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1990

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**UNIX/XENIX**\*

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Newsl

I have been trying to install worknet on my 886 and have not been having any luck. I believe my cables are ok. What else can I try?

#### A.

On your cables, make sure to use twisted pair cable, shielded, and use proper terminators. This is an engineering change that affects some 886's. Check to see if you have Diodes L1-24 near the worknet connector - if so, short these out.

## IN THIS ISSUE ....

- · EISA vs. Micro Channel
- UNIX Opportunities Seminar Report
- And, of course, the Free Unclassifieds

#### Q.

I ran into some problems when executing ua on my Series 2000 under Altos System V 5.3dt0. Could you pass along some of the pitfalls?

#### Α.

When running ua under Altos System V, be very careful when changing existing users. A good example is changing a user's default directory (i.e.: /usr/Jim to usr/data). The info that was under /usr/Jim is gone. If you decide to move the home directory back to usr/Jim, it would rename /usr/data to /usr/Jim. Any other users looking for data under /usr/data would not be able to find it.

# EDITORIAL COMMENTS

Play Ball - Hell! Watching the shenanigans of the baseball fiasco has convinced me that neither side really cares about the game itself. Some days Altos seems to follow the same pattern in some of their operations. While I remain convinced that the current management has things going the right direction for the good of the Altos stockholders, that doesn't always coincide with my perception of good.

Recently a member of this team got started in organizing the replacement parts distribution system, and while the stockholders may love it, few others will. Jobie Flores finally got out a new spares pricesheet (the same one promised as an "action" item by Ron Conway last August), and it certainly was a rude awakening. We had always acknowledged that there were some errors on the old schedule and had brought them to Altos' attention on several occasions. Not only did Jobie correct these errors, but he put the entire parts operation on a much more profitable basis, assuming they can sell any at the new prices.

If their goals for the program included getting Computer Support out of the replacement parts business, they have probably succeeded. There simply is no place for us with the structure they are putting in place. That does not mean that we are going to be any less of a factor in expansion products; we just won't be able to provide exchange parts as we have in the past. Our inventory is very high at this point in time, and our plans are to provide exchange parts until it is exhausted. We will then provide exchange memory boards, hard disk drives, tape drives and floppy drives from sources other than Altos leaving the exchange proprietary board business to Altos.

One of the reasons we were in the exchange business was our ability to provide the parts in a manner that a servicing dealer could live with. Our Altos parts department did a really good job of keeping the items in stock and getting shipments out promptly. Our willingness to cross-ship parts also helped in getting systems back on-line guickly. When I look at all the work involved in handling the parts, with shipments going to and from dealers and to and from Altos, I really don't think it was a profitable enterprise for us. I do think it was a service to dealers and a part of the value we added.

Most companies that I have experience with like to feel that they are capable of controlling their own destiny and the Altos management team fits this mold nicely. Even though we provided them an outlet for an annual total running into seven figures, we have never established much of a relationship with anyone there (no Altos employee has been in Sioux City since 1988). It is not likely that Altos values any part of what we have attempted to provide to their resellers, nor even understands that our intent was always to provide the services outlined in the original P2 agreement we had with them (an agreement they have not even had the decency to cancel in a businesslike manner).

I am pretty sure that the stockholders have the right management team in place at Altos, but I think independent resellers are going to find themselves on the very sticky end of the stick. Maybe what we should do is sell our businesses and put the funds into Altos stock; at least that way, we will benefit from their talents.

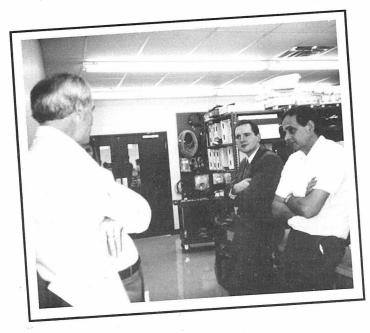
### UNIX Resellers Network Established February '90 Seminar Report

Who in their right mind would take a vacation to lowa in February? Well, the people who came to the UNIX Opportunities Seminar certainly seemed to be in their right minds to me. We enjoyed an extremely pleasant time and even the weather cooperated. As a result of the meetings the group decided to elect a Board of Directors with a charge of formulating a charter for a UNIX Resellers Network (hereafter to be known as URN). The Board will be working to define some common goals for the group, develop some membership guidelines, and prepare for a large gathering of resellers during the summer months. At the summer meeting a formal Board election will be held, and the charter formally discussed, modified and accepted.

