



**Computing Division Activity Report**

# **Windows Desktop Administration**

**Andy Lego & Adam Walters**

**Core Support Services**

**May 23, 2006**

# Desktop Administration Elements

Customer Service - SLA

IT Training

Provisioning

SW Licensing

SysAdmindb

**Budget**

HW Service

Inventory

Helpdesk

Node Reg.

Accounts

Reporting



Metrics

Scans & Compliance

Servers

Change & Configuration Mgmt.

Anti virus

Baselines

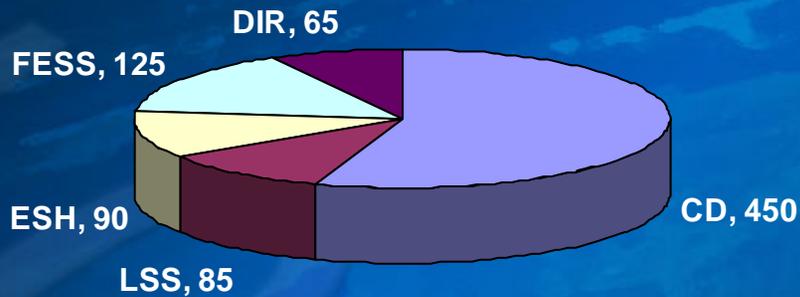
Patch Mgmt.

# Primary Drivers of Desktop Administration

- ❖ Configuration Management
- ❖ Cyber Security
- ❖ Evolving Tools for Windows mgmt.
- ❖ Customer Expectations & SLA
- ❖ New Versions of Software applications
- ❖ New & Old Hardware
- ❖ Cost effectiveness of IT service model
- ❖ Software Licensing
- ❖ Turn key workstation solutions

