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PROCESSING
ASSOCIATION**

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NCES Internet Demonstration Project: Client/Server Application Set

Project: Group develops standards and processes for using the Internet to transfer, store and retrieve education data.

Jan Volkoff, California Department of Education

In 1993, the National Center for Education Statistics (NCES) made a resolution to begin a series of interstate Internet Demonstration Projects designed to "develop standards, protocols, and processes to demonstrate the usefulness of the Internet for the transfer, storage, and retrieval of education data." One of the demonstration projects initiated through this resolution aims at developing a client/server application set to support the needs of education related to the collection and dissemination of information. California, along with NCES, New York, Arizona, Washington, and Wyoming, will be participating. This 18-month project encompasses the K-12, postsecondary, and library segments of education.

The project is being led by Denis Martin of NYSERNet, the network system for New York state. Kathleen Barfield of the Far West Laboratory will act as the contact and coordinator of the three segments (K-12, postsecondary, library) for California. Bill Padia, Director of the Research, Evaluation, and Technology Division (RETD) of the California Department of Education (CDE) will facilitate the coordination for the K-12 segment.

PHASES

The project will include three phases: (1) requirements and analysis; (2) coding; and (3) testing and implementation. The process of development includes structured opportunities for participation by other states, NCES, and other federal agencies during both the requirements

and testing and implementation phases. The project is currently in Phase Two. Phase Three is scheduled to begin in the Fall of 1995.

1. Phase One: Requirements Gathering and Analysis (by 6th month)

Requirements were gathered from New York state, NCES, and other states. A specifications document was then developed from which the application set is being built. This phase also included analysis of alternatives to meet the specifications.

Requirements from other states were gathered in two ways. First, a general input survey was made available to all SEAs describing the scope of the proposed

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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 to other selected individuals within the State of California that are interested in information systems processing in education. All correspondence and address changes should be sent to:

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Fall Conference: Something for Everyone

Connecting Education: This year's theme describes our changing support role.

Ken Jones, Lodi Unified School District

The conference planning committee has been burning the midnight oil to get this year's conference off the ground. Here are a few highlights and some notes on special activities that we have planned.

You will want to come in a little early this year for Farley Stewart's excellent class on Internet World Wide Web Page Programming. This class will take place on Tuesday afternoon before the usual Wednesday start of the conference activities. For the nominal fee of \$55, you will be able to get three hours of Farley's time on this very popular subject. Farley is becoming known within K-12 circles as one of the top experts on the Internet and it is very exciting to be able get him for this class. You must be signed up for the conference to take advantage of this class, so get those registrations in early.

Speaker Chair Skip Sharp has recruited some fine main speakers and timely and relevant breakout speakers. For our keynote addresses, Skip has found some real talent. Dr. Kelly Blanton has a long and distinguished career as an educator in California, and has been Superintendent of Schools in Kern County since 1986. Alex Kaplan is Director of Western Business Operations for BDM Education Technologies. Mark Phigler is the Deputy Director of the Telecommunications Division of the State of California.

Representatives from the California Department of Education will be on hand to report the latest on CSIS, CENet, and Standardized Account Codes. Members of the CEDPA Board are involved in these projects and a good working relationship has been established with the CDE. Come hear what is going on in each of these projects.

Greg Lindner, Vendor Chair, has put together a great exhibit show for you this year. There will be new products to see from the vendors that have supported the CEDPA Conference so loyally for years, and there will also be new vendors and new products. We hope these new vendors will become loyal supporters of CEDPA as well. There will be refreshments, door prizes, and lots of good company at the show.

The Conference location is extremely convenient this

year. The San Jose Airport is five minutes away from the Fairmont and the hotel has free shuttle service. No long drives or waits after you finally get to the city. San Jose has many fine attractions.

We know that budgets are tight and you want to get the most bang for your buck. The CEDPA conference is designed to do just that for the IS professional in California K-12 Education. We hope to see you there.

