

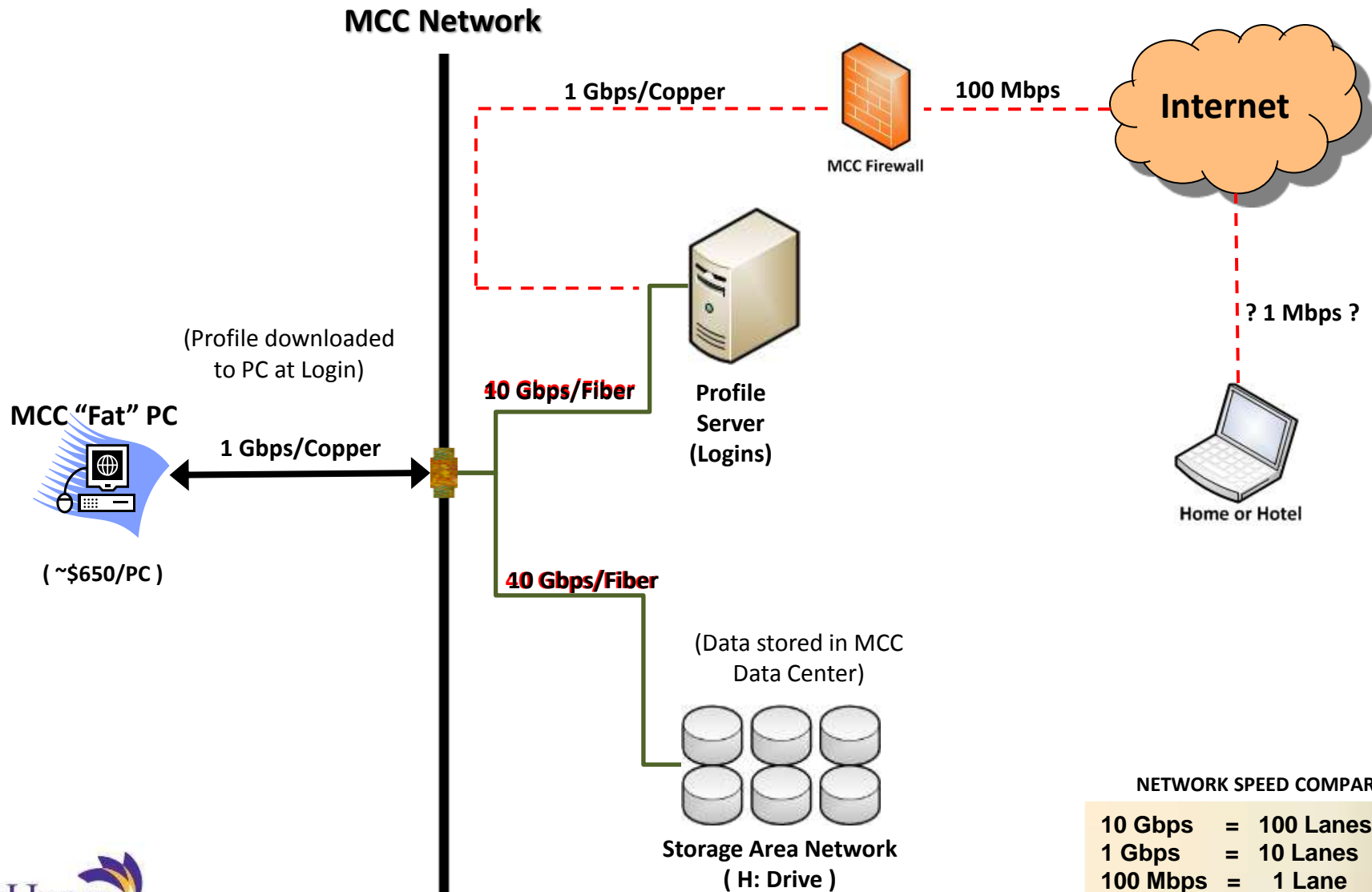


Technology Master Plan

**Continuing the Desktop
Virtualization Strategy**

Current MCC Desktop Computing Architecture

Presented at the 12/11/2012 Committee of the Whole

