



CALIFORNIA
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 DATA
 PROCESSING
 ASSOCIATION

THE
 DATABUS

"Serving California's Public Education Technologists"

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Elk Grove Unified School District Rolls Out New Client Server Application

Software: Automated online requisitioning supported by graphical user interfaces.

Charles Burns, Elk Grove Unified School District

When the boss wanted a new "On line Requisition System" that would automate the budget checking and authorization process, plus automatically link to our existing purchasing and warehousing system, we decided to look real hard at exactly what problem we were solving. It turns out that what we really needed was a system that imitated the paper flow of many many forms within our organization, all requiring a hierarchy of signatures to get approved.

This is a typical problem of many organizations, both public and private sector based. There are a number of recently developed products that attempt to meet this need by mixing forms and electronic mail. The problem with every one of them is that in order to be all things to all users, they become much too complex, and never quite meet the users' needs. So we decided to build our own.

After a year of exhaustive research on both front end GUI's and back end database engines, we settled on Gupta's SQL Windows as our development language and Sybase System 10 as our database engine. We were strongly drawn to Power Builder due to the enormous amount of publicity, but when we developed a test application, we found we wrote more code and much more easily crashed the system (GPF's). We like the robustness of SQL Windows and Gupta has promised our required Macintosh client sometime this summer. The database

engine is running under HPUNIX on an HP9000 E35. We have been customers of Hewlett Packard's equipment for many years and have been constantly rewarded with phenomenal up-time and excellent field service. Of course their discount structures for education have also helped significantly.

After sending a two-person team of programmers to Gupta training, a system administrator to UNIX training for 2 weeks and a database administrator to Sybase for a week, we began developing our first application. We knew up front it would be a throw away, but we gave it our best shot. We put together a little program to record special requests from our users, rank them and present

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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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A Message from the President Pro-Tem

Ken Jones, Lodi Unified School District

Recent events have required some changes to be made to the CEDPA Board of Directors.

CEDPA's president, Phil Branstetter, informed the board that he would not be able to complete his term of office due to the requirements of his new job. Through board action, I was appointed to complete Phil's term of office as President Pro-Tem.

Phil has been a long standing member of the Board and has contributed greatly to the success of CEDPA. He worked on many committees at the State and regional level and was always sure to make CEDPA extremely visible in whatever was going on. Phil's work at Riverside County Office of Education most notably included being one of the first test sites to electronically transmit student data between several Southern California County Offices of Education.

Phil has left the education field to join a start-up HMO in the Riverside area, and will be managing the operational aspects of the business (including MIS!). This new challenge is a big step up for Phil, and we wish him all the best in his new career.

As they say, if the reigning president is no longer able to serve, the duties fall upon the first runner up. No one is more surprised than I to be in this position. Fortunately the CEDPA Board's composition is prepared to support situations such as these by having veteran board members act as mentors for the newer officers. This forward planning has allowed the Association to continue to serve its membership throughout the years, even though the composition of the Board is in a constant state of flux. I will do my best to support the duties of Association president through the rest of this year and move CEDPA forward into the second half of the decade.

My personal philosophy on the position and responsibility of CEDPA in the K-12 community is very close to Phil's. We are very much at a crossroads with administrative technology in K-12 education. Three dynamic and opposing forces are at work in our industry. First, we probably thought that our house was in order for basic accounting and payroll functions. Surprise — desktop applications and graphical user interfaces have made our tried and true mainframe systems look archaic in the eyes of our user community. Inflexible data storage methods

are not acceptable. Second, the year 2000 is just around the corner and most of these systems that store two digit dates will not function. We need to start making decisions today regarding the updating of the older systems or the purchase and installation of new systems. Third, the instructional community has looked across the aisle and discovered a resource that they desperately need to build the information infrastructure that they crave. These folks are a totally new breed of customer for most Information Systems shops, and we must shift gears to make our product both available and palatable to these folks. Not making Instruction your first priority, even in the face of these other dramatic needs, could easily prove fatal to IS. All this in the face of general budget cuts and downsizing.

On another note, *DataBus* editor Addison Ching has left Newport-Mesa Unified to join the Los Angeles County Office of Education. He has agreed to serve on the board and at the board's pleasure until the Fall conference. He will also continue as editor of *The DataBus* and will be responsible for producing the conference announcement and program.

