

Anthony Cuffe

iPac'14 Technical Debrief

Dresden, German

2014 JACoW Team Meeting

Melbourne, Australia

Thomas Jefferson National Accelerator Facility is managed by
Jefferson Science Associates, LLC, for the U.S. Department of Energy's Office of Science



Overview

- ⦿ Credits
- ⦿ Hardware
 - Proceedings Office
 - Author's Reception
 - Business Office
 - Registration
 - Speaker Preparation
 - Auditoriums
 - Paper Café
 - Internet Café
- ⦿ Networking
- ⦿ Software
- ⦿ Space Planning
- ⦿ Ergonomics
- ⦿ Usage Statistics
- ⦿ What Went Right/Wrong?
- ⦿ More Information



The poster for the 5th International Particle Accelerator Conference (IPAC14) features a night view of the Dresden skyline with the Elbe River in the foreground. The text is overlaid on the image.

IPAC14

5th INTERNATIONAL PARTICLE ACCELERATOR CONFERENCE

June 15 - 20, 2014
Dresden | Germany

HOSTED BY **HZDR**

ORGANIZING COMMITTEE CHAIR: Andrzej Wolski (*University of Liverpool*)
SCIENTIFIC PROGRAMME COMMITTEE CHAIR: Gianluigi Arduini (*CERN*)
LOCAL ORGANIZING COMMITTEE CHAIR: Peter Michel (*HZDR*)

LOCATION International Congress Center Dresden

Special Thanks

Siegmar Lieber, HZDR

iPac'14 IT Coordinator



JACoW Developers

Raphael Muller

Ivan Andrian

Volker Schaa

Jan Chrin

Stefano Deiuri

Matt Arena



Hardware

⦿ Editor's Windows Workstation (20)

- Fujitsu Esprimo P720, E90+, Intel Core i5
- 8 GB RAM
- 256 GB SSD
- 24" Fujitsu B24W-6 LED Display (1920x1200)

⦿ Editor's Mac Workstation (2)

- 27" iMac

⦿ Printers (2)

- HP LaserJet 500 color M551

⦿ 24 Port Network Switch (2)

- Unmanaged

⦿ Backup Server

- Editor's Workstation with 500GB drive and 16 GB RAM

⦿ Spares

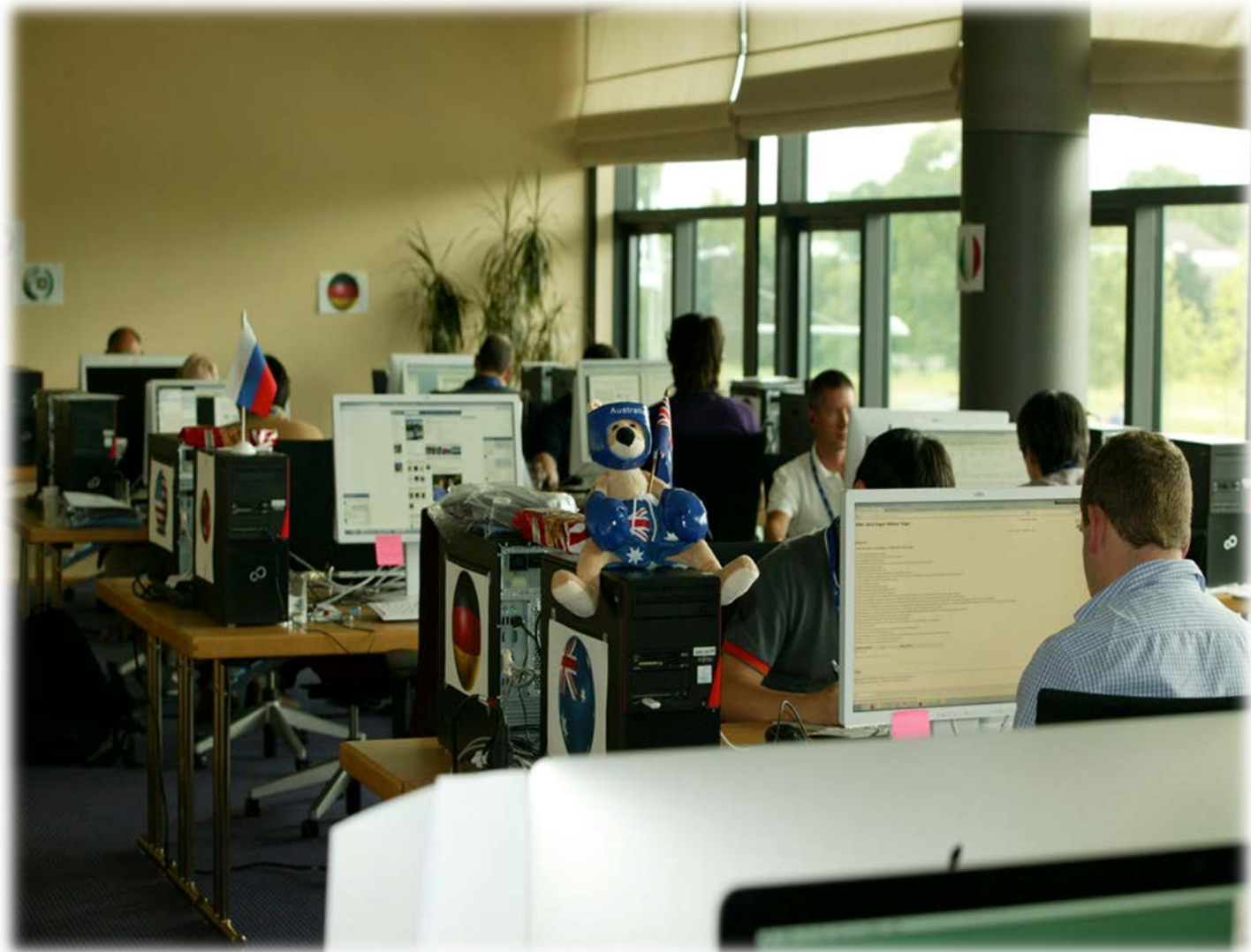
- 24" Monitor (2)
- Editor's Workstation (2)