If you are interested in being a part of URN, you may contact any board member or direct your communications to *Altogether*, and it will reach the Board and the other 1200 dealers who receive the publication. Now is the time to have a voice in the future of your industry - don't miss it!

#### Founding Board of Directors - URN

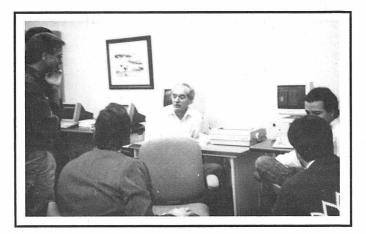
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Charles Kreul Computer Consults
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Harry Keairns, Communications Computer Support



#### Seminar Comments . . .

"The relaxed format allowed good flow of information. It was very good to see the program followed also. The hospitality far exceeded any previous meeting or school. In the future when this seminar is offered and people ask 'What's in lowa?', I can truthfully say 'a better solution for my customer'."

John Murphy, Advance Micro



## URN Chairman Says Service a Major Need

Having completed the first UNIX Opportunities Seminar, we asked the Chairman of the Board of UNIX Resellers Network to provide us some comments on both the seminar and the future direction of the Network.

Following are the comments of Jim Sloan of Custom Business Software, Inc. and Chairman of the Board of UNIX Resellers Network . . .

"I think it (the seminar concept) bears further investigation, but it will probably be beneficial to have these seminars on a regular basis. A problem with UNIX VARS is that if we can do UNIX, we can do anything. The question then becomes what is best to do, and what not to do. Some of that question is as individual as the dealers themselves, while other parts of the question are generic; and we can help each other through a sharing of experiences.

"Another issue is clout. We are independents for a reason, but name recognition is important in this business. I told Leith Anderson no thanks when he and some others were starting LANDA, and thought nothing would come of it; but now you see LANDA's name everywhere. As much as I am not a joiner, I am resolved to the fact that we as a group need something to band us together - at least to the point of meaning something to our potential customers.

"The Altos price scare may now be a thing of the past, but it has caused me to do a little thinking about the whole situation. Without trying to prejudice you with a lot of details, I think CSSC should consider becoming a "P2" for many different manufacturers and use your current dealer base as your authorized repair centers. Obviously, there would be many problems to resolve with each manufacturer about warranty work, but you could hire John Andreason as a consultant to help with this.

"Service is going to continue to be a major need for some time to come, perhaps always. It seems that there are the major manufacturers who do only their own at big bucks; the third party vendors who usually don't do well and charge too much; the local service companies who try and become authorized with everyone, and pretend to know everything, and usually get screwed up, and will probably be a major target of the Better Business Bureaus around the country; and the local servicing dealers who know a lot about one type of equipment and not much about other brands.

"To me the concept of local service companies could be made good if there was some sort of national credibility. I think CSSC has the wherewithall to provide the base for such a grand scheme. Of course, when you have pursued this idea and are rich beyond your wildest dreams, I expect you to cough up a consulting fee to me for giving you this great idea."

LONE-TAR <sup>M</sup> THE ULTIMATE	Lone Star Computer Services Jeff Hyman - Tech Support 13987 W. Annapolis Ct. Mt. Alry, MD 21771 800-525-UNIX (Sales) 301-829-1622 (Support) 301-829-1623 (Fax) SCO <sup>ITT</sup> or ALTOS <sup>ITT</sup>
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# Computer Support of Sioux City, Ltd.

