# CEDPA Launches Discussion Lists

**E-mail:** Forums disseminate timely information and provide answers to questions.

**Addison Ching, CSU Chancellor's Office**

CEDPA has launched several discussion lists or "Listservs" that represent current topics of importance and interest to the association. These Listservs are forums to learn about, discuss, and share ideas relating to the particular discussion list. By joining these listservs, members receive all communications posted to these discussion lists and have the opportunity to post messages or queries to all of the list's members. These lists provide an excellent platform to exchange timely information and get specific questions answered from sources throughout the state.

At present there are two active discussion lists, ERATE and EDTECH. Additional lists will added as interest or importance dictates. If you have suggestions for a discussion list that you feel will benefit CEDPA's members, please communicate your suggestion to one of CEDPA's board of directors.

The Educational Technology (EDTECH) listserv is a discussion list about technology issues in education.

The E-Rate (ERATE) listserv is a discussion list that has been formed to provide critical and timely information about the Telecommunications Act of 1996. The Act, commonly referred to as the E-Rate, will provide tremendous savings to schools in the areas of telecommunications and connectivity. Recent information exchanged through the discussion list provided specifics about applications, qualifying technology and bidding requirements. There exists confusion and incorrect information that is being disseminated concerning E-Rate. This discussion list provides an excellent opportunity to obtain accurate information from the experts, including participants of the CEDPA conference E-Rate discussion panel.

You must first join a list before you can post messages or questions to it. To join a list, send an e-mail message to **listserver@cedpa-k12.org**. Leave the message subject blank. The message body should contain only two words: the word **subscribe** and the name of the list you wish to join. The rest of the message should remain blank. Do not include any other text or signature lines in the message.

For example, to join the E-Rate discussion list, send an e-mail message to **listserver@cedpa-k12.org** with the following in the message body:

## Also 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 or filling out the interest form at CEDPA's website.

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**http://www.cedpa-k12.org**

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# Remote Administration of Windows NT Servers

**Software:** Utility provides complete desktop access from any point on your network.

### Addison Ching, CSU Chancellor's Office

Windows NT Servers are sometimes employed as departmental servers located in departmental offices. While this environment might be satisfactory for a local department or workgroup, it is not satisfactory for enterprise-wide servers for these reasons:

• Environment: Often, departmental air conditioning is not available 24 hours a day, 7 days a week. This produces an unstable temperature environment which is harsh on sensitive computer components. In addition, overheating and burnout are possible if temperatures are allowed to build up to unsafe levels, especially in closed rooms.

• Power: Department servers are often not protected by an Uninterruptable Power Source (UPS) or at the very minimum, conditioned power. Power main fluctuations caused by brownouts, copy machines, coffee makers, or floor heaters will all affect the operation of disk drives and could cause unrepairable disk failures.

• Security: Importance of the security of a mission-critical data is often overlooked. Department-located servers are often left in unlocked rooms, typically with the server's administration account logged in and completely accessible through the attached keyboard. A disgruntled employee could intentionally sabotage the server without any difficulty.

Enterprise servers are more appropriately located in an enterprise's secure computer room facility, where stable temperature and power environments are more likely to be available. However, placement of these servers in remote compute rooms makes administration of servers inconvenient. Systems administrators often do not have all of their technical resources available to them when working in the computer room, and prolonged exposure to the cool temperatures of a computer room can adversely affect a person's temperament.

If the NT server is a member of a domain, then certain administrative functions can be performed from other NT workstations within the same domain. Microsoft's NT Server Resource Kit contains several utilities that allow some administrative functions to be performed from NT workstations across the network. However, this is not a total solution. Administration utilities do not support remote access to many critical function areas, including the server's control panel or to server-based applications, for example. A more robust solution is needed.

