

# Revamping the Electronic Congress System and Supporting Equipment at the People's Majlis Parliament Hall

## **1.1. Electronic congress system with standard delegate units and separate tablets**

- 1.1.1. Accepted brands:
  - 1.1.1.1. Electronic congress system and software: Bosch, Brähler Systems, Sennheiser or equivalent
  - 1.1.1.2. Tablets: Apple or equivalent
  - 1.1.1.3. Network switches: Aruba, Cisco or equivalent
  - 1.1.1.4. Wireless access Points: Aruba, Ruckus, Ubiquiti or equivalent
  - 1.1.1.5. MDM software: Jamf or equivalent
  - 1.1.1.6. Solid-state network audio recorder: Denon, Tascam or equivalent
  - 1.1.1.7. Structured cabling: CommScope, Panduit, Belden or equivalent
  - 1.1.1.8. Digital signal processor: Biamp, Crestron, Sennheiser or equivalent
  - 1.1.1.9. Integrated controller: Crestron, AMX or equivalent
  - 1.1.1.10. Any other brand for accessories must be approved.
- 1.1.2. Delegate units (Quantity: 148)
  - 1.1.2.1. 500mm gooseneck microphone electret with illuminant ring
  - 1.1.2.2. RFID card reader and two blank cards for each microphone
  - 1.1.2.3. All required delegate software, licenses and programming
- 1.1.3. Chairman units (Quantity: 2)
  - 1.1.3.1. 410mm gooseneck microphone electret with illuminant ring
  - 1.1.3.2. RFID card reader and two blank cards for each microphone
  - 1.1.3.3. All required delegate software, licenses and programming
- 1.1.4. Central discussion unit(s)
  - 1.1.4.1. Fully redundant units with no single point of failure
  - 1.1.4.2. Dante audio output
- 1.1.5. Secretariat software
  - 1.1.5.1. Parliamentary vote
  - 1.1.5.2. Camera control
  - 1.1.5.3. Time control
  - 1.1.5.4. Identity control
  - 1.1.5.5. 6 x conference operators
  - 1.1.5.6. Seating arrangement
  - 1.1.5.7. Server provision for software will be provided by the People's Majlis Secretariat.
  - 1.1.5.8. Server provision does not include Windows Server 2019 licenses. These must be provided by the bidder.
  - 1.1.5.9. All other required software and accessories for parliamentary function
- 1.1.6. Delegate software
  - 1.1.6.1. 1<sup>st</sup> party software compatible with iOS, Android and Windows OS
  - 1.1.6.2. Management of all documents related to parliamentary function
  - 1.1.6.3. Full integration with electronic congress system
  - 1.1.6.4. Localization to Dhivehi (Thaana)
- 1.1.7. iPads (Quantity: 150)
  - 1.1.7.1. Latest generation base model.
  - 1.1.7.2. Must be mounted with a sleek desk mount.

- 1.1.8. Mobile device management software
  - 1.1.8.1. All required licenses to manage 100 iPads for 3 years.
- 1.1.9. Network switches
  - 1.1.9.1. Layer 3
  - 1.1.9.2. Enough ports for all equipment.
  - 1.1.9.3. All ports must be PoE+ compliant.
  - 1.1.9.4. 4x SFP+ ports on each switch.
  - 1.1.9.5. 4x10G-LR transceivers must be supplied with each switch. Specific coding for core switch side will be confirmed by the People's Majlis Secretariat upon starting of work.
  - 1.1.9.6. A redundant stack of switches connected via DAC cables may be used for areas needing more than one switch.
  - 1.1.9.7. High-quality 3<sup>rd</sup> party coded transceivers and DAC cables can be used.
  - 1.1.9.8. All main uplinks must converge at the main core switches at People's Majlis Secretariat main server room in the extension building.
  - 1.1.9.9. Network configuration must be done according to instructions from People's Majlis Secretariat.
- 1.1.10. Wireless access points (Quantity: 4)
  - 1.1.10.1. 802.11ac wave 2
- 1.1.11. Solid-state network audio recorder
  - 1.1.11.1. Ethernet Connectivity
  - 1.1.11.2. Web management interface
  - 1.1.11.3. WAV and MP3 recording
  - 1.1.11.4. Scheduling of automatic recording and archival
  - 1.1.11.5. Automatic archival to network location
  - 1.1.11.6. Records to SD/SDHC/SDXC cards
  - 1.1.11.7. WAV or MP3 Recording
  - 1.1.11.8. Records up to 24-bit/48kHz
  - 1.1.11.9. XLR and RCA Analog I/O
  - 1.1.11.10. Dante™ audio interface (optional)
  - 1.1.11.11. AES/EBU and S/PDIF Digital I/O
  - 1.1.11.12. RS-232 Control
  - 1.1.11.13. Rack-mountable
  - 1.1.11.14. 64GB SD card included
- 1.1.12. Digital signal processor
  - 1.1.12.1. 32x32 Dante™ audio interfaces
- 1.1.13. Integrated controller
  - 1.1.13.1. Integrated controller for all equipment in main 42U cabinet.
  - 1.1.13.2. Touch panel for control in the audio room.
- 1.1.14. Speakers (Quantity: 6)
  - 1.1.14.1. Low profile
  - 1.1.14.2. Dante™ audio interface
  - 1.1.14.3. Wall-mount
  - 1.1.14.4. Speaker model must be suggested after the initial survey and must be approved.
- 1.1.15. 42U cabinet (Quantity: 2)
  - 1.1.15.1. Must be 800mm wide x 1200mm deep.
  - 1.1.15.2. Vertical and horizontal cable managers must be used.
- 1.1.16. Civil work