# Windows Users

## Desktops & Laptops



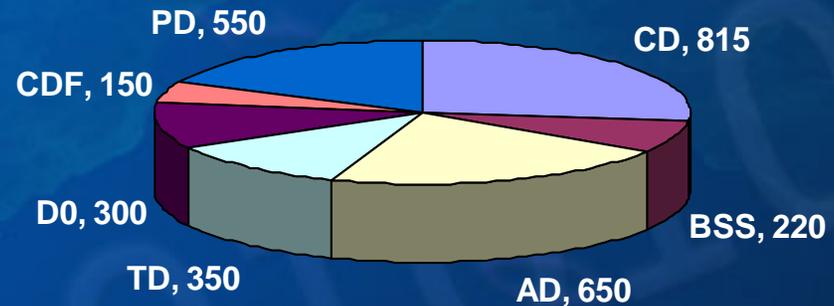
## Supported by CD\*

\*CD assists FESS & DIR

## Supported at the Laboratory

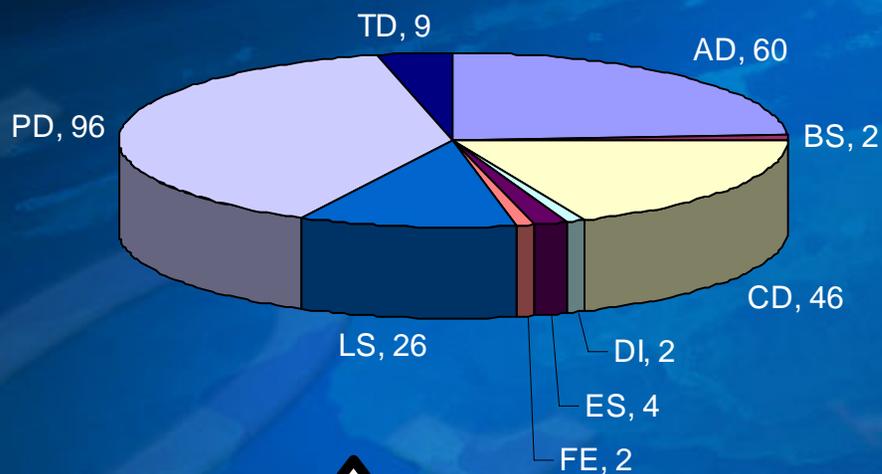


## Desktops & Laptops



# Apple Users

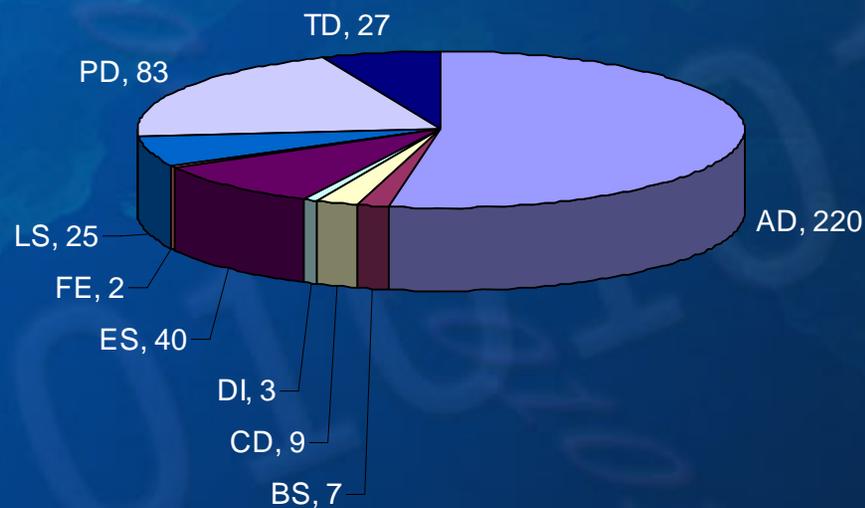
Supported at the Laboratory



## Active Sensitive Items

## Inactive Sensitive Items

> 5 years old



# Macintosh Services

- ❖ Hardware Support (D1)
  - Apple certified on HW and OS
  - Execution of Apple Warranties
- ❖ Software Licensing
  - MAC OS X – Tiger
  - Microsoft Office 2004 / Filemaker Pro
  - Symantec Anti-virus
  - Quest VMX Vintela (or equivalent) soon
- ❖ Desktop System Administrators
  - Two CD Admins trained on MAC OS

