

AGENDA ITEM NO. 24

**CITY OF SAN ANTONIO  
INTERDEPARTMENTAL MEMORANDUM  
ERM PROJECT**

**TO:** Mayor and City Council

**FROM:** Troy Elliott, Director, Enterprise Resource Management Project

**THROUGH:** Terry M. Brechtel, City Manager

**COPIES:** J. Rolando Bono, Deputy City Manager; Travis M. Bishop, Assistant City Manager; Andrew Martin, City Attorney; Gary Moeller, Director, Information Technology Services Department; Milo Nitschke, Director, Finance Department; Bill Wood, Assistant City Attorney; ERM Steering Committee; File

**SUBJECT:** Appropriating Funds and authorizing the associated annual contract for the Procurement of UNIX Hardware for the ERM Project

**DATE:** September 11, 2003

**SUMMARY AND RECOMMENDATIONS**

This ordinance authorizes the appropriation of funds and an annual contract with Commercial Data Systems for the purchase of UNIX Servers in support of the Enterprise Resource Management (ERM) Project.

This ordinance is in accordance with the plan proposed to the Council Governance Committee on September 4, 2003. The proposed plan is in response to the recommendations as suggested in the KPMG draft performance review and as further directed by the Council Governance Committee for an independent review and validation of hardware purchases associated with the ERM Project. In summary, the plan requires an independent review be performed to validate the necessity for the UNIX equipment prior to acceptance and payment for the ordered equipment. The Mercury Interactive Corporation is being engaged by Deloitte Consulting to perform the independent validation through the City Auditors Office.

The City is negotiating with the hardware vendor (Commercial Data Systems) the payment and acceptance terms of the hardware. The terms include payment and acceptance to be made contingent upon completion of the independent validation within 45 days from delivery of the hardware. Additionally, the ERM Project, Deloitte Consulting and Mercury Interactive are currently in the process of developing the scope of the independent review. The scope of the review will be confirmed by the City Auditors Office and include a deliverable to complete the necessary validations for the UNIX equipment within the required 45 day acceptance period.

Staff recommends approval of the following Ordinance:

An ordinance authorizing the appropriation of funds in the amount of \$1,210,000 for UNIX servers and accepting the bid of Commercial Data Systems to provide the City of San Antonio with hardware and software on an annual contract basis for fiscal year 2003-2004 required for the ERM Project implementation.

## **BACKGROUND INFORMATION**

The initial procurement of Hardware for the ERM Project was authorized via Ordinance number 96054 on June 27, 2002 in the amount of \$5,061,836, creating the foundation for the ERM Project to build upon as the design for each Wave of the Project is completed. This hardware purchase only included the minimum configuration in order to minimize project costs until a more detailed sizing could be performed. This minimum configuration included the development, testing/training (sandbox) and initial go-live hardware. The hardware purchase included items such as UNIX servers, NT servers and disaster recovery software moving the City in the direction of a Client Server environment and away from a mainframe based system.

The combination of the evolving design requirements and additional testing have revealed the need for additional infrastructure requirements in the area of servers, network improvements, Citrix (terminal emulation software), additional disaster recovery software licenses and miscellaneous items such as backup tapes, power distribution units and cabling services. The need for the additional equipment is a contributing factor to the need to revise the timelines for the ERM Project Go-live dates. The Project Go-live dates are dependant upon the approval of this procurement item by September 12, 2003 in order to fully install, develop and stress test the new equipment in time for production readiness. Postponing the purchase of the necessary equipment items will result in renegotiating trade-in values (\$382,060) and allowances and discounts (\$429,136) for a total of \$808,196, which is potentially an additional cost to the Project. In addition, the project may lose a negotiated upgrade from a medium capacity server to a high-end server with the value of the upgrade approximating \$600,000 based on list prices. The vendor providing the UNIX servers has agreed to extend the negotiated discount terms until September 12, 2003 with the execution of a non-binding letter of intent to purchase by that date.