There are several available utilities that allow console functions (keyboard, mouse, and video) to be "taken over" by another computer via some remote connection method. Two of the most popular of these utilities in the NT world are PC Anywhere and Remotely Possible. While PC Anywhere shares the lion's share of remote control computer access utilities in the Windows world, I found that its NT implementation wasn't consistent with my expectations. However, I found Remotely Possible's features to be more in line with a robust remote access agent capable of performing the kinds of tasks required in remote server administration.

Remotely Possible can operate in two modes. The Client mode is always available by default, while the host mode is established on servers that need to be accessed from remote locations. On an NT server, Remotely Possible establishes itself as a service which can be started automatically before logging on. This makes it ideal for remotely rebooting a server; control of the remote server is lost only until the Remotely Possible host restarts itself as a service after the rebooting. All functionality of the server's keyboard and mouse are available remotely, including certain "control" functions such as ALT-TAB, CTRL-ESC, CTRL-ALT-DEL, and SHIFT-ESC that would otherwise be executed as commands on the local computer. Video color reproduction from the remote screen is accurate and fast.

Access is controlled at several levels, including account, password, and IP mask. Connection methods include dial-up modem, TCP/IP, NetBios, or IPX. With the first two options, remote administration of computers located anywhere can be accomplished from anywhere else in the world using dialup or network connections, access permitting. This makes it possible, for example, for a network administrator at the central office to administer NT servers located on remote campuses or schools or to diagnose problems by viewing the Event Log on the remote server. Connectivity parameters including access name, password can be stored in address books.

The features of Remotely Possible do not come without a price. NT Server licenses are about $300, while NT workstation licenses are about $100 (educational pricing is available). Win95 support is also available. Purchasing licenses in "starter Paks" or in groups provides additional discounts. However, the features of Remotely Possible are well worth the investment. 30-day trial copies of the software are available from the manufacturer, Avalan Technology (**http://www.avalan.com**).

# Cisco's Switched to the Desktop Solutions for Education

**Sue Mangiapane, Cisco Systems, Inc.**

Cisco Systems, Inc. recently announced a 50- percent price reduction on its Catalyst 1900/2820 high-performance Ethernet switches that will enable schools to affordably transition from basic hub connectivity to intelligent switching technology. In a related announcement, Cisco also disclosed a new line of Ethernet workgroup switches, the Cisco Catalyst 1900 and 2820 Enterprise Edition, targeted toward enterprise workgroup environments. New prices for the existing Cisco Catalyst 1900 switch start at a U.S. list price of $74 per port. The new Cisco Catalyst 1900 and 2820 Enterprise Edition switches provide enhanced performance and scalability starting at a U.S. list price of $99 per port. New features will include Fast EtherChannel( links, Inter-Switch Link (ISL) virtual LANs , multiple ATM emulated LANs, and Web-based management and enhanced security. "This is significant news," said Tam Dell'Oro, principal anaylst and founder of the Dell'Oro Group. "Cisco is clearly committed to making Ethernet switching an affordable choice for everyone."

With new affordable pricing in place, schools can begin taking advantage of switched Ethernet solutions to the desktop. The Catalyst 1900 switch provides 12 or 24 switched Ethernet ports, 2 Fast Ethernet links and 1 Ethernet AUI port. The Catalyst 1900 is designed to provide dedicated 10-Mbps connections to desktop users and high-performance connectivity between hub-based workgroups. The Catalyst 2820 switch provides 24 switched Ethernet ports, 1 Ethernet AUI port and 2 modular slots, which can support a combination of single or multiport Fast Ethernet, Fiber Distributed Data Interface (FDDI), and ATM interfaces. The Catalyst 2820 is designed for Ethernet workgroups and individual users who need increased performance and flexible, high-bandwidth connections to servers and network backbones. Both switches utilize embedded Cisco IOS(TM) technologies for network management and interoperability. At these new lower prices, many schools will now find that high performance Cisco switched Ethernet solutions cost no more than many traditional shared-media networks.