# XP Hardware Requirements

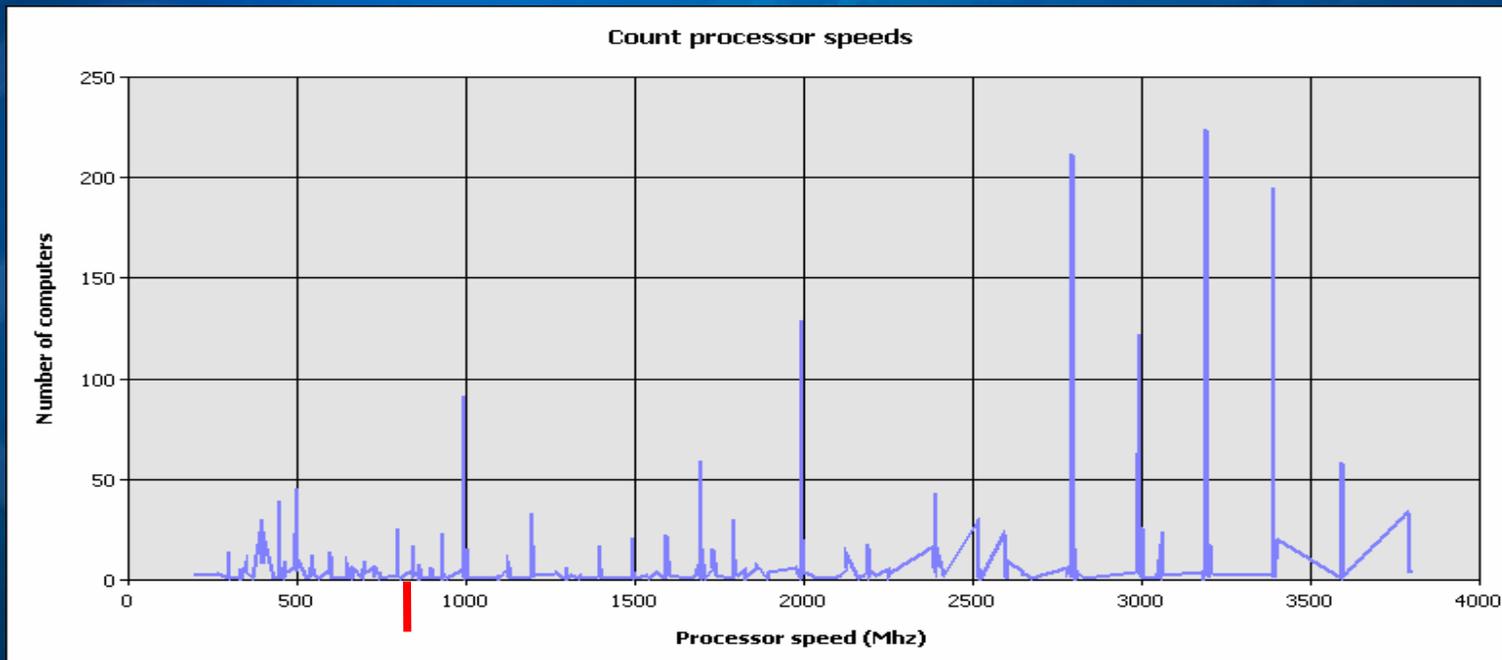
MS Minimum: P2-233 Mhz & 64 MB

MS Recommended: P2-300 Mhz & 128 MB

CD Minimum\*: P3-866 Mhz & 256 MB (20G HD)

\* Based on resource requirements of today's OS and applications (Desktop)

**P2 and early P3 technology (233 to 800 MHz) is 6-8 years old**



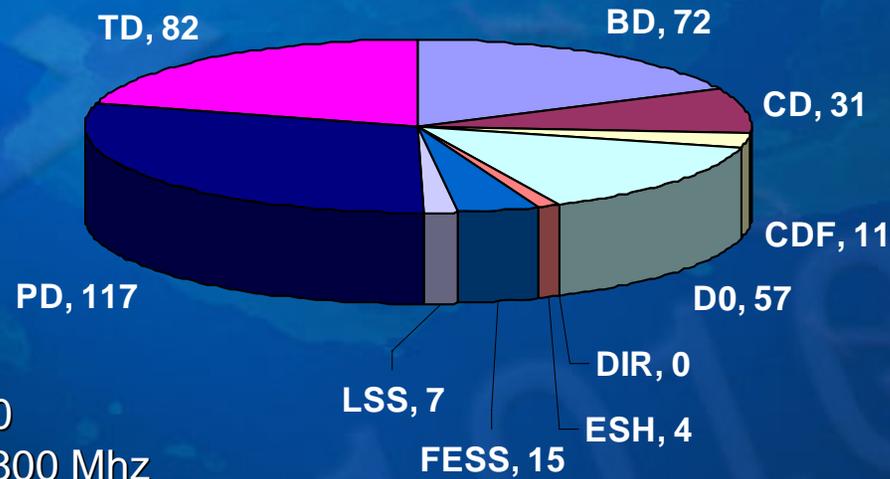
SMS Report → 2874 total → 500 desktops < P3-800Mhz

# Windows 2000 Population

- ❖ Why not upgrade to XP?
  - Legacy SW application – migration cost & effort
  - Obsolete Hardware
  - A few migrations are in progress

**Support Lifecycle**  
2000 Available  
2005 End availability  
2010 End support

**Windows 2000**



Most Windows 2000 desktops are < P3-800 Mhz

SMS Report → 400 Total

# Core Software Applications



Adobe Acrobat  
Dreamweaver  
Filemaker Pro  
Meeting Maker  
MS Project  
Open AFS Client  
VPN Client  
WRQ Reflections  
MozillaThunderbird

Adobe Acrobat Reader  
MS IE/Outlook/OE  
MS Office  
MS SMS  
Real Audio Enterprise  
Symantec Anti-Virus

Mozilla Firefox  
Oracle JInitiator  
MS Visio  
Crystal Reports  
Aperture  
Oracle Discoverer  
MS Front Page  
Remedy Client  
McAfee FW (LSS)  
GhostView/Script

And then there's specialized software including apps on turn key workstations

# Software Expense Projection

## Total Cost of Ownership (TCO) Gartner Group

The original hardware and software costs are a small portion of the cost of ownership

TCO is the direct and indirect costs incurred throughout the life cycle of a desktop. This includes acquisition, deployment, operation, support and retirement.

