Fall Conference Program Announced

"Connecting Education": Continuing theme emphasizes the importance of technology integration and networking in school agencies.

The California Educational Data Processing Association (CEDPA) recently announced the program for its 36th annual fall conference. This year's conference will be held at the Palm Springs Marquis Crowne Plaza Resort & Suites in Palm Springs, California, the first time in CEPDA's history that the conference will visit that area. This year's conference will be held on October 16-18, 1996 (Wednesday through Friday), with preconference sessions scheduled for Tuesday, October 15, 1996. Conference announcements have already been distributed to all recipients of CEPDA's newsletter, *The DataBus,* and to all California public school superintendents and technology coordinators.

This year marks the first time that the complete breakout session schedule is being distributed with the announcement. This was made possible through the efforts of speaker chairperson Judy Acosta, who was able to completely develop the breakout program in time for it to be presented in the announcement.

The annual conference features a main speaker program including a keynote speaker and two other main speakers, 25 breakout sessions on various interest areas, and a vendor exhibit representing approximately 50 dif-

ferent product and service vendors. Also returning to this year's conference is the Internet Room, a popular venue of the past two conferences. This room will demonstrate network connectivity of equipment from various manufacturers, integrated to provide connectivity and access to the Internet.

Another first this year is a golf tournament to be held on Friday, October 18th, following the conference. The tournament will be an 18-hole, best ball tournament. Entry fee is $55 per person, which includes the golf fees, cart rental, drink tickets and awards. Those interested in participating must register with Greg Lindner **by August 23rd** in order to be included in the tournament. Greg may be contacted at (916) 668-3738 or by e-mail at **glindner@yolo.k12.ca.us.**

Visit the CEDPA Conference Central at http://www.cedpa-k12.org or http://www.cyberventure.com/~cedpa for updated conference information

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In This Issue:

CEDPA Information

CEDPA is an association of Educational Data Processing Professionals (technologists) within the State of California. Founded in 1960, the major emphasis of the association's activities are directed towards improving Administrative Information Processing in public education within the State of California and to prepare its membership to better meet and support the technological needs of the Instructional Program.

CEDPA is a California non-profit corporation, as recognized by the Internal Revenue Service.

As cited in CEDPA's bylaws, the purpose of this organization shall be:

(a) To provide information to the California public educational community concerning educational data processing via dissemination at an annual conference and through periodicals and special interest seminars.

(b) To foster the exchange of knowledge of educational data processing concepts, systems and experiences between educational data processing installations and other associations both at the state and national level.

(c) To inform the association membership of important information concerning educational data processing.

(d) To provide recommendations to the State Department of Education, State Legislature, school districts, County Offices of Education and other public educational organizations concerning educational data processing.

(e) To develop professional standards for the Educational Information Systems Community within the State of California.

Yearly membership in CEDPA is granted to attendees of the Association's annual conference. Individuals interested in the Association's mailings may request to be added to CEDPA's mailing list by writing to the address below.

The DataBus is published bimonthly by the California Educational Data Processing Association and is distributed without charge to all members of the association and other selected technologists within the State of California who are interested in information systems processing and technology in education. Submissions, correspondence, and address changes should be sent to the editor at:

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Some Thoughts on Choosing New Administrative Systems

Process: Define system needs carefully and ensure that proposed solutions actually meet those needs.

Ken Jones, Lodi Unified School District

As eluded to in previous columns, my school district hired me to purchase and install new administrative systems. Their rationale was that, as a district of 25,000 students, we were at a size that an independent data center made sense. It also made sense because the systems provided by our county office were beginning to really show their age. I suspect that many of you have either purchased new systems recently or are considering them now (with the millennium and state account code problems looming before us). I thought I'd so bold as to relate some of the pearls of wisdom that have come to me during this process with the hope that some of you may find value in them. If this is all old news to you, never mind.

First, here is a small amount of background. Our district has a technology department but we do not have computer programmers and never expect to get funding for them (read: we must have "shrink-wrapped" software). Because we have been using the county system, we currently have no investment in any particular hardware platform, and no significant expertise that would push us to favor one platform over another. All of our desktop computers are Apple Macintoshes. We have Ethernet run to all workstations in the district office and are rapidly deploying wide area connections to the schools and installing Ethernet in the school offices. We are routing only two protocols right now, Appletalk and TCP/IP.

We have chosen a new student information system and a new operations management system. The PO's are cut and we are having the first meetings with the vendors' implementation teams. The payroll will be running by January, 1997. The Spring, 1997 scheduling will be done on the new SIS for the 1997-98 school year in our four middle and three high schools. The rest of the implementation will progress at a more leisurely pace over the next two years.

So much for who we are—here, in no particular order, are my thoughts regarding the selection process we have just been through.

1. Do no spend forever defining your needs. Assume that any reputable vendor with an installed base is likely to meet the basic needs of a school district or county office in California. Figure out what is truly different about your environment and make sure the vendor supports whatever that is.

2. Do not send out a 200 page RFP. Vendors' profit margins are not that large and if you ask them to answer thousands of questions about their software, they may simply pass on responding. You can lose out on some important options this way.

3. Do script the vendor demonstrations so that you force the vendors to show you what is important to your users, not just what is flashy about their software. Be aware that the software demonstrations take much longer than you expect. Allow one and a half days per vendor for a full operational management system demonstration. Allow a full day per vendor for a student information system demonstration.

4. There is absolutely no right answer. This means that there is something that you won't like about everything that you see. You are likely to choose among the best of all evils. We attempted to find things about software that we absolutely could not live with (for example—a student system which could not handle year-round sessions was unacceptable).

5. The losing vendors were perfect ladies and gentlemen. This came as a surprise after my involvement with other bids processes which ended up with vendors screaming at the Board of Education. The vendors invested a great deal of time and money in responding to our RFP and presenting their demonstrations—but if they didn't get our business, they accepted that fact very gracefully.

6. Regardless of their marketing hype, many of the non-traditional K-12 fund accounting software vendors are not really interested in breaking into our market. I sent out 17 RFP's for operational management systems and only four came back. Of those four, three had K-12 specific packages. One non-K-12 vendor went so far as to claim that if they were not involved with writing the

Spread Spectrum vs. Wireless Revisited

Allen D. Hall, Advanced Data Support Systems. Inc.

Editor's Note: The last issue of The DataBus *included an article by CEDPA director Terrell Tucker about his experiences with Spread Spectrum radios. Allen D. Hall, Vice President of Advanced Data Support Systems, Inc., an integrator that provides Spread Spectrum solutions, has agreed to provide additional information about the technology in general and Panama-Buena Vista Union School District's experiences in particular.*

Advanced Data Support Systems, Inc. (ADSS) appreciates the opportunity to respond to questions raised and clarification of some issues as presented in the last CEDPA Databus issue regarding "Spread Spectrum Wireless vs. ISDN, Part I" submitted by Terrell Tucker of the Panama-Buena Vista Union School District (PBVUSD), the views expressed by Mr. Tucker were his own personal statements. Our firm was the integrator of the wireless link established between their Leo B. Hart Elementary School and the district office to facilitate the WAN objectives desired by PBVUSD. ADSS has also been working with their district for over five years in the implementation of classroom technology via campus-wide LAN networks (fiber and copper based).

ADSS was peripherally involved in the WAN system proposed by Pacific Bell, and, we assisted the district in the connection of the first link from their Technology Training Center to the district office. Based on performance issues encountered during the first four months of the ISDN based WAN system, alternative ideas were discussed to improve the speed and performance desired by the district in meeting the long-term goals established by their district. ADSS responded with wireless spread spectrum products manufactured by Solectek Corporation of San Diego, CA.