CEDPA's Web Site Is Moving

CEDPA's presence on the Internet's World Wide Web is being relocated to another site. Please watch future issues of *The Databus* to find out the new address and how you can read *The Databus* and find out about future CEDPA activities all on line.

CONFERENCE INFO

Conference Dates

October 18-20, 1995 (Wednesday-Friday)

Conference Location

Fairmont Hotel, San Jose, California

Registration Fee

\$225 Prior to October 1, 1995

\$250 On-site Registration

Preconference Session

October 17, 1995 (Tuesday)

"How To Create Web Pages" by Farley Stewart

Full Conference Attendees Only

\$55 Registration Fee

Additional Information

Contact Jane Kauble at (310) 922-6141 or

Internet: kauble_Jane@lcoe.edu

Exhibitor Update

Exhibits: This year's vendors have a wide variety of products and services to show.

Greg Lindner, Yolo County Office of Education

The Vendor Show this year on October 19 at the San Jose Fairmont is shaping up to be a very good show! Many vendors have already signed up but we are always looking for more. If you know of any that may not have signed up please have them call me at (916) 668-3738 or email me at glindner@yolo.k12.ca.us.

We are very pleased to announce that several vendors have donated door prizes and/or made donations to our conference this year. Bay Networks, a leading worldwide supplier of routers, hubs, high speed switches and sophisticated network management products, is sponsoring one of our meals. Comlink, Inc., a supplier of data communications equipment and support, will supply our famous coffee mugs this year. Scanning Systems, a supplier of Data entry products, including optical mark readers and bar coding equipment and ICR, data storage and retrieval systems, scannable documents and output document printing, will be supplying us with our canvas bags this year.

Hospitality Suites are being sponsored by NCS, BDM, and Scantron this year. NCS supplies scanners for testing, surveys, and measurement, plus Instructional Management and Student Administration software. BDM provides consulting and systems integration. Scantron provides "Creative solutions for data management", computer scanners (optical mark readers and image), software (testing and survey) and scannable forms. When we get sponsorships like this, it helps us keep the cost of the conference down and it is very much appreciated - we really could not pull this off without their help.

Many vendors have agreed to sponsor door prizes this year. Among them are The Gina Project - 2 Gina/Core+ Accounts; BiTech - 1 Hewlett-Packard 10B Business Calculator; Pentamation - 1 Walkman; Lloyd Internetworking - 1 *Mastering the Internet* book; Digital Network Corporation - 1 \$50 gift certificate; CTB/McGraw-Hill - 5 TABE/PC packages; Adelphoi Technical Services, INC. - Several Courses (valued at \$950 each and taught in Lake Tahoe): 1) Database Theory Analysis and Modeling, 2) System Migration; Transitioning from COBOL systems to Client/Server, 3) Introduction to SQL and 4GL tools.

I want to thank all the vendors who have signed up already and who have graciously contributed to the con-

ference to make it an even better conference for our attendees. Once again, if you know a vendor that you would like to see at the conference please have them call me. See you at the show!

Job Opportunity Director of Computing and Information Services Eugene, Oregon

The Eugene School District 4J, located in Eugene, Oregon (120,000 population) and home of the University of Oregon and the Pac-10 representative to the 1995 Rose Bowl, is seeking an executive manager of the Computing and Information Services department reporting to the Superintendent. Eugene is noted for its educational and recreational opportunities and is a short one hour drive to the beautiful Oregon coast to the west and the Cascade Mountains to the east.

The CIS Director will manage a \$2 million budget and lead a staff of 20 employees in developing and implementing policies and programs related to administrative and instructional systems, information technology, telecommunications, and library services. The salary range is \$57,796 - \$70,251 with an attractive benefit package including fully paid (PERS) retirement, Tax Sheltered Annuity, and Health/Dental with dependent coverage.