Some experts estimate the annual cost of ownership is four times the original cost of the hardware

	Maint	LIC/Maint
WinXP OS	\$ 19.53	\$ 75.77*
Windows (CAL)	\$ 2.82	\$ 17.84
MS Office Pro	\$ 47.88	\$ 284.89
SMS (CAL)	\$ 3.70	\$ 24.30
Meeting Maker	\$ 18.00	\$ 55.50
Symantec AV	\$ 6.50	\$ 15.83
WRQ	\$ 30.51	\$ 130.51
=====	=====	=====
<b>Total</b>	<b>\$ 128.94</b>	<b>\$ 604.64</b>

\*maintenance only

Typical Software Costs  
(Annual) for 2006

# Desktop SW Licensing

- ❖ The 3 year Microsoft Enterprise Agreement ends 10/31/06
  - The new EA will obligate all Fermi owned desktops (site-wide) to participate
  - Desktops should be purchased with the operating system only
    - OS license lives & dies with the machine it was purchased for & cannot be obtained through the EA
    - EA applications can be obtained through the EA and can be transferred to new desktops
- ❖ Adobe Acrobat Licensing Agreement
  - Depending on the final agreement, it may encompass additional Adobe products including Macromedia products like Dreamweaver

# XP Remote Administration

## ❖ Remote Assistance

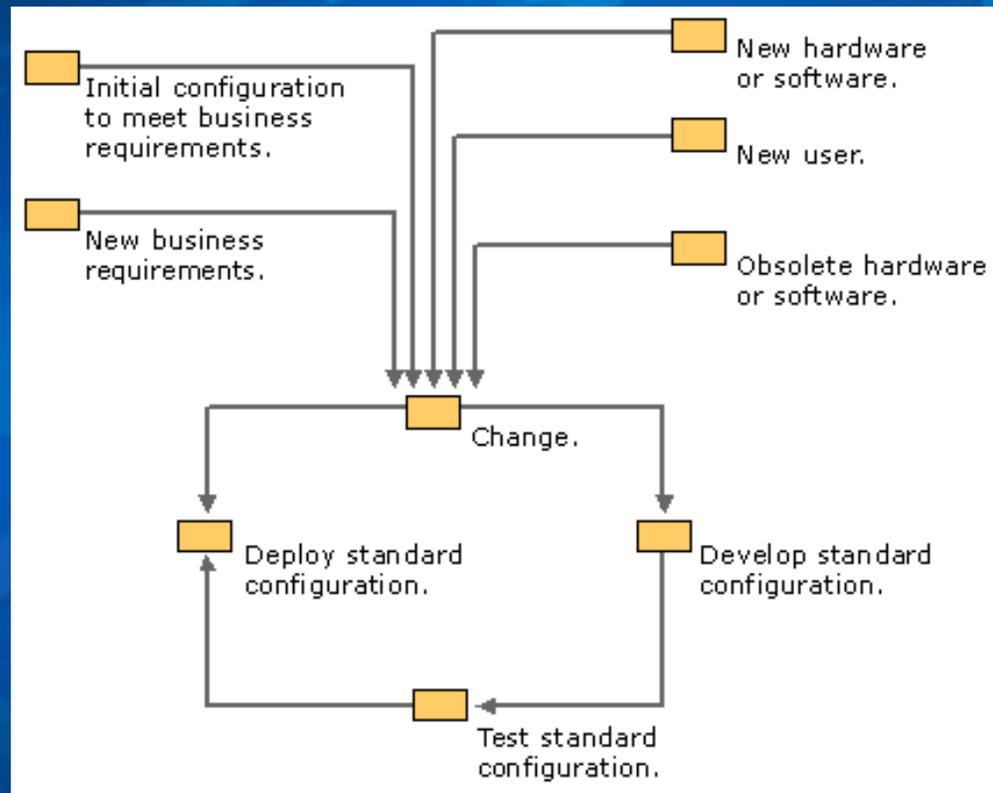
- Trusted person (Admin) requests Remote Assistance connection
- User approves
- Admin joins user session with user's profile
- Both user and admin viewing console and interacting with operating system and applications

## ❖ Remote Desktop

- User/Admin logs in and takes over PC Console
- *Not used by Desktop Support*

# Microsoft's view of desktop configuration lifecycle

- IT develops an initial desktop configuration that meets present business needs
- New business requirements necessitate changes to the initial configuration
- New hardware or software is introduced



- Other hardware or software becomes obsolete
- New users require services

Each time change is required, IT has to update, test, and deploy the new standard configuration.

