



IPAC'22 IT Report

Natthawut Suradet – SLRI

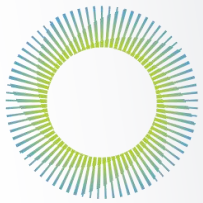
Represent by Dr. Thakonwat Chanwattana - SLRI

JTM2022 – Tennessee - USA



- Hardware components
- Proceeding office software setup
- Network
- Venue
- Manpower
- Conclusions

Hardware components



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List of hardware components

- 28x Windows desktops (2 spares)
- 28x 27" Full HD resolution monitors (2 spares)
- 10x 27" 2k resolution monitors for dual monitor (No spare)
- 5x Windows all-in-one desktop (No spare)
- 4x iMac M1 24" (no larger monitor on Apple store) (1 spares)
- 4x Micro PC for online meeting (2 spares)

List of hardware components

- 2x Canon iR ADVANCE C3530i III color printer
- 1x Canon iR ADVANCE 4551i III monochrome printer
- 1x HP inkjet printer
- 7x RaspberryPi 4 (2 spares)
- 3x 60" LED TVs with stands
- 4x 16:9 Full HD projectors (Venue)

Hardware allocation

Hardware	Proceeding office	Author Reception	Speaker Ready	Internet Café	Main Plenary	Secondary Plenary	Student Poster	Spare	Remark
All-in-One-PC				5					Rental(5)
Desktop	21	3	4		2	2		1	Rental(28), SLRI(5)
Notebook			1		1	1		2	Rental(3), SLRI(2)
MacBook			1		1	1		1	Rental(4)
iMac	3		1						Rental(4)
2k Monitor	8	2							Rental(10)
Color Printer	2								SLRI(2)
Mono Printer			1	1					SLRI(2)
Storage	1								SLRI(1)
Switch	2								SLRI(2)
Web Camera	1		1		1	1		1	SLRI(5)

List of hardware components (Network)

- 4x 48 port gigabit managed switches with POE (1 spares)
- 6x 24 port gigabit managed switches with POE (venue)
- 5x 8 port gigabit un-managed switches
- 21x Dual band access point (venue)
- 1x Network attached storage (NAS)

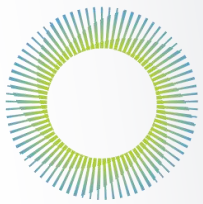
Hire cost

- 28x Windows desktop ~ 31,700 USD
- 4x 24-inch iMac Apple M1 ~ 5,600 USD
- 3x Windows notebook ~ 2,900 USD
- 3x Macbook Pro 13.3" M1 ~ 3,600 USD
- 5x All in one ~ 3,200 USD
- 10x 2k 27" Monitor ~ 3,900 USD
- 40x Acrobat licenses ~ 3,400 USD
- Shipping + Manpower ~ 6,400 USD

Summary ~ 60,700 USD

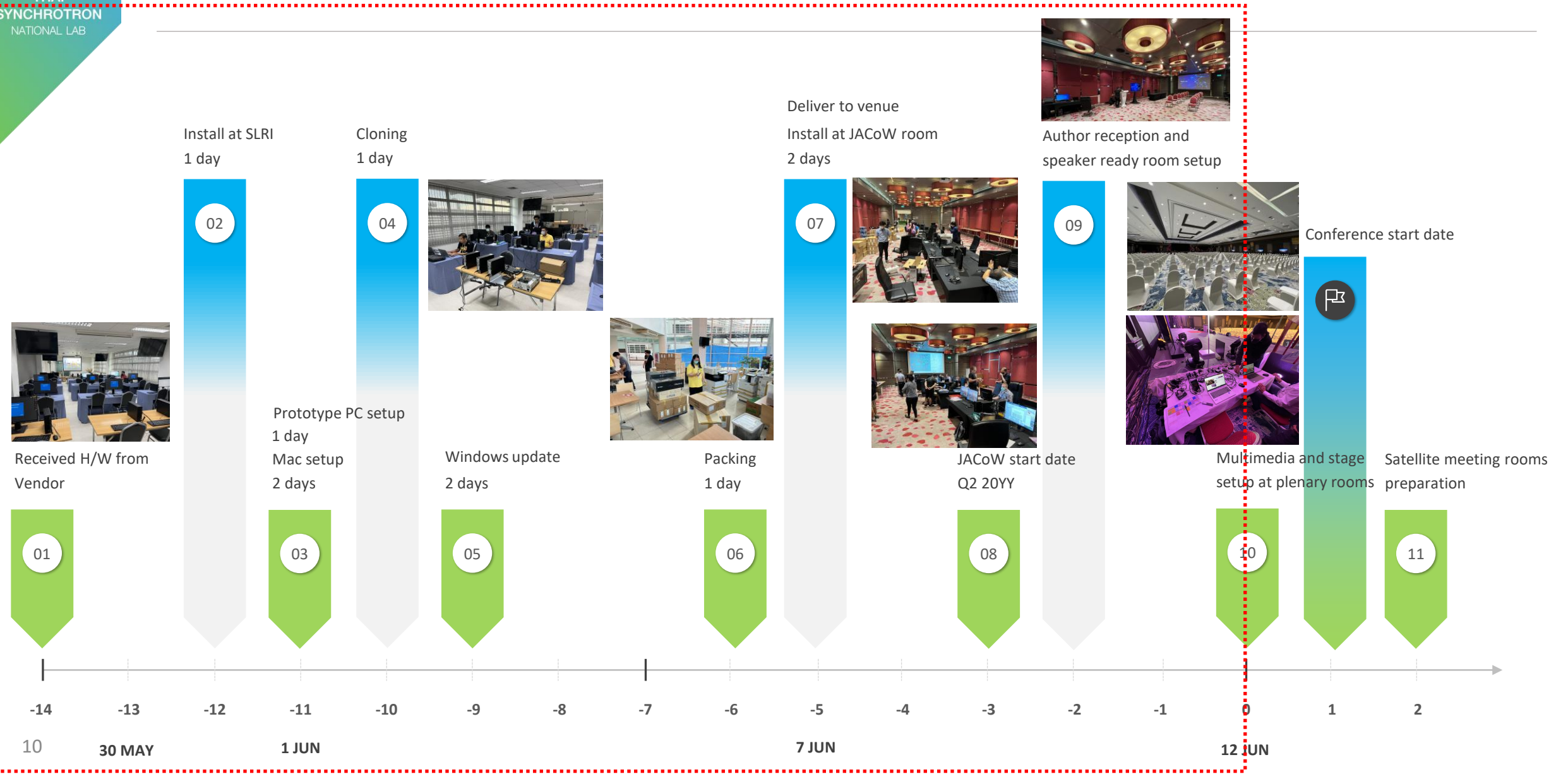
Summary + VAT ~ 65,000 USD

Proceeding office software setup



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Installation and setup timeline



Software

- **Microsoft Office 365**
- **Adobe Acrobat DC Pro 2022**
- **Enfocus Pitstop Pro 21.3**
- **LibreOffice 7.3**
- **FreeOffice 2021**
- **OpenOffice 4.1**
- **Firefox, Chrome, Opera, Edge**
- **Foxit PDF Editor**
- **Zoom, Teamviewer, VNC**
- **Text Editors:**
 - Gvim 8.2
 - Notepad++ 8.2
 - WinEdit 11
 - EditPlus 5.5
- **7Zip, Winrar**
- **PuTTY**
- **Tex Editors:**
 - MikTek 22.3
 - TexStudio 4.2.3
 - TexnicCenter 2.02
 - Texmarker 5.1.3
- **GhostScript 9.56, Ghostview 6**
- **CamStudio, Icecream Screen Recorder**
- **VirtualDub 1.10, Handbreak 1.5**
- **Windows Movie Maker 2022**
- **VLC, K-lite codex pack 16.9.8**
- **Paint.NET 4.3, IrfanView 4.6, XnView 2.5, GIMP 2.0**
- **Commander**