# **Ethernet Products Pricelist**

# January 1, 1990

	Description	List	Dealer	
Thick Et	thernet			
02739	Ethernet Transceiver	\$337.50	\$225.00	
02745	Thin cable Adaptor Cable, Transceiver	\$30.00	Incl \$20.00	
Thin Eth	iernet			
02742	Tee, BNC	\$4.65	\$2.10	
02741 02744	Union, BNC to BNC Adaptor, BNC Jack to N Jack	\$3.15 \$3.15	\$2.10 \$2.10	
02/11	Note: FAT to thin adaptor	ψ0.10	\$2.10	
28848	Terminating Resistor, Set Includes 1 Grounded, 1 Ungrou	\$4.65 inded	\$3.10	
CS010	Cable, Thin Net, 10', Teflon	\$37.50	\$25.00	
02748	Cable, Thin Net, 25', Teflon	\$52.50	\$30.00	
02750	Cable, Thin Net, 100', Teflon	\$75.00	\$40.00	
Ethernet	t Boards			
02868	Excelan Multibus Board, 3068	\$795.00	\$500.00	
02752	Excelan 205T, ISA PC Bus	\$995.00	\$500.00	
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BUY • S	50 DA	L • Y SALE	REP	AIF	<b>}</b>
• CPU •					
8000 - 2, 10, 12, 14 <b>10<del>00+</del></b>	<b>500</b> +	External			
8600         -         12, 14         2500+           68000         -         12, 14         3500+           5         -         5, 15         -750+	1600+ 1500+ 500+		10, 20, 30, 40, 80 <b>95</b>	1 <del>200</del> †	1000+
580 - 2, 10, 20 <b>1000+</b>	500+ 999+ 2500+	UK - 5	50, 80, 170 190, 380	1 <del>200</del> ∓	1000+
586T - 40, 80 25007	2000+	• •			
986T - 40, 80 <b>3900</b> + 686 - 25, 50 <b>2200</b> +	2500+ 1750+	External	rape ui		
686T - 50 <del>3000</del>	<b>2500</b> +	MTU - 2	2, 3, 4, 5	<del>1250</del> 7	1000+
886T         -         25, 50, 80         3500+           1086         -         50, 80, 190         5000+           2086T         -         80, 190         5000+	3000+ 4000+ 5000+	<b>Internal</b> Wangtek - A	Archive	<del>500</del> ∓	400+
3086T - 170 <b>19900</b> † 3068 - 80, 170, 190 <b>7500</b> †	8000+ 6000+	•	MEMO	RY •	
Series 2000         2417S         12500           Series 1000         1409T         -7500	9000+ 6000+		, 2, 4, 8, MB	<del>500</del> Ŧ	400+
		•	TERMIN	ALS •	
PRINTERS		Altos	-2, <b>3,</b> 4, <b>5,</b> 7	_	250+
OKIDATA 182 <del>200</del>	<b>150</b> +		- 30, 50, 60, 75 - 910,920,925,9		250+ 150+
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## **EISA vs. the Micro Channel**

IBM announced its Micro Channel architecture in 1987. Because EISA is being released more than two years later, its designers have had the benefit of being able to track industry experience with IBM's design. (Intel has developed both a Micro Channel chip set and the first EISA chip set.)

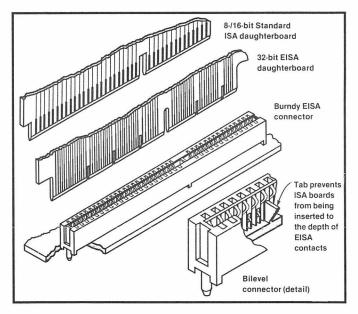
Some similarities are found between the two standards. As is true with Micro Channel systems, EISA systems can do full 32-bit transfers and can configure themselves automatically (EISA systems can even tell you how to set the DIP switches on older ISA-type cards). But unlike the Micro Channel, the EISA bus is fully synchronous and can perform cycles in long rapid-fire bursts. (The maximum throughput of the Micro Channel is 20 megabytes per second, while the EISA bus can support a maximum burst transfer rate of 33 megabytes per second.)

It may be easier to manufacture EISA boards than Micro Channel cards. They sport nearly double the surface area, making expensive surface-mount technology less of a necessity. An EISA adapter can use more than twice the power of a Micro Channel card. This will make peripherals like on-the-card hard disk, relay boards and intelligent I/O boards with a large amount of RAM (e.g., disk-caching controllers and laser printer controllers) simpler and cheaper to implement on EISA than on the Micro Channel.

IBM makes Micro Channel machines with both 16 and 32bit CPU's today. But while it's possible to build an EISA system with a 16-bit host processor (e.g., 16 or 20 MHZ 80286), it may be a while before you see such systems on the market. Intel, in an attempt, perhaps, to discourage the use of these second sourced processors, supports only the 80386 and 80486 with its EISA chip set. Since Intel's chips are, at this writing, the only ones available to support the EISA bus, users may have to wait for silicon from other vendors before they can enjoy the conomic benefits of the 80286 or even Intel's own 80386SX.