Solectek specializes in long-distance outdoor certified wireless products (bridges and routers) ranging up to 25 miles distance between sites. Solectek offers complete FCC certified products as total systems - including outdoor antennas, cabling and programmable interface devices (some other resellers have used indoor based roaming and/or bridging products and use third-party outdoor antennas and cables supplied by the installer that have not typically been certified as a total system). The link installed between Hart School and the District Office was the Solectek AIRLAN/Bridge Plus 914 Mhz Wireless Bridge that has a range of 3 to 5 miles in a point-to-point installation (directional antenna to directional antenna), adequate for the PBVUSD initial test requirement - but, a range of approximately 1/2 to 1 mile in an omni-

directional environment (not feasible for the complete PBVUSD long term requirements). A better long-term solution is best suited to the Solectek AIRLAN/Bridge Ultra, a 2.4 Ghz Wireless Bridge capable of operations up to 25 miles using directional antennas and 3 to 5 miles in an omni-directional environment from their district office. It was decided by ADSS and PBVUSD that the lower cost (not low level) AIRLAN/Bridge Plus would be used by the District in the wireless test - which has performed to expectations, as stated by PBVUSD with regards to performance.

Concurrently, while ADSS was installing the PBVUSD point-to-point link, ADSS was also installing a district-wide WAN wireless link for the Greenfield Union School District (9 school sites linked into the District Office) using the Solectek AIRLAN/Bridge Ultra 2.4 Ghz Wireless Bridge products. Based on their districts requirement for peer-to-peer operations, Solectek modified the base software of the AIRLAN/Bridge Ultra to incorporate portions of the CISCO IOS software used in the AIRLAN/Router products to incorporate the peer-to-peer requirements, and, was also able to solve the inherent problem of the CSMA/CA used in Ethernet based wireless links (analogous to the CSMA/CD protocol used in wired Ethernet networks) when used in a multi-site with directional antennas to a central site with omni-directional antennas. Refer to the Solectek White Paper article on **Solectek's Wireless Multipoint Media Access Control Protocol** for a more in depth discussion regarding the CSMA/CA protocol used by virtually all wireless bridge products - not just a Solectek problem (internet address is **http://www.solectek.com**). The new product now offered by Solectek is the AIRLAN/Bridge 200 that incorporates these new features (while still offering the original CSMA/CA protocol - user selectable). One of the benefits of using a programmable bridging product is that changes can be incorporated by changing the software without re-engineering or changing ROM chips used in a bounded "box" solution, however, costs are also higher when using computer based programmable devices.

Wireless communications is an interesting market and is able address some problems associated with land-based communication systems—who knows what the future has in store for us all? Comments and questions regarding this article may be addressed to Allen Hall at Advanced Data Support Systems, Inc. in Bakersfield, CA (E-MAIL address is: **rocky@adss.com**).

Conference

(Continued from Page 1)

This year, CEDPA has put up a Conference Central on its website. The Conference Central is a clearinghouse of information relating to this year's conference, including the complete program and an up-to-date listing of participating exhibitors. Please visit **http://www.cedpa-k12.org** or CEDPA's mirror website at **http://www.cyberventure.com/~cedpa** for conference information and other general information about CEDPA.

Also featured this year are two preconference sessions that will be held on the afternoon of Tuesday, October 15th. These preconference sessions are open to full conference registrants only. The fee for each session is $55, or you can sign up for both sessions for $100. These fees are in addition to the full conference registration fee of $225.

The first preconference session will feature Farley Stewart from Internet Products, Inc., presenting a primer on Common Gateway Interface (CGI) programming. Many of you will remember Farley's very successful and well-attended preconference session last year on web page programming. This year's session will attempt to remove the mystery about CGI programming, the method used to link enterprise databases to web-oriented search engines and produce web-oriented reports.

The second preconference session will feature Darryl La Gace and Addison Ching discussing classroom wiring issues. This will be another "discovery" session that will take you behind the scenes of the wiring closet, showing you how everything—from the hub to the termination—is hooked together and how it all works. A full working LAN will be available with all network components in full view for you to see.

The keynote speaker is Dr. Rudy M. Castruita, superintendent of the San Diego County Office of Education. His focus will be on STAC, the Superintendent's Technology Advisory Committee. This committee is a regular gathering of San Diego county school superintendents who meet to discuss technology and technology issues affecting their respective districts. The STAC has been instrumental in the successful implementation of technology in many San Diego districts. Dr. Castruita will explain why the STAC is important to the SDCOE and how it can possibly help other counties and districts in their technology implementation programs.

Dr. Castruita attended Utah State University on a basketball scholarship. He earned his bachelor and master's degrees at Utah State, and received his doctorate of education from the University of Southern California. He was superintendent for the 50,000-student Santa Ana Unified School District for six years before joining the San Diego County Office of Education, and has been in the field of education for 27 years. He received the ACSA Marcus Foster Award in 1991, and was named California's Superintendent of the Year in 1992.

One of the main speakers is Alex Kaplan, returning from last year's conference. This year he will speak on "Alternative Methods for Providing Service and Support to School Districts." Alex Kaplan is one of the nation's leading authorities on successfully implementing technology in school districts. He is currently the Principal for Solution Design and Delivery for IBM K12 for North America and is responsible for all of IBM's consulting and systems integration projects in school districts. Mr. Kaplan has extensive experience with school districts in technology planning, K12 product evaluation and selection, implementation of complex technology projects, and systems integration. He has also served as a policy consultant to state departments of education and is a published author and graduate of Columbia University.

The other main speaker is Jody Warne-Ellison. Ms. Warne-Ellison will talk about "The Difference Between Today and Tomorrow." Her experiences in the computer industry and unique perspectives will be sure to start you thinking about the future and how you'll relate to the technology of tomorrow.

Ms. Warne-Ellison is currently a consultant in industry working with companies such as Hewlett-Packard, Coca Cola, and IBM. Prior to this she was a California high school educator and administrator. She brings to us her humor, insight, and unwavering enthusiasm for the best in each of us.

This year's conference follows the format of past conferences. Registration begins on Wednesday at 8:00, with the conference commencing at 9:00 a.m. Following the opening remarks by CEDPA's president Ken Jones, Dr. Rudy M. Castruita will give the keynote address. Breakout sessions will follow for the remainder of the

Intranet Snake Oil: Beware of False Definitions

Paul Hoffman

Two years ago when "Internet" started to reach buzzword status, a few companies tried to position their products as being somehow related to the Internet when they had nothing to do with it. Those companies were forced to back down, and many of them are not actually trying to integrate their products with the Internet.

This year, the scene is different. Internet companies are trying to sell "intranet" as a buzzword, meaning essentially "the Internet, but just within your company." This makes perfect sense, because the technologies that make up the Internet are scaleable—up to accommodate tens of millions more Internet users, and down to handle small companies that want a simple, in-house network.

Nothing, not even a buzzword, is safe from marketing scams, however. Computer companies and magazines are seeing the result of their too-heavy hype of the Internet and are now jumping on the intranet bandwagon, but trying to pervert it at the same time to fit their old LAN-based thinking. What was a reasonably clear market a few months ago has now fallen into the hype morass of the Internet, and it may never make its way out.

Intranets: They're Not Rocket Science

Given that an intranet is just a small network that uses Internet protocols, you might wonder why some people are trying to stretch the term past what it really means. Basically, the companies and magazines that are trying to "reinvent" intranets are those who don't follow Internet protocols. They are still stuck in old, non-standard, non-open networking technology, and the real Internet scares the bejesus out of them.