As the designs for the City's configuration of the initial SAP Waves were finalized, the need for additional hardware to support those designs was identified. This is determined utilizing the ASAP Methodology (Accelerated SAP) designed and required specifically for SAP implementation projects. The methodology uses an independent hardware configuration process in order to determine the hardware sizing and configuration as follows:

1. The ERM Project team determines user and transaction counts during the blueprint phase of each Wave. This procurement utilizes actual data for Wave A, B and C and estimates the number of users and transaction counts for all Waves D, E, F, G and H.
2. The counts are provided to the hardware vendor's SAP competency center to determine the required processing capacity (system size) utilizing the SAP QuickSizer tool developed by SAP, IBM, Hewlett Packard, SUN and others. The SAP QuickSizer tool measures the required processing capacity in a unit of measure known as "SAPs."
3. The number of "SAPs" required is then used to determine the processor and memory requirements for each vendors hardware.
4. The Project Team and SUN select hardware based on capacity and the ability to accommodate future growth.
5. This process is repeated as the design for each phase is completed in order to refine the sizing and configuration of the hardware.

The UNIX Servers will not only address the Projects current requirements for user and transaction counts, but will simplify the design of the hardware component to include increased expansion capabilities and response times.

In addition to the process defined above, Deloitte Consulting retained consulting services from SAP's solution review service in March 2003 to provide the City with an independent and objective review of the Customer Relationship Management (CRM) business processes,

application configuration, and a readiness assessment for production. A component of this review focused on the technical landscape.

SAP was engaged a second time in May 2003 to focus specifically on the hardware landscape and provide summary and details of findings, identify potential areas of risk and provide recommendations. SAPs findings have been incorporated into the proposed hardware purchase in order to resolve and minimize the risk to the Project. The combination of the ASAP methodology defined above and the review performed by SAP was utilized to validate the required hardware landscape and proposed hardware purchase.

In addition to the validation process described above, Deloitte Consulting has agreed to fund an independent review and validation of the City's existing network infrastructure and proposed hardware purchase. Mercury Interactive will perform the validation of the ERM hardware and City network infrastructure and will report the results of the engagement directly to the City Auditors' Office in order maintain the independence of the review. The acceptance and payment for the hardware is dependant upon the results of the independent review and validation of the hardware performed by Mercury Interactive.

The remaining equipment and software items for NT servers, network improvements, Citrix (terminal emulation) and backup software and miscellaneous items are proposed to be presented to City Council for approval on September 25, 2003. These items will be recommended by staff for City Council approval upon the satisfactory results and completion of the independent hardware and infrastructure review to be performed by Mercury Interactive.

Additionally, for Council action is the approval and acceptance of the bid from Commercial Data Systems (CDS) to provide the City of San Antonio with UNIX servers, software and components necessary to install the servers. The bid from CDS is attached for review.

### **POLICY ANALYSIS**

Purchase of this equipment is consistent with previous City Council actions and the implementation of an Enterprise Resource Management System. This equipment will be purchased utilizing TXMAS Contracts and is being made in accordance with the State of Texas Cooperative purchasing Agreement adopted by the City of San Antonio resolution No. 91-39-53.

### **FISCAL IMPACT**

This ordinance authorizes the appropriation of funds from the ERM Project in the amount of \$1,210,000 for the purchase of UNIX servers in support of the Enterprise Resource Management (ERM) Project. Procurement of these items will be executed through the proposed annual contracts and state procurement mechanisms. Payment will be issued to an approved vendor upon successful issuance of a purchase order and receipt of items.

Annual maintenance and support in an approximate amount of \$185,310 will be funded from the fiscal year 2004 Information Technology Services Department operating budget.

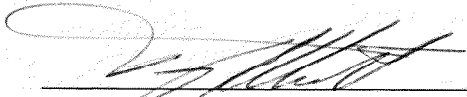
### **COORDINATION**

This item has been coordinated with the Council Governance Committee, City Auditors Office, City Attorneys Office, Information Technology Services Department, Finance Department, Purchasing and General Services Department, and the Office of Management and Budget.