Software check list

Software Installation Check Lists

Computer Name:

Item	Checked	Software	License	Remark
1	<input type="checkbox"/>	Windows 10 Professional 64 bit (English version)	Genuine	
2	<input type="checkbox"/>	Microsoft 365 (English version)	Genuine	
3	<input type="checkbox"/>	Libre Office 7.3.2.2	Free	
4	<input type="checkbox"/>	FreeOffice 2021	Free	
5	<input type="checkbox"/>	OpenOffice 4.1.11	Free	
6	<input type="checkbox"/>	Firefox	Free	
7	<input type="checkbox"/>	Chrome 101.0.4951.41	Free	
8	<input type="checkbox"/>	Opera 86.0.4363.23	Free	
9	<input type="checkbox"/>	Microsoft Edge	Windows	
10	<input type="checkbox"/>	Adobe Acrobat DC Pro 2022	Trial 30 day	
11	<input type="checkbox"/>	Foxit PDF Editor	Trial	
12	<input type="checkbox"/>	Microsoft.NET 6.0.202	Free	
13	<input type="checkbox"/>	Enfocus Pitstop Pro 21.3.0	Trial 30 day	
14	<input type="checkbox"/>	Notepad++ 8.2.1	Free	
15	<input type="checkbox"/>	WinEdit 11	Free	
16	<input type="checkbox"/>	EditPlus 5.5	Free	
17	<input type="checkbox"/>	Gvim 8.2 (64-bit)	Free	
18	<input type="checkbox"/>	7-Zip 21.07 (x64)	Free	
19	<input type="checkbox"/>	Winrar	Free	
20	<input type="checkbox"/>	PuTTY release 0.76 (64-bit)	Free	
21	<input type="checkbox"/>	Windows Defender	Windows	
22	<input type="checkbox"/>	MikTex 22.3 (64-bit)	Free	
23	<input type="checkbox"/>	TexStudio 4.2.3 (64-bit)	Free	
24	<input type="checkbox"/>	TexnicCenter 2.02 (64-bit)	Free	
25	<input type="checkbox"/>	Texmarker 5.1.3 (64bit)	Free	
26	<input type="checkbox"/>	GhostScript 9.56.1	Free	
27	<input type="checkbox"/>	Ghostview 6	Free	
28	<input type="checkbox"/>	VLC	Free	
29	<input type="checkbox"/>	CamStudio	Free	
30	<input type="checkbox"/>	VirtualDub 1.10.4	Free	
31	<input type="checkbox"/>	Microsoft.NET 6.0.202	Free	
32	<input type="checkbox"/>	Handbreake 1.5.1	Free	
33	<input type="checkbox"/>	Windows Movie Maker 2022	Free	
34	<input type="checkbox"/>	K-Lite_Codec_Pack_16.9.8	Free	
35	<input type="checkbox"/>	MEncoder (video coding editor)	Free	

Item	Checked	Software	License	Remark
36	<input type="checkbox"/>	Icecream Screen Recorder 6.27	Free	
38	<input type="checkbox"/>	Paint.NET 4.3.10	Free	
39	<input type="checkbox"/>	IrfanView 4.60	Free	
40	<input type="checkbox"/>	XnView 2.50.4	Free	
41	<input type="checkbox"/>	DoubleCommander 4.0.5 beta	Free	
42	<input type="checkbox"/>	SpeedCommander 20.0	Trilal	
43	<input type="checkbox"/>	Zoom	Free	
44	<input type="checkbox"/>	TeamViewer	Free	
45	<input type="checkbox"/>	Remote Desktop	Windows	Set allows remote this computer
46	<input type="checkbox"/>	VNC Viewer 6.21.1109	Free	

Proceeding office software setup – Preparation

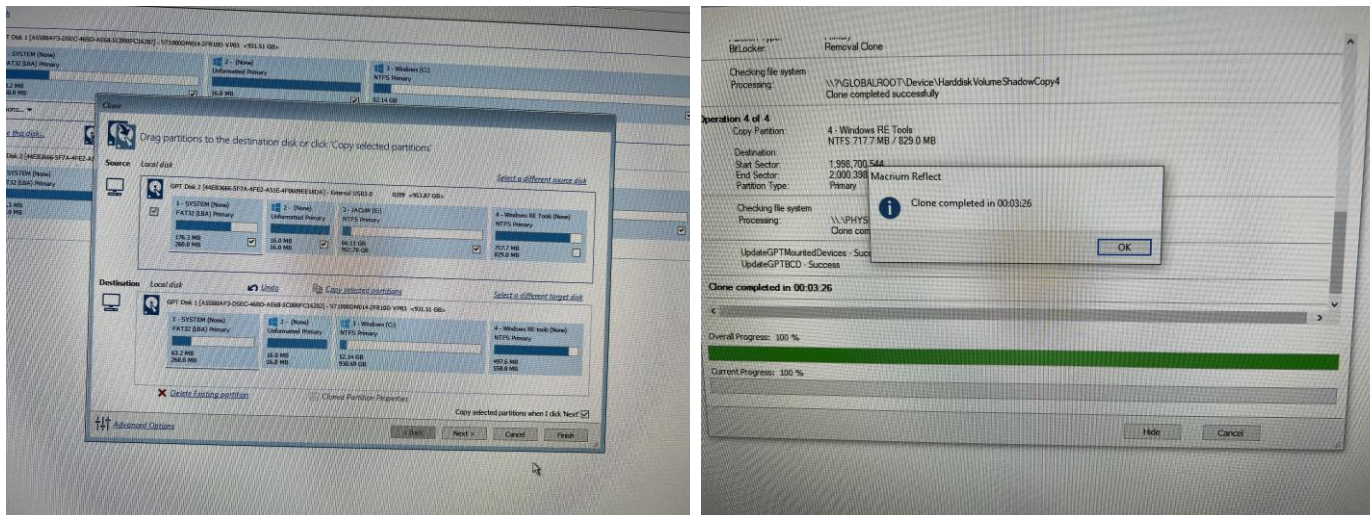


Proceeding office software setup – Cloning



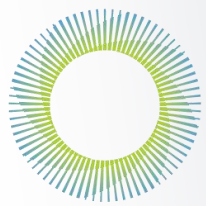
NVME 10Gbps

- Type-C to type-c cable
- Type-C to usb3.0 cable
- For PCI-e M key/M+B key
- Black



