

VIDEO CONFERENCE SYSTEM

BACKGROUND

Rationale

The aim of this tender is to establish a secure, robust, reliable, scalable and integrated video conferencing system with cutting edge productivity tools to facilitate collaboration and communication with member states across the continent.

Scope of Work

The scope of this project shall cover the acquisition and implementation of the following:

- Acquisition of the hardware and software infrastructure.
- Installation and maintenance of boardroom conferencing system.
- Integration of new video conferencing system with existing telephony and VC system.
- Training and enablement

REQUIREMENTS

Qualification Requirements

The desired service provider must have the following in order to qualify:

- Expertise and at least ten years' experience in the business.
- Capacity and ability to provide maintenance services/ technical support.

Technical Requirements

The service provider is required to conduct site inspection, submit detailed work plan specifying installation design and detailed activities. The technical requirements and evaluation criteria are as follows:

VISUAL COLLABORATION

The service provider is required to deploy two cost-effective unified IP based video conferencing solution that integrates with traditional third-party Video Teleconferencing System (VTC) and interoperates with Virtual Meeting Room (VMR) (such as Prexip, Meet Me, Zoom Meetings etc.).

The proposed video conferencing solution should meet the following minimum requirements of features and functionality. The table below list specifications for the video conferencing equipment.

CEO VC EQUIPMENT - ROUND TABLE (5-10 METRES)		
Components	Quantity	Description
Multipoint Conferencing Unit and High Definition Video Camera (1080p)	1	<ul style="list-style-type: none"> Intelligent 360 Degrees VC camera capable of capturing everyone in a round table.
Display	1	<ul style="list-style-type: none"> High Definition Projector Touch Panel - Support click-to-join using remote control, touch panel, or even touchscreen displays.
Sound system	1	<ul style="list-style-type: none"> High quality microphone systems AV - with capability to connect to interpretation system. Powered speakers
Virtual Meeting Room and Video Interop Server		<ul style="list-style-type: none"> VMR must interoperate with Skype for Business and other propriety VC systems (desktop and hardware based Multi-Point Conferencing Unit (MCU)). Allow users to join meeting using PSTN Dial-in and standard browser Integration with active Directory and calendar. Support calendaring and connecting to Exchange Server mailboxes to retrieve and display scheduling meeting information created by Outlook. Ability for users to share high resolution content(1080p) & application, record meetings, whiteboarding and polling etc Centralized management interface for managing video conference session. Multiple microphones with sound localization and lip sync capabilities. Flexible camera with innovative sound and facial-tracking algorithms to accurately focus on the person speaking Camera coverage should be at least 5-10M Support intelligent bandwidth management, reduce drop calls, tolerate packet loss without affecting audio-visual performance, deliver superior video and audio feed. Automatic gain control Noise suppression, noise block, acoustic fence, instant adaptation echo cancellation, live music mode, ability to pick up soft voice and set the microphone in the direction of the active speaker. Allow computer users or participants to actively participate in a conferencing session, simultaneous share content among all participants (e.g. share file, desktop, application and whiteboards),

		<p>share messages via instant messaging, ask questions using polls or raise hands, File sharing or slide shows to share PowerPoint or other presentations</p> <ul style="list-style-type: none"> ▪ Audio and video streaming. ▪ Live interaction and real-time session recording for later review or archiving ▪ Natively and securely registers to the Skype for Business platform and capable of accessing Exchange mailbox information to retrieve meeting invitations.
Video Standards and Protocols		<ul style="list-style-type: none"> ▪ Support for industry standards video and protocols such as: <ul style="list-style-type: none"> ○ H.261, H.263, H.264 AVC, H.264 High Profile, H.264 SVC, RTV ○ H.239/BFCP for content sharing ○ H.263 & H.264 Video error concealment` ○ HD display resolution
Audio Standards and Digital Format		<ul style="list-style-type: none"> ▪ Support for industry audio standards and digital formats such as: <ul style="list-style-type: none"> ○ G.711, G.722, G.722.1, G.728 and G.729A Codec standards
Enterprise Security Standards and Encryption		<ul style="list-style-type: none"> ▪ Support for strong media encryption (H.323, SIP): AES-128, AES-256, H.235.6, PKI/Certificate Management: (SSL 3.0, TLS 1.0, 1.1, 1.2), Self-signed and CA-signed certificate support and network intrusion detection system ▪ Utilize the latest encryption standards and other data security services to ensure that communications and system resources are kept secure and confidential.
Warranty	1	<ul style="list-style-type: none"> ▪ Three years warranty

