New Haven Seminar

--Michael Grunder, Yale University

Planning and Implementing a Replacement Telecommunications System

One-hundred and sixteen people, representing fifty-four Colleges and Universities and over a dozen businesses nationwide met recently at the Park Plaza Hotel in New Haven, CT. Their purpose was to attend the 1987 ACUPA Spring Seminar and to learn first hand of Yale University's recent conversion to a privately owned, 9000 line, Neax 2400 PBX in its Central Campus area.

The program, developed and taught by the Yale project team that selected and installed the new system, lasted two and a half days and was a mix of classroom lectures, tours, slide shows, and formal and informal discussions that spilled out of the classroom into the meal and hospitality functions.

Yale's Central Campus area dominates a large section of downtown New Haven. It consists of almost two-hundred buildings in a twenty-six square block area. Monday morning's program provided a history of Yale, the city of New Haven and the Southern New England Telephone Company. This history lead into a detailed overview look at the telephone system conversion project dating back to 1982. This was when a Request for Information (RFI) was sent out following the successful cutover of a Yale owned SL-1XL PBX in the Yale New Haven Medical Center. A feasibility study had previously been accomplished which determined that the Central Campus area could, in fact, be successfully recabled at a managable cost. The RFI was designed to determine the range of products available and to test for financial stability and support services available from potential suppliers.

From a field of twenty-two vendors, eleven emerged as possibly successful bidders for the Central Campus job. The success of the RFI also brought initial funding to augment staff and extend Yale's consulting contract with Rand Associates of Farmington, CT. With the beginnings of a project team in place, work began in earnest on a detailed Request for Proposals document (RFP).

Six months and two retorments later, the ninety-five page RFP was sent out to the eleven vendors identified by the RFI. The structure of the Yale RFP was discussed along with the problems encountered along the way in its development. This lead into the areas of consultant selection, how to best use consultants and then into the evaluation and negotiation technique used to ultimately select the winning bid. The morning concluded with a presentation and discussion on PBX contract development and negotiation.

After lunch the overview and familiarization process was completed by means of tours of the Yale Campus and the main switchroom facility. The latter of these two tours was especially significant in that it showed in graphic detail how an extremely hostile environment can be turned into a high tech, fully protected switchroom environment when no better location is available. (The "sow's ear to silk purse" part of the project.)

Tuesday morning's topic was Cable Plant and Construction issues. The discussions revolved around reuse and rehabilitation of cable plant (a great deal being reused on this project), cable plant design and standards, provision of free and ready access for cabling, construction planning,
NEW HAVEN SEMINAR, Continued:

construction contract negotiation, construction management and the removal of the old system. The presentations and ensuing spirited discussions brought into clear perspective the four fifths of a large telephone project normally hidden from public view. Of special interest here were the politics, both internal and external, of cable plant construction and implementation.

Telephone Switchroom–Yale University

The Tuesday afternoon presentation took the attendees into the details of data communications at Yale. An overview of existing systems and philosophies was presented. This was followed by a detailed look at Project Team attempts to develop and integrate an over-all Yale plan for data communications into the telephone conversion project. When this process failed, the "emergence of plan B" was detailed along with an explanation of its ultimate success and where Yale is headed now that it owns its own fiber and twisted-pair cable plant.

Late in the afternoon the implementation, staffing and management portion of the seminar was begun and continues through most of Wednesday morning. Topics included public relations, user training, systems design, the telephone coordinator program, staffing issues, development of data processing systems, provision and expansion of long distance services and the difficulties involved in providing redundant services through the entire cutover process. Included in the training segment of the program was a presentation of the training film developed in-house and shown to almost four-thousand telephone users at Yale.

The seminar concluded on a light note with a quick (relatively speaking) slide show of the highlights of the implementation. The slides graphically depicted a great deal of the construction necessary to accomplish this difficult, inner city installation.

The sun was finally shining in earnest on Wednesday afternoon as the attendees headed back to the four corners of the U. S. and Canada, better prepared to take on similar projects, or perhaps to argue the opposite case. Probably the most significant lesson learned at the seminar had to do with the complexity of such projects, the wealth of detail that must be dealt with and the significant magnitude effort that must be brought to bear if one is to succeed in such an undertaking.