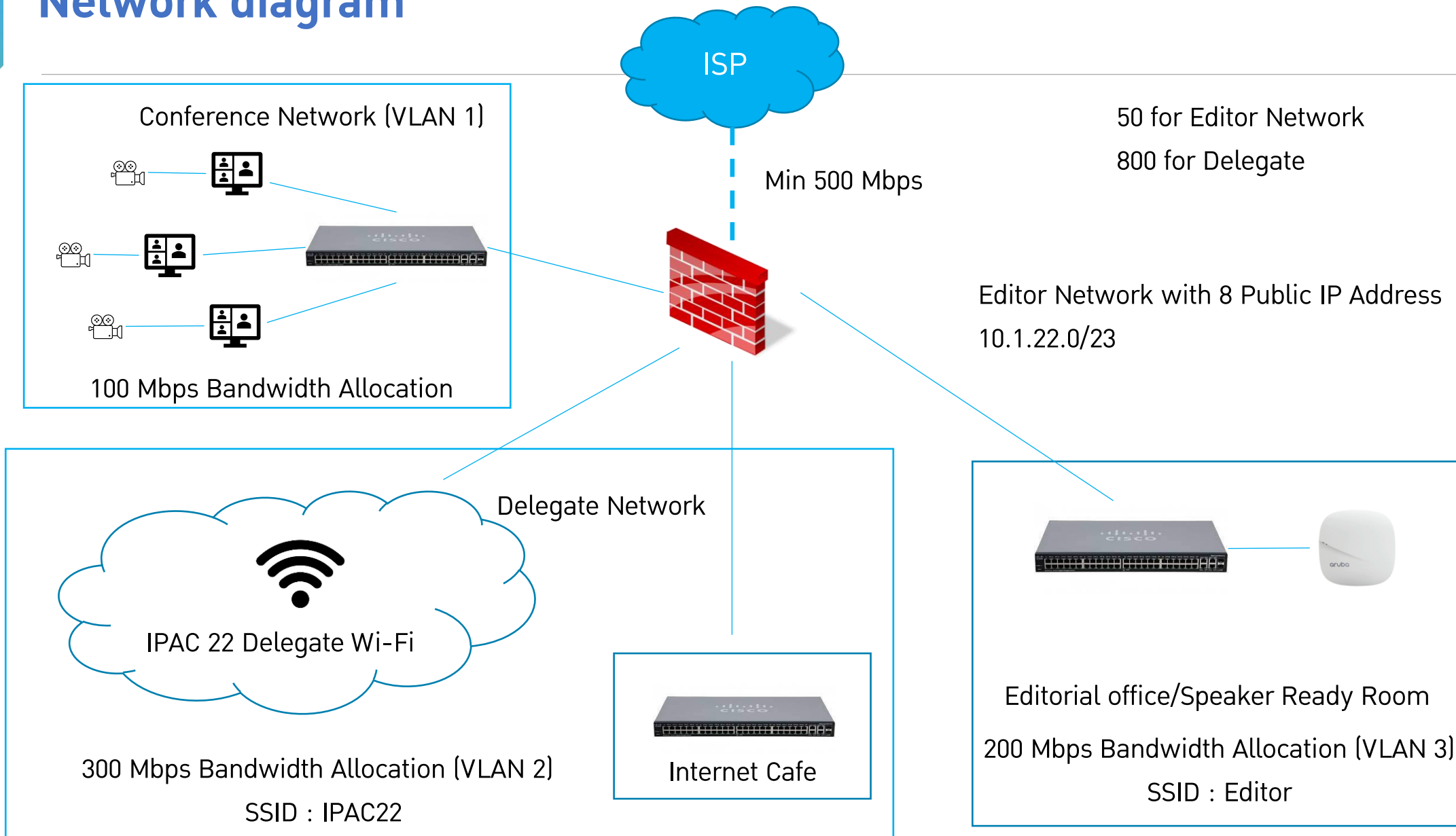
1 Tb m.2 NVMe SSD cloning just **3:26** minutes!!!

Network



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Network diagram

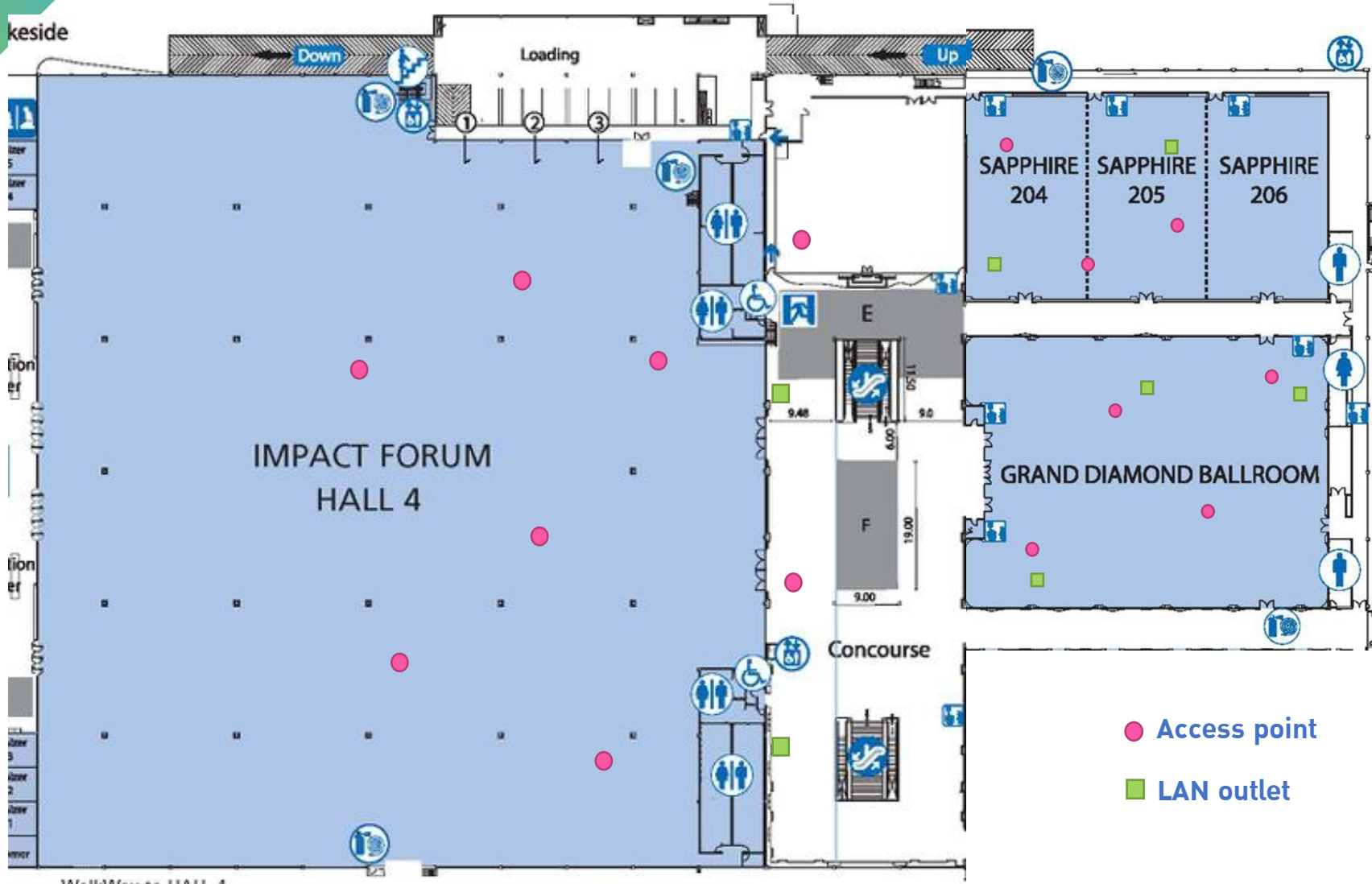


Access point and LAN outlet (1st floor)



- **Proceedings office**
 - Sapphire 101-102
- **Speaker ready room**
 - Sapphire 103
- **Author reception**
 - Sapphire 102
- **Satellite Meeting**
 - Sapphire 105-107
- **Baby Room**
 - VIP 101-102

Access point and LAN outlet (2nd floor)



- **Main Plenary**
 - Grand Diamond Ballroom
- **Secondary Plenary**
 - Sapphire 204 – 205
- **Exhibitor**
 - IMPACT forum hall 4