Hardware



Hardware



Hardware

⦿ Windows Workstation (4)

- Fujitsu Esprimo P720, E90+, Intel Core i5
- 8 GB RAMM
- 256 GB SSD
- 24" Fujitsu B24W-6 LED Display

⦿ 8 Port Network Switch (1)

- Unmanaged

⦿ Wireless Networking



Hardware

⦿ Windows Presenter Laptop (4)

- Fujitsu Lifebook E753 Intel Core i5
- 15,6" TFT, 8 GB RAMM (2560x1600)
- 256 GB SSD
- 1 used for



⦿ Mac Presenter Laptop (2)

- 13" Macbook Pro

⦿ 8 Port Network Switch (1)

- Unmanaged

⦿ Spares

- Macbook Pro (1)
- Lifebook E753 (1)

⦿ Wireless Networking



Hardware

⦿ Windows Presenter Laptop (2)

- Fujitsu Lifebook E753 Intel Core i5
- 15,6" TFT, 8 GB RAMM
- 256 GB SSD
- Exact same as used in Speaker Preparation!

⦿ Mac Presenter Laptop (1)

- 13" Macbook Pro
- Exact same as used in Speaker Preparation!

⦿ Timer Laptop (2)

- JACoW developed java timer application
- www.jacow.org >> Tools >> Software
- Auto start Firefox with local copy
- Required configuration in the source code.
- No network connection necessary !



Hardware

⦿ Windows Workstation (3)

- Fujitsu Esprimo P720, E90+, Intel Core i5
- 8 GB RAMM
- 256 GB SSD
- 24" Fujitsu B24W-6 LED Display

⦿ Mac Presenter Laptop (1)

- 13" Macbook Pro

⦿ Printers (1)

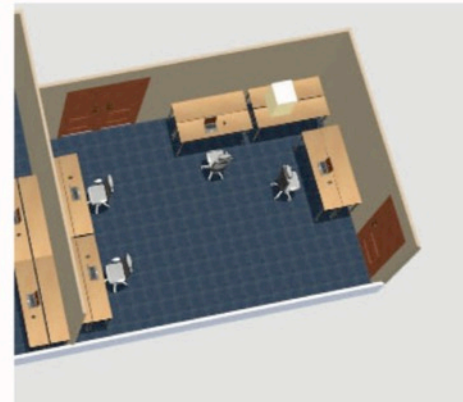
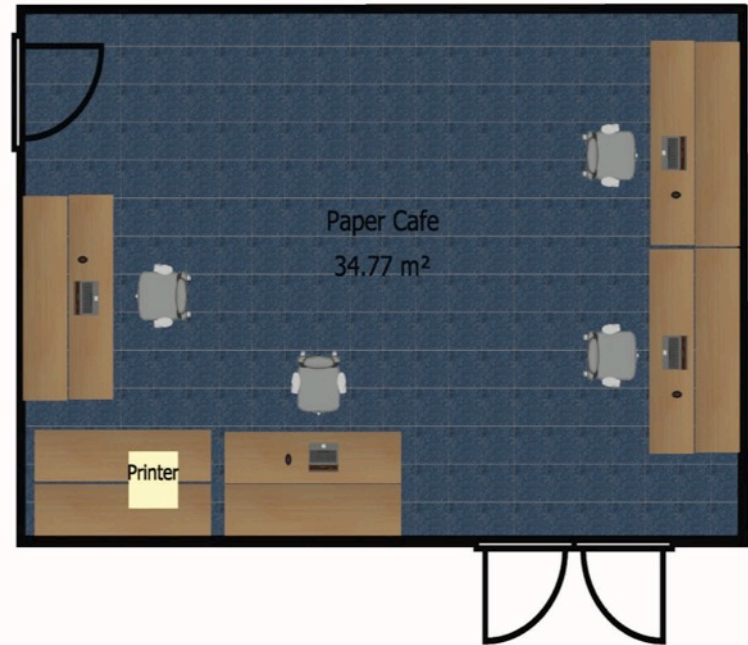
- HP LaserJet 500 color M551