There are hundreds of Internet protocols, each specified by the Internet Engineering Task Force. The IETF, which just had its triannual meeting in Montreal at the end of June, promotes the technical side of the Internet by making sure everyone knows what the standards are and where they came from. Want to read the down-and-dirty on the protocols that make up the Web, Internet mail, FTP, and so on? They're all there for free at *http://www.ietf. org/*.

A few of the most important features of IETF standards are:

- they are open to anyone to look at

> **Nothing, not even a buzzword, is safe from marketing scams, however. Computer companies and magazines are seeing the result of their too-heavy hype of the Internet and are now jumping on the intranet bandwagon, but trying to pervert it at the same time to fit their old LAN-based thinking.**

- anyone with an email address can participate in the crafting of new protocols

- no one company, regardless of how big it is, can take over a protocol

- new protocols are only approved if they are really needed to help keep the Internet flowing smoothly

The IETF has lots of problems, many of which have to do with this high degree of openness. However, it still works well for creating and maintaining the technical underpinnings of the Internet.

By default, then, the IETF also created all the protocols for intranets without really caring about it. Because intranets use the same protocols as the Internet, nothing needed to be changed in order for companies to use Internet protocols on their local networks instead of proprietary LAN protocols like those from Novell and Microsoft. In fact, many large and small companies have been selling intranet software for years (decades, in the case of Sun Microsystems), just without a cute name like "intranet". Instead, they had to call it "TCP/IP".

Laying Down the Layers

Without getting into the ugly details about layers of networks, you can take it for granted that the three most discussed parts of the Internet are identical on intranets. The protocols in the most basic layers of the Internet are TCP and IP. If it's not running TCP and IP, it isn't the

Intranet

(Continued from Page 6)

Internet or an intranet. The third important layer has the protocols for things like the Web, Internet mail, and so on. The protocols on this layer are called HTTP, SMTP, POP, and on and on.

So, just because you can run HTTP (the main protocol of the Web) on a network that uses something other than TCP/IP, that does not make this network "the Internet" or "an intranet" or anything else. One of the wonderful things about layers of protocols is that you can mix and match them (well, mostly) and they should all work pretty well. But that doesn't give marketing folks the right to say "we run a few Internet protocols on a LAN, so that LAN must be an intranet."

The funny part about all of this is that, because TCP/IP and the other protocols have been openly available to anyone for over a decade, networking companies didn't have to invent their own proprietary protocols: they could have been building intranets for their customers. Had they done this, they might own a large part of the intranet market today. You can imagine how angry this simple fact makes them.

For example, Microsoft is now touting its new intranet strategy. This follows on its recent Internet strategy, and uses most of the same pieces. It's true that you can create parts of an honest intranet with Microsoft tools, but Microsoft neglects to tell you that there are gaping holes in its strategy.

You can run TCP/IP everywhere with Windows NT and 95, and even use fairly robust Web software, all straight out of the box. However, Microsoft still doesn't have an Internet-standard mail system. Its highly touted Exchange server is proprietary, and doesn't use SMTP and POP3 protocols that tens of millions of Internet users use every day. It's as if Microsoft forgot that more people use email than the Web.

In Microsoft's intranet announcements, the press releases blithely danced around this glaring problem by not mentioning email at all. In his speech announcing the new strategy and advertising campaign, Bill Gates said (in a direct quote from Microsoft's transcript of the speech): "We got our Exchange product out and throughout the last couple of years, there's been a lot of neat things going on with Exchange to make it tie into the Internet, to make use HTML to format documents, to make it tie into the kind of exchange SMTP, NNTP that go on with the Web."

Gateways: Threat or Menace?

What Bill was fumbling around was the fact that Exchange doesn't use SMTP directly. Instead, it has to use a gateway to send mail to intranets that use SMTP, which leads to the fact that you no longer have an open system that uses Internet protocols. A gateways is a piece of software that changes things in one protocol into things in a different protocol. In this case, Exchange uses a gateway to change messages requiring SMTP into messages requiring Exchange's internal, proprietary protocol.

Gateways are an intranet marketer's favorite tool because they can say things like, "we don't need to have an SMTP server, we just use our own gateway." They say the same things about HTTP servers: we don't need a real one, we use a gateway. Ah, but if this was only true.

You can think of gateways as translators. Imagine a message in English being translated into Japanese. Even if the translator is extremely skilled at both languages, it is likely that there will be some subtleties that will get lost.

Gateways are, and have always been, the bane of the Internet's existence. Most mail gateways are pretty lame, and are probably the cause of 99% of the lost email on the Internet. That is, it's not the Internet itself that loses mail: it's bad gateways.

If the original writer of the message doesn't speak English well, or speaks a dialect different than what the translator knows, the translation will be that much further off.

Gateways are, and have always been, the bane of the Internet's existence. Most mail gateways are pretty lame, and are probably the cause of 99% of the lost email on the Internet. That is, it's not the Internet itself that loses mail: it's bad gateways. Even if a gateway is written extremely well, it has to make the assumption that the software that's handling its messages is also written well and is well documented. Yeah, right.

SMART–Statewide Management of Automated Record Transfer

Records: School agencies collaborate with Nevada Department of Education to develop automated system for information exchange.

Russ Brawn, WestEd

As we in public education approach the end of this century, providing high-quality, on-time services, tools, and strategies that will support school reform requires that we increasingly draw upon technology to address complex educational issues. The collaborative efforts of Nevada's school districts and the Nevada Department of Education (NDE) in developing the Statewide Management of Automated Record Transfer (SMART) System Plan is evidence of both Nevada's recognition of this need, and determination to address it. As practitioners of K-12 information technologies, it is incumbent upon us to understand the need for better information for education decision-makers, and to lead our organizations' understanding of relevant, efficient systems and methodologies.

The Nevada legislature and governor have designated funding to begin building the technology infrastructure to support statewide automation and transfer of student records. Included in the appropriation are $1.814 million for school districts, to be used for student information systems (SIS) software, needed hardware, and local area networks for connectivity among student records users. These funds will support implementations of six pilot school districts, with the ultimate goal of extending SMART to each of Nevada's seventeen school districts - which are in California terms, one "unified" district for each of the seventeen counties comprising Nevada.

The funds provided to the districts are not sufficient, however, for wholesale replacement of the already significant investments school districts have made in systems for student record management. In fact, in many cases the student information systems in place are meeting most, if not all, of local information management needs, so there are no compelling needs to replace them. Key to the success of the Nevada SMART System will be the creation of an "open systems" solution that meets identified requirements, but allows for flexibility at the local level in selecting systems to meet day-to-day needs. Open systems are built upon the concept of "standards without standardization" — student data may be kept in the formats of disparate local student systems, and still be shared with the NDE and among local education agencies,

in a commonly understood format. Existing local investment in hardware, software, and processes can be retained and leveraged to achieve cost effective solutions without comprising SMART System goals.

The same legislation made available additional funds to connect each of Nevada's schools to the Internet. The Nevada School Network (NSN) is being implemented through the combined efforts of the Department of Education and the University and Community College System of Nevada. SMART will utilize NSN to transport individual student record data from a central site for each district, to the Department of Education.

Specific features of the SMART - Phase I Project include:

- The development of a statewide data dictionary that will establish a "common language" for sharing information about students. Precise definitions and coding of student information to a shared standard will improve the quality, accuracy and ultimately the timeliness of educational information. Adoption of a consistent, statewide identifier for students is a critical element. Nevada, as have several other states, intends to rely upon the voluntary collection of social security numbers.