The new Catalyst 1900/2820 Enterprise Edition switches announced separately include all the features of the existing Catalyst 1900/2820 switches in the same configurations. In addition to connecting local workgroups, however, the Enterprise Edition switches are designed to extend and expand those connections into larger end-to-end networks. The Catalyst Enterprise Edition switches rely on new customer application-specific integrated circuits (ASICs) to offer outstanding performance and Cisco IOS technologies to deliver bandwidth optimization, networked multimedia and comprehensive management and security.

In an additional announcement, Cisco announced The Catalyst 2926 switch (24-port fixed 10/100 autosensing & autoconfiguring) with optional 100Tx or 100FX uplinks. Optimized for the wiring closet, but beneficial in large and small networks, the 2926 delivers flexibility, high perfomance, more features for less. The Catalyst 2926 is winning immediate recognition for its high degree of system compatibility with Cisco's other Catalyst family switches, and competitive superiority. "Cisco commands the leadership position in the high-end modular Ethernet market because they are consistently bringing down the price curve and maximizing port densities," said Tam Dell'Oro, "This raises the bar for the competition and further fortifies Cisco's position in the 10/100 switching market."

The Catalyst 1900 and 2820 switches are available today at Education prices of $1046.50 for the Catalyst 1912 12-port version and $1,396.50/$1746.50 for the 24-port version. The 24-port Catalyst 2820 has an Education price starting at $1,396.50. The Catalyst 1900 series Enterprise Edition switches are also available today at Education prices of $1,536.50/$1,886.50 for the 12-port version. The Catalyst 2820 Enterprise Edition switch will be available in December 1997 with a U.S. list prices at $1,886.50/$2,236.50. The Catalyst 2926, 24 port 10/100 TX Uplink Version, has an Education price of $9,796.50 and the Catalyst 2926F, 24 port 10/100, FX Uplink Version, $10,496.50, Two new line cards for the Catalyst 5000 and 5500 include , WS-X5012, 48 port 10BT at list $7,495, and WS-X5224, 24 port 10/100 card at list $9,995.

| | | |
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# Microsoft Happenings

**Glenn Osako, Microsoft Corporation**

### Introducing the K-12 Solutions Pilot Program

Microsoft in Education is proud to present the K-12 Solutions Pilot Program - a new educational technology resource designed to help schools create a Connected Learning Community. Microsoft and its Microsoft Solution Providers designed this structured program to help education customers evaluate over $20,000 (estimated academic retail value) worth of Microsoft software - including our award winning BackOffice(tm) server suite and Microsoft® Office 97, among others - for 120 days! Receive and keep Windows NT Network Administration Self-Paced Training Kit, Office 97 Starts Here CD, Interactive Training CD, Microsoft in K-12 Education Resource CD-ROM, and a TechNet CD (a collection of Microsoft technical information) for FREE! As part of this structured offer, a Microsoft Solution Provider delivers the K-12 Solutions Pilot (KSP) evaluation kit to the qualified school district's site. Microsoft Solution Providers are independent companies who team with Microsoft to help organizations of all sizes and industries to use technology enabled solutions for today's challenges. Although there is no charge for piloting the Microsoft software, Microsoft Solution Providers reserve the right to charge for the initial consulting and installation support required to ensure a successful pilot. For more information, please visit **http://www.microsoft.com /education/k12/ resource/ksp.htm**

### Tips for Installing Internet Explorer 4.0 for Education

Internet Explorer 4.0 delivers the most full-featured and complete browsing experience on the Internet. To help ease the installation process for educators, we have put together the following guidelines.

Installation Options:

There are 3 installation options for IE4: Browser Only, Standard Installation, and Full Installation. The difference between each installation options is the number of components installed with the Internet Explorer 4.0 Web browser. Once you have selected the installation option, you will need to choose a download site. Internet Explorer 4 will then be downloaded to your machine and installed.

System Requirements

To install Internet Explorer 4.0, you need a Windows 95 or Windows NT 486/66 computer with at least 8mb of RAM for Windows 95 or 16mb of RAM for Windows NT.