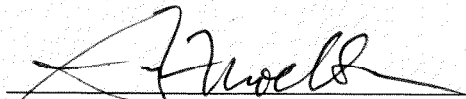
## SUPPLEMENTARY INFORMATION

Discretionary contract disclosures are not applicable to TXMAS Procurements.

## SIGNATURES



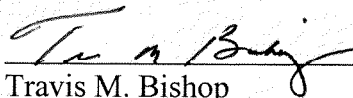
Troy Elliott  
ERM Project Director



Gary Moeller  
Director  
Information Technology Services Department



Milo Nitschke  
Director  
Finance Department



Travis M. Bishop  
Assistant City Manager

Approved:



Terry M. Brechtel  
City Manager

CITY OF SAN ANTONIO  
BID TABULATION

ANNUAL CONTRACT FOR: HARDWARE AND SOFTWARE FOR ERM PROJECT (A939-04)

State of Texas TXMAS Contract utilizing the following vendors:

Commercial Data Systems (TXMAS-3-70050)  
50 S. Beretania St.  
Ste. C-208B  
Honolulu, HI 96813

<u>Item</u>	<u>Product Number</u>	<u>Description</u>	<u>Unit Cost</u>	<u>Estimated Quantity</u>	<u>Extended Cost</u>
<b>Employee &amp; CRM Self Service, eProcurement</b>					
13	A37-WSPF4-08GQB	SFV480:4@900MHz Cu,8GB,2-36GB Sun Fire V480 Server 4 @ 900 MHz Cu, 8 GB memory, 2 - 36 GB, 1.0", 10,000 RPM, FC-AL disks, DVD, 2 power supplies. Standard Configuration.	\$29,396.00	6	\$176,376.00
14	X311L	NORTH AMERICAN/ASIA PWR CRD KT Localized Power Cord Kit North American/Asian	\$0.00	12	\$0.00
15	X6767A	2Gb PCI Single FC Ntwk Adapter Sun StorEdge 2Gb PCI single fibre channel network adapter, 200MB/s per channel with optical interface	\$1,680.00	12	\$20,160.00
16	SOLZS-090C9AYM	S9 SA ML Kit, SP, w/ Eng. Docs Solaris 9 System Administrator's media kit (latest release). Contains Multilingual CD & DVD Media & English Installation Documentation, SPARC Platform Edition.	\$67.00	6	\$402.00
17	W9D-A37-24-1G	Sun Fire V480 Server Upgrade to Gold Support + 7X24 On-Site Support 1 YR	\$3,600.00	6	\$21,600.00
18	SR9-XKL038A-IP	Cabinet, Sun Rack 900 Cabinet, Sun Rack 900 (This is an empty x-option rack without power.)	\$1,743.00	1	\$1,743.00
19	X6825A	Front Door, Sun Rack 900 Front Door, Sun Rack 900	\$287.00	1	\$287.00
20	X6849A	Pwr Dist Sys, Sun Rack 900 Power Distribution System (PDS), Sun Rack 900	\$1,722.00	1	\$1,722.00
21	X6828A	Pwr Cable, Dom., Sun Rack 900 Power Cable, Domestic, Sun Rack 900 (Four 20A cables)	\$116.00	1	\$116.00
22	WGSERVER-INSTALL	WKGRP SERVER INSTALL Workgroup Server Installation for 1 Server	\$1,175.00	6	\$7,050.00
23	A35-WBF2-2GRB1	280R/2x1.2GHz/2GB/2x73GB/DVD Sun Fire 280R server, two 1.2GHz UltraSPARC-III processors, 8MB E-cache, 2GB (4 x 512MB) memory, two 73GB 10,000rpm HH internal FCAL disk drives, DVD. Two power supplies. Operating Environment pre-installed Solaris 8 & Solaris 9. Standard Configuration.	\$12,596.00	1	\$12,596.00
24	X1150A	Sun GigaSwift Ethernet UTP Gigabit Ethernet Network Interface Card for high-performance Cat 5 UTP and PCI applications with full IEEE 802.3	\$697.00	2	\$1,394.00

compliance.