- The use of Standardization of Postsecondary Education Electronic Data Exchange / Exchange of Permanent Records Electronically for Students and Schools (SPEEDE/ExPRESS) data standards and electronic data interchange (EDI) for the transfer of student information.

- A technical architecture that utilizes client/server concepts for collecting, storing and accessing student data for NDE reporting. SMART provides for a scheduled data exchange, with a repository at the NDE to serve as a resource to educational policy-makers at all levels. This is not a design for a central system, nor for an on-line system Of the myriad pieces of student data in a typical SIS

SMART

only sixty-odd elements are reported through SMART. The initial collection and maintenance of all student information remains locally, with the districts and school sites.

- Incorporation of both new student information systems where local needs are not being adequately met, and existing local student systems to leverage the investments that have previously been made in hardware, software, and staff training.

- Secure methods of transmitting student information electronically that will not jeopardize the confidentiality or privacy of student records.

- The development of detailed technology plans that will provide NDE and school districts with specific information required for procuring, installing, training, and testing the student information transfer system.

- The transfer of a fully-functioning, operational system for managing and reporting student information that can be scaled to encompass the entire state of Nevada.

SMART will leave Nevada with the functionality for sharing student records between districts, using the identical procedures for data mapping and cross-walking that will be done for statewide reporting. Effectively, this is an electronic transcript means of sharing of student records. Thus, incoming students' needs may be quickly appraised, reducing the time needed to coordinate appropriate curriculum and services. NDE will also be able to share information back to districts that can aid them in assessing their schools and students compared to others across the state. A system that provides information sharing in both directions will facilitate greater communication and collaboration between the Department of Education and districts.

One indication of the commitment that Nevada has made to communication and collaboration is the formation of the SMART Advisory Committee. Representatives of the various stake-holder interests unanimously accepted the invitation extended by Mary Peterson, State Superintendent of Public Instruction, to participate in the group. Included are members of the State Board of Education, members of both Nevada legislative branches, private industry, the Governor's Budget Division, the Nevada Parent Teachers Association, plus district representation encompassing superintendents, a principal, plus curricular, business and technical administrators.

A further indication of its commitment is that NDE has chosen WestEd and its integration team to bring the optimal thinking, planning, and production tools available nationally to address the information needs of school reform. This team is responsible to the SMART Project Officer, Denise Quon. Inquires regarding the project may be directed to her attention at the address given at the end of this article. WestEd, the lead agency in this systems integration project, is joined by BDM Education Technologies, Evaluation Software Publishing, and Sierra Systems Consultants. Each of these organizations have extensive experience in strategic planning, project management, systems design and development, school district technology planning, training and technical assistance. Each is also recognized as national leaders in student information management issues and, along with WestEd, has worked with the US Department of Education, the Council of Chief State School Officers, the National Forum on Education Statistics, as well as districts and vendors at the local level to achieve the vision of comparable, consistent, timely and accurate student information to support accountability and school reform.

Nevada's initiative is indicative of a growing number of inter-operating information systems between local educational agencies and their respective state education agencies. Those states which currently have some form of automated reporting at the individual student record level include Florida, Hawaii, Louisiana, Minnesota, North Carolina and Texas. Several other states are considering systems employing similar concepts, including California. This publication has previously reported the progress of the California Student Information System, a demonstration project combining efforts of the California Department of Education, WestEd and a number of county offices of education and school districts

Direct inquiries to:

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Attn. Denise Quon, Evaluation Consultant
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700 east Fifth Street
Carson City , Nevada 89710.

The project also maintains a web site at ***http:// www.wested.org/smart***

What is this SPID Thing???

Frank Columbus, Cisco Systems, Inc.

I thought I could just plug the phone in and dial my number—Right? And this little router—isn't it just a fancy MODEM?

These could be typical reactions from anyone who is accustomed to POTS (Plain Old Telephone Service) a.k.a an analog phone line. With POTS, we have come to expect a "plug and play" environment. It all seems so easy until we try to share the same analog line among the phone, the FAX machine, and our computer's MODEM. In this setup, we would need a device in our home office which would intercept the incoming call and try to decipher which device gets the call based on an incoming tone.

ISDN (Integrated Services Digital Network) on the other hand has no incoming tones—the service is completely digital. Basic rate ISDN uses a device called an "NT-1" to separate the wire to the telco from the wire in the customer's premises. In future issues we will examine more of the functions of the NT-1. ISDN has the concept of a "passive bus". Simply put, this is the wire on the customer's side of the NT-1. You may only have one NT-1 per basic rate ISDN line, but you may connect from one to eight ISDN devices to the passive bus. One mechanism which ISDN uses to distinguish the devices is the SPID (Service Profile Identifier). The SPID in some way resembles the phone number to which it is associated but the final format may vary depending upon the central office switch type and the practices of each particular telco. Here is an example:

Let's assume that we are setting up a home office and we want to have a small ISDN router for telecommuting to our company's network and we want an ISDN phone. The telco is using an ATT 5ESS switch in their central office. The telco gives you two phone numbers: (714) 555-1212 for the phone and (714) 555-1213 for the router. The *usual* format for the SPID in this case would be 0155512120 and 0155512130, if the 5ESS is using a protocol called ATT Custom. You would need to set the SPID in your phone to: 0155512120. In the router configuration, you would set your SPID to: 0155512130.

Seems pretty simple so far, but if the ATT 5ESS is using a protocol called National ISDN-1 (NI-1) the SPIDs might look like: 714555121200 and 714555121300. This would also force you to setup your router differently when you configure the switch type and this consideration may also affect the choice of your ISDN voice telephone.

When a SPID is incorrectly entered, the device simply will not operate correctly. it is extremely important to have a clear dialog with the telco representative when you order your service. Let the person know exactly what equipment you intend to use. Ask them what type of central office switch services your home. For southern California there are only two choices: ATT 5ESS or Northern Telecom DMS-100. Ask them if they are using National ISDN-1 protocol. When you receive your phone numbers make sure that the telco gives you the associated SPIDs as well—it is the *only way to be sure* and to save yourself a good deal of frustrating troubleshooting time.

Cisco Tech Tips - Signs of an Incorrect SPID

The Cisco 1000 series routers through the Cisco 7000 series routers have extensive ISDN debug features. The appropriate one for this case is:

> debug isdn q931

Remember to use: "term mon" if you telnet to the router. The key error message which you will be looking for is:

> Requested Facility Not Subscribed

This will occur at each call attempt. While an incorrect SPID is not the only cause for this error message, it is probably the most common.

Remember to use: "undebug all" when you finish testing.

The Cisco 750/760 series report whether the SPIDs were accepted when they initialize the ISDN line.

Frank Columbus is a systems engineer and ISDN specialist with Cisco Systems, Inc. He may be reached by e-mail at fcolumbu@cisco.com.

Great Speakers, Breakout Sessions, and Lots More!!!!

Speaker Program: A variety of speakers and breakout sessions in store for attendees.

Judy Acosta
Ventura County Superintendent of Schools

You won't want to miss the annual 1996 CEDPA Conference in Palm Springs. We have lots of good things in store for you. Here are some of the reasons why.

1. We have lined up three "main" speakers who will be presenting information that is timely and pertinent to all of us.

2. The breakout sessions are GREAT. We've been very fortunate in having some great volunteers this year. You will have difficulty in making a choice on which ones to attend.