Hard Disk Space Requirements
- Browser Only: 66 MB during installation, 40MB after installation
- Standard Installation: 77 MB during installation, 51MB after installation
- Full Installation: 98MB during installation, 64MB after installation

### Windows Desktop Update

Internet Explorer 4.0 includes a new feature called Windows Desktop Update. This technology integrates the Internet Explorer 4.0 browser directly into the desktop, allowing you to use Desktop Components such as viewing folders as Web pages, using an HTML page as wallpaper, and much more. The changes to the desktop are always available, even when the browser itself is not running. However, Windows Desktop Update requires somewhat more system resources than just running the browser. Please see our recommendations below to determine whether you should enable Windows Desktop Update on your computer.

Recommendations

For 486 computers: We do not recommend enabling Windows Desktop Update on 486 computers unless you have 16MB or more of RAM.

For Pentium Computers: Pentium-based computers with 16MB or more of RAM can run Windows Desktop Update with little or no reduction in performance. Windows Desktop Update is automatically disabled on computers with 8MB of RAM, so for most Pentium computers you should allow the Internet Explorer installation program to select whether to enable Windows Desktop Update.

### Disabling Windows Desktop Update

To disable Windows Desktop Update (if installed with the browser), perform the following steps:
1. From your Start menu choose Settings, the Control Panel.
2. Double click on Add/Remove Programs.
3. In the software list, locate Microsoft Internet Explorer 4.0. Click on it to highlight it.
4. Click on the Add/Remove button.
5. The third option will enable you to remove the Windows Desktop Update component. Choose it and click OK.
6. Click OK to close the Add/Remove Programs control panel.
7. You will need to restart your computer.

Download Internet Explorer 4.0 Now **(http:// www.microsoft.com/ie/download/)**

# Internet Products Offers Free Web Filtering Subscription

**Filter:** Service provides tools for controlling web access.

**Dan Shahbazi, Internet Products, Inc.**

Internet Products announced that it will offer free InterGate Web filtering services from November 15 through December 31. During this trial subscription period, InterGate users will receive free nightly updates of Web sites that have been rated in any of 22 different subject categories.

InterGate Web filtering provides a centralized, network-based way for schools to limit access to Web sites that are deemed inappropriate. The service works in conjunction with InterGate's enhanced proxy mechanisms and Web-based management interface. These tools enable administrators to assign varying degrees of Web access to previously defined user profile groups from a single management screen.

Web filtering service block lists are rated using efficient robot mechanisms along with the accuracy of human site raters.

Beginning January 1, 1998 subscriptions to the InterGate Web filtering service will be available as follows:

| Number of Users | Annual Subscription |
|---|---|
| 100 | $1,195 |
| 250 | $1,795 |
| 1,000 | $3,595 |
| 2,500 | $4,795 |
| Unlimited | $5,995 |

Sites running multiple InterGate Internet servers for their districts can provide Web filtering services to their district wide enterprise for an additional $400. Multiple server enterprise pricing is available for the 1,000, 2,500 and Unlimited user categories. Additionally, Internet Products will offer a limited time pricing structure, whereby a two year subscription will include a third year free.

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*Dan Shahbazi is Public Relations Manager for Internet Products, Inc., and may be reached by telephone at (619) 576-4100 x 100 or by FAX at (619) 576-4111. His e-mail address is dan@ipinc.com.*

# Bay Networks Trade-In Program

**Jeff Lawson, Bay Networks, Inc.**

When you buy **BayStack** switches, you get cash back with no disruption to your network. That's right. There's no trade-in. You'll earn $25 per port on every **BayStack 303**, **304**, or **350T** switch you purchase. And you never have to return your hubs.

- No trade-in
- No shipments
- No RMA process
- No disruption to your network

With the "Switch to Bay" No-Trade, Trade-In Rebate, you simply fill out the claim form, submit it to Bay Networks, and then receive your check.