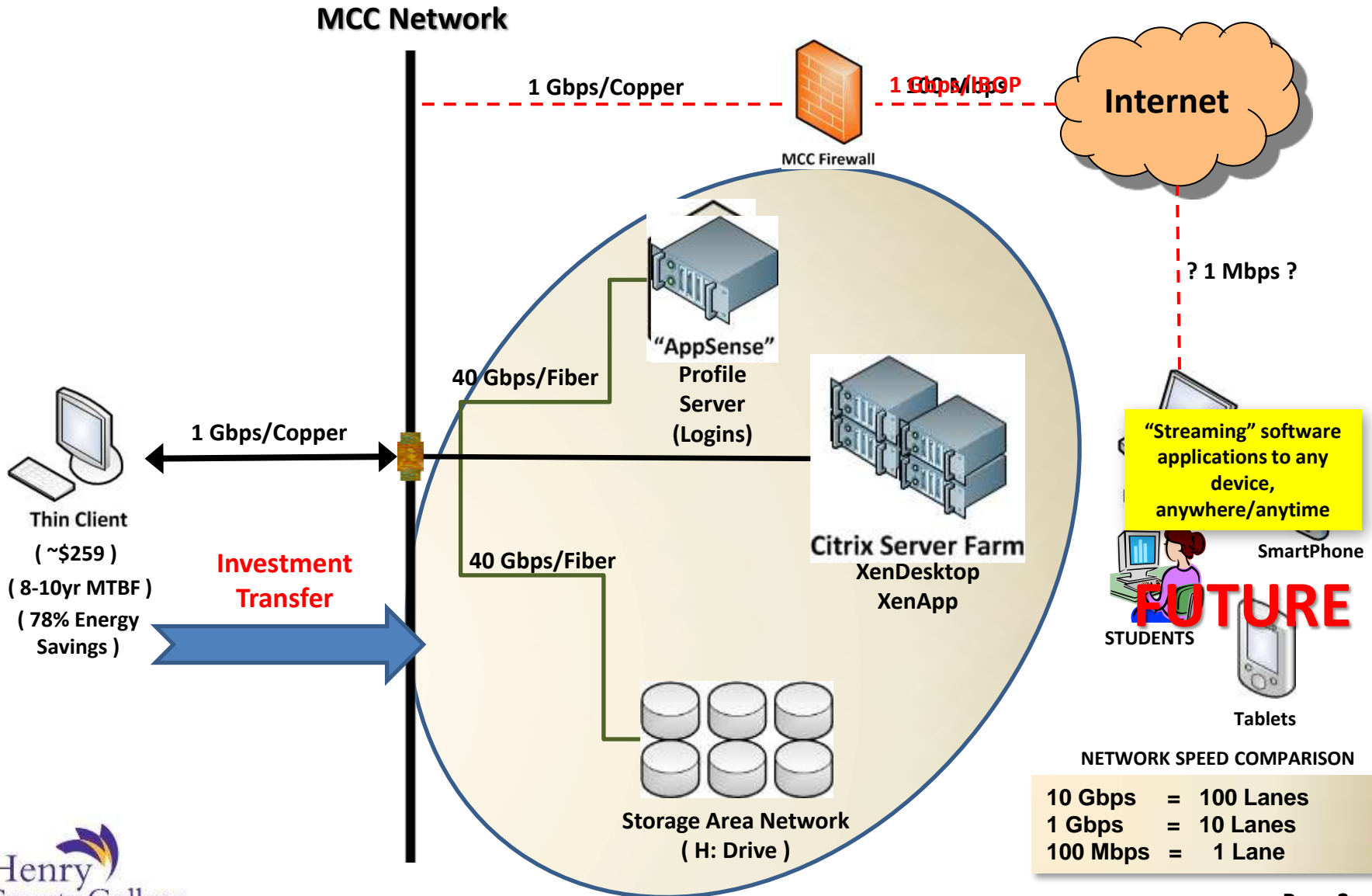


NETWORK SPEED COMPARISON

| | | |
|----------|---|-----------|
| 10 Gbps | = | 100 Lanes |
| 1 Gbps | = | 10 Lanes |
| 100 Mbps | = | 1 Lane |