25	X311L	NORTH AMERICAN/ASIA PWR CRD KT Localized Power Cord Kit North American/Asian	\$0.00	2	\$0.00
26	X6767A	Sun StorEdge 2Gb PCI single fibre channel network adapter, 200MB/s per channel with optical interface	\$1,680.00	2	\$3,360.00
27	SOLZS- 090C9AYM	S9 SA ML Kit, SP, w/ Eng. Docs Solaris 9 System Administrator's media kit (latest release). Contains Multilingual CD & DVD Media & English Installation Documentation, SPARC Platform Edition.	\$67.00	1	\$67.00
28	W9D-280R-24- 1G	Ent 280R System Upgrade to Gold Support + 7X24 On-Site support for 1 YR	\$2,371.00	1	\$2,371.00
29	SIGMA- INSTALL	WKGRP SERVER INSTALL Workgroup Server Installation for 1 Server	\$1,175.00	1	\$1,175.00
30	A35-WBF2- 2GRB1	280R/2x1.2GHz/2GB/2x73GB/DVD Sun Fire 280R server, two 1.2GHz UltraSPARC-III processors, 8MB E-cache, 2GB (4 x 512MB) memory, two 73GB 10,000rpm HH internal FCAL disk drives, DVD. Two power supplies. Operating Environment pre-installed Solaris 8 & Solaris 9. Standard Configuration.	\$12,596.00	3	\$37,788.00
31	X1150A	Sun GigaSwift Ethernet UTP Gigabit Ethernet Network Interface Card for high-performance Cat 5 UTP and PCI applications with full IEEE 802.3 compliance.	\$697.00	6	\$4,182.00
32	X6767A	2Gb PCI Single FC Ntwk Adapter Sun StorEdge 2Gb PCI single fibre channel network adapter, 200MB/s per channel with optical interface	\$1,680.00	6	\$10,080.00
33	X311L	NORTH AMERICAN/ASIA PWR CRD KT Localized Power Cord Kit North American/Asian	\$0.00	6	\$0.00
34	X7062A	OPT MEMORY 2GB (4*512MB) 2-Gbyte Memory Expansion Kit (4 x 512-Mbyte DIMMs) For use in Sun Fire 280R, Sun Blade 1000 and 2000	\$1,596.00	3	\$4,788.00
35	SOLZS- 090C9AYM	S9 SA ML Kit, SP, w/ Eng. Docs Solaris 9 System Administrator's media kit (latest release). Contains Multilingual CD & DVD Media & English Installation Documentation, SPARC Platform Edition.	\$67.00	3	\$201.00
36	W9D-280R-24- 1G	Enterprise 280R System Upgrade to Gold Support + 7X24 On-Site Support for 1 YR	\$2,371.00	3	\$7,113.00
37	SR9-XKL038A- IP	Cabinet, Sun Rack 900 Cabinet, Sun Rack 900 (This is an empty x-option rack without power.)	\$1,743.00	1	\$1,743.00
38	X6825A	Front Door, Sun Rack 900 Front Door, Sun Rack 900	\$287.00	1	\$287.00
39	X6849A	Pwr Dist Sys, Sun Rack 900 Power Distribution System (PDS), Sun Rack 900	\$1,722.00	1	\$1,722.00
40	X6828A	Pwr Cable, Dom., Sun Rack 900 Power Cable, Domestic, Sun Rack 900 (Four 20A cables)	\$116.00	1	\$116.00
41	SIGMA- INSTALL	WKGRP SERVER INSTALL Workgroup Server Installation for 1 Server	\$1,175.00	3	\$3,525.00

