

# PAC07 IT Redux

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# External Contracts

- \$15K contract with IEEE for 50 laptops, networking hardware, A/V equipment, Internet access (which was subcontracted to Convention Center), and 3 computer technicians.
- \$21K contract with AVPS (Convention Center A/V company) for 24 laptops, monitors, keyboards, & mice.

# Web Server/Paper Upload Server

- Dell PowerEdge SC1425 server
  - dual Intel dual-core 3.6 Ghz Xeon CPU
  - 2 GB RAM
  - dual 80 GB hard disks – RAID 1
  - RHEL 4, Apache 2.0.52, Perl 5.8.5
- backups to institutional Tivoli server 4 times daily
- pac07.org website consumed 32 MBytes – static HTML, no CMS
- paper uploads consumed 20.3 GBytes
- SPMS @ FNAL redirected client uploads/downloads to this LANL server

# Editorial Software

- Win XP SP2
- Internet Explorer 6.0
- Firefox 2.0
- Adobe Acrobat 7.0
- Adobe Distiller 7.0
- Enfocus PitStop Professional 6.5
- WinEdt 5.3
- ProTeXt 2.0
- WS\_FTP Pro 8.03
- WinSCP 3.6.1
- UltraVNC
- MS Office 2003
- OpenOffice 2.2
- Semantec AntiVirus
- Gimp 2.3
- Cygwin 1.5
- gVim 7.1

# Editorial Software (con'd)

- All software installed and tested on 'development hardware' prior to conference.
- Final software validation on 'production hardware' performed one day prior to paper editing.
- Software installed on 24 laptops in 2 parallel sessions using Symantec Ghostcast the evening prior to paper editing – took ~1 hour.
- Ghostcast process tested thoroughly prior to the conference.

# Editorial Hardware

- IBM T60 laptops (18 editors + 6 paper reception)
  - 2.0 Ghz Intel Core 2 Duo
  - ATI Radeon X1400 graphics
  - 1 GB RAM
  - 100 GB hard drive
  - wired ethernet
- NEC 20" 1600x1200 LCD monitors
- External keyboards & mice

# Editorial Hardware (con'd)

- Apple PowerMac (2)
  - Dual 2.0GHz PowerPC G5
  - 2 GB RAM
  - 120GB hard drive
- 23" Apple Cinema Display

# Editorial File/Print Server

- Dell Precision 360 (2)
  - 2.4 Ghz Intel Xeon
  - 2 GB RAM
  - 80 GB + 250 GB hard drives
  - 250 GB USB drive for backups
  - Windows 2003 Server
    - 'Simple File Sharing'
    - shared 'editor' account with individual folders for each server



# Printers

- HP Color LaserJet 4350TN (two for editors + 1 for Internet cafe)
- HP LaserJet 1230TN (2 for registration)
- consumed ~15,000 pages

# Registration Desks

- Dell Latitude D600 laptops
  - Intel 1.4 Ghz Pentium M
  - 512 MB RAM
  - 80 GB hard drive
  - wired ethernet
- 3 for delegate registration
- 1 at vendor registration
- 1 at registration desk for JACoW registration

# Badge Printing

- Dell Latitude D410 laptops (2)
- Fargo DTC-550 badge printer (2)
- worked beautifully...  
...until the ribbon ran out.

# Internet Cafe

- Dell Latitude D600 laptops (24)
- Color printer
- Wired Ethernet
- Always full...

# Connectivity

- Internet access was provided by Convention Center as part of our IEEE contract.
- Advertised 3.0 Mbit/s down / 1.0 Mbit/s up for wired network.
- Separate 1.5 Mbit/s down / 768 Kbit/s up for wireless network.
- Actual wire speeds ranged from 80 kbit/s to 240 kbit/sec under load.
- Outages
  - House wiring issue caused ~3 hour downtime on wired network.
  - ESNNet routing issue in CA resulted to loss of connectivity to LANL and FNAL for ~4 hours.

# Staffing

- IT Coordinator (11 days), Senior Computer Technician (7 days), Student (3 days).
- 3 Computer Technicians from IEEE – responsible for networking, Internet Cafe, A/V.

# Lessons Learned

- Get good help.
- Throughput and load testing should be conducted early on.
- Insist on a physical inspection of all network infrastructure.
- Seeing EPAC operation first-hand was invaluable – thanks Freddie!