TELEPHONE SYSTEM INSTALLATION

SOME HELPFUL HINTS

—Michael Grunder, Yale University

Don't begin the project without active support from the highest possible administrative levels in the institution. (AND ACADEMIC LEVELS IF YOU CAN)

Define the RFP process with enough time and detail to allow for logical participation by as many vendors as possible. (i.e., take full advantage of competition within a framework which will allow an 'apples to apples' comparison.)

The RFP should have a very detailed "Business Terms and Conditions" section. This will make contract negotiation easier because the vendor will have already agreed to many of your demands in writing prior to negotiating a contract.

Beware of vendors whose representatives act like used car salesmen.

Develop the telephone coordinator program* very early in the implementation process. Their input is very important, even critical, in the inventory, system design and installation/removal processes. (AS WELL AS UNLOCKING DOORS.) Plan to carry over the program after cutover as these folks will become invaluable in helping with future add, move and change work.

When designing departmental systems, arrange for immediate, direct access to a computer file so reams of hand-written material do not have to be typed in after the fact. This would be a tremendous time and error saver. (Unfortunately it is also easier said than done.)

The previous idea would necessitate that some part of the computerized management system be available early so complete inventory data cannot only be input, but manipulated easily.

Assuming that a computerized management and billing system is to be developed as opposed to purchased off the shelf, it should be done on an RFP/bid basis with financial penalties for not making significant deadlines.

Qualified management personnel should be hired in great enough quantity and brought into the process at the earliest possible date. Don't nickel and dime on staffing. It will cost dearly in the end. (If you can convince your institution and personnel department on this one, you're doing REAL well.)

System implementation should be overseen by a qualified person in the direct employ of the institution and not a temporarily employed consultant. This primarily to avoid the "buffering" of critical communications.

Good consultants can play a real important role in a conversion project. Politically they are the expert from out of town that everyone believes. Logically they bring an outside perspective and a degree of expertise on certain topics that may not be readily available on staff. They can also provide extra labor for one-time chores. They should not be allowed to become indispensable to the management and operation of the system. If they do, someone isn't doing their job properly. (Continued: Next page)

*Telephone coordinators are individuals selected from each department who are trained in the fundamentals of telephony. They then act as departmental representatives for inventories, system design, training and billing.
PARTY LINE

—Ruth Michalecki, Nebraska

Everyone in ACUTA is getting excited about the upcoming Annual Conference to be held in Minneapolis, Minnesota July 26 thru July 30, 1987. The speakers have been selected and Mall Wheeler has done his usual outstanding magic act of fitting an extraordinary amount of timely information and excellent speakers into three and one-half days, and still left time for other activities as well. A new offering this year is the "Call for Papers" sessions with ACUTA members presenting a program covering a project of theirs. The response to the Call for Papers was great and you will have an opportunity to hear first hand the problems and successes of your fellow telecom administrators. Scheduling meeting times for specific User Groups and for ACUTA Regional Meetings was introduced at last year's conference, and we will provide time in the schedule for these activities again this year. Please contact your regional director to indicate your interest in these sessions, or better yet, be sure to check this area on your registration card, when you send it in.

A flyer containing general information concerning the annual conference, is enclosed with this issue of ACUTA News. As you can see, it promises to be another excellent conference. Brochures, registration cards, hotel registration cards, and spouse program information will follow soon. Be sure to mark your calendars and plan to attend. You won't want to miss this one!

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I hope you were one of the lucky ones attending the Spring Seminar at YALE. I have heard so many good comments covering the program. Mike Gruender sent an article on the seminar and he included some helpful hints and checklists—things they discovered during their project that he feels might help some of you planning a switch and plant installation. In addition, Mike sent along his version of Murphy's Laws, as it pertains to telecommunications. I will share these with you in the newsletter over the next few issues. Mike will make a presentation at the annual conference, so you have a second opportunity to learn first hand what is involved when you purchase your own switch and plant.

************

I spent a few minutes with Harry Newton, (Teleconnect, CO, Telecom Library) at the USTA Western Showcase in Las Vegas. He was busier than ever, and looked great! Have any of you read his publication CO? Harry has offered to send CO to ACUTA members at no charge. It is very good—has some great articles on switching and network services.

Write CO, 12 West 21 Street, New York, NY 10010 for information on how to get a free subscription.

Let me quote from a recent article in CO written by Harry, concerning ISDN.

"....Some telco people see ISDN as another pair gain device, squeezing more conversations onto one pair. Some see it as a Vision approaching Utopia, where Man communicates with each other and ware are a thing of the past.