EISA's main advantage is that it does not have to "catch up" to the Micro Channel right away in order to be useful. Users can install cards designed for ISA machines while waiting for fast EISA cards to appear.

With the advent of the new Altos 5000, there are a lot of questions regarding the new EISA bus. For the comparisons done in the November issue of the *Byte* magazine between EISA and IBM's Micro Channel, see figures 1 and 2.



**Figure 1:** The EISA two-level expansion card connector allows backward compatibility with the ISA card in the same slot, while letting EISA cards have twice as many signal lines.

	DUJL	VOL		
			1	
GND	GND	님	IO CH CHK-	
+5V	RESET DRV	-닐-	D7	- CMD-
+5V	+5V	-님-	D6	START-
MFG SPEC	IRQ 2	-님-	D5	- EXRDY
MFG SPEC	-5V	-님-	D4	— EX32-
(KEY)	DRQ 2	<b>⊢</b> ∦-	D3	- GND
MFG SPEC	-12V	<b>⊢</b> ¦≓-	D2	— (KEY)
MFG SPEC	N/C	┣ <u></u>  -  -	D1	EX16-
+12V	+12V	-片片-	D0	SLBURST-
M-IO	GND	- H -	IO CH RDY	MSBURST-
LOCK-	SMEMW-	-片	AEN	— W-R
RESERVED	SMEMR-	-片	A19	- GND
GND	IOW-	-片	A18	- RESERVED
RESERVED	IOR-	- 吉-	A17	- RESERVED
BE3	DACK3- DRQ3	-Ä-	A16	- RESERVED
(KEY)	DACK1-	十萬-	A15 A14	— (KEY)
BE2-	DACK1-	十萬-	A14 A13	BE1-
BE0-	REFRESH-	十月-	A13 A12	— LA31
GND	CLK	十八-	A11	GND
+5V	IRQ7	上昌-	A10	LA30
LA29	IRQ6	十三-	A9	— LA28
GND	IRQ5	十न-	A8	LA27
LA26	IRQ4	十न-	A7	LA25
LA24	IRQ3	- 言-	A6	— GND
(KEY)	DACK2-	18-	A5	— (KEY)
LA16	TC	18-	A4	— LA15
LA14	BALE	18-	A3	— LA13
+5V	+5V	18-	A2	— LA12
+5V	OSC	18-	A1	LA11
GND	GND		AO	— GND
LA10				— LA9
	Extensi	ion for	AT bus	
- LA8				LA7
LA6	MEM CS16-		SBHE:	- GND
LA5	I/O CS16-	느릴-	LA23	LA4
+5V	IRQ10	_⊒_	LA22	— LA3
LA2	IRQ11	느낄_	LA21	- GND
(KEY)	IRQ12	_밀_	LA20	— (KEY)
D16	IRQ15	_⊎_	LA19	— D17
D18	IRQ14	_밀_	LA18	— D19
GND	DACK0-	_밀_	LA17	D20
D21	DRQ0		MEMR-	— D22
D23	DACK5-		MEMW-	- GND
D24	DRQ5		D8	— D25
GND	DACK6-	느므_	D9	D26
D27	DRQ6		D10	D28
(KEY)	DACK7-		D11	— (KEY)
D29	DRQ7		D12	— GND
+5V	+ 5V		D13	— D30
+5V	MASTER-	느릴_	D14	D31
, MACKn-	GND		D15	MREQn-

**BUS EVOLUTION** 

**Figure 2:** The evolution from PC to AT to EISA. The expansion bus has contacts for both sides of the expansion cards. The original PC bus (inside columns, top) had only 62 lines. The ISA 16-bit (AT) bus (inside columns, bottom) changes only line 8A of the PC bus, but extends the bus with 36 new lines. The EISA bus (outside columns, top and bottom) added 59 new lines at a different card depth from the ISA bus. Otherwise, the basic 62 lines stayed the same. Note that EISA attempts to "wrap" power and ground lines around clock lines and to position power rails so that they can be combined into thick traces on a motherboard. EISA nearly doubles ISA's number of bus lines.

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