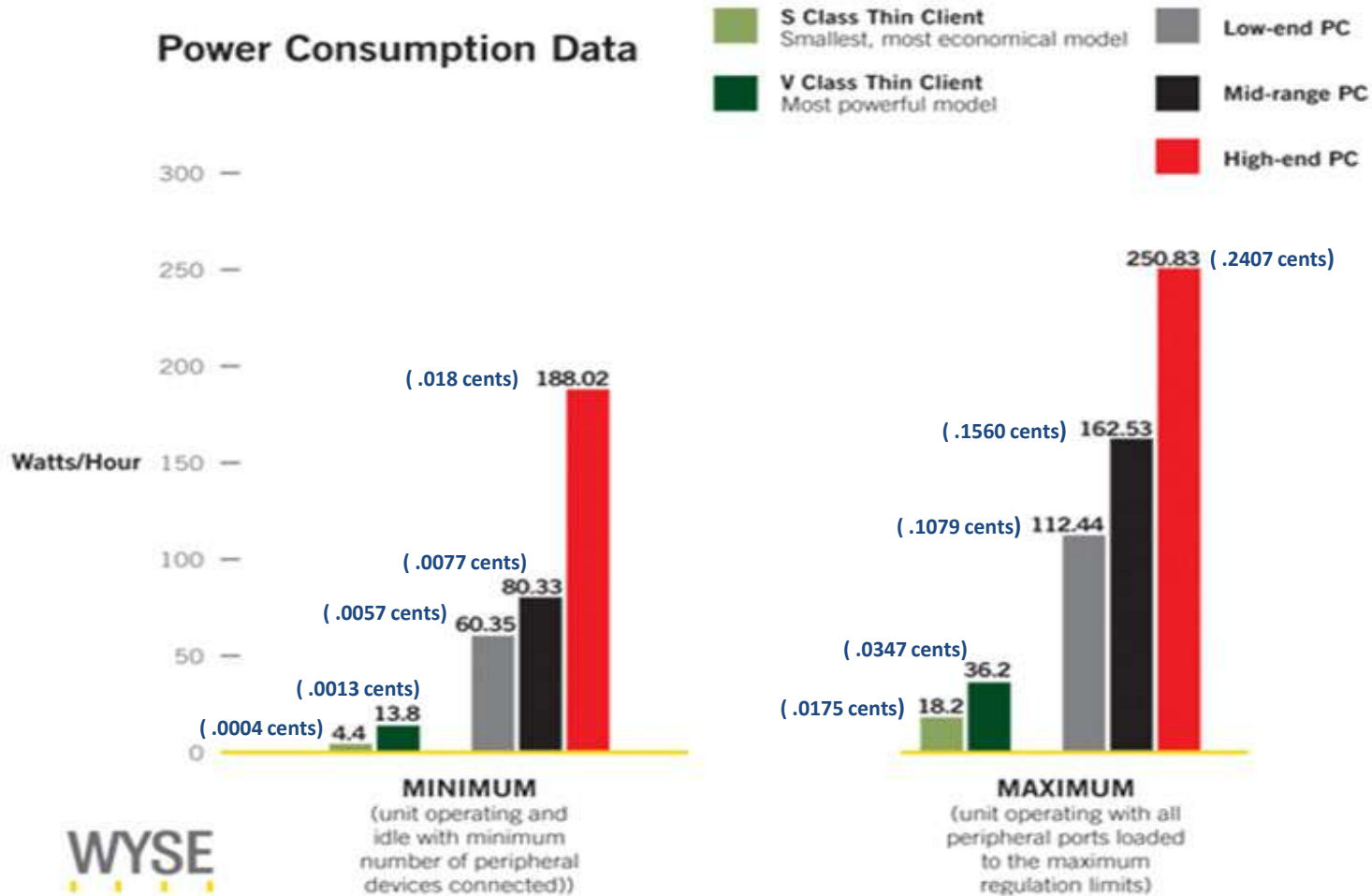
New Virtual Desktop Computing Architecture

3-Year Implementation = 30% – 40% penetration (450 – 600 workstations)