Some users see it as already obsolete, because of plummeting T-1 prices.

Whatever your position—at the extremes or in the center—ISDN is unquestionably the most important telephone concept in the past 30 years.

If ISDN captures the industry's imagination, it could rekindle an enthusiasm we haven't seen in the industry since we wired the nation for universal service earlier this century.

My bias is simple. I'm in favor of ISDN. I see ISDN's greatest human contribution to be in education. I look back to my checkered education. Those courses which excited me, I did well in. Those courses I did well in were always taught by great teachers.

If all courses could be taught by great teachers...think of the impact on our children. Think of the impact on our workforce.

ISDN could bring the world's greatest teachers into our classrooms, into our homes.

Universal quality education. That's the ultimate ISDN Vision.

In the more realistic future, ISDN could bring access to the world's information storehouses—also called data bases—to our homes and offices.

What is ISDN?

Northern Telecom's attractive bimonthly magazine, Access, says ISDN is a collection of communications standards for network access and signalling.

If adopted and implemented, these standards will allow people to communicate by voice, data, text, graphics or images to anyone anywhere in the world.

Consider the telephone. Today callers can talk throughout the world. It makes no difference who made the telephone instrument, who supplied the dial tone or who supplied the long distance connection.

Today's rigorously defined and universally accepted standards ensure universal voice communications.

Today's data communications standards are not yet universal. The world's computers cannot talk to each other as easily as people and their phones do. This is one reason an Integrated Services Digital Network (ISDN) is needed...."

I agree with Harry, it is important and it will happen. I can think of so many ISDN applications, as I understand it, for universities. My major problem—do I really understand what it is? What it will do?

Both the USTA Eastern and Western Showcases had some outstanding sessions covering ISDN development and on Signalling System 7. Some exciting things are just around the corner.

And one more comment about Harry Newton. He has been advocating automatic dialing correction technology. "Imagine, he says, when you hit the wrong digit while dialing your number, instead of hanging up and redialing the entire number, how about a "back-up" system, that would allow you to hit the # sign, backspace one digit, punch in the correct digit and keep on dialing? Sounds good. My sister and I are long-time duplicate bridge players. We always felt bridge should have a "back-up" bid that would let you "back-up" when you bid too high or made a wrong bid..... She wasn't very successful in getting it established in bridge-players circles, but maybe Harry will.

************

When I attended an Executive Briefing conducted by IBM at their facility in Research Triangle Park in North (Continued, next page)
PARTY LINE, Continued:

Carolina several weeks ago, I was told the ROLM operation would be fully integrated with IBM product lines; managed and marketed by IBM. In fact, a large segment of the executive briefing focused on integrated voice & data switching as viewed by IBM, featuring the ROLM Switch, (however, it was not called ROLM), and was presented by a marketing person from IBM. From what I have been reading of late, it appears that the ROLM operation, as known by many ACUTA members, no longer exists.

It is true they intend to name the switch IBM-23X? One wonders about future development and marketing, since the business is such a small part of the total picture at IBM; probably amounts to about 1% overall. I would guess. Of course, 1% of IBM is not peanuts!

I was sorry to hear of the death of Bruce Howat. Bruce was the long-time publisher of Communication News and a strong supporter and friend of ACUTFA. When our association was struggling to gain recognition, Bruce was always willing to write about ACUTFA, publicize our programs and conferences and was often a speaker at our functions, giving freely of his time to help us in our early years. Mail Reader reminded me of Bruce's famous motto: "If it is to be, it is up to me". I still have a memo pad on my desk from Bruce with those words printed across the pages.

The last time I saw Bruce, we were both at an ICA show. He looked great and seemed to be enjoying his retirement. He reminisced about ACUTFA members, recalling their names and universities. Bruce died on Good Friday—he will be remembered.

And speaking of Communication News, did you catch the article by Roger Underwood on the history of ACUTFA? We are pleased to be included in Roger's selection of important telecom user associations that are considered to have an impact in the industry. ACUTFA has come a long way in 16 short years. Our training programs, seminars and conferences are second to none. We would like to reach all colleges and universities eligible for membership in ACUTFA, so if you know any likely prospects, please contact Pat Paul, our membership chair, at Cornell.

