

RFP NUMBER: RFP/IT/2022/16

RFP TITLE: APPOINTMENT OF SERVICE PROVIDER FOR THE SUPPLY, INSTALLATION, COMMISSIONING, TRAINING, HANDOVER AND SUPPORT OF THE MCR ROUTER REPLACEMENT FOR A PERIOD OF TEN (10) YEARS

The Questions Received from the vendor are tabulated below with the SABC team's answers as tabulated on 06 June 2022. (Questions 1-46)

Bidders Question - Question 1 :

Networking

4.3.1 Network Architecture: Spine & leaf

We noticed that the Spine equipment will be hosted in two separate rooms (MCR and NSR). Which features / benefit do you expect?

SABC's Response: *De-centralisation.*

- *2 -Tier Spine-Leaf Architecture with blue and red redundancy required between the two areas MCR and NSR.*
- **Improved Redundancy** – *As opposed to our traditional three-tier architecture where access layer switches connect to only two uplink distribution switches, every leaf switch connects to every spine switch. And instead of Spanning Tree Protocol (STP), we implement Transparent Interconnection of Lots of Links (TRILL) and Shortest Path Bridging (SPB), which allows traffic flows across all available links, offering improved redundancy, but like STP, still prevent loops.*
- **Increased Bandwidth** – *By implementing TRILL and SPB, we have the ability to use multiple active links instead of one and it increases bandwidth. With STP, only one link is active and the other links are blocked.*
- **Improved Scalability** – *In the event of oversubscription, we can add a spine switch and connect it to every leaf switch. If the port density is a concern, we can add a leaf switch and connect it to every spine switch.*
- **Low Latency and Congestion Avoidance** – *With having only a maximum of two hops between any source and destination nodes, we make a more direct traffic path, which improves performance and reduces bottleneck. The only exception is when the destination is on the same leaf switch.*

Bidders Question - Question 2 :

4.3.2.2 Network Controllers (2 Points each):

Do you mean a Network control system such as CISCO DCNM or Arista MCS?

SABC's Response: *Yes*

Bidders Question - Question 3 :

4.3.1.5 NMOS compliant API control of managed networks

Do you mean AMWA IS-06 or vendors' Network Controllers?

SABC's Response: *AMWA IS-06*

Bidders Question - Question 4 :

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Question 2 : 4.4.5. Scalability

Based on the 3 requirements listed below we can guess that SABC would like to progressively move to 3G and scale to up to 1024x1024 matrix.

SABC's Response: *Yes, our idea is that the network/system design must cater for the 3G bandwidth demands such that the core network infrastructure can support 3G bandwidth requirements to 1024x1024 matrix (as the foundation) for dual redundant paths, and scalable for future requirements. However, we do not expect bidders to include gateways (SDI-IP & IP-SDI) equipment over and above the number requested in this tender.*

Bidders Question - Question 5 :

However, to avoid oversizing and better shape the network, could you please elaborate on your 5+ migration path?

SABC's Response: *We are unclear of what 5+ migration path is. We are merely making provision for future growth of facilities and possible changes in technology. To avoid oversizing, we recommend that bidders use the provided numbers on how many of which kinds of gateways the SABC is requesting.*

Bidders Question - Question 6 :

4.3.1.2 The network must be designed based on 1080p50 (3G-SDI)

SABC's Response: *Yes, our idea is that the network/system design must cater for the 3G bandwidth demands such that the core network infrastructure can support 3G bandwidth requirements to 1024x1024 matrix (as the foundation) for dual redundant paths, and scalable for future requirements. However, we do not expect bidders to include gateways (SDI-IP & IP-SDI) equipment over and above the number requested in this tender.*

Bidders Question - Question 7 :

4.5.1.1 SDI (1080i50) – Input or Output (minimum: 750 Sources and 750 Destinations)

SABC's Response: *Please refer to the provided table of what these inputs and outputs would be used for. That is how much SDI will need to be converted to IP and visa-versa to integrate with existing legacy facilities.*

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Bidders Question - Question 8 :

4.4.5. Scalability : 1024 X 1024 for 3G HD 1080p50

SABC's Response: *Yes, our idea is that the network/system design must cater for the 3G bandwidth demands such that the core network infrastructure can support 3G bandwidth requirements to 1024x1024 matrix (as the foundation) for dual redundant paths, and scalable for future requirements. However, we do not expect bidders to include gateways (SDI-IP & IP-SDI) equipment over and above the number requested in this tender*

Bidders Question - Question 9 :

Question 3 : 4.4.1. FAST IN Signal Clean-Switching

Do you require Clean switch / Make before Brake on all the 750x 2110 receivers? If yes, how many receivers do you expect to switch at the same time (5%, 10% etc.)?

