

FORCE Sight

BY STEPHEN FORCE

NaSPA, like the rest of us, is changing. Some of these changes are exciting, some stressful, but all of them are interesting.

My name is Steve Force, and I have been a practicing systems professional for 15 years. While working in Europe in 1989, I learned about NaSPA through Candle Corporation and subsequently joined. At the time, I was working as an MVS systems consultant, primarily on MVS with the JES3 subsystem, and thought that it would be interesting to write an article comparing JES2 with JES3. I soon discovered that writing an article was *work*. However, with the patient help of Tom Sprague and Amy Birschbach, the editors at Technical Enterprises, Inc., I soon discovered that even I could write (it is amazing how people trained in journalism can spin silk from binder twine).

I started my data processing career as a VM and MVT operator. Soon after, I got the job I really wanted: MVS systems programmer. Today, I am working more with connectivity, UNIX, TCP/IP, Novell NetWare 4.0 running on OS/2 2.1 and Windows/NT (among several other things).

The industry has changed, but I am not certain that it has changed as much as the "pundits" say. I think the greatest change has been the slow but steady acceptance of data processing (now called information systems?) by people familiar with what computers can (or cannot) do. Fifteen years ago, punch cards processed by data entry people were still the main form of data input to the computer. Tape and disk might have been faster and better, but one could actually see what was

on a punch card. Now, most data are created and remain electronic and magnetic.

In some ways, I think that change has come too slowly. Marketing hype from the major vendors promising wonderful solutions has been, for the most part, disappointing. As systems programmers, we have had to work with incomplete software, poor, cryptic, sometimes nonexistent, documentation and hardware that did not work as promised. Somehow, we tricked it all in. Once everything was stable, the whole cycle started over again.

Our technical skills were very much in-vogue. We really had the best of all worlds: a challenging and respected job, freedom to do our work as we saw fit, good money, a secret place to hang out (the machine room) and responsible positions at a young age. If we wanted another job, we simply had to make a couple of phone calls and things started popping.

Now, unless we anticipate inevitable changes, we will soon become obsolete. There are precious few "jobs for life." Think back to when you first started doing systems programming work. Did you then see the bright future in systems work, or did you just "luck" into it?

Those of us who anticipate changes in our industry thrive. Those who cling to the past will have problems.

NaSPA is reaching out to the new generation of computing professionals. The new generation has embraced PCs, MS-DOS and/or Microsoft Windows applications, and local area networks (LANs).

Some university graduates entering our field have never heard of MVS or VSE. Years ago, when I was a student at the University of Florida in Gainesville,

MVS was *the* system. Anyone who had an TSO account was special. The students I now know embrace "C", UNIX, TCP/IP and sockets. They have little interest in hearing about MVS.

Which leads me to this question: What is our field, exactly? Who should be NaSPA members?

Our field is providing information systems technical support for the enterprise regardless of operating system or network topology. NaSPA membership should consist of all the professionals providing this technical support. There should be no educational barriers to membership—some of the best sysprogs I have ever met were barely high school graduates.

In addition to the classical IBM mainframe-based technical support/systems programmer that currently makes up NaSPA's core, in addition to technical support managers and MIS managers, potential NaSPA members are, in my view:

- LAN and WAN developers and administrators;
- UNIX systems programmers, regardless of UNIX flavor;
- MS-DOS (or DR-DOS) systems support;
- OS/2 types;
- Windows and Windows NT systems people;
- APPC and APPN developers and implementors;
- TCP/IP and OSI developers and administrators;
- multimedia developers and administrators;
- teleconferencing staff;
- client/server implementation staff; and
- "middleware" developers and implementors.

NaSPA is in a unique situation, and should not be aligned with any one vendor nor technology. The NaSPA membership, spanning the globe, can decisively influence current and future trends because we are pragmatists. Not much room to be an idealist in our profession, is there? Let's use our collective knowledge, earned respect and influence wisely.