So your IS shop was humming along just fine until this year and you suddenly discover that you need help. Where do you go? Well, (warning: blatant self-promotion follows) the CEDPA organization is made up of folks going through the same changes that you are and have designed the fall conference to maximize you ability to solve those problems. The keynote speakers will address our changing times and give insight into strategies for success. The breakout speakers will give us more nuts and bolts information in all these areas than any brain could possibly hold. Finally, the vendor show will allow you to meet the people who are likely to get us out of this mess. We warn the vendors as they are signing up not to send the fluffier of their salespeople. They know that they need to populate their booths with the top end technical people so that the tough questions we all needs answers to can be addressed.

The location of the conference is incredible. Regardless of your opinion on the San Jose area, the Fairmont Hotel is absolutely first rate. We know from working with the hotel staff in planning the conference that this is going to be one to remember. We hope to see you at the fall conference. You will not be disappointed!

CSIS Project Update

Project: Far West Laboratories continues to research and develop methods for electronic exchange of student information.

Kathleen Barfield, Far West Laboratories

As the various acronyms below attest, the California Student Information Services project at Far West Laboratory has been working with state, county and local school and other children's services agencies to develop a regional infrastructure and promote electronic information sharing as a way to improve the provision and coordination of services to children. Through our many pilot efforts, we've learned a great deal about what it will really take to accomplish this goal. **The good news is we can get there from here.** But there's plenty of work to be done, as this outline of some of our recent activities shows.

AIRS

Automated Information Retrieval System Demonstration Project: Designed to demonstrate the technical feasibility of electronic data gathering and aggregation for state reporting, the AIRS demonstration project included participation from 331 school sites in 38 districts and six county offices of education. The AIRS Evaluation Report compares current reporting for the CBEDS School Information Form with the AIRS model and outlines next steps for statewide implementation of a streamlined electronic student information reporting process. Chief among these is a recommendation to establish a statewide advisory group for AIRS. Comprised of key CDE and LEA staff, this committee's role will be to develop agreements on kinds of data that must be collected for state reporting and maintained on local databases, how these data should be collected, for example, via regional server sites, and how accurate or error free these data should be for various aggregate reporting purposes. Another key agreement for the advisory group to establish is a calendar of official dates for electronic data reporting, consistent with reporting requirements and the way data is maintained on local systems.

CCSESA Telecommunications Survey

California County Superintendents Educational Services Association Telecommunications Survey: Funded by Kern County Superintendent of Schools, this project is designed to assess the capacity of county offices of education to serve as regional Internet service providers. The work is being completed on behalf of the CCSESA Telecommunications Technology Task Force, which has emerged as the driving force in K-12 networking. A cornerstone of the CSIS initiative, establishing a

statewide 'network of networks' will enable access and transfer of critical student information among local school districts, county offices of education and state agencies.

CRENC

California Regional Educational Networking Consortium: CRENC was awarded a Pacific Bell CalREN grant to support FWL, CDE, six counties offices of education, 48 school districts, and over 300 sites to gain Internet access that will allow electronic information sharing. This is the largest K-12 networking project in the state.

ExPRESS.Cal Pilot: CRENC recipients of lines through the CalREN grant will be piloting the transfer of individual student records between schools using the *ExPRESS.Cal* software developed at FWL. Each county office hub has a particular focus of interest, for example, the transfer of records for mobile student populations such as homeless or migrant students, or transfers of records to institutions of higher education. Funded by CDE through the Santa Clara County Office of Education, CSIS will provide training and technical assistance to schools, districts and county offices.

CIDC

California Interagency Data Collaborative, Phase I and II: Funded by the Foundation Consortium for School-Linked Services, the first phase of this project established standards for interagency sharing of children's information. Phase II will field test the standards and extend the data standards to specific program areas. CSIS participation has been influential in shaping an open-systems approach consistent with state and federal direction in information sharing.

MSIN

Migrant Student Information Network, Phase I: Far West Laboratory, in collaboration with staff in CDE's Research, Evaluation and Technology (RET) and Migrant Education offices, will work with school districts and migrant program regional offices to develop a statewide process for providing educational continuity for

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Requisitioning

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them to the department manager. It's not easy to move from a procedural language (mainframe COBOL) to object oriented and message driven environment. Our first application wasn't bad, but couldn't make it in prime time. But what a great learning experience for the staff.

In October of 1994 we began the real job of designing our first live client server system. Based on all the recommendations by those that have gone before us, we chose this non-critical application to start with. We quickly created prototypes for two application modules, the Admin module and the Router module.