NB : This information is crucial to properly design your system.

SABC's Response: *Yes all 750, we require a solution that will offer clean switching every time routing occurs.*

How many receivers do you expect to switch at the same time (5%, 10% etc.)? – please clarify how will this affect the network design.

Bidders Question - Question 10 :

Question 4 : 4.5.1.2. Cross-Conversion:

Should we quote an IP-IP or Hybrid SDI/IP conversion?

SABC's Response: *At the present moment, our facilities are fitted with SDI equipment. Cross-Converters integrate with existing equipment for various use cases. Hybrid conversion makes sense for now. We refer to up/down multiformat standard converter (i.e. replacing AJA FS4)*

Bidders Question - Question 11 :

Question 5 : 4.5.1.6. Multiviewer requirements

Would you like an IP, SDI or HDMI output type?

SABC's Response: *SDI output*

Bidders Question - Question 12 :

Do you need Tally support?

SABC's Response: *Yes*

Bidders Question - Question 13 :

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Question 6 : Tally

4.4.2 Control and Tally Identification:

Could you please provide us with the existing Tally setup ? Which protocol?

SABC's Response: *Currently TSL Tallyman is integrated with multiviewers enabling dynamic UMDs. In FCCs and Studios, the on-air source/ PiP is highlighted on the multiviewer.*

Bidders Question - Question 14 :

4.3.1.5 NMOS compliant: Tally and events automation control

Do you expect AMWA IS-08 implementation?

SABC's Response: *Yes the solution must be IS-08 ready*

Bidders Question - Question 15 :

Question 7 4.3.2.3 Operations Orchestration and Control:

a) « automated triggers and triggered timed events »

Could you please elaborate on the meaning of «automated triggers » ?

For instance, a use-case, user persona will be appreciated to better understand the requirement and the success criteria.

SABC's Response: *Flow orchestration management - Workflow routing management with rules to config and implement functions, automated triggers and triggered timed event.*

- *Timed events: switching planned feeds to specific destinations at a scheduled time. i.e. the salvo function on a scheduled time.*
- *Automated triggers: definable automatic switching of signal(s) in case a source/device/output failure and escalate the alerts/notification. Furthermore, automated triggering of up/down cross-conversion/standard conversion to destination standard (i.e. SD to HD up conversion)*

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Bidders Question - Question 16 :

b) The ability to create and trigger a predefined snapshot « setups/events triggered manually or via a timeline (Scheduled) »

Could you please elaborate on the meaning of « via a timeline (Scheduled) » and also list the type of events ?

For instance, a use-case or a scenario will be appreciated to better understand the requirement and success criteria.

Furthermore, how this function differs from other business workflows such as automation etc.

SABC's Response: *Via a timeline: ability to create and switch different snapshots of the orchestrated setup for the facility or scenario for a production or an event (i.e. switching of xy sources and destinations, multiviewer layouts, Tally/UMD, audio assignments)*

Not all facilities have automation.

Bidders Question - Question 17 :

c) Device configurations interfacing e.g., Multiviewer, UMD, tally configurations

Which level of configuration do you expect in terms of Multiviewer, Tally configuration?

SABC's Response: *....not sure if we are answering the question as our understanding of "level" is not clear?*

Any Multiviewer displays Tallies (on-air indications of what is routed to be on-air) as they triggered as well as UMD source name changes as the Multiviewer Router sources are changed.

How this requirement is linked to 4.4.2 Control and Tally Identification?

SABC's Response: *Interrelated, they can be one and the same thing difference is the orchestration can bring hands on operational ease to setup, control and process the tally identification and management within the workflows.*

Bidders Question - Question 18 :

d) Customisable video, audio signal error alerts displayed on operational display(s) with notifications and escalation

What is your definition of « customisable » ? Which level of customisation do you expect?

SABC's Response: *We need a system that offers us the ability to setup the error alerts to monitor and trigger preconfigured rules to escalate issues, e.g., probing parameters or thresholds to trigger priority escalation to alert high-lighted errors and things that need to be addressed technically and operationally.*

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Bidders Question - Question 19 :

Question 6 : 4.5.2 ASI routing

Do you expect us to integrate existing ASI routing system? If so, what is the make/model and supported routing protocol?