A Desktop Change and Configuration Management Process

# Systems Management Server

- ❖ SMS saves tremendous effort
  - Still learning – advertisement yields too low
    - People don't leave on (power, network)
    - Laptops consistently have lower yields
      - Dual boots, power save, travel
    - Other issues
  - Desktops not in AD, not running SMS
  - Always attempting to minimize impact to customers (reboots, timing)
- ❖ Reporting and inventory are invaluable

# Recycling Desktops – Life Cycle

- ❖ 3 year life cycle? Not exactly!
  - 3-5 year cycle for most primary desktops
  - Then the desktop is often re-used in years 4-8 in a less demanding situation (special purpose desktop, test stand, contractor/summer student?, etc.)
  - Similar strategy in other Divisions/Sections
- ❖ Target a 4 year refresh rate, retire by year 5
  - PC hardware: 40% of companies are on a 4-year cycle, 30% are on a 3-year cycle, and 30% are on other (longer) cycles
  - ~6% of the desktops in use by or supported by CD are 6-8 year old hardware & have questionable benefit/cost

# Recycling Desktops

Sanitization of Automated Data Processing Equipment (ADPE)

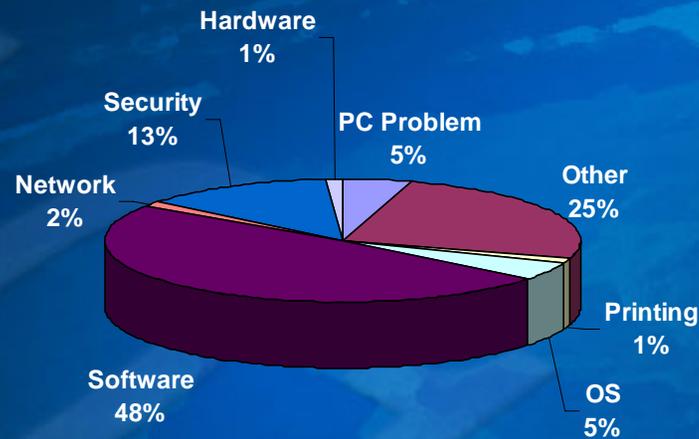
- ❖ Wipe that disk!
  - It's a good practice to wipe the disk and re-load if a desktop is being reassigned within the division – get Desktop Support involved
  - If a disk or desktop is sent to Site 38 for reallocation the laboratory must ensure “...all files and proprietary software are removed from hard drives prior...” to reallocation internal to the laboratory
  - Desktops, disks, media not recycled internally go to the ‘crusher’

# Desktop Administration Effort

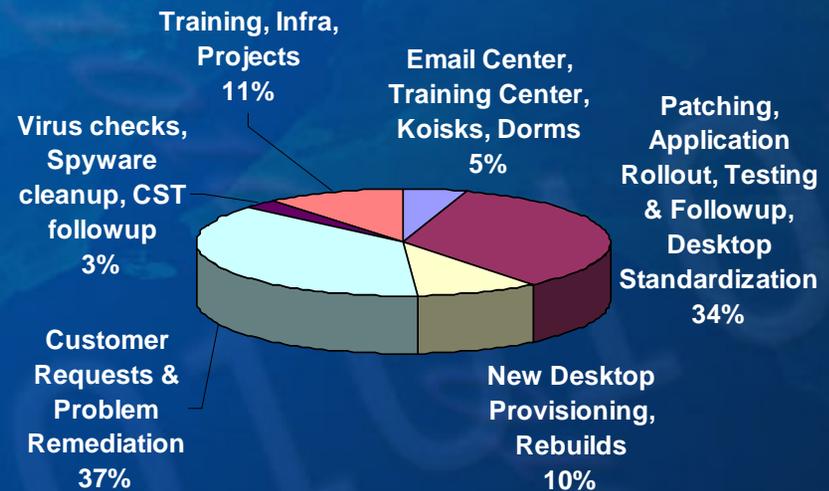
- ❖ Desktop tickets (12 months) - 2100
- ❖ Tier 1 HD Tickets (12 months) - 620
- ❖ New desktops provisioned – 100 est.
- ❖ Effort Reporting
  - Lego, Kippenhan, Hill, Karrels, Chramowicz, Kwarciany, Treptow, Walters, Kaletka
  - 4.1 FTE
  - Tier 1 HD effort Bozonelos, Monzon (D1)
  - Dave Schuman (D1) 2 days/week at FESS

# Desktop Administration Effort

## Remedy Desktop Tickets



## Mgmt View Desktop Activity



~ 5 FTEs used in the calculation

# The IT Communication Conundrum

User: Why can't those geeks communicate?