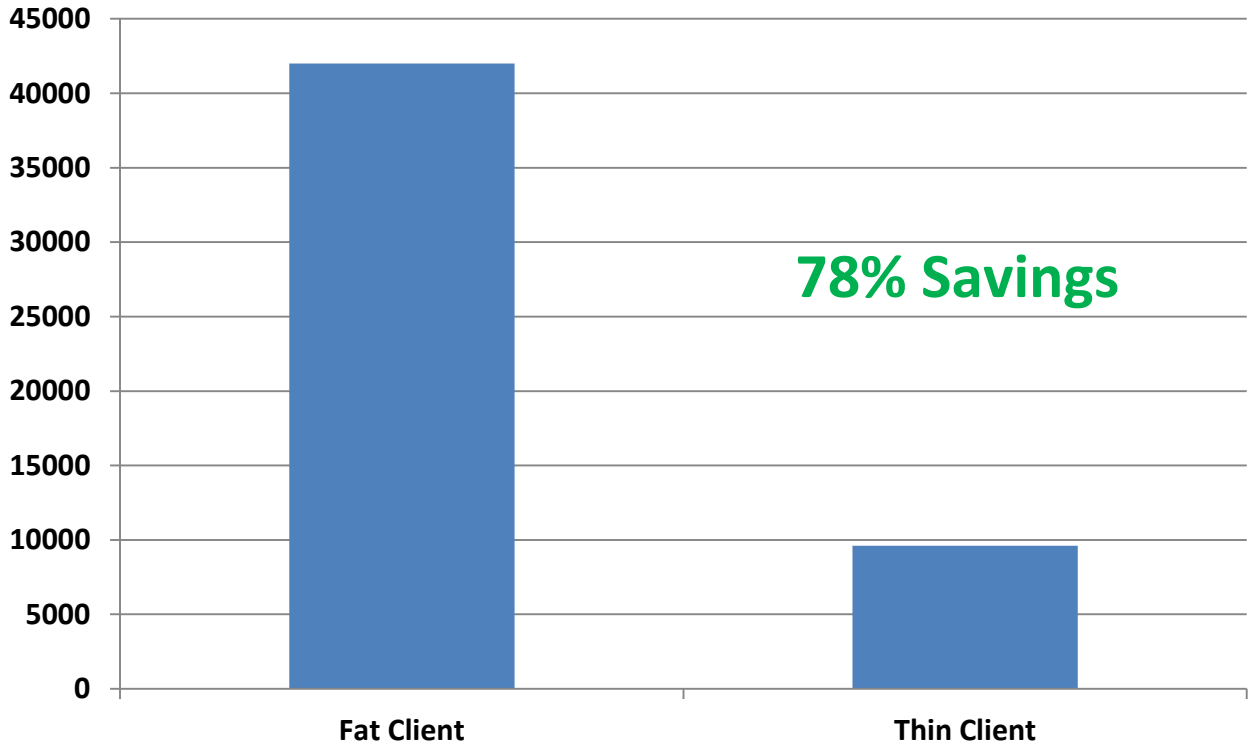
“Fat” Clients versus Thin Clients

Power Consumption Data



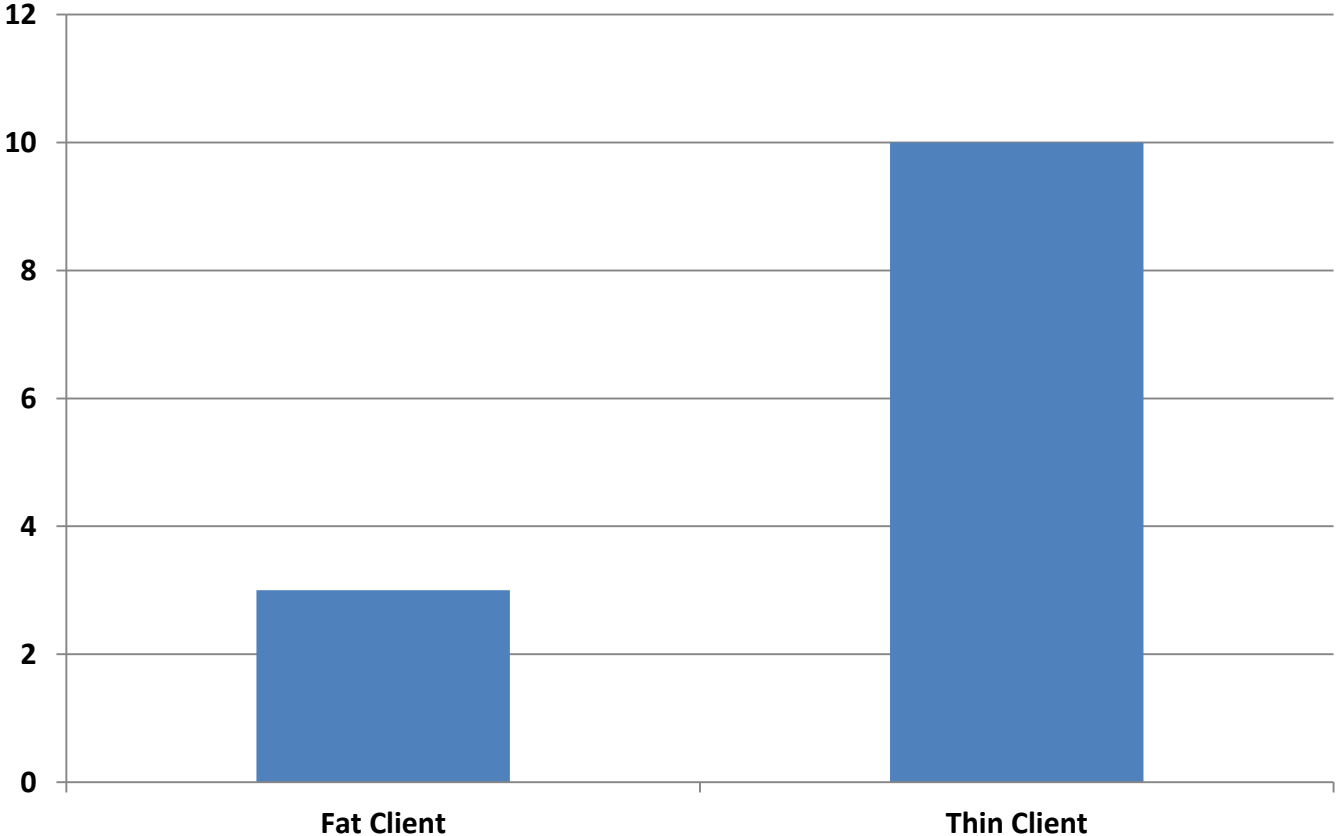
Fat Clients versus Thin Clients

Power Consumption (KWH per Year)
12 Hours/Day * 200 Days/Year * 100 Computers



Fat Clients versus Thin Clients

Mean Time Between Failure-MTBF (years)