⦿ 8 Port Network Switch (1)

- Unmanaged

⦿ Laptop Spaces (4)

- Wireless Available
- Wired Connections Available



Hardware

⦿ Windows Workstation (2)

- Fujitsu Esprimo P720, E90+, Intel Core i5
- 8 GB RAMM
- 256 GB SSD
- 24" Fujitsu B24W-6 LED Display

⦿ Multi-Function Printer

- Not utilized

⦿ 8 Port Network Switch (1)

- Unmanaged

⦿ Wireless Networking

Hardware

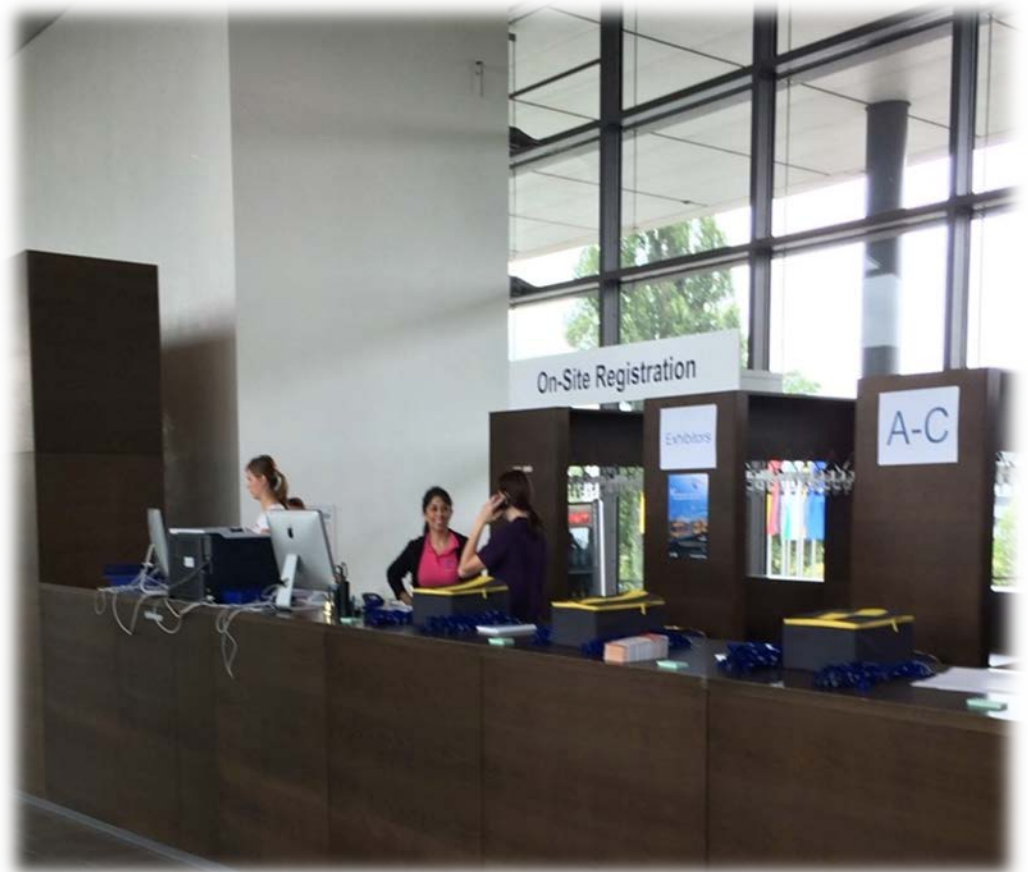
⦿ Mac Workstation (2)

