The Agony and the Ecstasy:
Establishing a thin-client network and a pay-to-print system
at the LSUS library

Presented by:

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Part I: Thin Client

- What drove our decision
- Hardware and software
- Deployment challenges
What possessed us?

- Old PCs were wearing out
- Warranties were expired
- IT department had unique ideas about configuration of the library’s PCs
What were we thinking?

- PC overkill: patrons were mainly just surfing the Internet
- PCs frequently needed upgrading, reformatting
- PCs often got hacked, goofy desktop changes, home pages frequently changed
Why thin client?

- No need for full blown PCs
- Library took control of management
- Ease of maintenance
What is thin client?

- Server based computing
- Clients need not be fully functional PCs
- Applications “live” on server
Advantages of thin client

- No need to constantly upgrade/repair multiple PCs
- Clients are very low maintenance: No moving parts, very little breakdown
- Uses less bandwidth
- More secure
Disadvantages of thin client

- If your server is down, all of your clients are down
Our decision

- Purchase MetaFrame Presentation Server software
- Purchase 2 Dell PowerEdge Servers
- Purchase 40 WYSE Winterm 3125SE terminals
- Purchase 40 external floppy drives
What is MetaFrame?

- Works with Microsoft’s Terminal Server
- Uses ICA connection
- Allows for deployment of particular applications to particular users:
  - Via a web page with IP-based authentication
  - Through the Program Neighborhood feature
Why not just use Terminal Server?

- MetaFrame enables deployment to a greater variety of clients
- Greater flexibility for managing applications and for load balancing
- Access to applications can be delivered via a browser into an “application portal”
Implementation

- Began deployment during intersession period
- 3 words: Licensing, Licensing, Licensing
Challenges

- Make the servers secure, but not too secure
- Microsoft applications are very tightly knit
  - Clients that strictly deploy IE can still be used to navigate to the control panel, desktop, etc.
  - Clients that deploy Office applications but not IE can still be used to “punch through” to the Internet
So far, so good

- Clients don’t “freeze” like traditional PCs
- No problems with speed
- Patrons “see” traditional PCs
- Servers are stable
- Clients are quiet!
Plans for the future

- Implement Active Directory to deploy applications based on user instead of terminal
- Consider delivering applications to patrons off campus
Part II: Pay-to-Print

- What drove our decision
- Hardware and software
- Deployment
Why move to pay-to-print?

- Our old setup included 40 PCs with dedicated printers
- Like the PCs, the printers were quickly failing
- Maintenance of printers was very time consuming
- Expense of printers, paper, toner, etc. was increasing steadily
Which vendors did we consider?

- CMS Diginet
- Envisionware
- Go Print
- iTeam Resources
- Pharos
What were we looking for?

- Compatibility with thin client
- Ability to charge different prices
- Ability to offer some free prints
- Robust reports
- Ease of implementation
- Good customer support
...and the winner is

- Go Print
- Best suited to thin client
- Good customer reviews
- Excellent tech support
What hardware are we using?

- Dell PowerEdge 2600 server
- 4 Xerox DocuCenter digital photocopiers
- 2 Go Print release stations
Deploying pay-to-print

- Go Print tech support came on site to configure server and set up the release stations
- Tech support now dials in to upgrade or troubleshoot
How was this received by our patrons?

- Initially we turned on the release station without charging
- Immediately saw a decrease in printing
- Patrons generally learned to use the release station with little difficulty
How was this received by our staff?

- Librarians were impressed
- Initial skepticism diminished
- Librarians were pleased to spend less time troubleshooting the printers
- The reference area is much quieter without 40 printers printing, jamming, making noises, etc.
What happened when we began charging?

- Library took a very proactive approach to the implementation of pay-to-print:
  - Posted signs by each client explaining the decision
  - Contacted the student newspaper to get the word out
  - Dropped the price of photocopies & other printouts
- Response has been surprisingly favorable
How has charging affected printing?

- Fewer pages printed
- Many more jobs deleted
- Campus lab that does not charge has not seen a significant increase in printing
Have their been any problems?

- Networked Xerox machines are unstable and problematic
- Minor glitches with Go Print software
Would we do it all again?

- YES!
- We’re not necessarily saving big money, but we are using our material and our staff resources much more effectively