Network & Internet Cost

ลำดับ	รายการ	จำนวน	หน่วย	ราคา/หน่วย	รวม
	IT Service				
1	Internet 500/500 Mbps. (Main+Backup)	1	Unit	216,000.00	216,000.00
2	Config & Installation SSID (3SSID/Portal/800User)	1	Unit	190,000.00	190,000.00
3	Fl.1				
	Access point	6	Unit	3,000.00	18,000.00
	Wiring LAN To AP	6	Link	2,200.00	13,200.00
	Wiring Lan (Outlet)	6	Link	2,200.00	13,200.00
	Switch 24 Port POE	2	Unit	4,000.00	8,000.00
	Wiring Lan (Uplink)	1	Link	2,200.00	2,200.00
	Wiring Fiber (Uplink)	2	Link	10,000.00	20,000.00
4	Fl.2				
	Access point	14	Unit	3,000.00	42,000.00
	Wiring LAN To AP	14	Link	2,200.00	30,800.00
	Wiring Lan (Outlet)	10	Link	2,200.00	22,000.00
	Switch 24 Port POE	4	Unit	4,000.00	16,000.00
	Wiring Lan (Uplink)	2	Link	2,200.00	4,400.00
	Wiring Fiber (Uplink)	2	Link	10,000.00	20,000.00
5	Hall 4				
	Access point	9	Unit	3,000.00	27,000.00
	Wiring LAN To AP	9	Link	2,200.00	19,800.00
	Switch 24 Port POE	2	Unit	4,000.00	8,000.00
	Wiring Lan (Uplink)	1	Link	2,200.00	2,200.00
	Wiring Fiber (Uplink)	1	Link	10,000.00	10,000.00
6	Internet Cafés				
	Access point	1	Unit	3,000.00	3,000.00
	Wiring LAN To AP	1	Link	2,200.00	2,200.00
	Wiring Lan (Uplink)	1	Link	2,200.00	2,200.00
	หมายเหตุ : ค่าเป็นการให้ทั้งหมด เพื่อใช้อินเทอร์เน็ต แต่ทางลูกค้าต้องเตรียม Storage สำหรับเก็บข้อมูล Syslog มาเอง (Storage หากได้แล้วอาจต้องขอเพิ่มมาดำเนินการก่อน)				
				รวม	690,200.00
				ภาษีมูลค่าเพิ่ม 7%	48,314.00
				รวมทั้งสิ้น	738,514.00

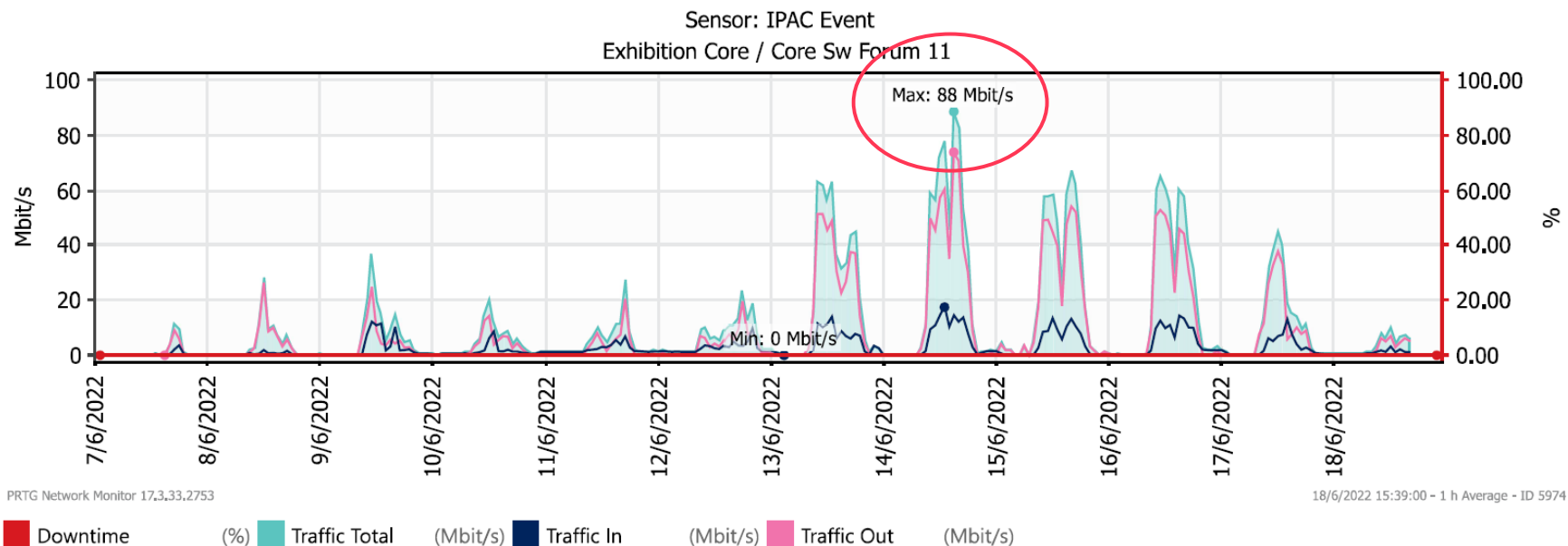
- Internet 500/500 Mbps (included backup) ~ 6,200 USD
- Wireless access point ~ 9,900 USD
- Switching ~ 900 USD
- Wiring ~ 2,750 USD

Summary ~ 19,750 USD

Summary + VAT ~ 21,000 USD

Network statistics – Delegate network

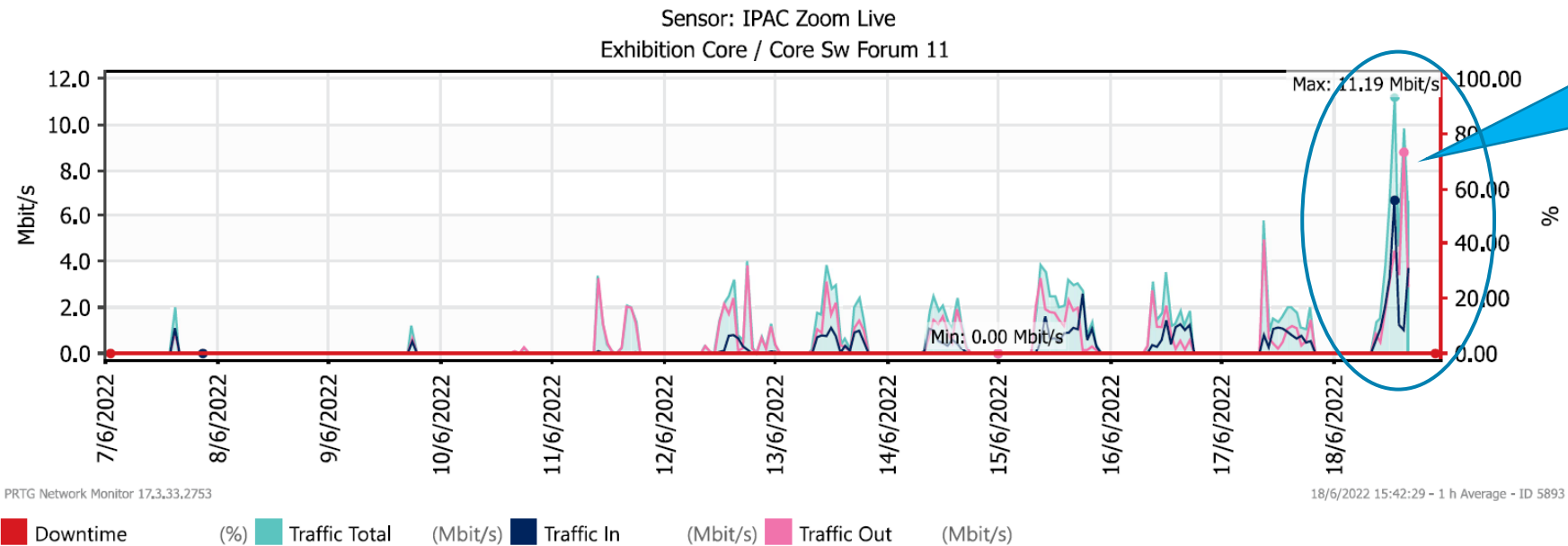
Report Time Span:	7/6/2022 0:00:00 - 18/6/2022 23:59:00					
Sensor Type:	SNMP Traffic 64bit (60 s Interval)					
Probe, Group, Device:	Local Probe > Exhibition Core > Core Sw Forum 11					
Uptime Stats:	Up:	100 %	[11d15h38m0s]	Down:	0 %	[0s]
Request Stats:	Good:	100 %	[16779]	Failed:	0 %	[0]
Average (Traffic Total):	11 Mbit/s					
Total (Traffic Total):	1,330,072 MByte					