I had a nice note from Linda Levenhagen, University of Wisconsin-Milwaukee, thanking us for publishing new exchanges in the newsletter. She said two new exchanges have been opened in Milwaukee, one in January, 1987 and the second one due August, 1987. Apparently, she wasn't prepared for the cutover in January and had a few problems because of it.

New exchange of the University of Wisconsin-Milwaukee in area code 414 is 227. In August exchange 229 in area code 414 will be added. Please add these numbers to your switching systems.

Linda was grateful to Pat Todas for her article on their cutover and especially for including a copy of the postcard they printed for their departments to notify their contacts. Linda said they are in the process of having similar postcards printed and to avoid earlier problems experienced, (from the cutover of the 221 exchange in January-87), they added the following sentence at the bottom of the postcard:

"If you are unable to reach us after August 8, please contact your Company's Telecommunications Office——Programming of your organization's PBX telephone system may be necessary to call 229 numbers."

In addition, they have requested Wisconsin Bell to have an announcement of the new prefix mailed out as a bill insert to all business customers in Wisconsin. Excellent idea!

Thanks for the nice comments Linda and for the added suggestions concerning new exchanges.

This was really my month! In addition to Linda's nice letter, I heard from Maureen Trimm, Stanford. If you can recall, I mentioned what outstanding training materials I found at IUPUI when I visited them in Indianapolis. I had forgot that Connie said she used the materials developed by Stanford, and in fact, she gives them credit for their contribution in the materials. Maureen said they found the Northern Telecom training materials were too generic, not well written, and not really appropriate for their environment. All of the original design work, descriptions and graphics were developed by her staff. They have licensed their materials to other SL100 installations, such as IUPUI. Just another example of the value of being a member of an association such as ACUTFA, where the members are willing to share their experiences with one another.

Maureen sent a list of about ten projects Stanford has perking right now. I was invited to visit them while I am in Sacramento last week of May, and I plan on doing just that. I'll tell you about those projects in the next issue, after I spend some time with Maureen and her staff.

Don't forget to review your name/address data sent to you this week from Jack Curry's office. Make any corrections needed and return as soon as possible. The new ACUTFA Membership roster will be printed from this data, and we would like it to be as accurate as possible. See you next month.

MURPHY'S LAWS

RELATED TO TELEPHONE PROJECTS

THE EXTENDED MURPHY'S LAW:

If a series of events can go wrong, it will do so in the worst possible sequence.

GATISSO'S EXTENSION OF MURPHY'S LAW:

Nothing is ever to be bad that it can't get worse (especially when it comes to switchrooms).

LYNCH'S LAW:

When the going gets tough, everyone leaves.

GRENZER'S ADDENDUM: Over my dead body they do.

BENEDICT'S PRINCIPLE (FORMERLY MURPHY'S NINTH COROLLARY):

Nature always smirks with the hidden flaw.

LAKSAMI'S LAWS:

1. Everything depends.
2. Nothing is always.
3. Everything is sometimes.

GROSSMAN'S MISQUOTE OF H.L. MENCKEN:

Complex problems have simple, easy-to-understand wrong answers.

FERGUSON'S PROPHET:

A crisis is when you can't say "Let's forget the whole thing".

(Continued, next page)
Always select a system that is large enough to handle growth projections!

Multiply all growth projections by at least two.

Accommodate for the immediate growth which will inevitably follow cut-over.

Be creative with switchroom design. It's surprising how much smaller a switchroom can be made if the vendor is pushed a little bit during the design process. (However, design the switchroom and support systems to permit the system - including cable - to grow to the maximum projected size with-out having to do construction. If you have a sudden spurt of growth, the last thing you will need to do is stop to re-build your switchroom).

Don't cut corners on switchroom environmental support systems (i.e., air conditioning, fire suppression, alarms, etc.). Air conditioning systems especially should be of a variety that are designed for switchroom applications. (And the air conditioning system should be completely redundant).

Always respect Murphy's Law, especially as it relates to construction time and cost estimates (apply the same factor as above to all estimates).

Plan installation and cut-over to accomodate the academic year if possible (Fall brings many, many requests for telephone changes).

Never volunteer to put together a telephone directory.

If forced to put together a telephone directory, define very early the book's specific format, the computer system to be used (i.e., data gathering and formatting and the procedures and STRTCH'IT deadlines for data input). Also, work very closely with the printer throughout the entire process, especially on things such as type setting, type style and costing estimates.