The Admin module is for defining our organizational chart and "special events" for routing documents. A special event can be defined by cost center codes, certain inventory items or spending limits. We're certain that as time goes on, we will encounter other types of special events, but we have them all defined in one spot so it'll be easy to add on to. The second module is the form filler and router application. Since a form needs to be routed as soon as it's filled in, we combined this into a single application program.

With SQL Windows, we were able to quickly make all the changes requested by our users. Since we didn't have a specific user development team, we asked for input from many sources, all of them future users of the various modules. It was uncanny the way that we were able to respond to their every whim. We're used to writing legacy COBOL that is anything but flexible. We used to try very hard to prototype using our mainframe tools, but it's not anything at all like using SQL Windows.

We were writing code by December and in February were testing integration. By March we were demonstrating the actual code. Once again, true to user habits, we had more changes, but nothing we couldn't handle. We spent the majority of our time customizing the download of accounting information from the mainframe and the upload of output data to our inventory system.

In early April we demonstrated the final product to my boss. His only comment was, "All we gotta do now is copyright it and start selling it." Unfortunately, we can't do that because it was developed with public funds and therefore is in the public domain. After we get the beta completed successfully, we plan on publishing the system on our internet server (<http://www.egusd.k12.ca.us>) and making it available to any public organization.

The system actually mimics what people do when they have a paper system., It makes it easy to fill in the forms, performs editing up front, and instantly routes the form to the next person that needs to see it. Each user in the system (could be hundreds) logs in each day and leaves the form filler iconized. When a form is routed to a user or if the user has a form already on their "desktop," then the icon flashes every few minutes as a reminder.

Use of the system is straightforward. It's a matter of a single click to approve a form, then a person must add their "electronic signature" to the form. Electronic signatures are just another password which is controlled by the user and aged automatically. But this signature must be entered for every transaction, just as the person would normally sign a paper form and set it in the outbasket. Our first form, the Warehouse Requisition also links to our warehouse catalog for showing the user what they're ordering and to check for valid input.

Training was accomplished during the last two weeks in April and concluded in early May. The first real live forms were transmitted on the system during the second week of May.

Some facts about Elk Grove Unified School District:

- Southern 1/3 of Sacramento County, Sacramento, California USA;
- 39 locations including 2 large office locations, 4 high schools, 4 middle schools, 25 elementary schools and 4 alternative centers;
- The district boundaries cover 320 square miles with locations up to 26 miles from the nearest office; and
- Enrollment is approximately 35,000 students Kindergarten through 12th grade plus Adult Education.

Development Team:

Charles Burns, Director of Information Systems

John Dipirro, Programmer Analyst and Team Leader

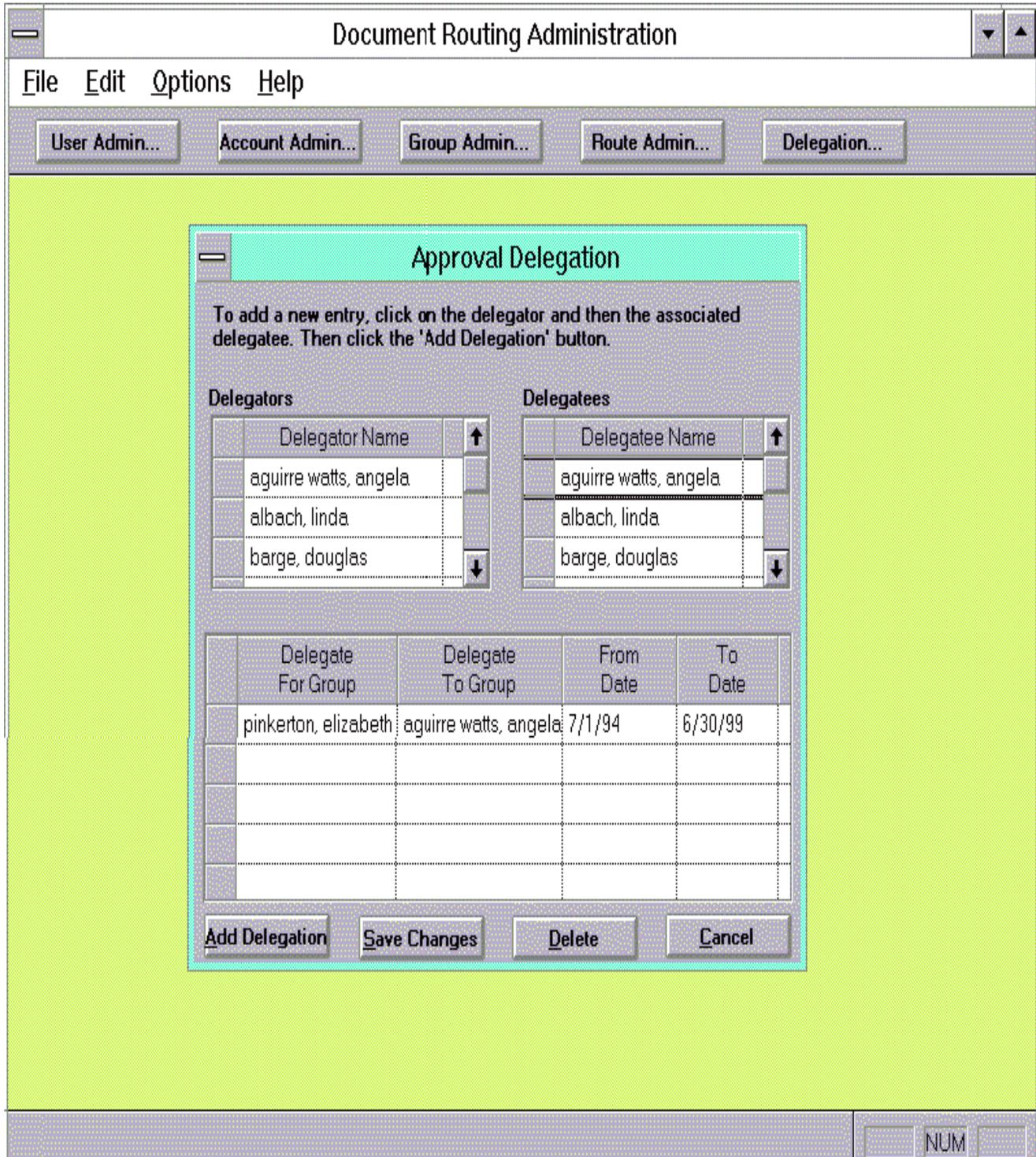
Michael Baca, Senior Programmer Analyst and Database Administrator

Marco Martin, Senior Computer Technician and UNIX System Administrator

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Requisitioning

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Exhibitor Update

Greg Lindner
Yolo County Superintendent of Schools

Here's a preliminary lineup of vendors that will be exhibiting at the Fall, 1995, CEDPA conference at the Fairmont Hotel in San Jose:

Bay Networks, a leading worldwide supplier of routers, hubs, high speed switches and sophisticated network management products, will be showing their product line.

Scantron will present their latest developments in scanning technology.

BDM Education Technologies, a systems integrator specializing in education and government, will discuss seamless integration techniques and methods.

Ameridata, a leading supplier of Compaq, IBM, Hewlett-Packard and Toshiba computer products, will show their product line.

Pentamation will present their latest school administration software for your review.

Data Blocks will again present their scanning software products that can be used for tests and surveys by school districts.

National Computer Systems (NCS) will again present its line of optical scanning hardware, testing software, and student accounting systems.

Lloyd Internetworking will show their Internet connectivity solutions.

Panduit Corporation will again display their full line of modular communications connectivity products and wiring aids.

Comlink will present their line of data communications equipment.

Bi-Tech Software will present their Interactive Fund Accounting System, a financial and accounting system.

Also look for these returning exhibitors to be at the conference: Apple, Digitronics, Macro Education Systems, Sehi Computer and U.S. Telecom International. Also look for many of these vendors to have their offerings on display in the Internet Connectivity room.

If you know of a vendor that would like to exhibit at the conference, please have them contact me at the address on page 2.

Adapt or Become Extinct

Addison Ching
Los Angeles County Office of Education

If you subscribe to *PC Week*, drag out the July, 3, 1995, issue and read Christine Comaford's "Mission Critical" article on page 12. Take what she offers to heart.

In this article, Ms. Comaford intimates that jobs in IT—Information Technology—will all be outsourced in no time and replaced by contractors. She continues that although there will be an IT department, "...the vast majority of its staff members will be contractors." She goes on to say that we are our own worst enemies and largely responsible for the outsourcing phenomenon. Rather than viewing ourselves as responsible for **servicing customers** (emphasis added) in the business organization, we still see IT as "builders of programs."

A report issued by CSC Consulting in Waltham, Massachusetts, included ten key points that comprise "The New IS Agenda." Ms. Comaford cites five of her favorite guidelines in her article.