CORPORATE SERVICES VC EQUIPMENT – 10 METRES		
Components	Quantity	Description
Multipoint Conferencing Unit and High Definition Video Camera (1080p)	1	<ul style="list-style-type: none"> ▪ VC camera capable of capturing everyone in the room. ▪ Eagle Eye IV Director or Eagle Eye Mini (USB) Camera that can be used with the VC system to boosts a 12x Optical Zoom with wide viewing range (pan, tilt and zoom functionality).
Conference Phone	1	<ul style="list-style-type: none"> ▪ Multitouch-capable touch screen ▪ On screen virtual keyboard
Sound system	1	<ul style="list-style-type: none"> ▪ 360 Degree High quality microphone systems (6 m pickup range) ▪ 2 x Expansion Microphones

**Virtual Meeting Room
and Video Interop Server**

- AV - with capability to connect to interpretation system.
- Loud Speakers
- VMR must interoperate with Skype for Business and other propriety VC systems (desktop and hardware based Multi-Point Conferencing Unit (MCU)).
- Allow users to join meeting using PSTN Dial-in and standard browser
- Integration with active Directory and calendar.
- Support calendaring and connecting to Exchange Server mailboxes to retrieve and display scheduling meeting information created by Outlook.
- Ability for users to share high resolution content(1080p) & application, record meetings, whiteboarding and polling etc
- Centralized management interface for managing video conference session.
- Multiple microphones with sound localization and lip sync capabilities.
- Flexible camera with innovative sound and facial-tracking algorithms to accurately focus on the person speaking
- Camera coverage should be at least 10M
- Support intelligent bandwidth management, reduce drop calls, tolerate packet loss without affecting audio-visual performance, deliver superior video and audio feed.
- Automatic gain control
- Noise suppression, noise block, acoustic fence, instant adaptation echo cancellation, live music mode, ability to pick up soft voice and set the microphone in the direction of the active speaker.
- Allow computer users or participants to actively participate in a conferencing session, simultaneous share content among all participants (e.g. share file, desktop, application and whiteboards), share messages via instant messaging, ask questions using polls or raise hands, File sharing or slide shows to share PowerPoint or other presentations
- Audio and video streaming.
- Live interaction and real-time session recording for later review or archiving
- Natively and securely registers to the Skype for Business platform and capable of accessing Exchange mailbox information to retrieve meeting invitations.

Video Standards and Protocols		<ul style="list-style-type: none"> ▪ Support for industry standards video and protocols such as: <ul style="list-style-type: none"> ○ H.264 AVC, H.264 High Profile, & X-H.264UC ○ HD display resolution
Audio Standards and Digital Format		<ul style="list-style-type: none"> ▪ Support for industry audio standards and digital formats such as: <ul style="list-style-type: none"> ○ G.711, G.722, G.722.1, G.728 and G.729A Codec standards
Enterprise Security Standards and Encryption		<ul style="list-style-type: none"> ▪ Support for strong media encryption (H.323, SIP): AES-128, AES-256, H.235.6, PKI/Certificate Management: (SSL 3.0, TLS 1.0, 1.1, 1.2), Self-signed and CA-signed certificate support and network intrusion detection system ▪ Utilize the latest encryption standards and other data security services to ensure that communications and system resources are kept secure and confidential.
Warranty	1	<ul style="list-style-type: none"> ▪ Three years warranty

PROJECT DELIVERABLE

Service providers should submit a detailed time schedule of the entire project.

Project Milestones	Responsibilities	Expected Timeline
Phase I – Requirement Definition and Planning		
Detailed Proposal	<ul style="list-style-type: none"> ▪ Assessment of the current systems <ul style="list-style-type: none"> ○ Video Conferencing network and infrastructure planning ○ Planning the deployment 	1 week
Project Plan	<ul style="list-style-type: none"> ▪ Acquisition of video conferencing software and hardware infrastructure. 	3 Weeks (Concurrent with the planning stage)