42	F12K-CAB3	Sun Fire 12K Server Cabinet Sun Fire 12K server cabinet with Fireplane, Fans, Power Supplies and System Controllers and updated Expanders	\$140,000.00	1	\$140,000.00
43	3800A	OPT PWR CORD FOR ENTERPR.(US) Power Cord for Enterprise System and Expansion Cabinet, U.S. Version (NEMA L6-30P Plug)	\$0.00	6	\$0.00
44	3858A	U.S. POWER CORD FOR STOREDGE U.S./Canada power cord for StorEdge expansion cabinet (NEMA L6-30P plug)	\$0.00	6	\$0.00
45	4610A	Top (Slot 0) Filler Panel F15K Top (Slot 0) Filler Panel for the CPU board slot in a Sun Fire 15K server	\$0.00	2	\$0.00
46	4615A	Bottom Slot1 Filler Panel F15K Bottom (Slot 1) Filler Panel in a Sun Fire 15K server	\$0.00	5	\$0.00
47	1150A	Sun GigaSwift Ethernet UTP Gigabit Ethernet Network Interface Card for high-performance Cat 5 UTP and PCI applications with full IEEE 802.3 compliance.	\$697.00	4	\$2,788.00
48	2222A	Sun(tm) Dual FE + Dual SCSI/P PCI Adapter with two Fast Ethernet Interfaces and Two SCSI Interfaces	\$1,117.00	2	\$2,234.00
49	4575A	hsPCI Assembly Sun Fire 15K Hot Swap PCI Assembly for Sun Fire 15K includes 4 Standard PCI Slots, two running at 66mhz and two at 33mhz, in 4 cassettes	\$6,300.00	2	\$12,600.00
50	6767A	2Gb PCI Single FC Ntwk Adapter Sun StorEdge 2Gb PCI single fibre channel network adapter, 200MB/s per channel with optical interface	\$1,680.00	2	\$3,360.00
51	CPUBD-442-1200	UNIBRD 4CPU@1200/4banks of 2GB Uniboard bundle with: 4 CPUs running at 1.2 GHz; 4x8MB Ecache; 4 banks of 2GB memory options (16 x 512MB DIMMs, 8GB total for the board).	\$81,620.00	3	\$244,860.00
52	1150A	Sun GigaSwift Ethernet UTP Gigabit Ethernet Network Interface Card for high-performance Cat 5 UTP and PCI applications with full IEEE 802.3 compliance.	\$697.00	2	\$1,394.00
53	2222A	Sun(tm) Dual FE + Dual SCSI/P PCI Adapter with two Fast Ethernet Interfaces and Two SCSI Interfaces	\$1,117.00	2	\$2,234.00
54	4575A	hsPCI Assembly Sun Fire 15K Hot Swap PCI Assembly for Sun Fire 15K includes 4 Standard PCI Slots, two running at 66mhz and two at 33mhz, in 4 cassettes	\$6,300.00	2	\$12,600.00
55	6767A	2Gb PCI Single FC Ntwk Adapter Sun StorEdge 2Gb PCI single fibre channel network adapter, 200MB/s per channel with optical interface	\$1,680.00	2	\$3,360.00
56	CPUBD-442-1200	UNIBRD 4CPU@1200/4banks of 2GB Uniboard bundle with: 4 CPUs running at 1.2 GHz; 4x8MB Ecache; 4 banks of 2GB memory options (16 x 512MB DIMMs, 8GB total for the board).	\$81,620.00	4	\$326,480.00