SABC's Response: No

Bidders Question - Question 20 :

If not, is the expectation for us to propose a ASI to IP & IP to ASI converters so the broadcast controller manages routing in IP domain?

SABC's Response: Yes

Bidders Question - Question 21 :

Question 7 : 4.5.3 Integration of existing broadcast systems

Could you please describe the control architecture of the existing SDI router and ASI router ? Which protocol? Which physical interface?

SABC's Response: *The Router matrix (SDI & ASI Probel Cygnus) has two controllers (Aurora and Morpheus Controllers). The control of crosspoint switching is through these controllers.*

- The XY panels are connected to the Aurora controller through RS422.*
- The Miranda PreStation panels are connected to the Aurora controller through RS422.*
- The Pebble Automation is connected to the Morpheus Controller through RS422.*
- Columbus Miranda Software control uses Encore router control for auto scheduled ingest for the News Production System (NPS); It needs to be noted that the new SI Media system will replace this old NPS system within the next 5 months.*

Bidders Question - Question 22 :

2. Generally speaking, could please provide us with performance information for each business applications that control the Routers? For instance, how many requests/event per second/minute?

SABC's Response: *The Bidder needs to determine the best solution by communicating with the equipment manufacturers specified to bring more clarity.*

Bidders Question - Question 23 :

3. Please describe a typical workflow with information related to non-functional requirements

SABC's Response: *We are not clear what clarity is being requested with this question nor what question or point on the document is being referred to?*

"non-functional" dictionary term is something that does not work.

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Bidders Question - Question 24 :

4. Can you confirm if Pebble Marina (Ver. 1.6) supports LRC (Logical Routing Protocol) or older Leitch XY protocol, as well as any other 3rd party protocol? Is the control protocol connectivity serial or IP?

SABC's Response: *Connectivity is currently serial. Pebble support IP (Do confirm with Pebble about what is possible with their system for an effective integration). We recommend the Bidder to determine the best solution by communicating with the equipment manufacturers specified to obtain clarity.*

Bidders Question - Question 25 :

5. Can you confirm if Miranda IS750 & Press Panel supports LRC (Logical Routing Protocol) or older Leitch XY protocol, as well as any other 3rd party protocol? Is the control protocol connectivity serial or IP?

SABC's Response: *Connectivity is currently serial, we recommend the Bidder to determine the best solution by communicating with the equipment manufacturers specified to obtain clarity.*

Bidders Question - Question 26 :

6. Can you confirm if Dalet Galaxy (Ver.5) supports LRC (Logical Routing Protocol) or older Leitch XY protocol, as well as any other 3rd party protocol? Is the control protocol connectivity serial or IP?

SABC's Response: *Connectivity is currently serial. Pebble support IP (Do confirm with Pebble about what is possible with their system for an effective integration) We recommend the Bidder to determine the best solution by communicating with the equipment manufacturers specified to obtain clarity.*

Bidders Question - Question 27 :

7. Can you confirm if News Production System (SI Media) supports Imagine LRC (Logical Routing Protocol) or older Leitch XY protocol, as well as any other 3rd party protocol? Is the control protocol connectivity serial or IP?

SABC's Response: *we recommend the Bidder to determine the best solution by communicating with the equipment manufacturers specified to obtain clarity.*

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Bidders Question - Question 28 :

8. Can you confirm if Graphics Payout (RT Software) supports Imagine LRC (Logical Routing Protocol) or older Leitch XY protocol, as well as any other 3rd party protocol? Is the control protocol connectivity serial or IP?

SABC's Response: *The input and output of the system is ST2110 but the RT Systems TouchScreen control needs to route the sources for live feeds to be displaced. We recommend the Bidder to determine the best solution by communicating with the equipment manufacturers specified to obtain clarity.*

Bidders Question - Question 29 :

9. Does Pebble Marina, Miranda IS750, Dalet Galaxy, SI Media and RT Software support LRC or XY Passthrough protocol. Serial or IP?

SABC's Response: *We recommend the Bidder to determine the best solution by communicating with the equipment manufacturers specified to obtain clarity.*

Bidders Question - Question 30 :

Some of the equipment such as Miranda PressMaster are quite old.
Is SABC planning to upgrade this equipment in the near future.