- 27" iMac
- Provided by Venue

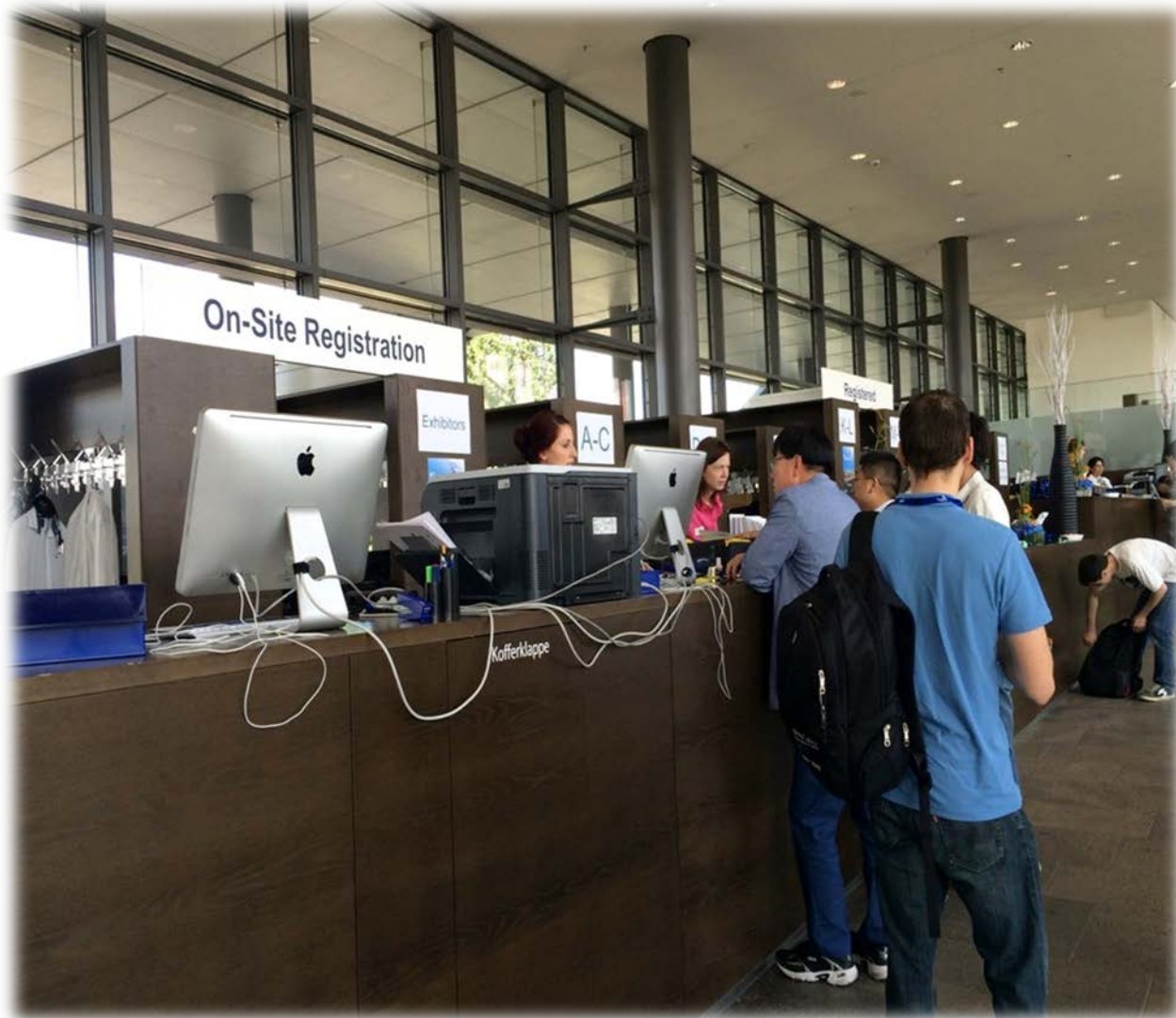
⦿ Multi-Function Printer

- Provided by Venue

⦿ Wireless Networking



Hardware



Hardware

◎ Ubuntu Workstations (10)

- Intel NUC PC Intel Core i3
- 4 GB RAMM
- 120 GB SSD
- Ubuntu Kiosk Mode – Firefox Auto launch

◎ 24 Port Network Switch (1)

- Unmanaged

◎ Laptop Spaces (4)

- Wireless Available
- Wired Connections Available



Hardware

© Dot Boards (3)

- 42" Plasma Display
- Mini PC Shuttle X6110XA Slim PC
- Rented from Convention Center



Hardware - Summary

- ⊙ PC Workstations (~27) (851€)
- ⊙ iMac Workstation (2) (700 €)
- ⊙ Internet Workstation (10) (364 €)
- ⊙ Backup Server (1) (1084 €)
 - Editor's Workstation with 500GB drive and 16 GB RAM
- ⊙ 24" (1920x1200) Monitors (39) (264 €)
- ⊙ Windows Laptops (6) (1168 €)
- ⊙ MacBook Laptops (5) (480 €)
- ⊙ Network Switches (10)
- ⊙ Printers (4)
 - HP LaserJet 500 color M551 (3) (460 €)
 - HP Multi-Function (1) – Not used (423 €)



- ⊙ Dot Boards (3) (1067 €)
 - 42" Plasma Display
 - Mini PC Shuttle X6110XA Slim PC

⌘ Spares

- 24" Monitors
- Editor's Workstation
- Internet Workstation
- Windows Laptop
- Mac Laptop
- Toner Cartridges for Printer