A position description, recruitment brochure, candidate profile, and application packet are available from EUGENE SCHOOL DISTRICT 4J, Human Resources Department, 200 N. Monroe, Eugene, OR 97402, Phone: (503) 687-3474, FAX: (503) 683-7450. Additional information on the Internet at [HTTP://www.4j.lane.edu/jhome.html](http://www.4j.lane.edu/jhome.html).

Submit required application materials by September 15, 1995. EEO/AA/ADA employer committed to diversity.

NCES

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application and providing an opportunity for written submission. Second, the development team conducted on-site interviews with six project participants. These participants will be involved in all development and testing.

2. Phase Two: Coding (by 12th month)

Source code for a UNIX based server, Macintosh, and Windows based clients is being developed. All development of coding will be conducted by NYSERNet.

3. Phase Three: Testing and Implementation (by 18th month)

Testing and implementation will cover an alpha period and a beta period. During the alpha period, NYSERNet will install, configure, and test the server and client source code in New York state. During the beta period, NCES and the other states (with support from NYSERNet) will install, configure, and test the server and client source code.

EXPECTED NEEDS/OUTCOMES

The following describes the basic assumptions and functions of the envisioned software:

1. Data Collection

A. Assumptions

- States/NCES collect data from constituents in a number of ways:
 - 1) A file format and data elements are specified in writing by the collector, and the submitter finds a way to generate the electronic file in that format.
 - 2) The collector distributes a program (which may have an associated data file) that the submitter runs on a personal computer and follows the instructions contained in that executable program to key in and generate the data targeted for collection via this instrument. These types of programs can be referred to as "data entry assistants" (DEAs). The characteristics they share include:
 - a) they are distributed and supported by the collector;
 - b) they execute in a standalone mode on a PC or Mac; and
 - c) they generate an electronic file that is

then transmitted to the collector.

- 3) The collector distributes a paper form that is completed by the submitter and then returned for key entry at some centralized point.

- It will be unacceptable for the project to propose one standard method for data collection. That is, whatever the project builds should address the data collection needs, assumed to fall into one of these three methods described above.
- TCP/IP as a common denominator will provide the "standardization" component of the data collection process while at the same time provide the flexibility in how the data is collected.
- Collectors of data need a way of providing status reports on the overall data collection efforts.

B. Server Capabilities

The server will be configurable to present the client program with a list of data reports required by the collector. The user will start the client, point it at the server and be presented with a screen listing out the data collection requirements. The server configuration will allow for a data collection "method" to be associated with each item. For example, if Form 123X is currently collected via a data entry assistant (DEA) type program and the collector wishes to continue this approach, the server will allow for attachment of this DEA tool which will be transferred via TCP/IP to the client program which can then (either immediately or at some later time) execute the standalone DEA to generate an output file to be transmitted back to the server via the client/server interaction.

The server will also be configurable to be able to define submitters. This will provide a mechanism for inventory of data collected and status reports.

At this point, it is anticipated that the client/server set would support the three methods of data collection:

- 1) the collector specifies a file format defining all the data elements, their sequence and layout;
- 2) the collector distributes an electronic DEA type tool which produces an electronic file; and

(See "NCES" on Page 6)

Speaker Update

Skip Sharp
San Diego County Office of Education

The speaker program for the upcoming conference is just about rounded into place and it promises to be a good one.

First there are three excellent keynote speakers. Kelly Blanton, Kern County Superintendent of Schools will deliver the kickoff speech. Dr. Blanton is heading some excellent ventures which promise to have a dramatic impact on the way schools do business, from who you hook up to electronically and how, to what is going on in the classroom. Dr. Blanton's 'down home' sense of humor and style perfectly complement the very important things he is trying to accomplish.

Mark Phigler, Deputy Director for the Telecommunication Division of the California Department of General Services, will provide a description of some of the many new things happening at the state level in the area of telecommunications which will have a direct influence on the ability of schools to provide new capabilities. Mr. Phigler has a real sense of what the telecommuting will look like down the road and what skills will be required to prosper in the future.