Date Time	Traffic Total (volume)	Traffic Total (speed)	Traffic In (volume)	Traffic In (speed)	Traffic Out (volume)	Traffic Out (speed)	Downtime	Coverage
Sums (of 280 values)	1,330,072 MByte		322,370 MByte		1,007,702 MByte			
Averages (of 280 values)	4,750 MByte	11 Mbit/s	1,151 MByte	2.69 Mbit/s	3,599 MByte	8.40 Mbit/s	0 %	97 %

Network statistics – Zoom - Conference network

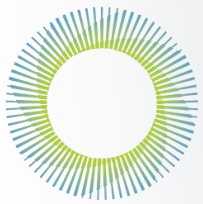
Report Time Span:	7/6/2022 0:00:00 - 18/6/2022 23:59:00			
Sensor Type:	SNMP Traffic 64bit (60 s Interval)			
Probe, Group, Device:	Local Probe > Exhibition Core > Core Sw Forum 11			
Uptime Stats:	Up:	100 % ■ [11d15h41m0s]	Down:	0 % ■ [0s]
Request Stats:	Good:	100 % ■ [16782]	Failed:	0 % ■ [0]
Average (Traffic Total):	0.66 Mbit/s			
Total (Traffic Total):	78,657 MByte			



Satellite meeting: IPAC'23 SPC meeting

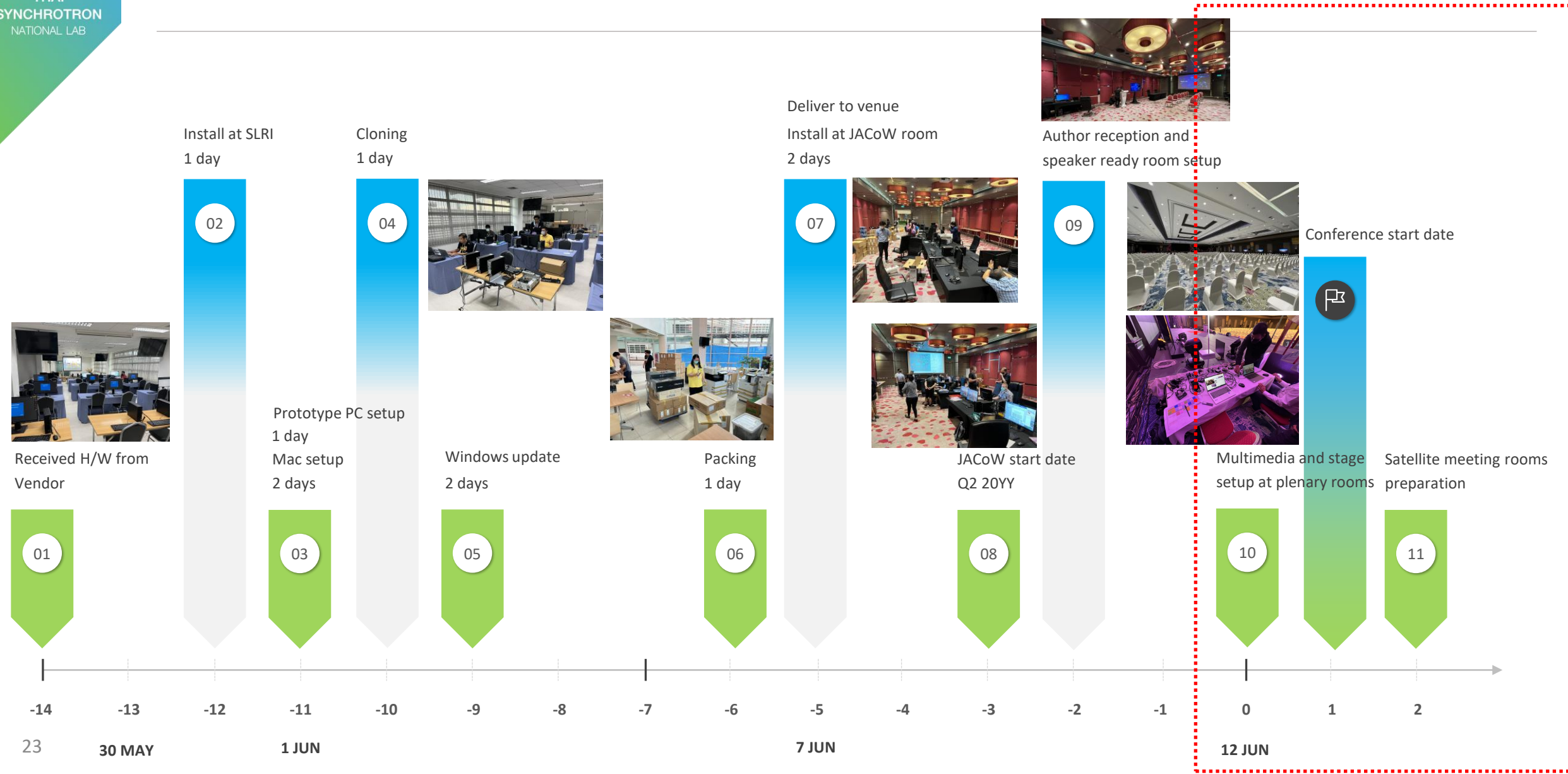
Date Time	Traffic Total (volume)	Traffic Total (speed)	Traffic In (volume)	Traffic In (speed)	Traffic Out (volume)	Traffic Out (speed)	Downtime	Coverage
Sums (of 280 values)	78,657 MByte		27,741 MByte		50,915 MByte			
Averages (of 280 values)	281 MByte	0.66 Mbit/s	99 MByte	0.23 Mbit/s	182 MByte	0.42 Mbit/s	0 %	97 %

Venue

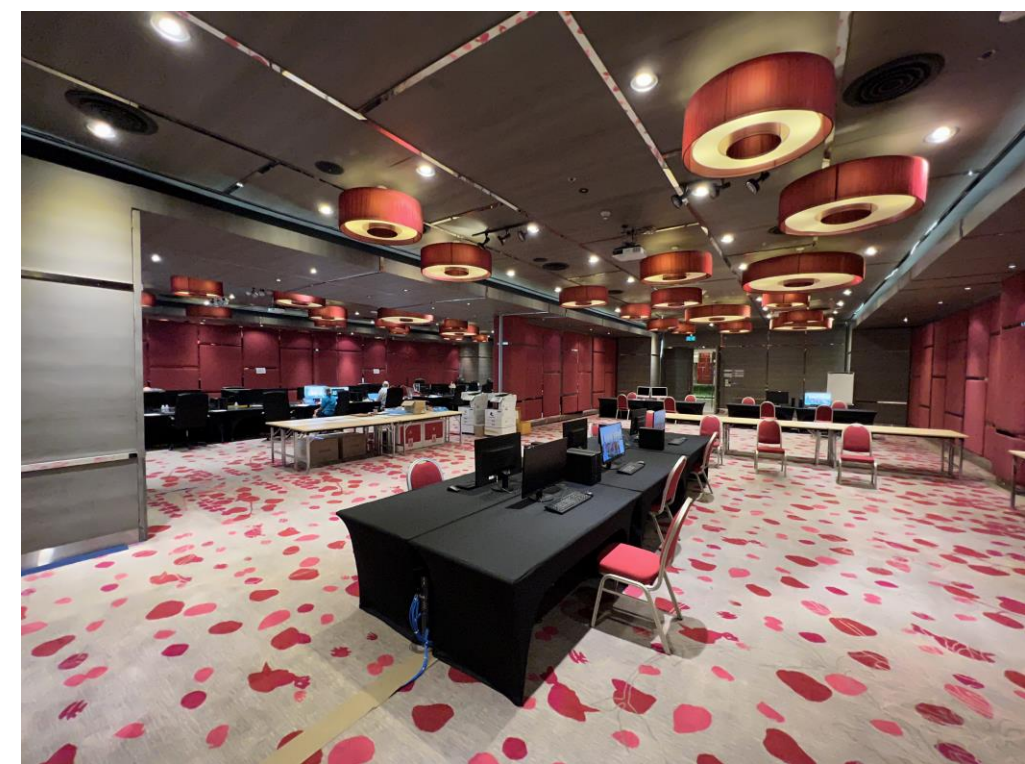
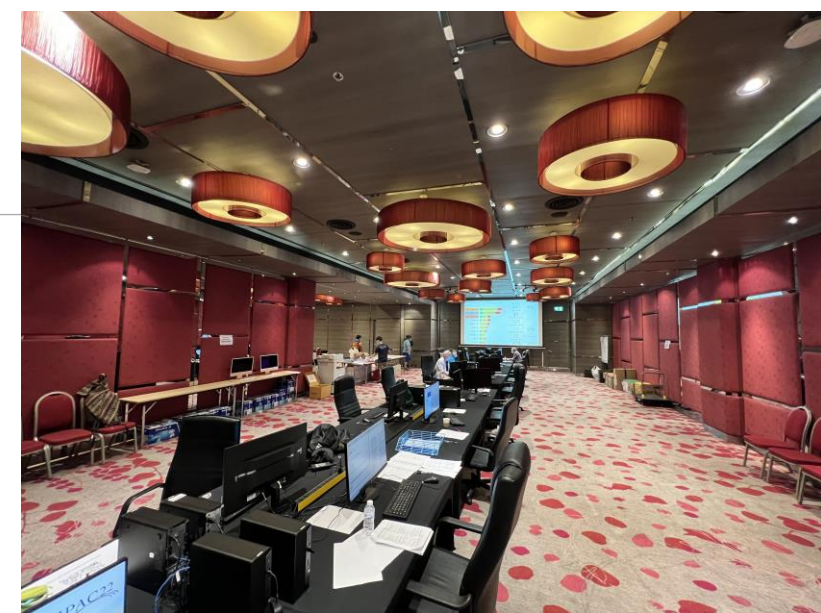