Networking

⦿ 1 Gb Venue Bandwidth

⦿ Hard Wires

- 1 Hard Wire drop in each location
- Giga-Bit Switches (9) for distribution
 - 8, 16 and 24 Port
 - Rented from Venue
- 3 Isolated VLANs
 - ⌘ VLAN1: Staff Offices
 - Proceedings
 - Speaker Prep
 - Auditoriums
 - Business Offices
 - ⌘ VLAN2: Internet Café
 - ⌘ VLAN3: Wi-Fi
- QOS on VLANs
 - ⌘ Quality of Service to guarantee bandwidth
 - ⌘ No issues -- not used

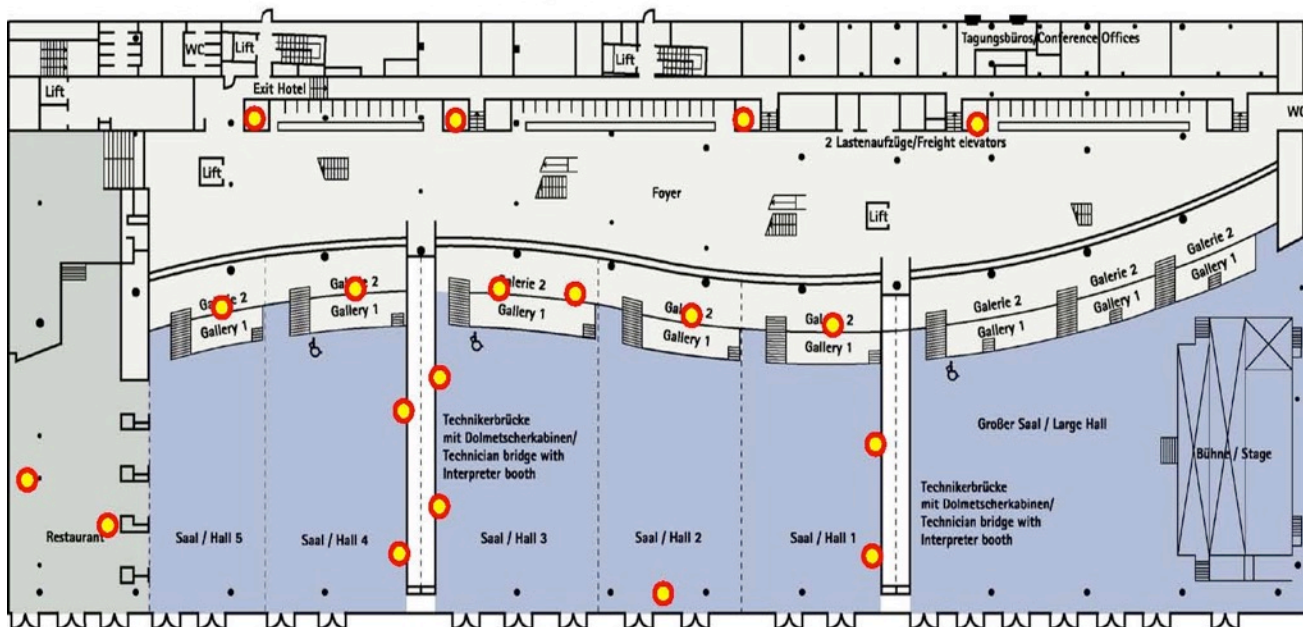


⦿ Costs for Network Drops, Rentals and Wireless – 12000 €

Networking - Wireless

⦿ Wireless

- 32 Wireless Access Points for entire venue
- 19 dedicated for the poster sessions and the industrial exhibition level
- Portable access points for quick coverage fixes
- Sized for 1200-1300 Delegates



Software – Proceedings Office

⦿ Editor's Windows Workstations

- JACoW automated bundle utilized for initial image(*Raphael*)

- **Software List:** <http://www.jacow.org/index.php?n=Editors.RecommendedSoftware>

- Master system cloned and replicated

- Manual configuration of PitStop, Acrobat Pro and MsWord

- **Procedures:** <http://www.jacow.org/index.php?n=Editors.SoftwareSettings>
- Took less than (5) minutes per workstation

⦿ Editor's Mac Workstations

- Manual configuration of PitStop, Acrobat Pro and MsWord

- **Procedures:** <http://www.jacow.org/index.php?n=Editors.SoftwareSettings>
- Took around (20) minutes per workstation

⦿ Red/Yellow/Green Dot Plugin (*Ivan*)

- Plugin to tag papers in lieu of stickers
- Manual install
- Saved time, money and looked pretty

Software – Speaker Preparation and Auditoriums

⦿ Windows and MacBook Pro Laptops – *All identically configured!*

○ JACoW automated bundle utilized for initial install (*Raphael*)

- **Software List:** <http://www.jacow.org/index.php?n=Editors.RecommendedSoftware>

○ Manual configuration of other software using **Ninite** (*ninite.com*)

- Ninite – installs or updates multiple apps at once – ninite.com

1. Click all the apps you want

You can learn more about a program by hovering over it.