SABC's Response: *Yes*

Bidders Question - Question 31 :

1. Why specifically the leaf and spine requirement?

SABC's Response: *Refer to Question 1*

Bidders Question - Question 32 :

2. Why the chassis spine requirement?

SABC's Response: *Refer to Question 1*

Bidders Question - Question 33 :

3. vendors, we request an extension to the tender closing date by two weeks.

SABC's Response: *minimum period is 21 days, 28 days given.*

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Bidders Question - Question 34 :

Section 5.2 of the above-mentioned RFP specifies that the products must be supplied within 12 weeks of placement of purchase order to be eligible for additional points as part of evaluation.

SABC's Response:

Clearly indicate the expected equipment delivery to the SABC from date of purchase order:

- *12 weeks and Less delivery = 10 points*
- *More than 12 weeks delivery with no OEM letter = 0 points*
- *More than 12 weeks delivery delay due to component shortages and OEM letter as confirmation = 10 points*

The SABC understands the industry wide component shortages the world is facing and requires Bidders to still comply with timeline indication stating equipment delivery challenges by providing a Signed OEM letter from the manufacturer as evidence that specifies their challenges with component shortages clarifying delivery delays.

Bidders Question - Question 35 :

What is the timeline for this project? Expected Delivery Date, On Air Date?

SABC Response: *the SABC appreciate the potential complexities of migrating to the new solution; the migration plan will define the "on-air" date; this can be discussed with the successful bidder during the consultation period of the project. We do wish the roll-out will be agile and not be prolonged unnecessarily.*

Bidders Question - Question 36 :

Will all Henley Facilities hardware be located in one central equipment/server room?

SABC Response: *yes, in and around the MCR machine room.
It must be noted that by the nature of the 2 tier spine leaf design the network will be distributed.*

Bidders Question - Question 37 :

Bidder must propose software or computer-based tools to ease signal routing as an alternative/backup to the hardware routing signal routing as an alternative/backup to the hardware routing panel catering for the 100 user licenses

Can you clarify that you would like 100 software licenses, in addition, the to the 132 hardware panels?

SABC Response: *we are looking for a solution that will enable routing with a computer-based application independent from hardware panels. The 100 number is the baseline for bidders if this feature of the solution will need licensing.*

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Bidders Question - Question 38 :

Is Remote access/ work from home required?

SABC Response: *though not specified in the tender, the orchestration, control and system monitoring, if possible, must be remotely accessible.*

Bidders Question - Question 39 :

NMOS Compliant

Are there any IP Native devices that will be connected?

If so, what are the devices, are they NMOS compliant?

SABC Response: *Except for the RT Graphics system, there are no other devices that are IP Native. Future projects and facilities improvements will be absolute 2110 compliant.*

Bidders Question - Question 40 :

Cross-Conversion: Up/Down Converters (20x HD to SD and visa-versa with frame-sync), (Frame rate conversation) and must be reprogrammable, for future functional repurposing

What frame rate conversions are to be supported?

SABC Response: *Currently, our standard is 1080i50, so we need the ability to convert from any other frame rate to comply with 1080i50 and 625 @ 25 frames.*

Bidders Question - Question 41 :

Embedder/De-embedder (x20) including audio shuffling, 8 channels and must be reprogrammable, for future functional repurposing

Are these audio requirements for the existing AES audio, or AES 67 (ST2110-30) audio

SABC Response:

- *yes for the existing AES audio requirements.*
- *Future AES 67 (ST2110-30) audio*

Bidders Question - Question 42 :

Embedder/De-embedder (x2) including audio shuffling, 16 channels, and must be reprogrammable, for future functional repurposing

Are these audio requirements for the existing AES audio, or AES 67 (ST2110-30) audio

SABC Response:...

- *yes for the existing AES audio requirements.*
- *Future AES 67 (ST2110-30) audio*

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Bidders Question - Question 43 :

AES Audio

Are the AES audio sources balanced or unbalanced?

SABC Response: *balanced..*

Bidders Question - Question 44 :

Multiviewers for News Digital Media NDM- 16 PiP - 2 MLT VW Mon

Total counts on Excel doc state 128x8 total count. Can you confirm that this should be 16 PIP and 8 Monitor or 2 monitors as listed in the description?

SABC Response: *...
16 PIP and 8 Monitor*

Bidders Question - Question 45 :

Multiview displays

Are the monitors to be connected via HDMI or SDI?

SABC Response: *SDI*

Bidders Question - Question 46 :

Multiview Displays

Are the monitors in each location colocated in the same room?

SABC Response: *both scenarios are true; some are colocated in the same room but not all of them.*