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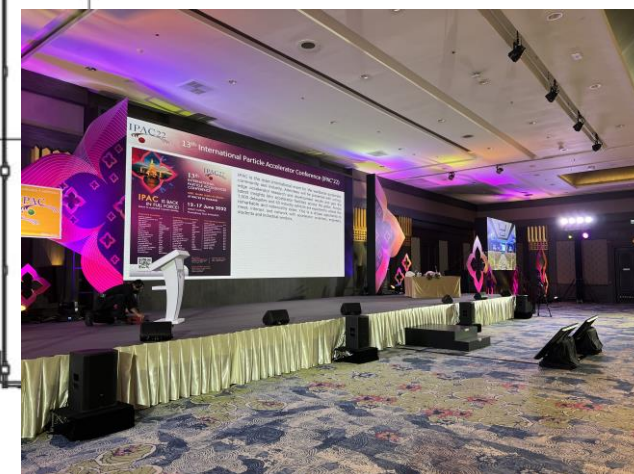
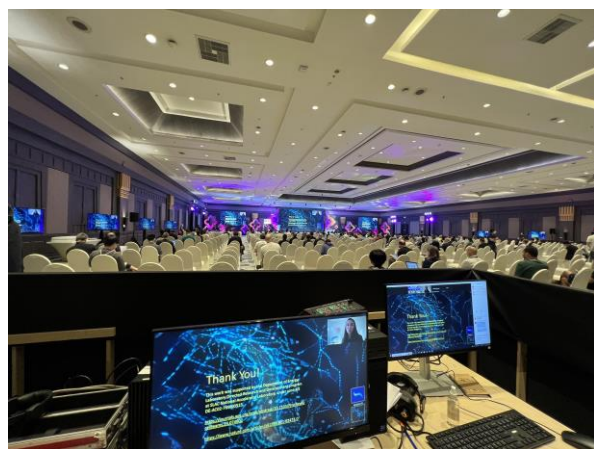
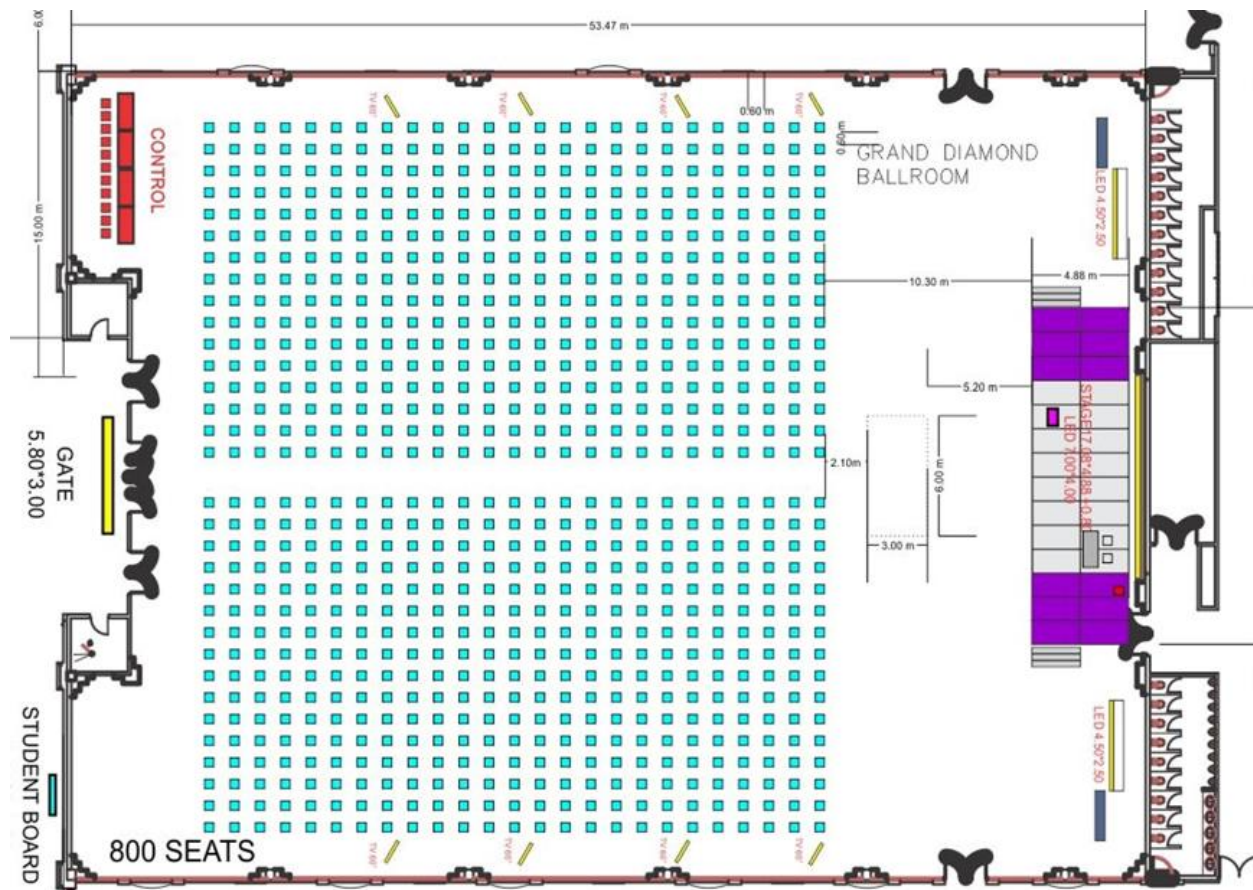
Installation and setup timeline