2. Click Get Installer and run it

Ninite installs apps for you in the background. No clicking next. We say NO to toolbars or other junk.

3. Run it again later

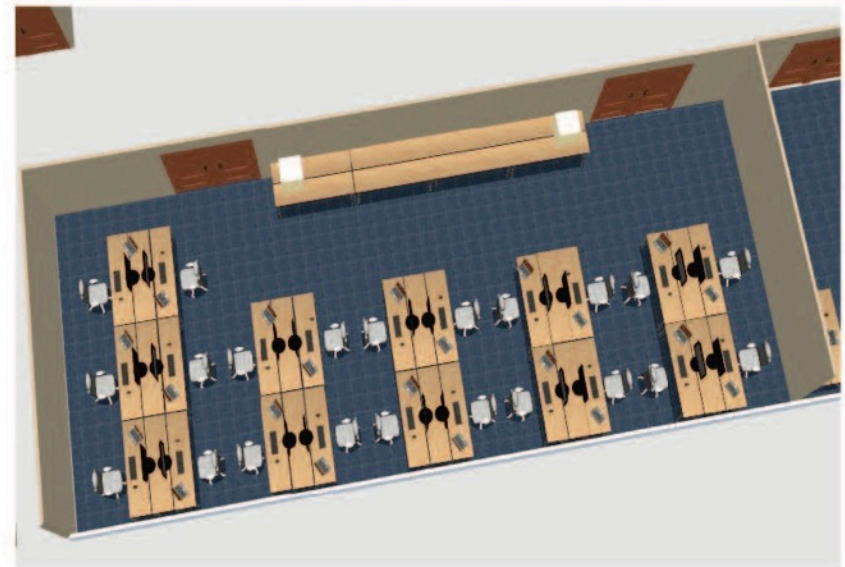
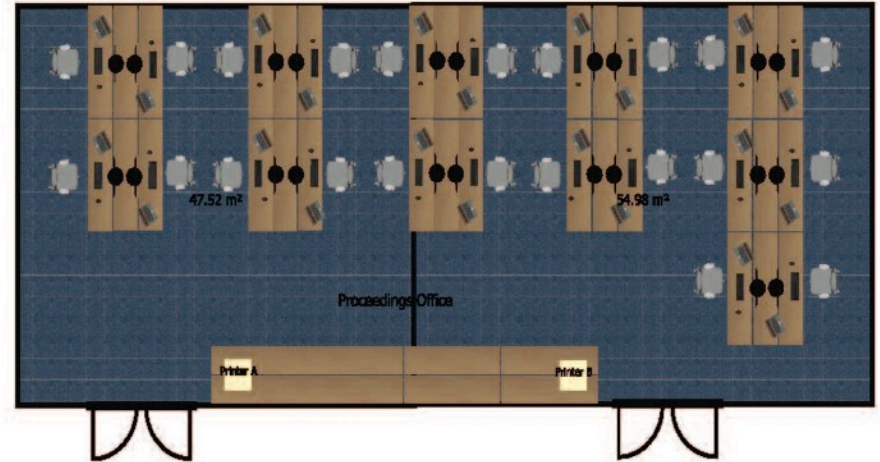
Your installer will update apps to the latest versions. If something is up-to-date we'll skip it.

