

## **PC RESERVATION/TIME CONTROL AND PRINT MANAGEMENT SOFTWARE**

By Richard W. Boss

The demand for public PCs and printing exceeds most libraries' resources, therefore, it is essential that there be a way of equitably allocating time on public PCs and recovering the cost of printing, and achieving those objectives with minimum staff intervention. A decade ago most libraries used a sign-up sheet for public PCs and the honor system for collecting payments for printing. That involved a significant investment of staff time, time taken away from more important activities. Now that many libraries have scores of PCs and, in some cases, hundreds of PCs, it is essential that staff be relieved of the responsibility for reserving computers, monitoring time, and accepting payments. There are two types of products that achieve that: PC reservation/time control software and print management software. While generally available separately, they are sometimes bundled into a product suite.

Managing public PCs and printing must be differentiated from PC security and access control. PC security seeks to protect a computer against intentional or accidental damage from misuse. It includes both protection of hardware and software. PC security concerns are not unique to libraries, therefore, no TechNote has been written on this topic. A wide range of PC security products can be identified by googling "PC security products."

Access control is used to limit access on the basis of the patron's status. Access control software recognizes patrons using patron authentication and gives or denies access to desktop applications, online reference services, specific URLs, and the Internet as a whole. Libraries have unique access control issues, especially with regard to minors. The TechNote entitled "Filtering Software and CIPA Compliance" addresses this aspect of access control. For an extensive discussion and evaluation of blocking and

filtering software consult the report by Australia's CSIRO for NetAlert and the Australian Broadcasting Authority at [www.aba.gov.au/internet/research/filtering/filtereffectiveness.pdf](http://www.aba.gov.au/internet/research/filtering/filtereffectiveness.pdf)].

## **PC Reservation/Time Control Software**

PC reservation/time control software schedules access to public PCs and controls session time. Some of the products now popular began as time control managers—products that did nothing more than limit the use of a PC to 30, 60 or another specified number of minutes. They evolved into products that also handle the reservation of public PCs.

PC reservation/time control software benefits library patrons by providing them with guaranteed access to PCs at known times and for known lengths of time. It benefits libraries by relieving staff of the need to handle scheduling and the policing of time, and it maximizes resource utilization.

Some of the products are server-based, requiring not only software on each PC, but also on a server. When a system is distributed, the clients can function without communicating with the server, but a management console may be required for centralized control and data gathering.

All of the products are now self-service, meaning that library staffs don't need to take the reservations and enter them into the system. In fact, most allow remote reservation via a LAN or the Internet. Patrons are provided a receipt with their reservation information and are granted a grace time for late arrival before the PC is returned to the pool for reassignment.

Most of the products make it possible for staff to remotely set up reservations, send a message to any PC, terminate a session, extend the time for a user, restart a PC, or shut down any or all PCs.

A few products are queue-based, assigning each patron a position behind patrons who have already been assigned. The now more common alternative is a time-based product, one that assigns a patron an exact beginning and ending time for the session. This eliminates the need to wait for the previous user to finish. Should a user finish early, an abbreviated session can be assigned for the remaining time until the next reservation.

Patron authentication is an important feature of PC reservation/time control software because it makes it possible to deny multiple reservations by the same patron. It also makes it possible to deny access to children in an adult area, or to other users a library wishes to restrict in some way. The most common use is to control access to specific applications.

All of the products have an on-screen clock or timer so that the patron knows how much session time remains. If a PC is inactive for a library-specified period of time, the session will be ended, but before that happens, a warning message alerts the patron that he or she must respond that further use is planned. Another important feature is the ability to “refresh” after each user, thereby providing greater privacy. A convenient feature offered by some of the products is the ability to lock the session so that the patron can briefly leave the PC.

Most PC reservation/time control software includes a SIP2-based interface to the patron database of an automated library system, however, some products store patron IDs as an option.

Multilingual products are only now emerging, thus allowing a patron to select the language of choice.