Video Conference Deployment and Mobile Video Conferencing	<ul style="list-style-type: none"> ▪ Provisioning, deployment and configuration of video conferencing system. ▪ Deployment and Configuration of Virtual Meeting Room, Video Interoperability Server, remote worker specifications ▪ Hybrid Deployment and Integration with Skype for Business. ▪ Setting up Dial-in Access Numbers. ▪ Bandwidth testing and configuration ▪ Sound testing and localization (Preset) ▪ Network Configuration - integration with the present network environment, configuration of VLANs, bandwidth allocation and traffic segmentation. 	2 Weeks
Acceptance of the solution	<ul style="list-style-type: none"> ▪ Acceptance Testing ▪ Training and Enablement 	2 Weeks 1 Week
Training Manual	<ul style="list-style-type: none"> ▪ Launch 	1 Day

PHASE 1: This covers the preliminary work, installations and provisioning of the systems as specified. Under this phase the service provider is required to conduct an assessment of the existing solution and provide a project plan with duration of the project and delivery date. In order to capture the requirement, the service providers will have to organize meeting with the IT personnel at the APRM Secretariat to conduct an assessment if necessary. Following the assessment, the contractor will also draft a project plan and define the timelines. At this stage the service provider is expected to do the following:

PRE-INSTALLATION

- Provide detailed work plan with timelines specifying installation design, deployment plan, detailed activities and conduct site inspection.
- Acquisition of video conferencing software and hardware infrastructure.

PHASE 2: This covers the actual installation of the software and hardware. This is the installation and configuration aspect of the deployment which covers configuration of software and hardware required for the successful implementation of the proposed system.

Under this phase the service provider is required to install, configure and integrate all the systems. At this stage the contractor is expected to do the following:

ACTUAL INSTALLATION

- Provisioning, deployment and configuration of video conferencing system.
- Deployment and Configuration of Virtual Meeting Room and remote worker specifications
- Hybrid Deployment and Integration of Skype for Business.

- Setting up Dial-in Access Numbers.
- Bandwidth testing and configuration
- Room design and configuration
- Sound testing and localization (Preset)
- Network Configuration - integration with the present network environment, configuration of VLANs, bandwidth allocation and traffic segmentation.

PHASE 3: The final phase of the deployment includes the training, testing of the equipment and maintenance as described below.

TRAINING AND ENABLEMENT

Following the deployment, the service provider is required to provide an onsite vendor enablement for staff.

Bidders must dispense training to achieve the required knowledge to operate the systems with minimum supervision. Ensure end-users are conversant with the proposed solutions.

The service provider should submit the training manual if need be prior to the service commencement period.

TESTING

The preferred service provider shall conduct series of test for at least 2 weeks prior to inspection.

The acceptance test procedure shall be in accordance with the following:

- Must be undertaken for a period of 3 months and ensure that all equipment are in good working condition during the agreed test period.
- The performance tolerance level agreed upon is attained during testing.

SLA

Service Provider shall:

- Provide an escalation list and procedure in reporting fault and downtimes;
- Service Providers must immediately advice APRM of any known defects ahead of time; and
- Service Providers must be available to assist immediately if the equipment is faulty.

WARRANTY

The service provider must also provide a minimum of 3-year warranty for all the IT equipment. During this period the contractor will be fully responsible for any faulty equipment.

EVALUTION CRITERIA

The following is the evaluation criteria for each video conference system. Please note that all fields marked with an asterisk (*) are mandatory.

Criteria - Visual Collaboration	Scoring
<ul style="list-style-type: none"> ▪ Multipoint Conferencing Unit and High Definition Video Camera (1080p) * <ul style="list-style-type: none"> ▪ Camera with 12x - 18x Zoom Capabilities. ▪ Multipoint Conferencing Unit (MCU) with Multipoint license to accommodate simultaneous multi-party conferencing capacity needs etc. 	Yes <input type="checkbox"/> No <input type="checkbox"/>
<ul style="list-style-type: none"> ○ Monitor or Smartboards * <ul style="list-style-type: none"> ▪ 1 Smartboard or 1 Standard HD 70-75" Touch display screen. ○ Projector * <ul style="list-style-type: none"> ▪ High Definition Projector 	Yes <input type="checkbox"/> No <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Conference phone or Touch Panel* <ul style="list-style-type: none"> ○ Standard Microsoft Skype for Business Complaint boardroom conference phone or Touch Display 	Yes <input type="checkbox"/> No <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Sound system* <ul style="list-style-type: none"> ○ High quality microphone and sound systems. 	Yes <input type="checkbox"/> No <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Enterprise Unified Communication and Collaboration * <ul style="list-style-type: none"> ○ Unified IP based video conferencing solution for meeting rooms. ○ Unified access to their voicemail, emails, audio and video conferencing from anywhere. ○ Virtual Meeting Room (VMR) / Video Interop Server (VIS) must interoperate with Skype and Skype for Business <ul style="list-style-type: none"> ▪ Allow users to join meeting using PSTN Dial-in and standard browser ▪ Ability for users to share content & application, record meetings, whiteboarding and polling etc ▪ Interoperability with Microsoft on premise Skype for Business room System and other traditional third-party Video Teleconferencing System (VTC) (such as Cisco Unified Communication Manager (UCM), TelePresence Video Communication Server (VCS) for Cisco endpoints (TIP), Avaya, Yealink, Logitech, Polycom, Lifesize etc) ▪ Integration with active Directory and calendar. ▪ Support calendaring and connecting to Exchange Server mailboxes to retrieve and display scheduling meeting information created by Outlook. 	Yes <input type="checkbox"/> No <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Features and Capabilities * <ul style="list-style-type: none"> ○ Multi-party interactive video sessions and asynchronous visual collaboration. 	Yes <input type="checkbox"/> No <input type="checkbox"/>