Thin Client Deployments at MCC

Dec 2011-Aug 2012

Phase 1 in Weather Center, Atrium, Bldg A Classrooms

125 Thin Clients

Wyse R10L @ \$349 each



Dec 2012-Aug 2013

Phase 2 in Library, Kiosks and Selected Classrooms/Offices

100 Thin Clients

Wyse T10 @ \$285 each



Dec 2013-Aug 2014

Phase 3 in Selected Staff Offices and Classrooms

200 Thin Clients

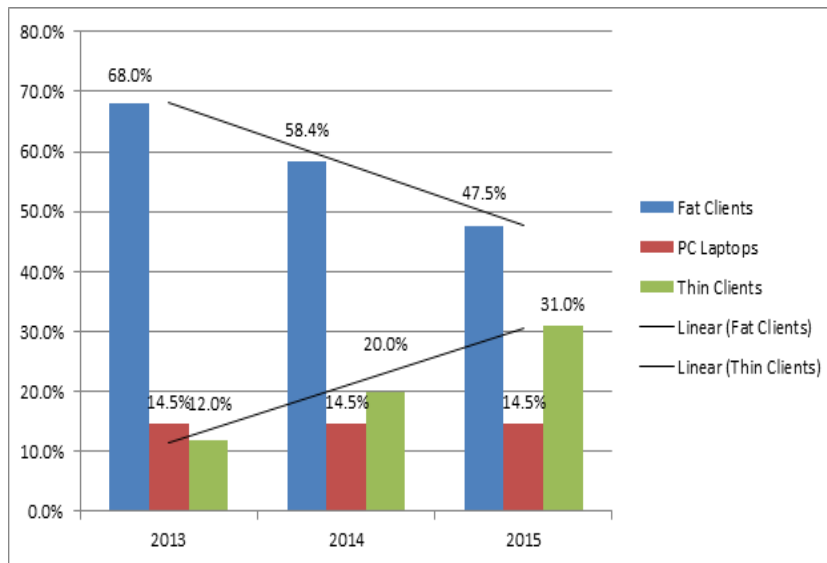
Wyse T10 @ \$259 each

Targeting Total 425 Thin Clients by Fall Semester, 2014

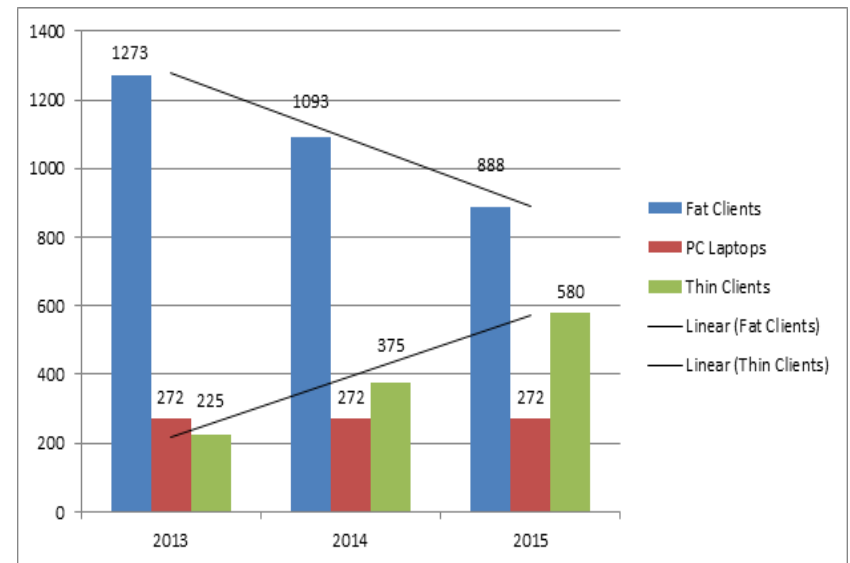
Dec. 2013: MCC Fat and Thin Client Counts

The College is gradually reducing the number of “fat client” PC’s and increasing the number of thin clients, with a final target of ~600 thin clients by the end of FY2015.

Percentage of Fat vs Thin Clients



Counts of Fat and Thin Clients



Spring 2012

PC's Leased:

485

Spring 2013

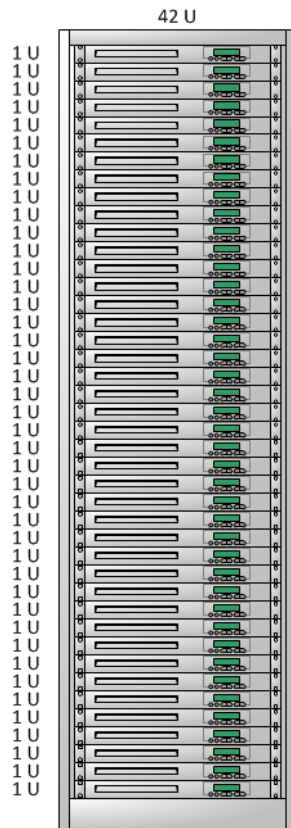
310