You cannot train users enough. Set up specialized training sessions for top executives. Get direct support for the training process from the highest administrative level to insure maximum attendance. When necessary, take the training to the users if that's the only way to reach some people.

Communicate your plans thoroughly to all levels of the user community, getting as much direct input as possible (especially from those in high and politically sensitive positions who will inevitably ask "why didn't someone ask my opinion?")

Beware, however, of going beyond some logical limit in your communication with the community. You may get more comments and confusion than you bargained for.

Never negotiate a contract or make an important decision after 3:00 p.m. on a Friday. Hold your most critical meetings in the morning when minds are fresh.

Develop your own contract prior to entering contract negotiations rather than using the vendor's stock purchase agreement. It will put you in the drivers seat during contract talks.

See if the vendor is willing to contribute to the cost of the switchroom. After all, it will be a showcase for the vendor's product, right?

Clearly define, in the contract, all of the levels of technical support to be provided by the vendors and specifically how those levels relate to one another under various conditions. This should include not only reporting structure but documentation of technical competence at each level.

Insist that ALL implementation committees act on a timely and scheduled basis with regular, honest reports of progress and lack of progress.

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Budget extra money up front so departmental systems can be redesigned and corrected once, at no additional cost to the department. Keep a moratorium on service orders as "burn in" time necessary for appropriate redesign.

Encourage full involvement by all relevant telephone company departments, as internal communications about agreed upon procedure is sometimes thin. Don't burn any telco bridges behind you if you can avoid it.

Don't underestimate the importance of the directory assistance/intercept operation. Clearly define the level of service desired and staff appropriately at reasonable salary levels. Arrange directory number input into the local operating companies automated directory assistance system.

Insist from your vendors an automated man-machine and machine-machine interface as it relates to system management (i.e. inventory control, order processing and billing).

Don't be too disappointed when you don't get the automated interface.

Clearly define all financial accounts up front and assign ONE person through which all bills must be processed for payment. This will greatly enhance cost control and an orderly final reconciliation of total expenses.

Insist that all significant product claims made by vendor sales personnel be documented in writing for use later when installation and account support personnel tell your management something cannot or will not be done.

Make it crystal clear to the vendor project manager who the customer is and to whom he or she should be reporting.

Insist on an escalation chart for handling problems as they arise and then escalate problems through the vendor's corporate structure logically and with the knowledge and concurrence of all relevant levels of the implementation team.

Don't allow the implementation team to get into a crisis management mode (i.e., keep the project in proper perspective and know when to step back and laugh a little). Stay flexible enough to change staff responsibilities and related deadlines as conditions during the implementation demand.

Reserve DID number groups from the Telco such that internal software numbers are not subsequently given to other customers by the Telco.

Be prepared to work harder and longer than you've ever worked before.

"Wow! Look at the one they caught!"
BUILDING WIRING OPTIONS

WHAT KIND OF CABLE?

—Dorian Benkoil

When is it better to use what? What are the advantages and disadvantages of each type of cable?

Twisted Pair, Unshielded

Pros:
1. It's the most flexible and easiest to move and install in any situation.
2. It's easier to lay than the other types and more people have more experience with it.
3. Cost. It's the least expensive type of cable.

Cons:
1. It carries the least amount of information of cable types. It has a low data rate.
2. It's very vulnerable to lighting, the elements and interference.
3. Puts off an electromagnetic field which can cause interference, such as cross talk or data errors.

Twisted Pair, Shielded

Pros:
1. Less likely to cause interference than unshielded cable. Less likely to be affected by nearby equipment or wires.
2. Less vulnerable to the elements than unshielded.
3. Quick and easy to install. Plenty of people have plenty of experience with it.

Cons:
1. Lower bandwidth, relative to coaxial or fiber optics.

Coax:

Pros:
1. Carries more information than twisted pair.
2. You can get it today. Though it's newer than twisted pair cable, there is still plenty around.
3. There are enough people around with enough experience that you can probably get a good installation.

Cons:
1. It's more bulky than thin twisted pair and difficult to move. CATV coax cable is quite rigid and requires special tools to install it around curves.
2. Nearly always installed as a "home run" -- a terminal is connected to a mainframe, with no cross-connection in between. Makes it more difficult to move and costly to move "drops" (terminals, phones, and other workstation terminals) than with twisted pair.