57	NS-XDSKS1-373GAC	StorEdge S1, 3x73GB, AC Sun StorEdge S1 Array. Rackable thin storage 1U high, 3x73GB disk array, 10Krpm hot-swap drives, Ultra2/3 SCSI to host, AC powered. (Standard Configuration)	\$3,944.00	2	\$7,888.00
58	X3831A	10M CABLE, SCSI TO VHDC 10-meter 68-pin to VHDC differential Ultra SCSI cable	\$137.00	2	\$274.00
59	SR9-KL038A-IP	Cabinet, Sun Rack 900 Cabinet, Sun Rack 900 (This is an empty x-option rack without power.)	\$1,743.00	1	\$1,743.00
60	3831A	10M CABLE, SCSI TO VHDC 10-meter 68-pin to VHDC differential Ultra SCSI cable	\$137.00	2	\$274.00
61	6825A	Front Door, Sun Rack 900 Front Door, Sun Rack 900	\$287.00	1	\$287.00
62	6828A	Pwr Cable, Dom., Sun Rack 900 Power Cable, Domestic, Sun Rack 900 (Four 20A cables)	\$116.00	1	\$116.00
63	6849A	Pwr Dist Sys, Sun Rack 900 Power Distribution System (PDS), Sun Rack 900	\$1,722.00	1	\$1,722.00
64	NS-DSKS1-373GAC	StorEdge S1, 3x73GB, AC, CTO Sun StorEdge S1 Array. Rackable thin storage 1U high, 3x73GB disk array, 10Krpm hot-swap drives, Ultra2/3 SCSI to host, AC powered. (Standard Configuration)	\$3,944.00	2	\$7,888.00
65	SOLZS-090C9AYM	S9 SA ML Kit, SP, w/ Eng. Docs Solaris 9 System Administrator's media kit (latest release). Contains Multilingual CD & DVD Media & English Installation Documentation, SPARC Platform Edition.	\$67.00	1	\$67.00
66	HA-F12K-PAK	F12K HAPAK BASIC- SITE&SERVER F12K CORE BASIC HAPAK for site & systemcentric platform integration mission critical support. Includes: ARS, SRAA (standard), EDU SKILLS PAK, PLAT.warranty upgrade, RAS profile, project delivery mgmt.	\$227,256.00	1	\$227,256.00
67	W9D-F12KBD4-NW-IP	Sun Fire 12K System Board with 4 CPU's, Upgrade to 1 year of Platinum support	\$1,853.00	1	\$1,853.00
68	CLUZS-999-99M9	SC 3.1 Base media kit latest Sun Cluster 3.1 Base Media Kit for SunPlex Systems latest. This part number always refers to the latest release of Sun Cluster 3.1 base software.	\$120.00	1	\$120.00
69	CLA9S-999-99M9	SC 3.1 Agents media kit latest Sun Cluster 3.1 Agents Media Kit for SunPlex Systems latest. This part number always refers to the latest release of Sun Cluster 3.1 Agents software.	\$120.00	1	\$120.00
70	CLSIS-LCO-C999	SunPlex svr lic for SF12k SunPlex server license for Sun Fire 12k. One license required per server.	\$57,900.00	1	\$57,900.00
71	CLAIS-XXF-9999	SunPlex agent lic for NFS SunPlex agent license for NFS Agent. One license required per cluster.	\$0.00	3	\$0.00
72	CLAIS-XXR-9999	SunPlex agent lic x HA Oracle SunPlex agent license HA Oracle agent. One license required per cluster.	\$3,200.00	3	\$9,600.00
73	CLAIS-XXG-9999	SunPlex ag lic x Scalable SAP SunPlex agent license for Scalable SAP Agent license. One license required per cluster.	\$6,400.00	3	\$19,200.00