- 1.1.16.1. Shielded CAT6 horizontal cabling must be laid for all components in the parliament hall not counting the devices needing looped patch cords.
- 1.1.16.2. Shielded CAT6 horizontal cabling must be properly terminated in a grounded patch panel in the main 42U cabinet.
- 1.1.16.3. Looped patch cords must be factory made to the exact length required.
- 1.1.16.4. All hall device patch cords must be shielded CAT6 with boots.
- 1.1.16.5. All patch panel patch cords must be shielded CAT6 without boots.
- 1.1.16.6. Must lay single-mode fibre drop cables from ODF to audio and video room with each terminated neatly in rack-mounted fiber panels.
- 1.1.17. Programming
  - 1.1.17.1. All initial programming necessary for parliament function must be completed by the bidder.
- 1.1.18. Survey
  - 1.1.18.1. Bidder must do an initial survey of the parliament hall and fully understand its workflow.
- 1.1.19. Presentation
  - 1.1.19.1. Bidder must give a presentation to the secretariat regarding the products selected for the tender.
- 1.1.20. Training
  - 1.1.20.1. Training directly from the manufacturer for all secretariat technical staff.
- 1.1.21. Warranty
  - 1.1.21.1. A minimum of a 5-year warranty for all critical components. Warranty must be extendible for all critical components to a minimum of 10 years with an AMC.
  - 1.1.21.2. Standard manufacturer warranty for delegate units and other equipment.

## **1.2. Video broadcasting system**

- 1.2.1. Accepted brands:
  - 1.2.1.1. PTZ cameras: Sony, Panasonic or equivalent
  - 1.2.1.2. Camera remote controller: Sony, Panasonic or equivalent
  - 1.2.1.3. Live production system and IP encoders: NewTek, Ross Video or equivalent
  - 1.2.1.4. SDI matrix switcher and SDI to HDMI converters: Blackmagic Design, Ross Video or equivalent
  - 1.2.1.5. Network switches: Aruba, Cisco or equivalent
  - 1.2.1.6. Structured cabling: CommScope, Panduit, Belden or equivalent
  - 1.2.1.7. Integrated controller: Crestron, AMX or equivalent
  - 1.2.1.8. Any other brand for accessories must be approved.
- 1.2.2. PTZ cameras (Quantity: 7)
  - 1.2.2.1. 4Kp30 resolution
  - 1.2.2.2. Excellent low-light sensitivity
  - 1.2.2.3. 1" MOS-type sensor
  - 1.2.2.4. PoE+ capable
- 1.2.3. Camera remote controller
  - 1.2.3.1. Compatible with the selected PTZ camera model
  - 1.2.3.2. If this component is not required, it may be omitted.
- 1.2.4. IP encoders (Quantity: 8)
  - 1.2.4.1. 7x wired 4K capable encoders
  - 1.2.4.2. 1x wireless encoder
  - 1.2.4.3. NDI or AIMS compatible with live production system
- 1.2.5. Live production system
  - 1.2.5.1. 16x IP inputs
  - 1.2.5.2. 4Kp60 capable