The concluding keynote will be delivered by Alex Kaplan of BDM. Mr. Kaplan's firm has successfully transitioned from a defense oriented firm to the educational environment, and he will share what it takes to successfully conduct such a transition, a task faced by many in the education community today.

In addition to the keynote speakers there is an equally outstanding array of breakout sessions. Interested in the Internet? If so, there is an interesting panel presentation on the legality and appropriateness of presenting material from the Internet to school children and a session on Internet security.

Several members of the vendor community will team up for a series of presentations on innovative strategies and applications, ranging from how to economically provide wiring to campuses, to which topology best suits a particular environment. Don Peterson of Modesto City Schools will also share how he has used the cable TV companies to be a data signal carrier.

The California Department of Education will be presenting a series of breakouts that are designed to inform

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NCES

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3) the collector provides an on-line data entry form to be completed by the submitter.

C. Authentication/security

Some of the issues to be addressed during this development project include authentication/security on the network and methods of transmission. For example, there is an active debate currently underway on how to transmit electronic data interchange (EDI) objects via the Internet. One of the proposed solutions is to use multipurpose Internet email extensions (MIME) for this support.

D. NYSERNet Role

NYSERNet does not plan on doing data collection for anyone involved in this project. It will support project participants as they collect data using the methods supported via the client/server set. However, it is up to the project participants to determine how much testing they wish to do and what data will be collected during this process.

2. Data Dissemination

A. Assumptions

It is assumed that one of the impetus factors behind this effort is making data that is collected available in a timely and efficient way. The client/server application set will support this.

B. Server Capabilities

The server will be configurable to provide the user a list of data available and options for retrieving and/or viewing that data. The options at this point are anticipated to include retrieval of an entire data base file in some specified format (e.g., ASCII, comma delimited) and alternatively via an "on-line" query.

The disseminator of data will be able to download files onto his/her data server and control how users get the file. The ties between the data collection system and the data dissemination system will need to be worked out but will provide the key to a fully functioning "data machine."

Jan Volkoff is with the Special Projects Unit and California Student Information Services (CSIS) Coordination, Research, Evaluation, and Technology Division (RETD) of the California Department of Education. She can be reached at (916) 323-5110, email jvoljoff@cde.ca.gov. Kathleen Barfield can be reached at Far West Laboratories, (415) 565-3055, email barfield@fwl.org. Denis Martin can be reached at dmartin@nysernet.org.

Windows 95 - Are You Ready?

Operating System: Revamped Windows Poses Delima To Upgrade Or Not.

Addison Ching, Los Angeles County Office of Education

“Should I upgrade to Windows 95?”

I was asked that question a couple of weeks ago. Not until January, I indicated, would I even consider looking at it, allowing Microsoft ample time to fix all the initial release bugs and come out with version 1.03. As with most new software programs, I'm suspicious of the first release because it usually doesn't work the way it's supposed to. The fact that an acquaintance of mine attempted to install one of the prerelease betas and wiped out his entire hard disk didn't influence me; I just don't like to install Version 1.0.

However, my interest in keeping abreast of the latest technology developments changed that. So I bit the bullet and bought an upgrade copy of Windows 95.

Not having extra computers at my disposal, and not wanting to jeopardize the use of my computer by upgrading over the existing DOS and Windows environments, I spent some time trying to devise a method of somehow adding a second hard disk that would contain the Windows 95 operating system independent of the DOS environment with the ability to boot up from either hard disk. The problem with most boot loaders is that they expect to load from the first hard drive and don't have the capability of booting from the second hard drive.