3. The vendor show promises to be better than ever with some really good door prizes.

4. The ever-popular Internet Room is back with the latest and greatest.

5. The CEDPA Board worked hard on selecting a menu for you that will please and delight one and all.

6. CASUAL DRESS—leave those business suits, ties, dresses at home.

7. For the first time ever—a golf tournament following the close of the Conference. Be sure and sign up and miss the Friday afternoon traffic rush.

All of this will be taking place in a hotel that is delightful and gracious—the Palm Springs Marquis, Crowne Plaza Resort, located in the heart of Palm Springs, within walking distance of shops for anything that you forgot to bring, great restaurants for your dining pleasure, and even a Street Fair on Thursday evening. Park your car and forget it until you're ready to go home. I can't think of a better place to fill my head with knowledge during the day, and to relax during the evening hours.

I look forward to seeing you in October. Check your Conference Announcement for a complete schedule of breakout sessions. You'll find lots of sessions that will be of interest and value to you. If you have misplaced your announcement, or did not receive one, contact any of the Board members listed on page 2 of this publication and we will see that one is sent to you immediately.

June SIG Summary

San Diego: Large group hears presentation on Microsoft networking solutions.

Darryl La Gace, Lemon Grove School District

June's SIG Meeting was the second in a series on Microsoft networking solutions. This time we focused on Microsoft's Internet strategy and Microsoft's current set of powerful Internet tools including Internet Explorer, Internet Assistants, FrontPage, and Internet Information Server. Elisa Bartell, Education Market Manager at Microsoft, coordinated the presentation given by a Microsoft Systems Engineer. Twenty seven people attended the session.

Microsoft®Internet Information Server is the only web server integrated into Windows NT Server, and is a powerful platform for a new generations of web applications. The Systems Engineer took us on an on-line tour of each of the components of Microsoft®Internet Information Server. The presentation concluded with an exciting preview of ActiveX.

ActiveX™ Document support means you can open a document, complete with its native toolbars, menus, and all other user interface elements, from within Internet Explorer. For the first time ever, you can open and use richly formatted documents (such as Microsoft® Excel spreadsheets and Word documents) right inside your Web browser. Your browser simply becomes the frame in which you can browse and view all documents. ActiveX Document support is available in only one browser: Microsoft Internet Explorer.

The presentation ended at noon, leaving the rest of the day for our usual round table discussions. The topics ranged from Windows 95 to Internet. The group brought many insightful responses and experiences to the topics at hand. These discussions continue to be the catalysts for new ideas and solutions. Thanks to all who attended for contributing their expertise and many thanks to Elisa at Microsoft for taking a personal interest in making this series possible.

August's SIG concludes the series on Microsoft's networking solutions. This time we will focus on Microsoft's Systems Management Server (SMS). Come and learn about the Microsoft Systems Management Server and how it can help with your management needs such as inventory, software distribution, network monitoring, and help desk remote control. As always, the meeting will be an informative one. It will be held in Santa Monica at Microsoft on August 9, 1996. To register call Darryl La Gace at (619) 589-5734 or E-mail me at **dlagace@lgsd.k12.ca.us**

Microsoft News Flash

Elisa Bartell, Microsoft Corporation

Microsoft made a number of significant Internet related announcements in June. The following summarizes some of the highlights. For a copy of a complete press release on any of the following announcements, please send email to elisaba@microsoft.com or refer to http://www.microsoft.com for more information on Microsoft products, tools and announcements.

OFFICE 97 AND MICROSOFT'S INTRANET STRATEGY

On June 13th, Bill Gates outlined Microsoft's strategy to help users work together on an intranet using Microsoft® Office. Gates previewed the next version of the world's most popular desktop suite, Office 97, which includes built-in hyperlinking, searching and navigation functionality. This powerful combination of Microsoft Office and Web technology introduces a new standard for collaboration by providing users with the tools to create, analyze and share information easily on an intranet.

As part of its intranet strategy, Microsoft also unveiled an innovative desktop information-management application, Microsoft Outlook™, which facilitates both internal and external corporate communications. The addition of Microsoft Outlook to Office 97 redefines communication and collaboration as integral parts of the desktop-application suite category. Together, these new Web technologies and products are designed to combine the best of the Web and the best of the desktop, to empower users to realize the full potential of intranets. "Intranets provide a great infrastructure for communicating, but they are only as valuable as the information they contain," said Pete Higgins, group vice president of the applications and content group at Microsoft. "Office 97 delivers a powerful solution for business users who want to take advantage of intranets. By integrating Web technology into Office 97, we brought the ease of use of desktop applications to intranet users.

MICROSOFT LAUNCHES DEDICATED OFFICE DEVELOPER WEB PAGE

On June 17, 1996, Microsoft launched its new Microsoft® Office Developer Web Page within the popular microsoft.com support site. This no-charge, specialized content area is designed to provide developers working with Microsoft Office the key technical information they need to create custom applications using the advanced features of Microsoft Office.

Developers involved in designing custom solutions for personal or business applications will find a broad base of helpful information on topics such as integrated features used to automate tasks through advanced Microsoft Office tools, procedures for creating APIs with the Microsoft Visual Basic® programming system, data retrieval and integration from external sources, Microsoft Access built-in functions, and a rich array of productivity enhancement tips and tricks from Microsoft support engineers. In addition, the new Microsoft Office Developer Web page provides easy access to Microsoft Knowledge Base, a comprehensive collection of more than 70,000 technical articles, as well as access to Microsoft's extensive software library.

The Microsoft Office Developer Web page is located at http://microsoft.com /OffDevSupport/. Direct inquiries for technical assistance should not be submitted by means of this site. For more information on other Microsoft support options, please call (800) 936-3500.

MICROSOFT DELIVERS JAVA SUPPORT FOR INTERNET EXPLORER 3.0

On June 20, 1996, Microsoft announced that support for Java with Microsoft® Internet Explorer version 3.0 is available for immediate download at no charge from Microsoft's Web site (http://microsoft.com/ie/). Microsoft's open implementation of Java gives developers fast performance and the broadest functionality of any native Java implementation available today. And users can now view the breadth of innovative content on the Web, regardless of the development tool used to create the site. Microsoft is also working to include Java support in the versions of Microsoft Internet Explorer for Windows® 3.1 and Macintosh® in the near future.

The delivery of Java support for Microsoft Internet Explorer provides the following capabilities:

- Access to content. Microsoft Internet Explorer 3.0 users now have access to the widest range of Internet content.

- Broad functionality. Developers can use the breadth of development tools for creating innovative Web content.

Exhibitor Preview

Products and Services: Vendors prepare to show you their best and newest.

Warren Williams, Grossmont Union High School District

The 36th Annual CEDPA Conference will be held at the Palm Springs Marquis Crowne Plaza Resort & Suites in Palm Springs. The conference will be held on October 16-18, 1996 (Wednesday through Friday), with approximately fifty vendors on hand to show you their latest products and services. The vendor exhibition will continue after lunch, concluding in the door-prize drawings that afternoon. Vendor-hosted hospitality suites will cap off Thursday's activities.

Vendors this year represent a comprehensive range of the products and services commonly used in educational settings. Included are:

AMP, Inc will feature centralized network administration and UTP video distribution system. Featuring AMP's wireless products.

AmeriData Technologies, Inc. offers comprehensive services including systems integration, product distribution, support and maintenance, networking, rental, and consulting services.

Anixter Inc., is a value-added provider of integrated networking and cabling solutions that support business information network infrastructure requirements.

Bay Networks offers market-leading LAN and ATM switches, frame relay switches, hubs, routers, remote and Internet access solutions, and network management applications, all unified by the Baysis^a architecture.