Statistics on use are kept by all of the products, including time used, number of sessions per day, average session length, longest session, etc. They also report on reservations made and not used.

The typical cost for reservation products is \$200 to \$350 per PC, with the cost per PC going down as the number of PCs goes up. The figures do not include the hardware cost for the server that may be required, typically a low-end machine costing no more than \$2,000.

Seven major vendors offer PC reservation/time control software: CMS ([www.cmsdignet.com](http://www.cmsdignet.com)), Comprise ([www.comprisetechologies.com](http://www.comprisetechologies.com)), CybraryN ([www.cybraryn.com](http://www.cybraryn.com)), EnvisionWare ([www.envisionware.com](http://www.envisionware.com)), iTeam Resources Incorporated ([www.iteamaccess.com](http://www.iteamaccess.com)), Pharos ([www.pharos.com](http://www.pharos.com)), and 3M ([www.3m.com/us/library](http://www.3m.com/us/library)). 3M's product was previously known as Library Guardian before it was purchased by 3M from Guardianet.

*CMS' PC-Cop* is a centralized system that uses a server. It interfaces with any integrated library system using SIP2 or APIs. The software allows machines to be grouped into logical sets so that session limits, warning messages, and warning time can be set for each group. If no one is waiting to use a computer, existing users are allowed to extend their session time. It is available bundled with the vendor's DigiNet Print Management System or separately.

*Comprise's SAM* (Smart Access Manager) tightly integrates session, Internet, and print management in a single centralized system. Only the print management component can be purchased separately. The software is available not only installed on a server in the library, but also as a hosted solution. It interfaces with any integrated library system using SIP, NCIP, or APIs. It is one of the three most popular choices with some 2,000 libraries as customers. 3M is a major distributor of SAM. The vendor also has business partnerships with Innovative, Polaris, SirsiDynix, and TLC.

*CybraryN RSVP* is part of a broad suite of centralized software products that also includes desktop security, Internet Browser control, equipment and facility scheduling, and staff and volunteer scheduling. It is in use at more than 3,000 libraries in 36 countries. The software allows patrons to register with an alias in order to assure privacy.

*EnvisionWare's PC Reservation* is available bundled with the LPT:One print management product or separately. It uses a distributed processing approach rather than a server. Both standalone and network versions are available. It interfaces with any integrated library system using SIP or APIs. The vendor has more than 4,000 libraries as customers. It has business partnerships with Polaris, SirsiDynix, TLC, and VTLS. PC Reservation is multi-lingual, with patrons able to select the language. The software allows a patron to lock the session in order to briefly leave the PC.

*iTeam Resources Incorporated's Re'Quest* is available integrated with the vendor's print management product or by itself. It does not require a server. It can be used with a wide range of operating systems. Patrons can extend time when no one is scheduled for the next time slot. Although, it interfaces with all major integrated library systems, it maintains a real-time shadow database of patrons.

*Pharos' SignUp* is a centralized system that is marketed to companies as well as academic, special, and public libraries. There are approximately 1,000 installations, the majority in companies. Reservations can be made via a library's LAN or over the Internet. The company also offers a self-service kiosk that handles reservations, payments for printing, and payments of fines. The kiosk interfaces with any integrated library system.

*3M's PAMS* (Public Access Management System) is a tightly bundled centralized system that includes not only reservation/time management and print management, but also access control. PAMS maintains its own patron database and does not interface with an integrated library system. It has been designed to utilize a smart library card that allows the system to recognize patrons and adjust access levels. The

card also functions as a prepaid cash card. A card dispensing/revalue station is required. The advantage of this approach is that the card can also be used not only with PC printers, but with copiers. PAMS is available only as a hosted solution.

## **Print Management**

Print management is more than collecting payment; it includes the provision of privacy for patrons by verifying jobs to be printed and holding printout at a release station until patrons are ready to pick them up.

