tests. Sequent was 2-4 times longer than Pyramid



Benchmark Results

- *Description:* MT7 - 21 concurrent users: 5 product extracts (PB1), 5 composite product extracts (PB2), 5 daily price extracts (PB3), 5 ad hoc query sessions (PB4), and 1 financial data insert (Fin).
- *Results:*
  - 1st - Pyramid (10-processor)
  - 2nd - Sequent (8-processor)
  - 3rd - Encore
- *Analysis:*
  - DEC performed this test on the VAX cluster only. 4 of 5 of the most intense extracts aborted due to a bad data block in the Oracle database and Oracle internal errors. Results inconclusive.
  - With a relatively light load and a variety of jobs, all other vendors perform reasonably well
  - System time: Sequent was g nerally 2-3 times more than Py mid

Encore Strengths/Weaknesses

- Best scalability with MPP design
- Best current Oracle MPP vendor
- Performed well under heavy loads, batch

- Small company
- Limited Oracle7 installs
- Small chip - Motorola 88100 (25Mhz) going to 88110 (50Mhz)
- No local support currently
- Most expensive proposal submitted
- Minor HW & SW problems during benchmark

Pyramid Strengths/Weaknesses

- Strong Oracle relationship
- Strong local/national support
- Mature SMP technology
- 64-bit chip architecture
- >50% installed base is Oracle servers
- Top 10 Oracle VLDB sites, large presence in financial services
- Large adoption of chip technology (MIPS)
- Good channel connect solution available
- Strong technology direction and MPP future
- ISO 9001 Quality certified
- Hot (online) replacement of CPUs

- No current NT support

(they believe NT will succeed)

Sequent Strengths/Weaknesses

- Strong Oracle relationship
- Strong local/national support
- Mature SMP technology
- >50% installed base is Oracle servers
- VLDB installed in financial services
- Large adoption of chip technology (Intel)
- OS support for UNIX and NT
- Parts depot/hot backup in Denver

- Smaller chip performance affects complex query and batch
- Proposed channel connect solution not currently available

DEC Strengths/Weaknesses

- Large company, large installed base
- Stable cluster technology (VAX/VMS Oracle6)
- 64-bit architecture Alpha chip technology
- Multiple OS support - VMS, OSF/1, NT
- Large SW base
- Channel connect solution available

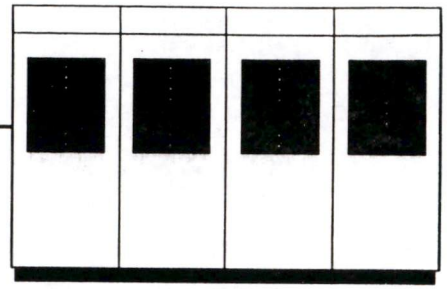
- Incomplete benchmark results
- No internal Oracle support
- Primary OS (VAX VMS and Ultrix a Tier 2 Oracle port)
- Proposed solution not available & tested. No SMP, no cluster support currently
- Limited SMP scalability (6-processors)
- Limited current chip adoption for Alpha
- Local sales and tech support poor

Key Evaluation Criteria Ratings

Evaluation used to come up with "top 2" short list.

Criteria	DEC	Encore	HP	Pyramid	Sequent
HW Systems Technology	4	5	3	5	4
Chip technology	5	3	4	5	4
System & I/O Bus	4	5	4	5	3
Disk technology/RAID	4?	4	3	4	5
Benchmark	2	4	0	5	4
Oracle relationship	3	2	2	5	5
Customer Support !	2	3	2	4	5
Open Systems VMS is not open.	3	4	5	5	5
Futures	4	5	4	5	4
Price/Performance	3	2	1	5	4
Suitability for SPC	3	3	1	5	4
Total	37	40	29	53	47
	(4)	(3)	(5)	(1)	(2)

Vendor Recommendation



- Pyramid Technology

Results of N.Y meeting 11/17

1. Digital to do VAX/UNIX Benchmark by 12/15 – Jack W.
2. Russ G. to fix "customer focus" problem. "Fix Denver"
3. Russ G to get clear "Oracle status".
4. Invite S+P to Salem Benchmark site Jack W
5. Convince S+P we should be on short list – Done

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

Doc. No: 006285
Date: 09-Aug-1993 03:59pm DST
From: Dianne Becker @DVO
BECKER.DIANNE AT A1 at DV780 a
Dept:
Tel No: 303-649-3006

TO: BOB BAJEMA @SEO
TO: ANDREA WILKINS @MKO

CC: DOUGLAS ANDERSON (ANDERSON.DOUGLAS AT A1 at DV780 at D
CC: Jack Wachtler (WACHTLER.JACK AT A1 at DV780 at DVO
CC: THOMAS WAGNER (WAGNER.THOMAS AT A1 at DV780 at DVO

Subject: CUSTOMER CALLS - DENVER - 16 AUGUST 1993

Russ,

Following is the information you will need for your August 16th, trip to Denver, Colorado.

August 15th, Sunday: Arrive at Centennial Airport, you will be staying at the Scanticon Hotel, Inverness Conference Center. Confirmation #0599713

August 16th, Monday:

7:00AM - Breakfast/Briefing at Scanticon Hotel.
8:15AM - Leave for Standard & Poors
8:30-9:30AM - Customer Meeting
9:45AM - Arrive at Digital facility
10:00AM - What's on your mind discussion
11:10AM - Depart for Comprecare
11:30AM - Arrive at Comprecare, pickup customer and leave for lunch
1:30PM - Leave for airport

Following are the call summaries from Jack Wachtler (Standard & Poors) and Doug Anderson (Comprecare).

a you should file these under customer folders.
~~Compre~~
- Comprecare (TakeCare)
- Standard + Poors.