Bi-Tech Software, Inc. IFAS is a fully integrated fund accounting package which meets the accounting/management needs of school districts, departments of education, and a host of educational related organizations.

Cisco Systems, Inc. is the leading supplier of internetworking solutions, including routers, LAN and ATM switches, dial-up access servers and network management software.

Data Impressions Inc. a vendor for computers and computer accessories, all Novell tested and approved;

Digitronics School District Administrative Software. Many systems available. Student, Business, Library, and Adult Education

Featherstone Communications offers a wide range of technology services including; data communications, video distribution, LAN site preparation, and project management. DataChannel™ CATV-Ethernet system utilizes existing local cable TV channels to transmit data between District-wide school sites. Fully bridged 10Mbps Ethernet speeds can be maintained over a 200 mile service area.

Gateway Software Corporation develops and markets AS/400 administrative software for schools. The products include: Library Management System, Media Booking System, Textbook Management System, Warehouse Management System, Work/Order/Facilities Maintenance System, and Vehicle Maintenance System. A GUI interface will soon be available for all products.

Internet Products, Inc. will be demonstrating the new InterGate v2.5 Internet Server which combines a comprehensive set of Internet services with an intuitive web-based management interface to provide a powerful, easy to manage gateway to the Internet. InterGate includes Email, WWW, DNS, Web site filtering, Caching, Proxy, News, BOOTP, DHCP, firewall security and much more.

Macro Educational Systems, one of the leading vendors of student administration and financial management software for K-12 schools.

Madge Networks, Inc Focus on switching (Ethernet, Token Ring and/or ATM) that can provide bandwidth relief to busy networks and still protect current investments and allow a growth path as network demands increase. At the conference, Madge will show "End to End" product offering.For Adult Education and Food Services.

McGraw-Hill School Systems. District-wide solutions for student information management. Featuring: "McGraw-Hill School System" Windows Administration Software The McGraw-Hill School System features the world-renowned scheduling module that will handle any type of scheduling scheme, from block schedules to modular schedules.

Microsoft will be showcasing its latest release of WindowsNT 4.0! Also demonstrations of Windows 95, Office 95, and Microsoft's powerful Internet/Intranet tools.

National Computer Systems OMR and image scanning. Survey software. Instructional management software. District financial and student administration software.

New Technologies Intel Alder system running Windows NT. Acer Open Systems. Video conferencing.

Novell, Inc. The company's software products provide the distributed infrastructure, network services, advanced network access and network applications required to make networked information and pervasive computing an integral part of everyone's daily life.

Panduit Corp. a leading manufacturer of high quality wiring

Exhibitors

and communication products. These products provide solutions for containing, terminating, identifying, insulating, protecting, and fastening wire and cable, as well as many electrical, electronic and mechanical components.

Quest Media & Supplies, Inc. Category 5 fiber optic cabling for schools. CMAS contractor. Full computer product line and services, all major manufacturers.

Quintessential School Systems sells, supports and enhances SCHOOL/3000 and STUDENT/3000 software. These systems are designed to meet all administrative needs of a school district or county office. Finance, Personnel/Payroll, and Student Records.

Schoolhouse Software Integrated hardware and software solutions.For Adult Education and Food Services.

Scanning Systems markets a wide range of data entry products including OMR scanners for student information and testing. Bar code readers for library, textbook tracking and asset tracking, and intelligent data entry systems.Scanning Systems also prints OMR and Output Forms and Bar Code Labels.

Sehi Computer Products will feature Hewlett-Packard Computers and Peripherals

U.S. Telecom will feature Phone Master voice technology systems providing automatic dialing, voice mail and information/homework hotlines.

Webster Computer Corp. will feature cost effective networking and Internet connectivity

Additional exhibitors are signing up on a regular basis. For the latest information about exhibiting vendors, please see CEDPA's Conference Central on the Web at **http://www.cedpa-k12.org/96conference.html**.

Education First News

Paul Sosa, Pacific Bell

Pacific Bell has filed for a one year extension of the Education First tariff scheduled to expire at the end of 1996. The new deadline for school applications will be December 31, 1997 subject to CPUC approval. We expect final notification at the end of July.

Paul J. Sosa is a System Designs Consultant, Educational Services for Pacific Bell. He can be reached at (213) 975-2287 or by e-mail at pjsosa@pacbell.com.

The DataBus Is Now Available In Adobe Acrobat (PDF) Format

Addison Ching

Beginning with the August-September issue, complete editions of CEDPA's *The DataBus* will be available from CEDPA's website in Adobe Acrobat distilled (PDF) format. Acrobat is a technology developed by Adobe that allows documents to be stored in a platform-independent format and subsequently downloaded and viewed an/or printed out on client computers using Adobe's Acrobat reader software. The documents retain their original formatting and content when they are "distilled" into Acrobat format, regardless of what software was used to create the original document.

At present, Acrobat reader software is available for Windows and Macintosh platforms and can be obtained at no cost from Adobe's website at http://www.adobe.com. CEDPA's website will feature a direct link to Adobe's website to obtain the reader software, which is needed to process the distilled PDF files.

Previous electronic editions of *The DataBus* that are currently available on CEDPA's website will be adapted to Acrobat PDF format in the future. In addition, past issues of the newsletter that are not currently available in electronic form will be posted in both electronic (HTML) and PDF formats when they are converted.

Register Early for CEDPA's Fall Conference to Qualify for Prize Drawing

Be sure to send your fall conference registration forms in early. All forms received by September 13, 1996, will qualify for an early registration prize drawing. The winner of the drawing will receive a complimentary half-hour massage at Peggy's in the Palm Springs Marquis Crowne Plaza Resort & Suites.

Additional announcements can be obtained directly from Jane Kauble, CEDPA's secretary, at (310) 922-6141 or by e-mail at kauble_jane@lacoe.edu. Announcements and/or a forms packet can be downloaded directly from CEDPA's websites (see related article in this issue.)

Novell's Enterprise Strategy

Software: Vendor offers integrated solutions for networked environments.

Warren Williams,Grossmont Union High School District

The future of computing is in the network. But networks are evolving. Networks once just linked PC's to one another, creating isolated worlds. Today, there is an increasing need for those individual networks to communicate with one another - a need for a homogeneous way to connect heterogeneous worlds. As the only major software company singularly focused on network software, Novell sees today's networks - local-area networks, wide-area-networks and the Internet - combining into a single and managed Smart Global Network. Moving into everyday life, this Smart Global Network will change the way we all work, play, educate and govern ourselves.

Novell is the world's leading network software provider. Novell software provides the infrastructure for a networked world, enabling our customers to connect with other people and the information they need, anytime and anyplace. Novell partners with other technology and market leaders to help our customers make networks a part of their everyday lives.

Best known as the developer of NetWare, the world's leading network services platform, Novell today offers a wide range of distributed network, small network and Internet/intranet solutions. Novell created the LAN market by connecting PCs. Then Novell connected LANs to bring networking to the enterprise. Now, Novell is helping customers evolve enterprise networks into intranets that combine NetWare services with the Internet model of web browsers and servers.

Strategic Vision

Novell and its partners are leading the creation of a Smart Global Network interconnecting today's LANs, WANs, intranets, and the Internet into a single information resource for businesses and consumers. Novell is advancing this vision in three key marker areas:

- Internet and intranet solutions that integrate business networks with Web technologies and the global Internet;

- Distributed network services for connecting all people and systems, including both complete NetWare platforms and network software for non-NetWare platforms;

- Small network solutions that bring leading network technology to businesses with 100 users or less.