74	CLAIS-XXL-9999	SunPlex ag licxHA SAPliveCache SunPlex agent license for HA SAP liveCache Agent License only. One license required per cluster.	\$6,400.00	3	\$19,200.00
75	ALW-20-S-O-F12-CNS	Eligible Sun or Competitive Server to F12K,	(\$213,870.00)	1	(\$213,870.00)
76	UG-RMA	RMA-DOC KIT RMA documentation kit	\$0.00	1	\$0.00
77	F12K-CAB3	Sun Fire 12K Server Cabinet Sun Fire 12K server cabinet with Fireplane, Fans, Power Supplies and System Controllers and updated Expanders	\$140,000.00	1	\$140,000.00
78	3800A	OPT PWR CORD FOR ENTERPR.(US) Power Cord for Enterprise System and Expansion Cabinet, U.S. Version (NEMA L6-30P Plug)	\$0.00	6	\$0.00
79	3858A	U.S. POWER CORD FOR STOREDGE U.S./Canada power cord for StorEdge expansion cabinet (NEMA L6-30P plug)	\$0.00	6	\$0.00
80	4610A	Top (Slot 0) Filler Panel F15K Top (Slot 0) Filler Panel for the CPU board slot in a Sun Fire 15K server	\$0.00	4	\$0.00
81	4615A	Bottom Slot1 Filler Panel F15K Bottom (Slot 1) Filler Panel in a Sun Fire 15K server	\$0.00	5	\$0.00
82	1150A	Sun GigaSwift Ethernet UTP Gigabit Ethernet Network Interface Card for high-performance Cat 5 UTP and PCI applications with full IEEE 802.3 compliance.	\$697.00	4	\$2,788.00
83	2222A	Sun(tm) Dual FE + Dual SCSI/P PCI Adapter with two Fast Ethernet Interfaces and Two SCSI Interfaces	\$1,117.00	2	\$2,234.00
84	4575A	hsPCI Assembly Sun Fire 15K Hot Swap PCI Assembly for Sun Fire 15K includes 4 STandard PCI Slots, two running at 66mhz and two at 33mhz, in 4 cassettes	\$6,300.00	2	\$12,600.00
85	6767A	2Gb PCI Single FC Ntwk Adapter Sun StorEdge 2Gb PCI single fibre channel network adapter, 200MB/s per channel with optical interface	\$1,680.00	2	\$3,360.00
86	CPUBD-442-1200	UNIBRD 4CPU@1200/4banks of 2GB Uniboard bundle with: 4 CPUs running at 1.2 GHz; 4x8MB Ecache; 4 banks of 2GB memory options (16 x 512MB DIMMs, 8GB total for the board). For use with the Sun Fire 3800, 4800, 4810, 6800, 12K and 15K.	\$81,620.00	2	\$163,240.00
87	1150A	Sun GigaSwift Ethernet UTP Gigabit Ethernet Network Interface Card for high-performance Cat 5 UTP and PCI applications with full IEEE 802.3 compliance.	\$697.00	2	\$1,394.00
88	2222A	Sun(tm) Dual FE + Dual SCSI/P PCI Adapter with two Fast Ethernet Interfaces and Two SCSI Interfaces	\$1,117.00	2	\$2,234.00
89	4575A	hsPCI Assembly Sun Fire 15K Hot Swap PCI Assembly for Sun Fire 15K includes 4 STandard PCI Slots, two running at 66mhz and two at 33mhz, in 4 cassettes	\$6,300.00	2	\$12,600.00