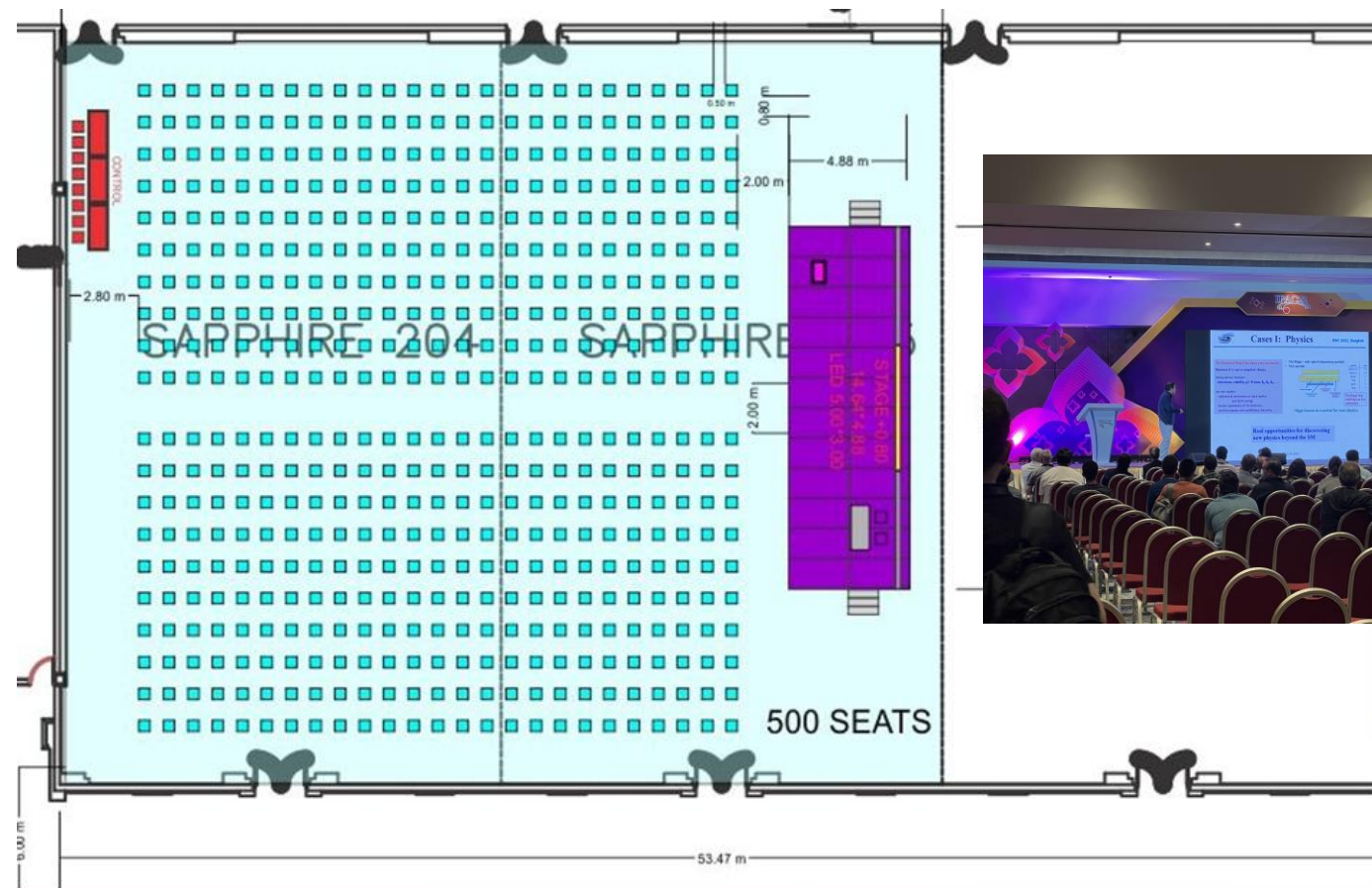
Proceeding office



Main Plenary



Secondary Plenary



Presentation on plenary rooms

■ Onsite presentation

- 1x Notebook + 1x spare for **PPT** (Win)
- 1x Macbook + 1x spare for **Keynote** and **PDF**
- 2x Logi Spotlight (Windows + Macbook) + 1 spare
- Used USB extension for Spotlight receiver (**must use a good quality**)
- Swap Spotlight for charging every session

■ Remote presentation

- Presentation file from venue
- 1x PC for Zoom hosting
- 1x PC for shared screen client
- Presenter must request control via shared screen



Feedback monitor

- 2 feedback monitors
 - On podium
 - Front of stage
 - Both used “Presentation View” for PPT files and “Duplicate View” for PDF and Keynote
- Presentation timer
- Main screen

**Recommend: feedback monitor at front of stage should set to “Duplicate View” with main screen for easy to view the pointer.



Presentation Timer

- Forked from <https://github.com/dcervenkov/presentation-timer>
- Coded by HTML5 & JavaScript
- Responsive resolution
- Run in any browsers (Chromium by RaspberryPi 4B)
- Remote control via VNC



Presentation Timer

14:43

Press to start and stop the timer.

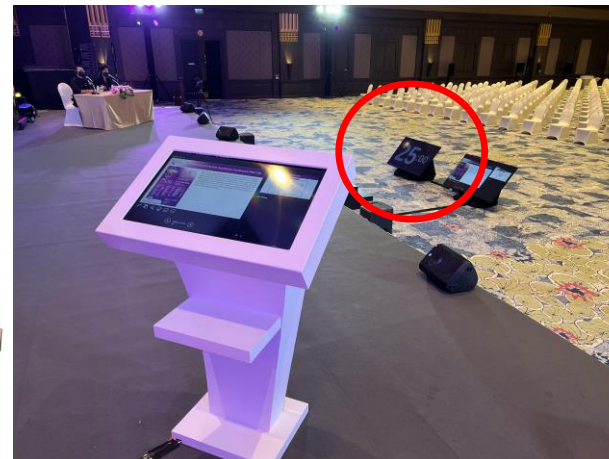
Use to add and subtract minutes from the timer.

Press to reset the timer.

Fullscreen on start

Presentation Timer also works with touch-only devices. Just visit this webpage.

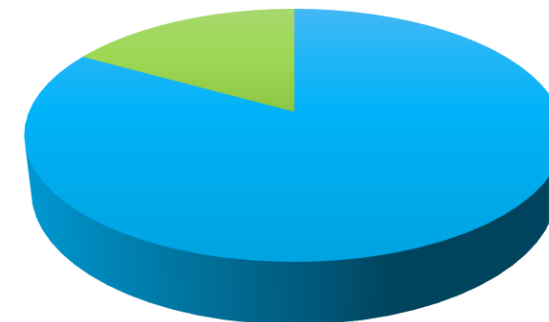
Wake lock API not supported; the screen saver will turn on.



Presentation file type statistics

	Main Plenary			Secondary Plenary		
	PPT	PDF	Keynote	PPT	PDF	Keynote
Monday	6	3	0	4	0	0
Tuesday	12	1	0	9	3	0
Wednesday	15	3	0	11	2	0
Thursday	12	3	0	8	1	0
Friday	8	2	0	4	0	0