This sensational "Switch to Bay" No-Trade Trade-In Rebate only lasts from October 1, 1997 to March 31, 1998.

**BayStack 350T** 16 Port 10/100BaseTX Ethernet Autosense Switch
**BayStack 350F** 12 Port 100BaseTX and 2 Port 100BaseFX Switch
**BayStack 303** 24 Port 10BaseT Ethernet Switch,1 100Mbps / 1 Open Slot
**BayStack 304** 12 Port 10BaseT Ethernet Switch, 1 100Mpbs / 1 Open Slot

| Part # | | Education Discount Price |
|---|---|---|
| AL2012E02 | BayStack 350T | $3,995 |
| AL2012E08 | BayStack 350F | $4,995 |
| AL2001E04 | BayStack 303 | $2,350 |
| AL2001E05 | BayStack 304 | $1,625 |
| AL3133001 | 100BaseTX Media Adapter | $345 |
| AL3133002 | 100BaseFX Media Adapter | $745 |

For purchasing information, call Cindy Hughes (310) 563-3703.

For Technology Planning and Network Design for E-RATE or Digital High School Initiative, please contact Jeff Lawson.

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*Jeff Lawson is K12 Representative for Bay Networks, Inc. He may be reached at (714) 251-4221 Direct Line, (818) 618-1218 Pager, or by e-mail at Jeff_Lawson@BayNetworks.COM.*

# Cisco Announces MC3810 Multiservice Access Concentrator

**Sue Mangiapane, Cisco Systems, Inc.**

Cisco Systems is pleased to announce the Cisco MC3810, a compact, low-cost multiservice access concentrator that combines voice, video, and data traffic for transport over public or private ATM, Frame Relay, or leased-line networks. Using the latest voice-over-network and multiservice technologies, the Cisco MC3810 reduces network operating costs by combining compressed voice, video, and data on the same network connection. Remote configuration makes the Cisco MC3810 easy to manage, and by supporting multiservices on a single device, equipment costs are reduced. IT professionals can cost-effectively deploy the Cisco MC3810 as a single-device solution for a wide range of enterprise or managed network services, extending multiservice capabilities to the edges of the network.

Highlights
• Cisco IOS™ software platform—IP, IPX, bridging, SNA
• ATM T1/E1 access
• Frame Relay UNI
• V2D™ voice switching and transport
• CS-ACELP—ITU G.729 and G.729a (8 Kbps) voice compression
• MultiFlex AccessTM multiservice trunking
• Circuit emulation for voice and video
• Frame Relay/ATM interworking
• Six analog voice ports: FXS, FXO, E&M type I, II, III, IV, V
• T1/E1 digital voice: up to 24 compressed voice channels
• Channelized TDM functionality with cross-connect

## Delivers On Voice Data Integration

The industry-leading, standards-based Cisco IOS™ software platform delivers network services across the network, connecting small and remote sites into a reliable network infrastructure and providing a scalable migration path. Cisco IOS software at the heart of the Cisco MC3810 makes it an access solution with built-in, carrier-class routing capabilities. Cisco V2D™ technology integrates robust voice and video transport capabilities into Cisco IOS software, making the Cisco MC3810 a true multimedia, multiservice access platform.

V2D technology provides voice switching and transport services over ATM, Frame Relay or HDLC networks. Advanced call management capabilities provide PSTN connectivity and allow calls to be routed from "on-net" to "off-net" when network resources are limited. This ensures the lowest possible networking costs while maintaining high network availability.

V2D transports video over ATM via circuit emulation for streaming video or variable bit rate (VBR) for packetized video. It implements standards-based traffic management techniques for ensuring quality of service (QoS) when using ATM or Frame Relay. With built-in V2D technology, the Cisco MC3810 is the perfect access device for delivering high-quality video applications, such as videoconferencing and distance learning, over ATM networks.