IT Pro: Why are those users so dumb?

Charles Shirley - NLIT 2006  
Sandia National Laboratories

- ❖ Good communication just happens, right?
  - It's work and it's sometimes a challenge to:
    - Research, think and explain. There is a tendency to move on to the next helpdesk ticket
    - Follow through & follow up
    - Provide a consistent message
    - Provide dynamic information with tool that is too static (Web)

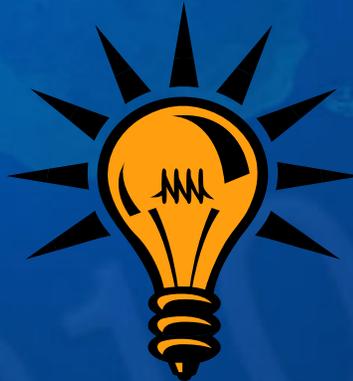
# Support Challenges – Desktops

- ❖ Dual boot desktops
  - Are too often not well managed
  - Run afoul of Remote tools (SMS, Remote Assist.)
  - Often have weak needs justification
  - Require follow up each month
- ❖ Exhausted desktops
  - Can take 300% longer to load an application
  - Disk space & memory issues (AV time out)
  - Is it efficient for our employees?
- ❖ Leverage more from tools
  - All desktops in Active Directory and using SMS?
  - Reduce instances of local admin?
  - Increase SMS advertisement yields
  - Extend intelligent use of Group Policy

# Support Opportunities - Desktops

Sounds like a proposed change to the Division's operational model, continued backing in tools development and investment new hardware.

OK, so what's the business case?



# Support Opportunities - Desktops

What are the benefits of change?

Reduce dual boot desktops

+ Replace older desktops

+ Leverage more from tools

-----

~ 1 Desktop Administrator

& more productive users

& increased cyber security

# The Roadmap to Success

## Accomplishments

- ❖ SLA & regular meetings with customers
  - LSS, ESH, BSS & FESS and DIR
  - Understanding, setting & managing expectations \*
- ❖ Systems Management Server (SMS)
  - Patch Management
  - Software distribution
  - Inventory & Reporting
- ❖ Remote Administration of Desktops
  - Fewer visits required to user locations

# The Roadmap to Success

## Accomplishments

- ❖ Integration with the Helpdesk
  - Tier 1 services provided at the Helpdesk
- ❖ System Admins not coupled to OU
  - Improved load balancing
- ❖ Alignment of SysAdmindb with AD
  - It's a inventory thing...what do we support?
  - Hierarchical logical cluster model
  - Helpful with security notices

# The Roadmap to Success

## Accomplishments

- ❖ Standard Desktop Configuration
  - Provisioning with base load install CD
  - Migration from Patchlink to SMS last May
  - D1 help to get desktops to standard config
    - OS & applications to current version
    - Includes updating and removing apps
  - 90% complete on 2000 → XP
  - 95% complete on migration to Office 2003
    - follows Windows 2000 to some degree

# On the Radar Screen

## ❖ Customer Service

- Improve communication and value
- Framework of standardization
  - Leave room to customize (one size does not fit all)

## ❖ Managing Disparate IT Systems

- Windows, Macintosh, Linux desktops
- Examining support for diverse systems is a discussion of comparable services
- Leverage existing investments

# On the Radar Screen

- ❖ Cyber Security Road Map
  - Configuration management
  - Compliance
  - Maturation of tools and skill sets
- ❖ Organization Evolutions
  - Continue to leverage centralized services
  - Resource Swap & Expertise Sharing
- ❖ IT Training and New Technology
  - To stay up to date, you have to immerse yourself in the technology

# Coming to a Desktop Near You

- ❖ Win 2000 → XP
- ❖ Version 10.1 SAV
- ❖ Real Audio Enterprise
- ❖ Microsoft Monthly Patches
  - 2<sup>nd</sup> Tuesday of the month
  
- ❖ Vista in 2007
- ❖ Office 2007



...the End