Market Position

Novell is the world's market leader in network operating systems, holding a 63 per cent share of the market (source: IDC research). Novell is also a world leader in the industry-standard TCP/IP networking software used to connect diverse computers into enterprise networks and the Internet. Novell products connect over 55 million users and 100 million devices. Novell's mission is to enable 1 billion network connections by the year 2000.

Products / Organization

Internet/Intranet markets application-level products for the Internet and intranets, as well as technology to support managed Internet and commerce services through NetWare Connect Services (NCS). The unit is also advancing Novell's GroupWise family of groupware products for use with the Internet and is carrying forward Novell Embedded Systems Technology (NEST) as a high-performance solution for integrating power line and cable systems with the Internet.

Distributed Networks addresses the network solution needs of organizations connecting multiple LANs and business sites. Carrying forward Novell's leadership in distributed network solutions, this unit is focused on making Novell network services available across diverse computer platforms. The unit is responsible for the continued development of the core operating system platform, Novell's smart network services, integrated back-office solutions, and the initiative code-named Net2000 to provide developers with common interfaces to network services.

Small Networks is focused on integrated solutions designed to meet the special requirements of small to medium-sized businesses. Novell solutions deliver unique value to these customers through access to managed WAN and Internet service through NetWare Connect Services (NCS), out-sourcing of network management with Novell's ManageWise product, integration of NetWare with GroupWise network-based messaging, and more

Process

(Continued from Page 3)

RFP, then they did not feel they had a chance to win the bid. I found that statement insulting. I came away feeling that K-12 is still a tough market for the big boys to play in. We have a couple of things that are unique (PERS/STRS for one) and they can't do them yet.

7.   After we determined that a software package performed the basic functions required by the district staff, we changed our focus to the vendor and the technology they used. Five years from now we do not want to be in the same position that we are in today. The vendor had to demonstrate a track record of continual improvement. They had to understand modern issues such as connecting their data to external tools like desktop spreadsheets and the Internet standards. They had to be running on industry standard hardware (yes, I know, Macs don't really fall into that category). They had to have installation methods in place which would get us up and running in our time frame without turning the district on its ear. They had to have a user community that had regular meetings. They had to have 800 number telephone support and electronic support methods in place (like an Internet technical web site).

8.   Do go to the corporate offices of the finalists and meet both the big wheels and the people on the other end of the phone. This can be a very enlightening experience.

9.   Do visit the districts or county offices which have fully implemented the version of the software you are considering. Never take the vendor along with you. Don't even tell them when you are going. When you talk to district staff, talk to the clerks who are down in the trenches to get the real story.

10. Change is very hard. Remember, those of us in the IS field are used to our entire world changing every couple of months — other district staff do not live in that world. If you have the time and money, hire an outside group which will teach the district staff how to best deal with change. This should be done prior to the start of software implementation so the staff is more ready for this gut wrenching process. By the way, we didn't do this and will be paying for it.

You have probably noticed that I did not mention what software or hardware we have chosen. Well, what we chose may or may not work for you. If you would like to find out what is working for Lodi, please drop me an e-mail (kjones@lodiusd.k12.ca.us) and I would be happy to

July SIG Summary

Windows NT and BackOffice: Largely Northern California group discusses NTAS and other BackOffice server products.

Eric Boutwell
San Francisco Unified School District

The July 11th Special Interest Group meeting's theme was Microsoft NT Server and Microsoft BackOffice . Although Microsoft was unable to provide us with any of their technical people to answer questions, we were able to draw from the experiences of the CEDPA members present . All the technical questions that were raised were answered by one or more of the attendees who also talked about their first hand experiences. It was apparent from the discussions that in the last year Microsoft NT has made large inroads into the K-12 community.

The main topics discussed were:

- Setting up Microsoft NT servers versus Novell servers;

- Running NT on multiprocessor servers;

- Running internet services from Microsoft and Netscape on NT servers;

- Microsoft SQL server;

- Using NT to assign IP addresses to Windows 95 clients;

- Proxy Servers;

- Security issues and Firewalls; and

- General networking topics included ISDN, Frame Relay, Microwave, Radio, Routers, etc.

This was the last Northern SIG meeting for this year. Thank you to all that joined us and contributed to the discussions. See you at the fall conference.

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share with you.

If you are doing part or all of what is described here, I wish you good luck—it is a fun experience.

Don't forget the most important part of your software seach—attending the CEDPA conference in October!!!

Educational Technology Legislative Update

John Cradler, WestEd

$750 Approved for New Education Initiatives with Technology as a High Priority.

On July 15, Governor Pete Wilson signed the 1996-97 state budget, leaving intact virtually every K-12 education item approved by the Legislature. The following is a summary of the major education technology funds approved by the Governor and the Legislature.

• New School District Block Grants: (one-time funds) ** $200 million (about $35 per average daily attendance) was approved for education technology, instructional materials, library resources, deferred maintenance, or any other non-recurring costs. Prior to the use of these funds, local school boards must hold at least one public hearing to identify the needs and existing resources available to justify the funding.

• School-Site Block Grants: (one-time funds) ** $387 million (about $72 per average daily attendance) was approved for individual school site block grants. No school shall receive less than $25,000, which may be spent according to priorities determined by local school councils or advisory groups. School boards must approve spending plans prior to allocation of funds.

• Reading Initiative: ** $167 million was approved for the Governor's reading initiative. These funds will be used for additional instructional materials and staff development. Technology-based resources supporting reading instruction may also be included.

$100 Million Technology Fund Rejected.

The $100 million for an Educational Technology Block Grant and $83.4 million for an increase in the State Instructional Materials Fund was not approved. The Legislature decided to delete these separate line items and lump the funds into school district and school site block grants to allow maximum local flexibility.

$35 million available Fall '96.

Approximately $35 million has been approved by the courts and the PUC for distribution to California public schools to support connectivity and Internet access. The Office of Public School Construction (OPSC) will administer this fund in conjunction with the CDE. OPSC is presently developing guidelines for distribution of the funds on an equitable basis to all schools sometime in the Fall.

Update on the $10 million for re-furbished computers. The Governor approved $10 million for California Computer Refurbishing Fund, the Detweiler program to refurbish recycled computers. The State awarded $150,000 to Sacramento County Office of Education to administer this project. A policy advisory committee is being formed to develop standards and guidelines for refurbishing and distributing computers. Schools can apply for refurbished computers sometime in the Fall. The CDE reported that these computers, at a minimum, should have the capacity for Internet and other high-end uses.

Update on the Technology use and home-school communications infrastructure.

SB 1802 (Polanco) was intended to authorize implementation of the Technology Task Force Report recommendations. However, it was determined that more time is needed to advocate for the recommendations and to put this bill on hold until next year.

Lottery Bond Bill Passed.

AB 536 (Archie-Hudson) to enact the Archie-Hudson and Cunneen School Technology Revenue Bond Act, was passed and chaptered into law. It allows for the issuance of bonds that could be re-paid with up to 25% of the lottery funds collected for that year.

Categorical programs funding reform passed.

AB 2769 (Baldwin) consolidates 27 existing categorical programs. The bill goes into effect for fiscal year 1997-98. This would eliminate the current SB 1510 School Based Educational Technology Grants Program as these funds would be consolidated with the other 26 programs and allocated to schools on a per-pupil formula. While this bill has passed the Assembly, it may have difficulty passing the Senate.

Superintendent's Educational Technology Task Force Report Released on July 10th.

The Superintendent's Technology Task Force released its report on July 10, 1996. The report makes the following recommendations:

1. Equip every California classroom and school library with the technology resources needed to create a learning environment that will improve student achievement.