- 1.2.5.3. Redundant power supply
- 1.2.5.4. Multi-tiered hardware and software fail-safe
- 1.2.6. SDI matrix switcher
  - 1.2.6.1. 12x12 matrix switch
  - 1.2.6.2. 1.5, 3, 6 and 12G SDI support
- 1.2.7. SDI to HDMI converter (Quantity: 2)
  - 1.2.7.1. 4Kp60 resolution
  - 1.2.7.2. Rack-mountable
- 1.2.8. Network switches (Quantity: 3)
  - 1.2.8.1. 24-Port Layer 3
  - 1.2.8.2. 4x SFP+ ports on each switch
  - 1.2.8.3. Physically isolated networks for NDI/AIMS and camera control
  - 1.2.8.4. One switch to connect equipment to secretariat network
  - 1.2.8.5. 2x 10G-LR transceivers for each switch must be supplied even if not used. High quality 3<sup>rd</sup> party coded transceivers can be used.
  - 1.2.8.6. Any uplink connecting to main secretariat network must converge at the main Secretariat server room and are to be 10G-LR.
- 1.2.9. Integrated controller
  - 1.2.9.1. Integrated controller for all equipment in 42U cabinet.
  - 1.2.9.2. Touch panel for control in the video room.
- 1.2.10. 32" LCD monitor (Quantity: 2)
  - 1.2.10.1. 1920x1080 resolution
  - 1.2.10.2. HDMI and DP inputs
  - 1.2.10.3. Wall-mounted
- 1.2.11. 42U cabinet (Quantity: 1)
  - 1.2.11.1. Must be 800mm wide x 1200mm deep.
  - 1.2.11.2. Vertical and horizontal cable managers must be used.
- 1.2.12. Survey
  - 1.2.12.1. Bidder must do an initial survey of the parliament hall and fully understand its workflow.
- 1.2.13. Consultation
  - 1.2.13.1. Official consultation directly from live production system manufacturer or a registered partner must be carried out after the tender has been awarded.
  - 1.2.13.2. Official letter or email from live production system manufacturer stating that the design will work as intended must be submitted.
  - 1.2.13.3. Any missing items required for project completion highlighted by the consultant must be done through variation.
- 1.2.14. Presentation
  - 1.2.14.1. Bidder must give a presentation to the secretariat regarding the products selected for the tender.
- 1.2.15. Civil work
  - 1.2.15.1. Shielded CAT6 horizontal cabling must be laid for all components in the parliament hall.
  - 1.2.15.2. Shielded CAT6 horizontal cabling must be properly terminated in a grounded patch panel in the main 42U cabinet.
  - 1.2.15.3. All patch panel patch cords must be shielded CAT6 without boots.
- 1.2.16. Programming
  - 1.2.16.1. All initial programming necessary for parliament function must be completed by the bidder.
  - 1.2.16.2. Integration with secretariat IPTV and digital signage system.

1.2.17. Training

1.2.17.1. Training directly from the manufacturer for all secretariat technical staff.

1.2.18. Warranty

1.2.18.1. A minimum of a 5-year warranty for all critical components. Warranty must be extendible for all critical components to a minimum of 10 years with an AMC.

### **1.3. Digital signage system**

- 1.3.1. Accepted brands:
  - 1.3.1.1. Network switches: Aruba, Cisco or equivalent
  - 1.3.1.2. Structured cabling: CommScope, Panduit, Belden or equivalent
  - 1.3.1.3. Integrated controller and IP encoders/decoders: Crestron, AMX or equivalent
  - 1.3.1.4. Any other brand for accessories must be approved.
- 1.3.2. Commercial displays (Quantity: 4)
  - 1.3.2.1. 86" diagonal length
  - 1.3.2.2. Must be a commercial grade display and not consumer hardware
  - 1.3.2.3. Mounted on the walls as instructed by the secretariat
- 1.3.3. IP video decoders (Quantity: 4)
  - 1.3.3.1. 4Kp60 support
- 1.3.4. IP video encoders (Quantity: 1)
  - 1.3.4.1. 4kp60 support
- 1.3.5. HDMI matrix switch
  - 1.3.5.1. 8x8 matrix switcher
  - 1.3.5.2. 4kp60 resolution
- 1.3.6. Network switch (Quantity: 1)
  - 1.3.6.1. 24-Port Layer 3
- 1.3.7. 42U cabinet (Quantity: 1)
  - 1.3.7.1. Must be 800mm wide x 1200mm deep.
  - 1.3.7.2. Vertical and horizontal cable managers must be used.
- 1.3.8. Survey
  - 1.3.8.1. Bidder must do an initial survey of the parliament hall and fully understand its workflow.
- 1.3.9. Civil work
  - 1.3.9.1. Shielded CAT6 horizontal cabling must be laid for all components in the parliament hall.
  - 1.3.9.2. Shielded CAT6 horizontal cabling must be properly terminated in a grounded patch panel in the main 42U cabinet.
  - 1.3.9.3. All patch panel patch cords must be shielded CAT6 without boots.
- 1.3.10. Programming
  - 1.3.10.1. All initial programming necessary for parliament function must be completed by the bidder.
- 1.3.11. Training
  - 1.3.11.1. Basic training for all secretariat technical staff.
- 1.3.12. Warranty
  - 1.3.12.1. Standard warranties for all components.