

# New Technical Notes

Macintosh

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Developer Support

## NW 585 - X.25 and X.400 Q&As Networking

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This Technical Note contains a collection of Q&As relating to a specific topic—questions you've sent the Developer Support Center (DSC) along with answers from the DSC engineers. While DSC engineers have checked the Q&A content for accuracy, the Q&A Technical Notes don't have the editing and organization of other Technical Notes. The Q&A function is to get new technical information and updates to you quickly, saving the polish for when the information migrates into reference manuals.

Q&As are now included with Technical Notes to make access to technical updates easier for you. If you have comments or suggestions about Q&A content or distribution, please let us know by sending an AppleLink to DEVFEEDBACK. Apple Partners may send technical questions about Q&A content to DEVSUPPORT for resolution.

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### Which A/ROSE version to use

Date Written: 6/2692

Last reviewed: 6/14/93

What should I be doing with A/ROSE versions? My application links with X.25\_Interface\_Library.o, IPCGlue.o, and FSDES.o. Should I be using the latest IPCGlue.o that is on the Developer CD, or should I use the one that came with the X.25 Developers Kit? Also what about A/ROSE itself? Can I safely replace the existing one in my Extensions folder with the latest one from the CD? If I do should I relink the app with the corresponding IPCGlue.o? What about the MacX25 Admin? Will it be happy with the latest copy of A/ROSE in the Extensions folder? My code resources also link with IPCGlue.o. I assume I should link the code resources and app with the same IPCGlue.o, right?

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Changes to A/ROSE are typically made to A/ROSE itself. In general, you should follow the guideline that you describe—link with the library file for the version of A/ROSE you plan to ship with. Interestingly, the A/ROSE IPCGlue.o file shipped with MacX25 1.0.1 is still fine for linking with. You should also relink your application with the (MacX25 1.1) X.25\_Interface\_Library.o as there are a number of memory management bugs fixed between 1.0.1 and 1.1, some of which caused system crashes.

Over the past several years, new releases of A/ROSE have been made to fix bugs and to support new hardware. If you plan to be compatible with new CPUs, you might want to supply the latest release of A/ROSE.

## **Locking X.25 segments**

Date Written: 6/2692

Last reviewed: 6/14/93

Are there any of the X.25 segments from X25\_Interface\_Library.o that need to be locked or should be specified as resident in my application's 'res!' resource? In, particular I am wondering about the segment X25\_VBL.

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The X25\_VBL segment contains code that is executed at interrupt time, and the rules for dealing with interrupt driver code should be followed—that is, the VBL code and VBL task record should be locked down.

## **Segmenting data for X25\_Write**

Date Written: 6/2692

Last reviewed: 6/14/93

When writing data with the X25\_Write routine, I seem to need to break up the data to write according to the current packet size and then make separate calls for each data chunk/packet. I had hoped the X25\_Write would have figured that out by itself. Am I missing something? What about when using X25\_Read? Should I be reassembling packets with the M\_Bit set, into big chunks of data?

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No, At present, the X25\_Write routine does not do anything very useful in the domain of segmentation and reassembly of X.25 data. The routine only handles the segmentation and assembly of *one* packet's worth of data. Unfortunately, the same comment applies to the X25\_Read routine.

## **Depending on A/ROSE to correctly queue a message**

Date Written: 6/2692

Last reviewed: 6/14/93

Is it possible to intercept an A/ROSE message from the X.25 server that was destined for the X.25\_Interface\_Library? The server and the client are running on the same machine, and I connect to the server with X25\_Server\_Connect(gTcb, connect\_via\_best).

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A/ROSE is dependable for delivering messages to your task, that are sent to *your* task, and not to other tasks. To date, there have not been any problems reported on this subject.

## **Translating 8-bit Macintosh text to 7-bit ASCII**

Date Written: 12/20/90

Last reviewed: 6/24/93

Is there an Apple-recommended method for converting 8-bit Apple text characters to that which can be sent over 7-bit media while observing X.400 rules, and only submit 7-bit text into the x.400 IA5Text body parts?

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MacPAD used to support only 7-bit file transfers, but it's now possible to translate from 8 bit characters to 7 bit.

### **Where to find X.400 & X.500 references**

Date Written: 1/23/91

Last reviewed: 6/14/93

Where can I find documentation on the X.400 and X.500 electronic-mail standard?

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There are a few interesting articles about X.400 in the Technical Information Library on AppleLink. One of them mentions that Apple has a forthcoming X.400 solution that is an X.400-compliant MTA (Message Transfer Agent) that runs on any modular Macintosh under System 7. It includes the seven layers of the OSI model. It works either over X.25 (on top of the MacX25 product) or over 802.3. (This is the most used link in the U.S.) It lets Macintosh users gain access to public X.400 networks or to connect to their private X.400 backbone.

For standards and specifications on X.400 and X.500, check with your local library for an IEEE periodical index. IEEE documents this type of stuff fairly regularly.

### **Feasibility of MacX25 AppleTalk internet routers**

Date Written: 3/26/91

Last reviewed: 6/24/93

What's the feasibility of internet routers for AppleTalk networks over MacX25?

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Internet routers for AppleTalk networks over MacX25 are not only feasible, they're available. Apple's internet router 3.0, with the X.25 internet router extension, provides this function.

### **Providing general "listeners" on MacX25 servers**

Date Written: 3/26/91

Last reviewed: 6/14/93

Is it feasible to develop general "listeners" on the MacX25 servers? This would allow users to connect to MacX25 servers and request specific services to be provided. Other non-Macintosh systems could also communicate with such listeners.

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MacX25 does indeed provide a listener agent. Please refer to the MacX25 product documentation. If, however, you want to develop your own listener, one could be provided via access to A/ROSE.

## **How to increase Macintosh X.25 user list size**

Date Written: 7/25/91

Last reviewed: 6/14/93

How do we go beyond the Macintosh X.25 user list entry limit of 256?

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The size of the X.25 user list can be modified by modifying the 'Maxu' resource in the X.25 Admin program using ResEdit. If you're using the latest revision of ResEdit version 2.1, a template for the 'Maxu' resource exists to assist with this modification. The other recommended change is to increase the program partition size of X.25 Admin by 32 bytes for each additional user to ensure that there is enough memory to hold all of the names. Note that this change does not increase the number of simultaneous connections.