Most print management software comes in two versions: client-only for use on individual PCs and networked print management for multiple PCs on a network. The latter requires a network release station. Almost all products offer the option to limit the number of print pages, variable charges for different printers and print sizes, and a library-specified number of free pages before payment is required.

Some vendors offer not only software, but also hardware for handling money and/or debit/credit cards. A few offer a “smart card” on which a patron’s credit balance is maintained.

Print management software may be interfaced with either a coin box or a credit/debit card reader. The use of a coin box means that staff must make change or a relatively expensive change machine must be installed. Coin boxes are most commonly used when a side printer is configured with each PC. Print release stations usually combine currency, coin, and debit/credit card payment options in one device. It is not difficult to interface a debit/credit card reader with print management software, therefore, it is the most common form of payment collection when a print station serves several PCs.

Stored value cards may also be used with a print management product. The Vend-a-Card systems from CCS Products ([www.compcontrolsys.com](http://www.compcontrolsys.com)) are the most

widely used card readers and card dispensers. The company also offers several hardware products, including an account payment machine that handles bills and coins; a smart payment machine that handles bills, coins, and credit/debit cards; and a point of sale device.

There are many others that can be identified by searching “access control systems” on the Web.

Libraries that have purchased reservation and time control software usually purchase print management software from the same vendor. The cost for print management software ranges from under \$100 to nearly \$300 per PC supported. When purchased with PC reservation/print management, the bundle usually is discounted. A coin box costs approximately \$300. A debit/credit card reader typically costs between \$400 and \$1,000, and a debit card dispenser costs \$3,500 or more.

*CMS's DigiNet Pay to Print* is sold bundled with the vendor's PC-Cop PC reservation and time control product or separately. It interfaces with any integrated library system using SIP or APIs. A print release station is not required. Print jobs can be sent from networked public computers or from laptops used by patrons within the institution's wireless network. The software supports printers connected directly to the client machine, printers networked to the client machine, and printers connected to a spooling station for later release by the patron. The vendor also sells printers, copiers, computers, coin boxes, and card readers.

*Comprise's SAM* tightly bundled the print manager with the sign-up, session control, and other components of a comprehensive system. Print management is the only component of SAM that can be purchased separately. The company also offers several hardware products, including an account payment machine that handles bills and coins, a smart payment machine that handles bills, coins, and credit/debit cards, and a point of sale device. It uses the existing library card and records the charges in the patron record. No print release station is required.

*CybraryN's CybraryPRINT* is usually bundled with the other products in a broad suite of products, but it can be purchased separately. The software allows patrons to confirm charges and debits before printing.

*EnvisionWare's LPT.One* is available bundled with the vendor's PC Reservation in the EnvisionWare Suite or separately. It comes in a basic version for individual computers and a distributed version for multiple computers. No server is required. Print release can be done on a dedicated print release station or on shared station such as a circulation desk workstation.

*iTeam Resources, Incorporated's Quest Suite* is available both as a standalone and network version. When used on a network, it can operate on an existing network server. It interfaces with the vendor's Re'QUEST. It maintains a patron database for online accounts. Printing can be done at individual PC printers or on a print release station. It is available in a dual-language mode. The vendor offers a wide range of coin and debit/credit card machines and patron cards.

*Pharos's Uniprint* is sold separately from its SignUp, but the two can be tightly integrated with one another. Uniprint has its own accounting database and can interface with third-party accounting and authentication systems. A scripting language allows a library to modify almost every aspect of the operation, including virtually all messages.

*3M's PAMS* includes a print manager that is tightly bundled with the other components. The components are not available separately. Printing and other fees are deducted from the patron's smart library card. The removal of the smart card from the reader closes all applications and windows, clears the cache, removes temporary files, and resets for the next customer.

PC reservation/time control and print management software are changing rapidly, therefore, vendor Web sites are the best sources for current information. Journal articles dated as recently as 2004 are not good sources of current information.

Prepared by Richard Boss, February 26, 2007; Revised March 14, 2007