Web Browsers	Messaging	Media	Runtimes	Imaging	Documents	Security	File Sharing
<input checked="" type="checkbox"/> Chrome	<input type="checkbox"/> Skype	<input type="checkbox"/> iTunes	<input checked="" type="checkbox"/> Java 8	<input type="checkbox"/> Paint.NET	<input checked="" type="checkbox"/> OpenOffice	<input type="checkbox"/> Essentials	<input type="checkbox"/> qBittorrent
<input type="checkbox"/> Opera Chromium	<input type="checkbox"/> Pidgin	<input type="checkbox"/> Hulu	<input type="checkbox"/> .NET 4.5.2	<input type="checkbox"/> Picasa	<input checked="" type="checkbox"/> Reader	<input type="checkbox"/> Avast	<input type="checkbox"/> eMule
<input checked="" type="checkbox"/> Firefox	<input type="checkbox"/> Google Talk	<input checked="" type="checkbox"/> VLC	<input checked="" type="checkbox"/> Silverlight	<input type="checkbox"/> GIMP	<input type="checkbox"/> SumatraPDF	<input type="checkbox"/> AVG	
	<input type="checkbox"/> Thunderbird	<input type="checkbox"/> KMPlayer	<input type="checkbox"/> Air	<input type="checkbox"/> IrfanView	<input type="checkbox"/> Foxit Reader	<input type="checkbox"/> Malwarebytes	Online Storage
Other	<input type="checkbox"/> Trillian	<input type="checkbox"/> AIMP	<input type="checkbox"/> Shockwave	<input type="checkbox"/> XnView	<input type="checkbox"/> CutePDF	<input type="checkbox"/> Ad-Aware	<input type="checkbox"/> Dropbox
<input type="checkbox"/> Evernote	<input type="checkbox"/> AIM	<input type="checkbox"/> foobar2000		<input type="checkbox"/> Inkscape	<input checked="" type="checkbox"/> LibreOffice	<input type="checkbox"/> Spybot 2	<input type="checkbox"/> Google Drive
<input type="checkbox"/> Google Earth	<input type="checkbox"/> Yahoo!	<input checked="" type="checkbox"/> Winamp	Utilities	<input type="checkbox"/> FastStone	<input type="checkbox"/> PDFCreator	<input type="checkbox"/> Avira	<input type="checkbox"/> Mozy
<input type="checkbox"/> Steam		<input type="checkbox"/> Audacity	<input type="checkbox"/> TeamViewer	<input type="checkbox"/> Greenshot		<input type="checkbox"/> Super	<input type="checkbox"/> OneDrive
<input type="checkbox"/> KeePass 2	Compression	<input checked="" type="checkbox"/> K-Lite Codecs	<input type="checkbox"/> ImgBurn		Developer Tools		<input type="checkbox"/> SugarSync
<input type="checkbox"/> Everything	<input checked="" type="checkbox"/> 7-Zip	<input type="checkbox"/> GOM	<input type="checkbox"/> Auslogics		<input type="checkbox"/> Python		<input type="checkbox"/> BitTorrent Sync
<input type="checkbox"/> NVDA	<input type="checkbox"/> PeaZip	<input type="checkbox"/> Spotify	<input type="checkbox"/> RealVNC		<input type="checkbox"/> FileZilla		
	<input checked="" type="checkbox"/> WinRAR	<input type="checkbox"/> CCCP	<input type="checkbox"/> TeraCopy		<input checked="" type="checkbox"/> Notepad++		
		<input type="checkbox"/> MediaMonkey	<input type="checkbox"/> CDBurnerXP		<input type="checkbox"/> JDK 8		
		<input checked="" type="checkbox"/> QuickTime	<input type="checkbox"/> Revo		<input type="checkbox"/> JDK x64 8		
			<input type="checkbox"/> Launchy		<input type="checkbox"/> WinSCP		
			<input type="checkbox"/> WinDirStat		<input type="checkbox"/> PuTTY		
			<input type="checkbox"/> Glary		<input type="checkbox"/> WinMerge		
			<input type="checkbox"/> InfraRecorder		<input type="checkbox"/> Eclipse		
			<input type="checkbox"/> Classic Start				