Legislative Update

    2. Incorporate technology into student content and performance standards recommended by the state for adoption at the district level.

    3. Integrate technology into the content and performance standards that will be used as the basis for setting policies for preparing, hiring, evaluating, and promoting teachers.

    4. Provide the expertise and resources to support the effective use of technology for students, teachers, parents, and the broader community.

The report provides cost information suggesting a price tag of over $10 billion to provide the technology access and support needed for teachers to implement the goals of the report. Presently the Task Force is working with groups such as the California Business Roundtable in an effort to obtain bipartisan support for funding this plan.

A National Partnership to Train Teachers.

    President Clinton announced a new initiative, 21st Century Teachers, a volunteer corps to help all teachers learn how to use new technologies to improve teaching and learning in every school, classroom, and home. In an effort to help meet the President's challenge that all teachers will be trained in the use of educational technologies, the corps has pledged to:

    • recruit 100,000 teachers already familiar with technology to lead an Internet kick-off event (similar to California NetDay) as school begins this fall to introduce their colleagues to the potential of educational technology.

    • train more than 500,000 other teachers beginning in October and continuing throughout the school year in using computers, educational software, and the Internet.

Parents, school boards, business groups, colleges and universities have volunteered to provide new resources and support to help technologically literate teachers help other teachers use new and more powerful learning tools.

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John Cradler is Legislative Policy Specialist for WestEd. He may be reached by e-mail at jcradle@wested.org.

Novell

Group Operations provides coordination across the group in the areas of finance, product marketing, strategic industry relations and business planning, developer relations, process development, and management training.

Strategic Partnerships

Novell meets customer needs by working with other leaders in computing, telecommunications, and services to incorporate Novell products in complete network solutions. Novell partnerships include OEM licensing of Novell products and technology, cross-product integration and other efforts to develop and support multivendor network solutions.

Novell backs its products with the industry's most comprehensive worldwide education, developer, distribution, and technical support programs. This network of partners ensures that Novell customers worldwide have local access to Novell products, training and certified support specialists. Novell also works directly with hardware and software developers to support the development of products compatible with Novell environments, and to certify third-party products with the Novell Yes brand of compatibility.

CONFERENCE INFO

Conference Dates
October 16-18, 1996 (Wednesday-Friday)

Conference Location
Palm Springs Marquis Crowne Plaza
Resort & Suites, Palm Springs, California

Registration Fee
$225 Prior to October 1, 1996
$250 On-site Registration

Preconference Sessions
October 15, 1996 (Tuesday)
Full Conference Attendees Only
• Web Page Programming–The CGI Unmasked
• Classroom Wiring from A to Z
$55 per session or $100 for both sessions

Additional Information
Contact Jane Kauble at (310) 922-6141 or
Internet: **kauble_Jane@lacoe.edu**

Conference

day. Wednesday's activities will conclude with the CEDPA-hosted President's Reception that evening.

Thursday will begin with breakout sessions that will lead into the all-day vendor exhibition. We expect about fifty vendors to be on hand to show you their latest products and services. Alex Kaplan will deliver our noon-time address. The vendor exhibition will continue after lunch, concluding in the door-prize drawings that afternoon. Vendor-hosted hospitality suites will cap off Thursday's activities.

Friday's featured speaker and breakout sessions will be both interesting and informative. CEDPA's business meeting will conclude the conference activities. The golf tournament will begin about 2:00 at the Tahquitz Creek Resort Course.

While planning for this year's conference, there are several important dates to remember. They are:

- August 23, 1996 - deadline to register for CEDPA Golf Tournament
- September 13, 1996 - deadline to qualify for early conference registration drawing.
- September 15, 1996 - deadline for hotel reservation forms to be submitted directly to the Marquis Hotel.
- October 1, 1996 - deadline for conference pre-registration.
- October 7, 1996 - last date to cancel registration. Cancellations received after that date will not be refunded.
- October 16-18, 1996 - Conference
- October 18, 1996 - Golf Tournament

The complete conference announcement, as well as a registration form package, are available in Adobe PDF format from CEDPA's websites. There is also a direct link to Adobe's website to download a free copy of the Adobe Acrobat reader which you will need to process the PDF files. Acrobat is a document processing system that can run on either PCs or Macintoshes and provides an exact-image representation of the original publication which can be either viewed on-screen or printed out. Additional conference announcements can also be obtained directly from CEDPA by contacting CEDPA's secretary, Jane Kauble, at (310) 922-6141, or by e-mail at kauble_jane@lacoe.edu.

Microsoft

- High Java performance. This initial Java release offers performance comparable to all major browsers on the market today. The final version will include a replaceable just-in-time (JIT) compiler, will be optimized for speed, and will run interpreted Java Applets faster than anything to date.

- Interactivity between Java Applets and ActiveX™ Controls. Microsoft's implementation of Java under ActiveX allows applications created with Java to be integrated with other Java Applets as well as ActiveX Controls.

- Full multimedia support. Microsoft's implementation of Java will allow developers to create Java applications that can take full advantage of multimedia features exposed through ActiveX Technologies.

INTERNET WORKSHOP WEB SITE GOES LIVE

On June 26, 1996, Microsoft announced the Internet Workshop, a Web site that provides comprehensive resources for developing with ActiveX™ Technologies. This site is targeted to anyone involved in the creation and maintenance of today's exciting, active Web sites, including designers, developers, business and production planners, content authors, and site administrators.

Initially, the Internet Workshop includes extensive information on HTML authoring, site production, Web design, development with ActiveX, and much more. Over the coming months, the site will expand to include a library of detailed technical articles on a multitude of Internet technologies and products, sample code from real Web sites, newsletters written by industry experts, third-party tools and extensive Java documentation, as well as many other valuable resources.

The Internet Workshop goes live today and can be found at http://microsoft.com/workshop/.

Any questions? Please call Microsoft Inside Sales at 1-800-426-9400.

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Intranet

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Thus, an intranet system that includes a gateway instead of a real Internet server is not really an intranet. Just as there's no excuse for a LAN to use anything other than TCP/IP, there is usually no good reason for an intranet to use a gateway instead of a real Internet-standard server or client. Today, there are over a dozen SMTP (mail) servers, and over fifty HTTP (Web) servers. For a company to say, "Oh, it's too hard to write our own server," or even worse, "Our gateway will work better than an Internet server," is like saying, "We don't care enough to do the real thing."

Real Intranets Really Work

The funny thing, with all the posturing of the companies that are so far behind in the intranet race, is that lots of other companies have been quietly selling full intranet suites for years. Sun Microsystems has been pushing TCP/IP for over a decade as a way to sell its hardware, but there have been plenty of other software-only companies that have been selling Windows-based TCP/IP solutions as well.

Now that Microsoft gives away a reasonable set of some TCP/IP software in Windows 95 (although it is still a real pain to configure), you would think that they would take the last step and go all the way with helping people with intranets. They haven't yet, and that's letting Netscape get a fair amount of market share selling their intranet solutions to people Microsoft could be serving.

By this time next year, this could all be moot, with people setting up intranets by getting some of what they need from Microsoft and the rest from other vendors. Of course, the big loser will be Novell, whose bread and butter comes from non-open LAN software. This is not to say Novell will go out of business soon: there will always be a legacy market. But as more and more people want to make their in-house systems work the same as the Internet, intranets will quickly start to outnumber old-style LANs, giving everyone many more choices from a variety of vendors.

Paul Hoffman is an independent consultant who's been writing about computers for over fifteen years.

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