## Maximize Voice Quality Over the Data Network

The Cisco MC3810 provides up to 24 digital channels (8 Kbps each) of compressed voice. A standard CS-ACELP algorithm compresses voice with toll quality for transport over ATM, Frame Relay or HDLC networks without hardware changes. The ability to consolidate voice applications over a single access link gives IT professionals unmatched flexibility, reduces equipment costs, and simplifies network management.

## Provide Full-featured Call Handling

With a comprehensive range of call handling features, the Cisco MC3810 provides full-featured voice switching. Flexible call set-up and call handling features include:
• Local (intra-switch) dialing
• Tandem switching
• On-net dialing
• Off-net switching
• On-net to off-net call rerouting
• Direct inward dialing
• Automatic ring-down
• PBX tie-line replacement

Dynamic DSP resource allocation maximizes the Cisco MC3810 total system utilization and availability. More than a simple point-to-point solution, the Cisco MC3810 delivers the robust call handling features required in enterprise and managed services environments.

## Ensure Complete ATM Access

The Cisco MC3810 is a T1/E1 service and supports non real time and real time VBR, CBR, and UBR service classes. It supports data transport over AAL5 for all LAN

# Concentrator

*(Continued from Page 7)*

protocols and voice compression with silence suppression to maximize bandwidth utilization. Voice may be transported in real time VBR or constant bit rate (CBR) mode. The Cisco MC3810 also supports circuit emulation for transporting traffic through an ATM network to a public switched network.

Video over ATM is supported by the Cisco MC3810 in real time VBR and CBR modes. CBR is used for streaming video, such as MPEG from a video codec. VBR support is used to transport video received from packet-based devices. The QoS parameters built into ATM ensure that voice and video traffic receive the required bandwidth while it is transported with data traffic over the access link to the network.

**Reduce Access and Management Costs with Flexible Trunking**

The Cisco MultiFlex Access™ feature enables IT professionals to configure several trunk types via software at the physical and protocol levels. This level of flexibility supports ATM, Frame Relay, and channel-bank functionality without changes in hardware, and allows the user to choose the best service to meet their business needs. MultiFlex Access enables trunk speeds from 56/64 Kbps to 2.048 Mbps, and the ability to consolidate multiple applications onto a single access platform enables remote offices to significantly reduce the access portion of their telecommunications costs.

Frame Relay/ATM interworking enables the Cisco MC3810 to be easily deployed in networks with a mix of Frame Relay and ATM access points. Frame Relay/ATM interworking simplifies network design, reduces inventory carrying costs, and ensures investment protection when migrating to ATM.

**Completely Standards Compliant**

The Cisco MC3810 is built on industry standards from the ground up. All port types conform to all aspects of voice and data-defined standards in ITU, ANSI, and other public forums. The ATM, Frame Relay, or leased line T1/E1 multiflex trunking are public service compatible.

**Reduce Management Costs and Overhead**

The Cisco MC3810 incorporates a comprehensive set of MIBs and is manageable by CiscoView™ network management software. With CiscoView, IT professionals can view management information in a wide range of graphical representations and consistent formats for easy management. CiscoView integrates easily with standard SNMP managers, such as HP OpenView and SunNet Manager. With standards-based management support, the Cisco MC3810 enhances multiservice access while reducing management costs and eliminating the need for standalone management systems.

For more information about the Cisco MC3810 Multiservice Concentrator, contact your local Cisco account representative today or visit Cisco's Web site at **www.cisco.com**

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# Listserv

*(Continued from Page 1)*

subscribe erate

After submitting a successful request to join a discussion list, you will receive e-mail confirmation that you have been added to the list.

To post a message to a list, send your message to *listname*@**cedpa-k12.org**, where *listname* is the name of the discussion list (either erate or edtech).

If, after joining a list, you find that you no longer want to participate, simply send an e-mail message to **listserver@cedpa-k12.org** with the words **unsubscribe** *listname* (substitute the name of the list you wish to leave) in the message body. You will be automatically removed from the list and receive confirmation of your removal.