Fiber optics:

Pros:
1. Carries information at speeds undreamed of only a few years ago.
2. Neither creates nor is susceptible to most interference because it doesn't have an electromagnetic field.
3. Can send a signal without boosting for a longer distance than copper wire.

Cons:
1. It's not ready yet for anything approaching a reasonable cost in an end-user environment.
2. Not many people have experience installing it. yet.
3. A small imperfection in the cable can mess up all the signals.

When to use what:

1. Unshielded twisted pair for phones and other situations where you may have to move a lot and aren't sending a whole lot of data over the line all at once. Best where there won't be a lot of other wires and equipment to cause or be affected by interference.
2. Twisted pair tends to give you more flexibility than coax or fiber optics. If you're moving workstations frequently, twisted pair may be the best. It's also much easier to have a cross-connect point for twisted pair than for the other types of cable. Makes it easier to change terminals and find problems.
3. Shielded twisted pair or coax when you've got more data to send, and don't want to risk it on unshielded, twisted pair. High-quality, noncompressed video takes up more bandwidth than twisted pair can handle.
4. Fiber optic cable is often used now for very high-speed transmissions with no interference.

Fiber can be a moot question now because unless you've got lots of money and very high usage. The day when a fiber optic cable terminates at your desk computer is still a ways off.

A Final note:

Since the cost of installing new cable is so much less than ripping out and replacing cable (1/2 to 1/3 as much), some people are installing coax or fiber optic cable in new buildings in anticipation of future needs.

This article was reprinted in part from TELECONNECT, February, 1987 issue.

Switchroom tour: John Meickle(center) explains.
POPPOURRI

—Connie Gentry, Emory University

My dear old Granny used to tell me that if you live long enough you see everything. She said that in 1952 when we were one of the first few families in Tallapoosa, Ga. (pop 5345) to get a t.v.; she said it in 1959 when Neil Armstrong frollicked on the moon, although she always suspected he wasn't on the moon but in Arizona or New Mexico; and we both said it on 1/1/84, when divestiture became a reality. The latter was accompanied by a lot of head shaking, too.

Well, I'm sure she'd say the same thing about a new "telephone" on the market called the Beardroid Phone. For $129, plus $6 postage and handling from DAK Industries, Inc., you, too, can have your own teddy bear with a built-in telephone. But watch! There's more! This little cuddly, electronic marvel doesn't just sit there and hold the line: "...his mouth and eye movements are synchronized to the voice coming over the line. He can chew gum. He can yawn. He can 'mouth' each word as it's spoken." Let me quote further..."...[the Beardroid] is really happy sitting in your lap while you talk on the phone..." Leapin' Lizards! Just think of the potential: this might be the way to achieve world peace! I vote that we take up a collection and send one to the White House and one to the Kremlin and see what develops. I just love modern telephony!

If a company called National Telephone Services, Inc. comes knocking on your door, you might want to give them some time. These folks want to take your 9+0 traffic, credit card, third party billed, collect calls, etc., and ship them over their network, for which they will give you a commission each month. We signed up in February, shipped 114,000 plus minutes of 9+0 calls and got a healthy $7,000 check. I've heard of a couple of other companies who do the same thing and if you're looking for ways to generate revenue without plying your users, you should at least listen to what they have to offer.

Is there anybody out there who owns their system and is doing in-house maintenance and installations (5L-100 users not included since I talk to them all the time!) ?? We're trying to compare costs of in-house maintenance with contract maintenance and the one hang-up seems to be how to classify the positions and place them within the University salary scale without skewing the entire scale. Until our personnel department can assign a salary range, we don't know whether or not we'd be able to recruit and maintain appropriate personnel. Please call me if you can help (404-727-4320).

Everything is a-bloom and a-twitter at beautiful downtown Emory...including me! I have the hardest time staying in the office, attending to business when the dogwoods, tulips, azaleas, et al are going at it with reckless abandon. Of course my sinuses don't appreciate all the pollen, but somebody once told me that you have to suffer to know when you've had a good time. In that case, I'm having a wonderful time in spite of the tears and nose blowing! I recently found out that our primrose research field station, about twenty miles out in the country, has a lake in which they let certain folks fish, and that someone caught an 8lb largemouth bass there last year, so I have a feeling that I will be doing an extensive and long overdue evaluation of their phone system, which will probably last at least through the summer. Dedication to one's job is so important, don't you think?

See you next month.....