First, the mission of IT is to create value-added business change—not simply to support ways of doing business. This can be accomplished by helping our customers envision new ways to do their jobs, instead of simply making old methods and procedures "hi-tech."

Second, the responsibility of IT is to ensure that computing is done well—not to be all things to all people. Using a basic approach of solving user problems is more effective than implementing flashy new technology that might look good but doesn't help the user do their job.

Third, the output of IT is information infrastructure, not "applications" or "information systems." The products of programming are simply a means to the end, rather than the end itself. Ms. Comaford cites Steven Spewak's "Enterprise Architecture Planning" as a source for additional information about this concept.

Fourth, the purpose of new technology is to create business opportunities, not merely to improve the level of automation. This is possible only if top management can provide IT with a clear understanding of the business vision and mission, and only if IT can design systems that take future business needs into consideration. Systems need to be flexible and adaptable to support the business information infrastructure as business shifts occur.

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Vacancy Announcement

LOS ANGELES COUNTY OFFICE OF EDUCATION DIRECTOR, MANAGEMENT SERVICES

DEFINITION

Plans and directs all activities of the Management Services Unit consisting of the Management Assistance Team (MAT) and Management and Information Advisor Services (MIAS) unit. Maximizes acquisition and use of information in providing comprehensive management consulting services for the business, administrative, and financial operations of school districts and community colleges in Los Angeles County. Provides additional consultation to the Los Angeles County Office of Education (LACOE) , districts, and community colleges in all areas of finance, business, and administration. Represents LACOE in meetings with district superintendents, board members, and the California Department of Education on district operations, finances, and management processes.

EXAMPLES OF DUTIES

Plan, organize, direct, and coordinate multiple projects and activities of the MAT and MIAS units of LACOE; assist in planning activities for school district and community colleges in the business and administrative functions to establish and/or improve organizational structures and operating procedures; plan, organize and administer a management research and executive information center to collect, interpret, and communicate appropriate demographic, education, and industry trend data to policy makers within school district, community colleges, and the LACOE; establish requirements for the analysis of school district finances, facilities management, organizational structures, human resources, and operating policies and procedures to determine service effectiveness and efficiency; prepare and oversee the fiscal budget for the MAT and MIAS units; develop and supervise scope of services and work performed by internal project staff and outside consultants; perform other related duties as assigned by the Assistant Superintendent, Business Services.

EXPERIENCE AND EDUCATION

Any combination of experience and education that could likely provide the required knowledge and abilities would be qualifying. A typical way to obtain the knowledge and abilities would be:

Experience:

Five years of experience directly related to project, program development, or management consulting with lead responsibility for multiple functions or projects.

Education:

A Master's degree with major coursework in public or business administration, organizational development, or closely related field from an institution of higher learning accredited by one of the size regional accreditation associations as recognized by the Council on Post-Secondary Accreditation.

Salary placement is \$5415-6709/month.

Recruitment for this position closes on August 7, 1995.

For further information, contact the Personnel Commission of the Los Angeles County Office of Education at (310) 803-8360.

Far West

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migrant children through the timely transfer of student records.

During Phase I, FWL will establish an Interim California Migrant Student Directory to serve as a student locator and coordinate eligibility information on newly identified children with the assignment of student ID numbers. Migrant regional offices will use COEstar, a software product developed by Troy Rinker, former director of the Migrant Student Record Transfer System (MSRTS), to submit information collected on electronic Certificate of Eligibility forms to FWL on a daily basis. FWL will provide Internet access to the student directory for migrant regional offices to aid them in determining a migrant student's last school of attendance. This process will also allow the Migrant Program to count the number of migrant students eligible for funding. The MSIN will be fully integrated with CSIS and cooperate with similar efforts in other states to share student information.

Many thanks for your continued support throughout this effort. Please contact me if you have any comments,

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IT

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Fifth, the technology platform shapes and is shaped by business work. Technology must be selected that supports our business. Ms. Comaford uses as an example Oracle's prefabricated business modules that are a part of Oracle's Object Marketplace on their web site. The modules can be browsed and played with online and paid for and downloaded only after a determination is made that they indeed support a business need.

The article concludes with a bit of philosophy: "So listen up, IT. You're an endangered species. The choice is up to you—adapt or become extinct."

questions or suggestions. For more information about programs at Far West, including CSIS, point your web browser to <http://www.fwl.org>.

Kathleen Barfield is the Program Director of Education Information and Accountability Services at Far West Laboratory. She can be reached at (415) 565-3055 or Internet: barfield@fwl.org.

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