Some common errors that are being made when trying to sign up for the lists include:

- superfluous text in the message body – The message body must contain only two words: **subscribe** *listname* where *listname* is the name of the distribution list. Automatic signatures, taglines, or other text should not appear in the message body.
- incorrect command syntax – The command word (**subscribe** or **unsubscribe**) was incorrectly spelled.
- signup request incorrectly addressed – The request was not addressed to **listserver@cedpa-k12.org.**

# PROGRAMMING SERVICES MANAGER
**Salary: $5123 - $6242 per month**
**Closing Date: Friday, November 14, 1997, 4:30 p.m.**

The Orange County Department of Education is accepting applications for the position of Programming Services Manager. The Programming Services Manager will manage, plan, and coordinate the activities of the financial, human resources, training, and applications programming support staff and will provide overall program, administrative and operational management of the supported application modules.

## ESSENTIAL FUNCTIONS/DUTIES

Direct, plan, organize, and coordinate the work of assigned staff to ensure efficient and effective implementation of financial and human resources applications at client districts; insure maintenance of installed systems meets client requirements. Hire and train new staff. Evaluate and recommend application upgrades/replacements in support of current and projected service requirements for the districts and the Department. Direct the development of program and system applications, operator instructions, and documentation manuals; develop, maintain, and implement programming standards. Resolve difficult or complex application problems through on-site analysis and effective utilization of technical staff, coordination with OCDE business services staff, and use of vendor contracts.

## EMPLOYMENT STANDARDS

**Knowledge of:**
* Advanced principles and practices of system analysis, system design, database design, and documentation.
* Design and operation of computer software.
* Concepts and principles of financial and human resource application packages.

**License, Education and Training:**
* Equivalent to five years of full-time experience in the design, development and implementation of computer application systems that utilize advanced data processing technology. Detailed knowledge of the Bi-Tech system is desirable.
* Equivalent to a baccalaureate degree from an accredited college or university with course work in computer science, data communications, business administration, electrical engineering, computer science or closely related field.

## BENEFITS

A comprehensive package of tax-free insurance benefits is offered to all full-time members of the staff. This package includes employee and dependent medical and dental insurance and employee vision care and life insurance.

**Call (714) 966-4026 to have an application mailed to you.**

# Microsoft
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**K-12 Connection Live**

You are cordially invited to join us to chat online in November and December for K-12 Connection LIVE! We are hosting four online chats to provide a forum for you to discuss your challenges, solutions and ideas with fellow educators who are integrating technology into their classrooms, schools, and districts. We will be online to help provide resources you might be interested in and learn more about your school's needs, goals, and to hear your success stories! Please submit questions you are interested in asking at these chats to k12@microsoft.com. In the subject line of the email message, type in:

Chat Question and let us know which chat you are referring to.

As you exit the chat room, be sure to fill-out our feedback form and enter yourself to win our chat door prizes!

Chat Schedule

**Technology Innovation in Today's Schools:** Key issues, challenges and successes in using technology to enhance student learning, improve school administration and build community support.
November 13, Thursday 5-6pm Pacific Time

Where: The MSN Freewire Chat

**Professional Development for Teachers**
November 19, Wednesday 6:30-7:30pm Pacific Time
Where: The MSN Freewire Chat

**Running the School Network While Preparing for the Future**
December 2, Tuesday 6-7pm
Where: The MSN Freewire Chat

**Integrating Technology into Today's Classroom**
December 15, Monday 5-6pm
Where: The MSN Freewire Chat

Be Prepared to Participate in Our Chats

1. Mark Your Calendar for the Chats You Are Interested. **(http://msncomputing.msn.com/events/default.asp)**
2. Install Free Chat Software **(http://www.microsoft.com/ie/download)** Chat software is necessary for all participants, please see the instructions for chat software for Windows users or Macintosh users.
3. Join us in the Freewire Cafe Chat Room. **(http://msncomputing.msn.com/events/default.asp)**

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