MURPHY'S LAWS—Continued:

NASSER'S LAW:
You can make it foolproof, but you can't make it damn foolproof.

DRAZEN'S LAW OF RESTITUTION:
The time it takes to rectify a situation is inversely proportional to the time it took to do the damage.

HUTCHISON'S LAW:
If a situation requires undivided attention, it will occur simultaneously with a compelling distraction.

HARRISON'S POSTULATE:
For every action, there is an equal and opposite criticism.

ROGERS' RULE:
Authorization for a project will be granted only when none of the authorizers can blame if the project fails but when all of the authorizers can claim credit if it succeeds.

CONWAY'S LAW:
In any large project there will always be one person who knows what is going on. This person must be fired.

STEWART'S LAW OF RETROACTION:
It is easier to get forgiveness than permission.

LOFTUS' THEOREM ON PERSONNEL RECRUITMENT:
1. Far-away talent always seems better than home-developed talent.
2. Personnel recruiting is a triumph of hope over experience.

FIRST RULE OF SUPERIOR INFERIORITY:
Don't let your superiors know you're better than they are.

WHISTLER'S LAW:
You never know who's right, but you always know who's in charge.
(Not always true at Yale).

SPENCER'S LAWS OF DATA:
1. Anyone can make a decision given enough facts.
2. A good manager can make a decision without enough facts.
3. A perfect manager can operate in perfect ignorance.

GOTTLEB'S RULE:
The boss who attempts to impress employees with his knowledge of intricate details has lost sight of his final objective.

FIRST RULE OF NEGATIVE ANTICIPATION:
You will save yourself a lot of needless worry if you don't burn your bridges until you come to them.

URM'S LAW OF PROFESSIONAL PRACTICE: (Post cut-over)
The client who pays the least complains the most.

MACDONALD'S SECOND LAW:
Consultants are mystical people who ask a company for a number and then give it back to them.

PEFFER'S PRINCIPLE:
Never make a decision you can get someone else to make.
Corollary: No one keeps a record of decisions you could have made but didn't. Everyone keeps a record of your bad ones.

Facilities Management Market To Grow

Market observers believe 1987 will be the year for telecommunications facilities management, the communications version of third-party data center operations.

Several projects are already underway. Electronic Data Systems (EDS) recently landed a contract with Shell Brasil SA for telecommunications facilities management. The company has several projects pending and seems ready to combine its expertise in contract management with its experience operating General Motors communications networks.

DMW Group, the Ann Arbor-based telecommunications consulting firm, has been working on telecommunications facilities management projects for the past five months, according to a DMW spokesperson who would not elaborate on the nature of the contracts or clients.

Big Eight firms are also taking a look at the market. Deloitte, Haskins & Sells (DH&S), for example, is currently managing the telecommunications system of a major Ohio-based corporation.

Analysis indicate that the lingering impact of divestiture and recent changes in the tax code have opened the facilities management market, making it attractive for telecommunications firms and companies strongly associated with data processing services like EDS and DH&S.

Many believe corporations were unprepared to inherit the responsibility of managing their own telecommunications systems in the post-divestiture era. According to Tom Fluhler, national director of telecommunications and technical services at Coopers & Lybrand, the market for telecommunications facilities management began to grow as confused companies turned to outsiders to operate their communications system.

"Before 1984, if a corporate communications manager wanted to install a system, all he had to do was call AT&T," Hur commented. "Then after '84, the old-time communications manager—who had really been an order placer—had to manage the system, hire engineers and, in general, hire people to do things the phone company used to do. Some installations turned out to be totally beyond the capacity of the company. Now people realize they can't do it themselves."

The training problem is compounded by understaffed communications departments attempting to manage facilities that, by some reckonings, represent an investment within 5% of a company's data processing expenditures.

"We have staffs of three managing a $30 million communications budget," Rush said. "That's what's driving the market."

"When AT&T divested a management vacuum suddenly appeared," he added.

While divestiture is playing a role in the market's growth, analysts believe the current tax situation—particularly the elimination of the investment tax credit (ITC)—will cause market expansion to accelerate. In their view, telecommunications equipment rental and third-party management will be more attractive than equipment purchasing and the building of internal staffs.

John Powers of Powers, Tritech & Assoc., Inc., a Wellesley Hills, Mass.-based consulting firm, sees the fusion of equipment rental and facilities management as a potent combination. Powers believes vendor leasing programs—like the one initiated by Northern Telecom, Inc. last year, will fuel market growth.