I located a program on a local bulletin board called BOOTIT which allows you to specify booting from either the first or second hard drive at bootup time. If this program worked as its documentation indicated, I would be able to choose which hard drive (and operating system) to load. As a test, I installed DOS and Windows on the second drive and then installed BOOTIT. I was pleasantly surprised to find that the program worked as documented! I uninstalled BOOTIT in preparation for the Windows 95 upgrade. I unhooked my DOS drive and connected the new drive as my primary drive and proceeded with the Windows 95 upgrade. I was in for a nice surprise.

The installation, while taking a bit long, is relatively foolproof and quite effective in self-installing. It is full of Microsoft's now-famous “Wizards” that analyze your system and figure out all the hardware you have. My computer is a 486 workstation, complete with multimedia capability, networking, Extended IDE hard drives, IDE

CD-ROM drive, and a modem. I did have to go back and modify the interrupts for my modem and network card since I didn't have them configured the way Windows 95 expected. The installation was otherwise uneventful; I even registered my copy online, an option that is now available for new Microsoft products using an 800 number.

I then decided that I would listen to an audio CD while familiarizing myself with the new desktop and features of Windows 95. I inserted the CD and started searching for the CD player using the new Start button on the new Windows Taskbar. Before I could locate the media player application icon, the CD started playing by itself! Wow! My next question was: If Windows 95 could auto-detect and play an audio CD, could it auto-detect a software CD ROM and automatically begin the installation?

I removed the Doobie Brothers CD and inserted the Microsoft Office for Windows 95 CD ROM in the CD ROM drive. After a few seconds, an eerie attention-getting theme and an introduction screen greeted me although I hadn't done anything with the keyboard or the mouse. It seems that Microsoft has added an auto-start feature for the installation programs of Windows 95-specific applications, a nice touch.

I've now been running Windows 95 for a few days and haven't had any problems with its performance. I've migrated several applications, including my Internet dialup service, to Windows 95 using its internal TCP/IP support instead of the Trumpet package, and it all appears to work as it should. This article is being created with Word for Windows 7.0 under Windows 95.

Some of WIN95's nice features are extended filenames, folders within folders, hotkey startup icons, and the multitasking toolbar that includes a volume control and a clock (Yes!). Many options are single mouse-click or right mouse key-activated and there is a new button to close folders or windows that are open.

Some disadvantages to existing DOS/Windows users are learning the “new way” to do things, getting used to new sounds, having to use the **Windows Explorer** to manipulate files rather than DOS commands (the DOS Command Prompt is still there for those who insist on
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Speakers

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CEDPA members on what is taking place at the CDE, and how CDE ventures can help the CEDPA membership.

On the business side, Ken Prosser has an excellent presentation and first hand account on the effects of outsourcing, and Carlene Naylor and Jan Sterling will be providing an update on the new standardized account code structure. There will also be a presentation on the things you need to do before jumping headlong into a client-server architecture and a session on financial planning for individuals.

Several breakouts will be oriented to emerging technologies such as imaging, document routing, multimedia and video conferencing and how they can applied in an educational setting.

The sessions are varied and hold something of interest and value for everyone. The presenters are enthusiastic about their topics and are interested in making the sessions especially worthwhile for you to attend. See you in San Jose.

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Windows 95

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using it) and setting up new Program Groups and aliases (I found this the most difficult.)

Macintosh users still have the last say! While Windows 95 comes the closest yet to replicating the Mac's graphical desktop metaphor in the PC world, the MAC's operability is still a bit easier.

“Should I upgrade to Windows 95?”

If you're thinking about it, I recommend that you use a non mission-critical 486 with 8 megabytes of RAM and install the Windows 95 upgrade on it to make that determination yourself. This machine could also be used as a training computer to allow you and potential users to become familiar with Windows 95 before it is installed on mission-critical computers. Before upgrading, make sure you're completely backed up. While Windows 95 “preserves” your file environment and comes with an Uninstall feature, nothing substitutes for a good backup. Migrate your applications to Windows 95 gradually and check each thoroughly before proceeding with the next migration. And keep your fingers crossed!

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