	PPT	PDF	Keynote
Summary	89	18	0
	83%	17%	0%



■ PPT ■ PDF

Speaker ready room



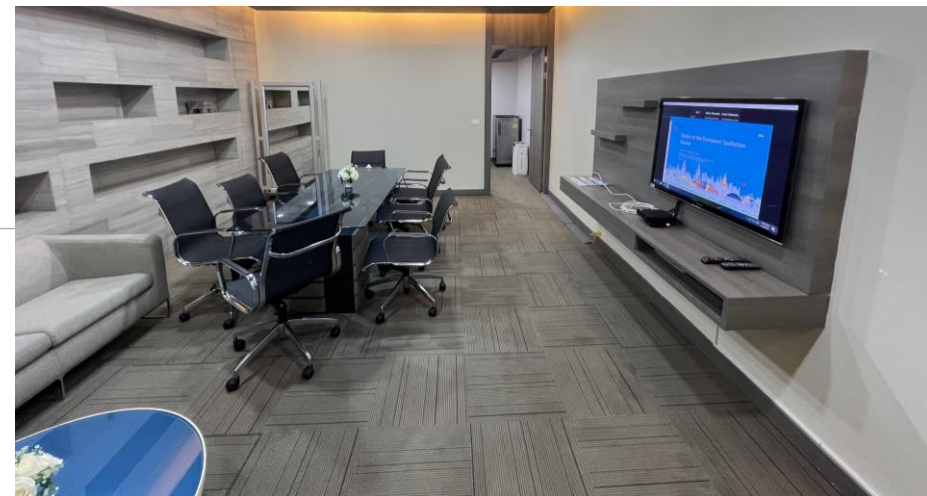
- 2 PCs + 2 MACs for speaker editing
- 1 PC + 1 Macbook for presentation testing
- 1 PC for Zoom meeting with remote speaker + **Webcam**
- 16:9 projector screen
- 32" feedback display on podium
- 1 Spotlight + 1 spare
- 2 IT guys + 2 receptionists

Author reception

- 2 PCs + 2 MACs for reception
- Partition between reception zone and editor zone

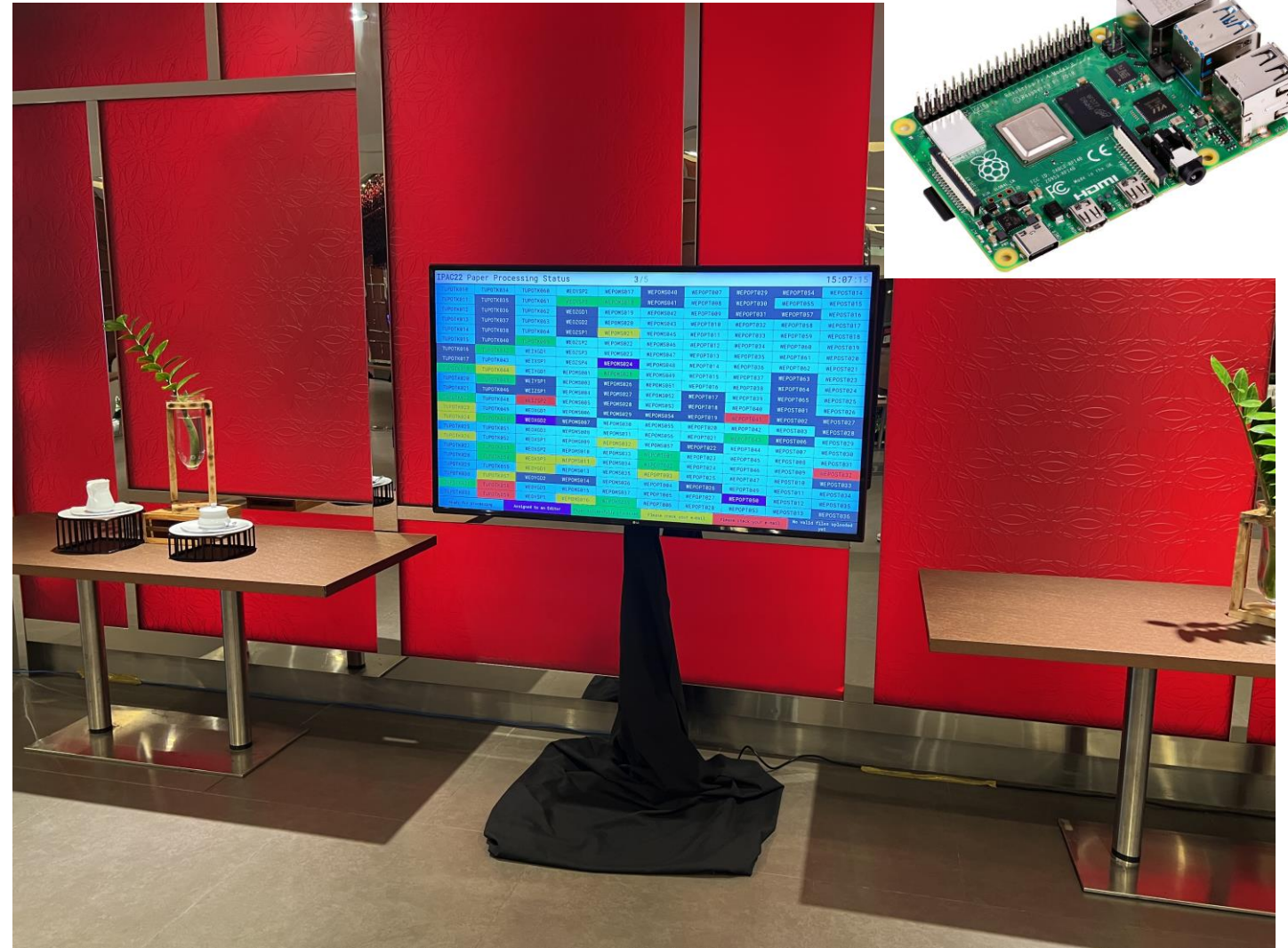


Satellite meeting rooms



DOT display

- 3x DOT displays at front of:
 - Proceeding office
 - Main plenary hall
 - Exhibitor hall
- 60" Full HD monitor
- Powered by RaspberryPi 4B
- Kiosk mode setup



Manpower

			TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT
			7	8	9	10	11	12	13	14	15	16	17	18
			IT installation			JACoW team start								
1 นาย	ณัฐวุฒิ	สุรเดช	1	1	1	1	1	1	1	1	1	1	1	1
2 ดร.	พัฒน	โพธิ์ทองคำ				1	1	1	1	1	1	1	1	
3 ดร.	เริงรุจา	รุจนะไทรกานต์						1	1	1	1	1	1	
4 ดร.	กัรติ	มานะสดีตพวงศ์	1	1	1	1	1	1	1	1	1	1	1	
5 นาย	ชัชภูมิ	ธรรมทอง						1	1	1	1	1	1	
6 นาย	ณัฐพล	สุมะโน						1	1	1	1	1	1	
7 นาย	นฤพนต์	ว่องประชานุกูล						1	1	1	1	1	1	
8 นาย	ชัยยุทธ	ปรีชา	1	1	1	1	1	1	1	1	1	1	1	1
9 ว่าที่ร้อยตรี	เจษฎา	ภาชนนก์					1	1	1	1	1	1	1	
10 นาย	กิตติรัชต์	ฤกษ์บุรี						1	1	1	1	1	1	
11 นางสาว	อธิการ	ทองวัฒน์	1	1	1	1	1	1	1	1	1	1	1	1
12 นาย	วุฒิพงษ์	ชาลีรินทร์	1	1	1	1	1	1	1	1	1	1	1	
13 นาย	อภิวัฒน์	ภิญโญยาม	1	1	1	1	1	1	1	1	1	1	1	
14 นาย	สมเกียรติ	วิสัยเพ็ญ						1	1	1	1	1	1	
		sum	6	6	6	7	8	14	14	14	14	14	14	3

Troubles

- No any rental computer in Thailand for JACoW's minimum specifications
- No experience on SPMS system
- More workload in speaker ready room
- Got issue on spotlight signal receiver in 2nd plenary room (poor USB extension)
- Venue's WIFI controller was not stable
- Registration and payment system had more issues.

Considerations

- Need spare parts of everything
- Clarify deadline of presentation file update to speaker
- Messenger group for IT team is useful (more than 2000 messages)
- RaspberryPi are practical use, stable and very save cost
- NAS made convenient, secure and fast to send files between speaker ready and plenary room
- Always leave at least an IT guy in proceeding room

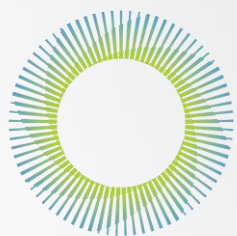


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THANK YOU



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