"Believing the new tax laws would bring about a resurgence of the rental market, Northern Telecom set up a number of telecommunications facilities management programs," Powers said.

Under Northern's Telecommunications Facilities Management program (TFM), the company sells its PMX products to a designated TFM vendor which, in turn, rents the units to clients. In addition to the rental service, TFM vendors also provide installation and, importantly, management services.

According to Warren Sanders, Northern's director of marketing support strategies, TFM program involves all of its distributors, the RBDCs and large telcos. But the company is also recruiting "non-distributor, national account companies," he added.

One such company is Planning Research Corp. (PRC), which became a Northern TFM vendor seven months ago. Sanders said announcements on major Northern/PRC contract awards would be likely in the next three-to-six months.

Sanders expects '87 to be a strong year for Northern's fledgling program.

"We've talked with a number of corporations that are dealing with the elimination of ITC and the establishment of a corporate minimum tax, and we get a positive feeling that many will go from capital funds to operational funds for telecommunications," he explained.

Powers believes other vendors will join Northern Telecom in encouraging telecommunications facilities management.

"Northern has been the one blowing their horn and everyone else has been waiting to see how their program gets off," Powers said. "But I would be surprised if the others waited much longer."  

This article was reprinted from Computer Consultant, February, 1987 issue.

Mike Grunder conducting a switchroom tour at ACUTA Spring Seminar held at Yale University on March 29 – April 1, 1987.
The Association of College and University Telecommunications Administrators
16th ANNUAL CONFERENCE
Minneapolis, Minnesota * July 26 - July 30, 1987

"Managing The Telecommunications Resource" is the theme of ACUTA's 16th Annual Conference, July 26-July 30 in Minneapolis, Minnesota. The program will provide an opportunity for participants to select sessions based on particular interests, participate in User Group and Regional Meetings, listen to presentations from other ACUTA members (Call-For-Presentations), explore a Vendor Exhibit Area and interface with both old and new ACUTA members.

SESSION HIGHLIGHTS

* Regulatory Issues & Industry Trends
* Hospital Communications Issues
* Managing Telecommunications as a Business
* Vision 2000 - Emergence of the Value-Added Telecommunications Manager
* Strategies for Planning Voice & Data Networks
* Establishing an In-House Maintenance Program
* Network Management Issues
* The Media Dilemma
* Payphone Forum
* Evolving Network Options
* Plus ...... Introductory Sessions on Telecommunications, Computer Communications and Local Area Networks

This year's Conference will introduce several new speakers as well as include past presenters who have continued to share their expertise and insight with ACUTA members.

PROGRAM SPEAKERS

* Welcome and Keynote Address: Don Wiley - Publisher, Communications News
* Lillian Goleniewski - LIDO Organization
* Philip Beidelman - WTC
* Dr. K. H. Gordon - VIA Informationways
* James Jewett - Jewett Enterprises
* Ruth Michalecki - University of Nebraska
* Victor Toth - Attorney
* Michael Donnelly - AGT
* Nancy Aldrich - TMC
* Greg Jacobson - TII
* Steve Merrill - University of Utah
* Jerry McDowell - BCR
* Mike Hashemi - Telesynetics
* Lynn DeNoia - TMC
* William Malone - Attorney
* Plus....... ACUTA members who submitted abstracts to the "Call-For-Presentations" and were selected to participate in this year's program

Information packages, including a detailed conference program, complete registration information and a hotel reservation card, will be mailed to ACUTA members in early June. Conference Date & Location: July 26 - 30, 1987 Minneapolis, Minnesota

Registration Fee: Members-$445.00 Non-members - $495.00
Early registration* - $395.00 Early registration* - $445.00 (* July 4, 1987)
A Spouse Program will be available at the nominal cost of $75.00

Accommodations: Minneapolis Marriott City Center Hotel (612-349-4000)
Room Rates: Single $84.00/night (plus tax) Double: $94.00/night (plus tax)

CONFERENCE INFORMATION

* Program Chairman: Mal Reader - University of Calgary 403-220-3880
* Registration & Spouse Program: Wendy Grant - Case Western Reserve University 216-368-5490
* Industry Sponsorships & Exhibit Area: Del Combs - University of Kentucky 606-257-1820
* User Group Meetings: Pat Paul - Cornell University 607-255-3333

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