The NaSPA publications should be, in my view, a vehicle providing applied

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CONNECTIONS

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Dependent can transmit onto the link. The PHY is also responsible for decoding every five-bit symbol from the Physical Medium Dependent into four bits of data to be interpreted by the MAC.

The FDDI Physical Medium Dependent (PMD) specifies the lower sublayer functions of the Physical Layer of the OSI Model. The PMD provides the physical interface to the FDDI ring and converts optical energy into electrical signals. The PMD controls the optical transmit/receive levels, optical jitter and acceptable Bit Error Rates (BER). The PMD also specifies connector pin-outs and footprints. See Figure 2.

There are four different port types that nodes use to connect to an FDDI network: A ports, B ports, M ports and S ports. The A port receives from the Primary ring and transmits to the Secondary ring. The B port receives from the Secondary ring and transmits to the Primary ring. The M (Master) port and the S (Slave) port receive and transmit data from the same ring. The A and B ports are used in combination to connect to Dual Attached node to the Primary and Secondary rings. Concentrators use M ports to connect Single Attached nodes to the FDDI network via S ports.

The need for implementing FDDI will continue to grow due to complex networks that include video, media and large amounts of information that need higher bandwidth. The future of fiber optic technology shows that the life cycle has just begun. The increases in fiber technology will also drive the price of fiber to be more affordable, which will render copper obsolete.

October's column will further discuss the uses of FDDI and its use as a backbone to connect LANs and WANs.

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FORCESIGHT

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information technologies' knowledge, since applying applicable technology as a part of a solution is what we do as a profession. This means article content must span technologies and vendors in providing the best, most timely information possible for our readers. This is, by the way, very difficult to do. It is time-consuming and requires deep commitment by the author. It also requires timely information from vendors. Members not comfortable with English should be encouraged to submit what they can, allowing us to help them with articles.

NaSPA needs to cast the net out to establish and cultivate broad support from vendors, large or small. Through this support, our NaSPA publications can provide us, the NaSPA membership, pragmatic information on a timely basis, as well as give all vendors a chance to be heard by the best technical audience imaginable: NaSPA members.

NaSPA is an organization, and organizations must be actively supported by their members. Those who wait for others to provide answers are normally disappointed. In contrast, the members who are actively involved gain the most. We must aggressively pursue and coax our foreign colleagues to join and be involved with NaSPA.

I envision my column to be loosely structured, serving as the forum for whatever is pertinent at the time. Please contact me about anything on your mind: comments, criticism, good things about our profession, bad things—anything. I can be reached via NaSCOM (Forcsteg), CompuServe (76470,2637) or by telephone (313) 620-9264.

Finally, even though I am an independent now focused more on providing applied connectivity and data processing solutions rather than applying PTFs, I am still an MVS systems programmer at heart.

So, until next time, good bye and auf wiedersehen. For our German readers, Tschüssle!

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STORAGE

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implementing Sequential Data Striping. For example, striped data sets, unlike non-striped data sets, cannot be extended to additional volumes. Thus it is not possible to add another stripe to a data set that has run out of space on any of its original stripes. Also, because striped data sets are treated for most purposes as ordinary multivolume data sets by MVS, they cannot be edited or browsed under

ISPF

Disaster recovery issues must also be taken into account when striped data sets are used. It is important to ensure that a sufficient number of ESCON channels and 3390-3 Extended Platform controllers, both of which are required for striping, are available at the disaster recovery site. Also, restore programs such as DFHSM, DFDSS and FDR cannot restore a striped data set to a non-striped condition or vice versa.

Sequential Data Striping is one of many new functions that call for the storage administrator's analysis and judgement in deciding what to implement and when.

In future columns, I'll be discussing other new technologies that will affect the storage administration function. However, I'd also like to hear from you: Is there some trick or technique you use in your shop that you think others might find useful? What was your best (or worst) experience when installing new hardware or software? Drop me a line in care of this magazine or on NaSCOM (user ID: Pryostes), and I'll try and publish your experience so we can all benefit.

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