CUSTOMER EXECUTIVE CALL SUMMARY

For: RUSS GULLOTTI (name) VICE PRESIDENT, U.S. AREA (title)

Customer Name: Mike Keller
Title: Vice President, Technology
Account: Standard & Poor's Compustat Services, Inc.
Time: 8:30 AM, Monday August 16, 1993
Location: Standard & Poor's Compustat Services, Inc.
McGraw-Hill Data Center
7400 S. Alton Court
Englewood, CO. 80112

(5 Minutes from Digital Sales Office)

Local Digital Participants: (name) & (title)

Jack Wachtler, Senior Sales Representative
Tom Wagner, Colorado CBU Host Manager
Russ Gullotti, Vice President, U.S. Area

Logistics:

7:00 AM Breakfast/Briefing at Scanticon Hotel. 8:15 AM Leave Scanticon for Standard & Poors. 8:30 - 9:30 AM meeting. Return to Digital Office at 9:45 AM.

Brief Account Description:

Standard & Poor's Compustat Services, Inc. (SPCS), headquartered in Englewood, CO. maintains one of the largest financial databases on U.S., Canadian and global companies.

SPCS is part of Standard & Poor's Equity Services Group which is headquartered in New York City and is a key element of McGraw-Hill's Financial Services segment.

Standard & Poors Equity Services Group is a large Digital Customer in New York, providing on-line financial services to the investor and financial management community via a large VMS cluster system with distributed DEC RISC servers for various business functions.

The Senior Vice President of the Equity Services Group in New York, John Kerin, is a long time Digital supporter and is the Senior Executive responsible for the SPCS Denver operation.

Brief Account Description (continued):

SPCS in Denver has traditionally delivered information products via timesharing, tape and CD-ROM to Corporate Financial and Investment managers through a large Amdahl Mainframe system located at the McGraw-Hill Data Center in Englewood, CO.

Digital does have a small product presence in Denver with two DEC 3000/500 AXP servers running OSF/1 and a DECstation 5000 running Ultrix. These systems were purchased in early 1993 as data entry servers to work with Microsoft Windows PCs as a part of an initial effort to reengineer current CICS data entry processes to take advantage of the more productive Microsoft GUI environment.

The SPCS Vice President of Technology in Denver who we are meeting with, is Mike Keller. Mike reports to John Kerin in New York.

The current plans are to reengineer the current Amdahl based production system to a new Client-Server based architecture based on Oracle7.

Digital is in the process of submitting a proposal for a DEC 7000 AXP system running Oracle7 client-server software as a platform to replace the Amdahl mainframe.

Customer Executive Background and Issues:

Although his boss, John Kerin in New York, is an ardent Digital VMS supporter, Mike Keller is UNIX oriented. Before being hired by John Kerin for his current assignment, Mike was VP of MIS for Petroleum Information in Denver. In both of these positions Mike managed large Amdahl mainframes running Amdahl's UTS (UNIX Timesharing System) operating system. Unlike the typical UNIX workstation environment, Mike is used to running a mainframe, commercial oriented UNIX environment with Data Center oriented tools for managing large tape & CD production activities which are used to supply products for customers.

Sales Opportunity/Problem to be Discussed:

The proposal mentioned above is worth $1.3-1.7 Million in Q2 if we win. We have substantial competition from high end UNIX multiprocessor systems such as NCR and Sequent which are installed at other McGraw-Hill and Standard & Poors locations.

Mike Keller is enthusiastic about Alpha but not about OpenVMS. We have proposed an OpenVMS solution because it provides the high availability and growth features today along with synergy with the systems in New York. John Kerin visits Denver frequently and has indicated to us that we should propose a OpenVMS solution.

SPCS previously tried to install an OpenVMS VAX server in the Denver office and were unsuccessful because the VAX "C" compiler did not support some of the ANSI "C" calls in their software. All of their software is developed to strict ANSI coding standards. The existing development and support staff in Denver has some UNIX expertise but no experience with OpenVMS except this one negative experience.

We eventually solved this problem by pulling out the VMS server and replacing it with a DECstation which uses the "C" compiler we resell from MIPSCO. When we brought in the DECstation with the MIPSCO "C" compiler SPCS software ported easily.

Ever since our failure with the VAX OpenVMS server, John has been leery about how "Open" is "OpenVMS".

Mike has also mentioned to me his concerns that there will be fewer tools for Client-Server on the OpenVMS platform than on UNIX.

Although Mike very enthusiastic about our strategy to provide Windows NT on Alpha, he is somewhat disappointed that he is not able to use the existing DEC 3000 AXP OSF/1 servers to run Windows NT.

Objective/Desired Outcome of this call:

The objective of the call is to establish Digital's credibility with Mike Keller around our commitment to provide "open systems" and to provide clearer communication to our customers as to our product capabilities and directions so that they can make business plans to use Digital products with confidence.

Specific Role/Approval Requested from Digital Executives:

I would like for Russ to provide some reinforcement that we are committed to SPCS success. It would help if Russ could reinforce the message that Digital is committed to support Open Standards on OpenVMS and that Digital management is interested in resolving any specific instance where a customer finds that "standards compliance" is compromised on OpenVMS.

The investment which we have made to obtain XPG/3 branding

and OpenVMS success stories or references with Alpha AXP could help to increase Mike's comfort factor with Digital.