90	6767A	2Gb PCI Single FC Ntwk Adapter Sun StorEdge 2Gb PCI single fibre channel network adapter, 200MB/s per channel with optical interface	\$1,680.00	2	\$3,360.00
91	CPUBD-442- 1200	UNIBRD 4CPU@1200/4banks of 2GB Uniboard bundle with: 4 CPUs running at 1.2 GHz; 4x8MB Ecache; 4 banks of 2GB memory options (16 x 512MB DIMMs, 8GB total for the board). For use with the Sun Fire 3800, 4800, 4810, 6800, 12K and 15K.	\$81,620.00	3	\$244,860.00
92	NS-XDSKS1- 373GAC	StorEdge S1, 3x73GB, AC Sun StorEdge S1 Array. Rackable thin storage 1U high, 3x73GB disk array, 10Krpm hot-swap drives, Ultra2/3 SCSI to host, AC powered. (Standard Configuration)	\$3,944.00	2	\$7,888.00
93	X3831A	10M CABLE, SCSI TO VHDC 10-meter 68-pin to VHDC differential Ultra SCSI cable	\$137.00	2	\$274.00
94	SR9-KL038A-IP	Cabinet, Sun Rack 900 Cabinet, Sun Rack 900 (This is an empty rack without power.)	\$1,743.00	1	\$1,743.00
95	3831A	10M CABLE, SCSI TO VHDC 10-meter 68-pin to VHDC differential Ultra SCSI cable	\$137.00	2	\$274.00
96	6825A	Front Door, Sun Rack 900 Front Door, Sun Rack 900	\$287.00	1	\$287.00
97	6828A	Pwr Cable, Dom., Sun Rack 900 Power Cable, Domestic, Sun Rack 900 (Four 20A cables)	\$116.00	1	\$116.00
98	6849A	Pwr Dist Sys, Sun Rack 900 Power Distribution System (PDS), Sun Rack 900	\$1,722.00	1	\$1,722.00
99	NS-DSKS1- 373GAC	StorEdge S1, 3x73GB, AC, CTO Sun StorEdge S1 Array. Rackable thin storage 1U high, 3x73GB disk array, 10Krpm hot-swap drives, Ultra2/3 SCSI to host, AC powered. (Standard Configuration)	\$3,944.00	2	\$7,888.00
100	SOLZS- 090C9AYM	S9 SA ML Kit, SP, w/ Eng. Docs Solaris 9 System Administrator's media kit (latest release). Contains Multilingual CD & DVD Media & English Installation Documentation, SPARC Platform Edition.	\$67.00	1	\$67.00
101	HA-F12K- SYSPAK	F12K HASYS PAK - BASIC SERVER F12K CORE BASIC SYSTEM CENTRIC HAPAK FOR ADD- ONTO CORE BASIC HAPAK MISSION CRITICAL SUPPORT. INCLUDES 1-ARS, 1YR PLAT. WARRANTY UPGRADE, RAS PROFILE, PROJECT DELIVERY MGMT.	\$73,932.00	1	\$73,932.00
102	W9D-F12KBD4- NW-IP	SunFire 12K System Board with 4 CPU's, upgrade to 1 year of Platinum support	\$1,853.00	1	\$1,853.00
103	CL SIS-LCO- C999	SunPlex svr lic for SF12k SunPlex server license for Sun Fire 12k. One license required per server.	\$57,900.00	1	\$57,900.00
104	ALW-20-S-O- F12-CNS	Eligible Sun or Competitive Server to F12K, Customer must return trade-in equipment within 30 day, otherwise the allowance will be invoiced	(\$168,190.00)	1	(\$168,190.00)
105	UG-RMA	RMA-DOC KIT RMA documentation kit	\$0.00	1	\$0.00
106	Note	Cluster interconnect for the R3 cluster domain is two existing X1141A GBE PCI HBA'S.  Customer is trading in a SF 4800 with 10@900Mhz and 20GB's Memory for this SF12K			

107	CLUZS-999-99M9	SC 3.1 Base media kit latest Sun Cluster 3.1 Base Media Kit for SunPlex Systems latest. This part number always refers to the latest release of Sun Cluster 3.1 base software.	\$118.00	1	\$118.00
108	CLA9S-999-99M9	SC 3.1 Agents media kit latest Sun Cluster 3.1 Agents Media Kit for SunPlex Systems latest. This part number always refers to the latest release of Sun Cluster 3.1 Agents software.	\$118.00	1	\$118.00
109	CLSIS-LCO-Y999	SunPlex svr lic SF4800/4810 SunPlex server License for SunFire 4800/4810. One license required per server.	\$15,500.00	2	\$31,000.00
<b>SubTotal</b>					<u>\$1,821,172.00</u>
<b>Sun allowance SAR</b>					<u>(\$426,136.00)</u>
<b>Total Estimated Cost</b>					<u>\$1,395,036.00</u>