Spring 2014

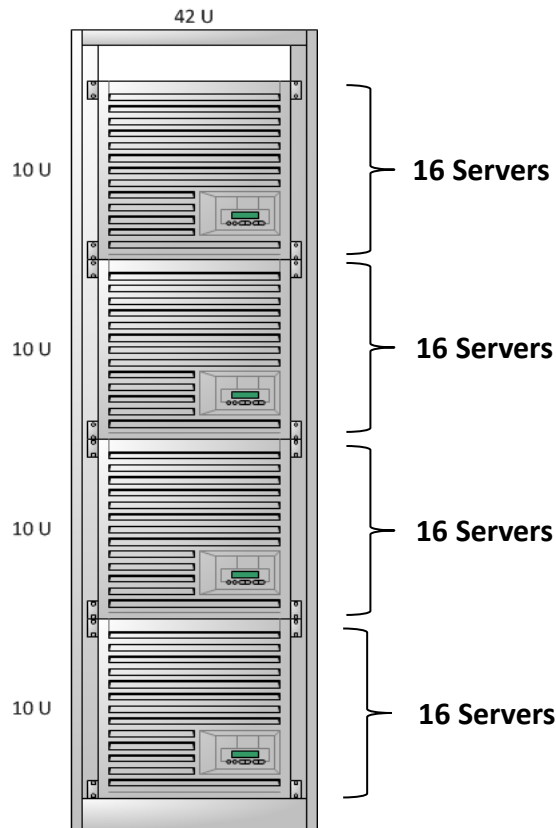
~225

Data Center Infrastructure Using Blade Server Technology

Using Blade Server Technology is 60% more dense than traditional servers



42 Servers



64 Servers



Dec. 19, 2013 Regular Board Meeting

Phase 4 of Desktop Virtualization Begins

- **Purchase 200 more Wyse T10 Thin Clients = \$52,880.00**
- **Expand Data Center Infrastructure and Software:**
 1. Additional servers to expand VMware and Citrix farm
 - 3 more blade servers in existing chassis
 2. Additional Microsoft/Citrix/VMware software licensing
 3. Capacity will support up to 350 more thin clients through FY2015
 - Targeting approx. 600 total thin clients by end of FY2015
- **Lease Data Center equipment and software licenses using current Dell Master Lease Agreement**
 - Not-to-exceed \$15,000 implementation services
 - 5-year lease / Annual Payment = ~\$49,400