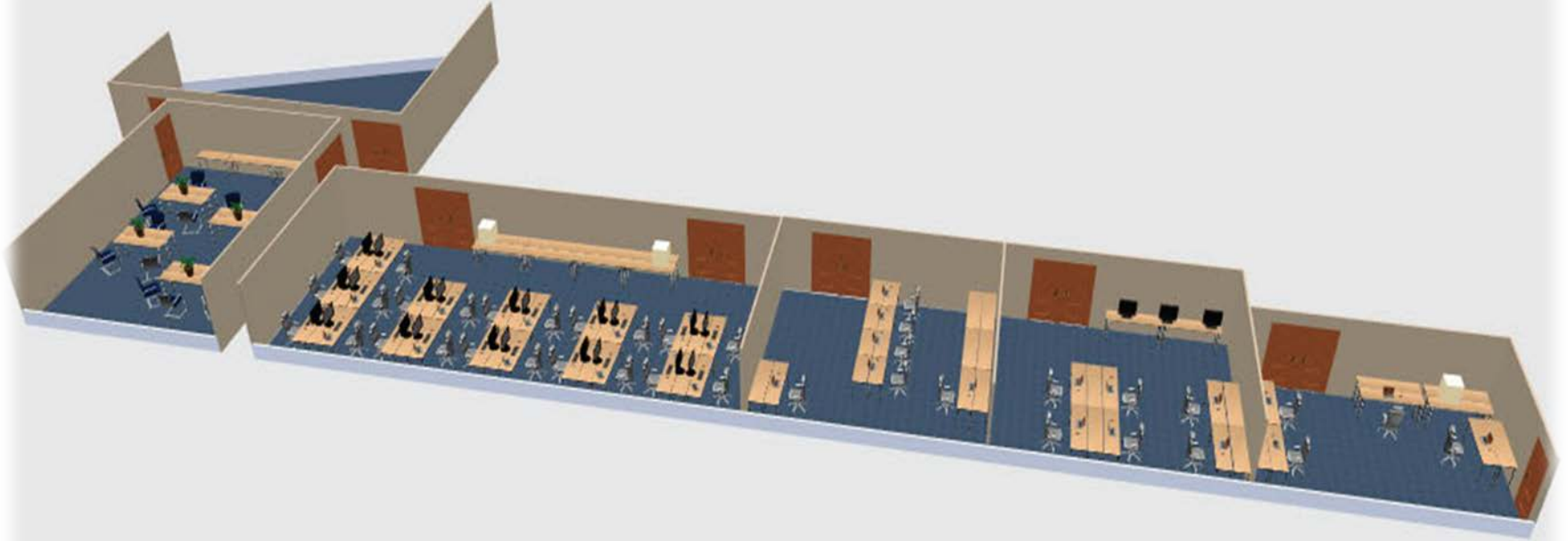
Get Installer

Space Planning

- ⦿ Layouts created for all IT spaces (Siegmar and Raphael)
- ⦿ Layouts created with *Sweet Home 3D* (free interior design application)
- ⦿ Spaces were perfectly laid out and provide plenty of space for editors.
- ⦿ No surprises – everything fit!



Space Planning



Ergonomics – Proceedings Office and Author's Reception

⊙ Workspaces

- Deep enough to work with printed papers.
- Enough Space for Laptops and to put other gear.
- Extra chairs (and space) for visiting authors.

⊙ Chairs

- Ergonomic, height adjustable chairs.
- Comfortable for Editors to sit for 8-12 hours a day.



⊙ Lighting

- Lots of natural light from windows.
- Bright workspaces for reading papers.

Usage Statistics

◎ Paper Consumption: 9600+

- Proceedings Office: ~9.000 pages
- Paper Café: ~620 pages
- Business Office: Multifunctional printer not used
- Only one Toner cartridge change

◎ Papers/Talks Processed: ~1300

◎ Network Bandwidth

- Bandwidth of internet connection for all network areas: 1 GBit/s
- Measurement of data rate on an individual PC:
 - download: 120 MBit/s
 - upload: 110 MBit/s

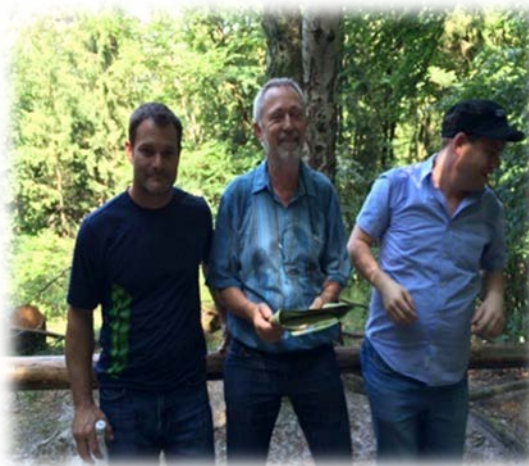
◎ Devices on Wireless

- 650+ registered devices
- 400-550 average per day in exhibition hall (600 peak)

What went right? *Everything!*

- ⦿ Staff clearly learned from lessons of the past.
- ⦿ Hardware specs were very high.
- ⦿ Spares were readily available.
- ⦿ Systems were installed and nearly flawless before Editors arrived.
 - Systems were patched and configured prior to cloning.
 - Very little post setup configuration was necessary.
 - Editing began before most editors arrived.
 - L.O.C. Admins were knowledgeable and quick to respond to anything.
- ⦿ Network Bandwidth was huge (1Gb) and it showed!
- ⦿ Wireless Networking was flawless in nearly all areas.
- ⦿ Near perfect IT meant free time for staff.

What went right? Free Time and the *World Cup*!!!!



What went right? Free Time and *World Cup!!!!*



What could have gone better?

- ⦿ WiFi at edges of building was not very good at start of conference.
 - This was dealt with by re-positioning portable access points.
- ⦿ IT/AV needs for breakout meetings were not communicated beforehand to the IT planners.
- ⦿ Laptop timer application required some re-write.
 - The aspect ratio was written for small screen sizes.
 - Perhaps this could be re-written to auto scale.
- ⦿ The U.S.A Team could have played better!

More Information

- ⦿ IT Documentation Bundle from iPac'14 (Siegmar)

IPAC14_IT.zip (uploaded as supplemental file to SPMS)

- ⦿ Previous IT Reports

<http://www.jacow.org/index.php?n=Editors.ITReportsPreviousExperiences>

- ⦿ Recommended Software List

<http://www.jacow.org/index.php?n=Editors.RecommendedSoftware>

- ⦿ Proceedings Office: Recommended Hardware

<http://www.jacow.org/index.php?n=Editors.RecommendedHardware>

- ⦿ JACoW Information for Organizers

<http://www.jacow.org/index.php?n=Editors.HomePage>

Q & A