<ul style="list-style-type: none"> ○ Ability to setup video conference call and invite participants to a video conferencing session via link, PSTN Dial-in Conferencing, SIP, audio and video invites concurrently. ○ Support click-to-join using remote control, touch panel, or even touchscreen displays. ○ Multiple microphone inputs and stereo channels. ○ Centralized management interface for managing video conference session. ○ Multiple microphones with sound localization and lip sync capabilities. ○ Flexible camera with innovative sound and facial-tracking algorithms to accurately focus on the person speaking ○ Camera coverage should be at least 10M ○ Support intelligent bandwidth management, reduce drop calls, tolerate packet loss without affecting audio-visual performance, deliver superior video and audio feed. ○ Automatic gain control ○ Noise suppression, noise block, acoustic fence, instant adaptation echo cancellation, live music mode, ability to pick up soft voice and set the microphone in the direction of the active speaker. ○ Allow computer users or participants to actively participate in a conferencing session, simultaneous share content among all participants (e.g. share file, desktop, application and whiteboards), share messages via instant messaging, ask questions using polls or raise hands, File sharing or slide shows to share PowerPoint or other presentations ○ Audio and video streaming. ○ Live interaction and real-time session recording for later review or archiving ○ Natively and securely registers to the Skype for Business platform and capable of accessing Exchange mailbox information to retrieve meeting invitations. 	
<ul style="list-style-type: none"> ▪ Control Devices - Remote control, touch panel and touchscreen display. * 	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<ul style="list-style-type: none"> ▪ Networking Protocols - Support the DNS (Client), DHCP (Client), RTP, SIP, RTP, TCP, H.323/H.320 and other standard networking protocols for video conferencing. * 	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>

<p>Audio Standards and Digital Format *</p> <ul style="list-style-type: none"> ▪ Support for industry audio standards and digital formats such as: <ul style="list-style-type: none"> ○ G.711, G.711A-law, G.711U-law, ○ G.722, G.722.1 ○ G.728 ○ G.729A, G.729 and PMCA Codec standards 	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Video Standards and Protocols *</p> <ul style="list-style-type: none"> ▪ Support for industry standards video and protocols such as: <ul style="list-style-type: none"> ○ H.261, H.263, H.264 AVC, H.264 High Profile, H.264 SVC, RTV ○ H.239/BFCP for content sharing ○ H.263 & H.264 Video error concealment` ○ MPEG, MPEG2 and MPEG4 video formats ○ HD display resolution 	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Enterprise Security Standards and Encryption</p> <ul style="list-style-type: none"> ▪ Support for strong media encryption (H.323, SIP): AES-128, AES-256, H.235.6, PKI/Certificate Management: (SSL 3.0, TLS 1.0, 1.1, 1.2), Self-signed and CA-signed certificate support and network intrusion detection system ▪ Utilize the latest encryption standards and other data security services to ensure that communications and system resources are kept secure and confidential. 	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Warranty *</p> <ul style="list-style-type: none"> ▪ The service provider must also provide a minimum of 3-year warranty for all the IT equipment. 	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>

Please read the Terms of Reference carefully before applying.

Closing date: **18 April 2019 at 3pm RSA time.**

All proposals should be submitted to: tender@aprm-au.org