Q&A Addendum

Arkansas Research and Education Optical Network

ARE-ON Optical Equipment Refresh

RFP 666832

This document provides question and answer information pertaining to the above captioned RFP.

REMINDER: It is the Respondent's responsibility to thoroughly examine and read the entire RFP document and any appendices and addenda to this RFP.

Posted Febraury 14, 2018

Questions regarding Appendix I:
The current network is made up of the ADVA RE2 and R7 platforms. The drawings show the platforms together at various locations and apart at others.

Question: To what extent are the RE2 and R7 integrated together? Is the R7 acting as an expansion or shelf or both of the original design? Need to understand the relationship better between the two platforms.

Answer: Where both an RE2 and an R7 node coexist at a location, each node (R7 or RE2) functions independently and each is managed independently. Neither node is an expansion shelf of the other. The function of the RE2 nodes is to provide pre-amplification, OSC termination, and, in some cases, transponders. At the following locations the RE2s also function as the ROADM: Arkadelphia, UALR, UAMS, Conway, Russellville, and Fort Smith. All R7 nodes have transponders. In addition, R7 ROADMs are present at the following sites: Alma, Morrilton, North Little Rock, Malvern, Hope, and Atlanta. The R7 nodes in Atlanta and Hope also handle pre-amplification and OSC termination between those two sites.

Question: Vendors are being asked to replace the RE2 platform along the 5 routes. How integrated would the new solution have to be with the R7? Is there an expectation that the R7 and new platform understand and communicate with one another? Or that only services would be connected drop-side between the two platforms? If drop-side only, are you expecting OTU based connections?

Answer: If the vendor's proposed system does not call for replacing the R7s, we do not expect the R7s' management network to be integrated with dissimilar equipment. However, provisions for the existing management network used to manage the R7s must be included in the vendor's proposed system. Optical service channels may be terminated on any of the equipment being proposed. Replacement of the

R7s is optional. If R7s are not being replaced in the vendor's proposed system, the services supported by the R7s must be integrated into the solution either through alien wave transport or terminating the services and handing off traffic to existing R7 services at the 1G or 10G Ethernet level. If ROADMs are not being replaced at the multi-degree sites (North Little Rock, Alma, Hope), the proposed system must make provisions for traffic (i.e. services) to be handed off to the existing ROADMs nodes.

Question: **[A]**The RFP states that replacing all gear is an option on the 5 routes. What is the view on this approach if the new platform and R7 cannot be integrated directly, except for drop-side connectivity?
[B] Also, there are a few linear spans off of route 3 to Yellow colored R7 platforms. If we propose replacing those, can we get span distance and loss information for those?

Answer: **[A]** (See answer to Question #2.) Direct integration of remaining R7 equipment is not a requirement; however, all services supported by remaining R7 equipment must be accounted for in the proposed system.
[B] The four linear routes off of route #3 are not in the scope of this RFP. Services from these linear routes are accounted for in the services table in Appendix II.

Questions regarding RFP Word Document:

Question: Does ARE-ON expect the RE platform to be removed by the winner of the RFP? Or will ARE-ON remove the equipment at a later time?

Answer: ARE-ON shall be responsible for the removal of the RE2 equipment except where space and/or power limitations require removing some or all of the old equipment before the new equipment can be installed. Unless the vendor proposes a trade-in of the RE2 equipment, ownership resides with ARE-ON, and ARE-ON will be responsible for disposing of the equipment. ARE-ON will not accept trade-in for any R7 equipment.

Question: Does ARE-ON expect a physical resource to be onsite during production cutover? How soon would that effort occur after the new network is up?

Answer: Each vendor is to propose an installation and cut over plan that takes into consideration the number of sites and personnel needed to accomplish the tasks. The existing network must remain up and available until the new equipment is ready to be activated. To reduce the number of personnel and to reduce the duration of any outages required, it is expected that the network cutover will occur in stages, possibly one segment of the network at a time. Some sites will require ARE-ON personnel or the site's owner to escort the vendor during installation and cutover.

Question: Does ARE-ON prefer current smaller rate waves to be moved to 100G or larger waves to save on channel count? So long as the correct client hand off is maintained and the current smaller waves can be carried together along the same path if it makes sense? This would also remove the need for DSCM's.

Answer: ARE-ON is looking for a comprehensive solution that supports both our existing services and provides a path to future services that include 100G and above. Section 5.5.1 requires that the proposed system be optimized for 100G transport

and that existing DCMs are eliminated. The vendor's solution must ensure that the lower bandwidth services are delivered as specified in the RFP, but the method of delivery is up to the vendor, keeping in mind that cost is a factor in the evaluation. Lower bandwidth services may be multiplexed on larger bandwidth transport services if the vendor's solution provides for the support of all existing services in the current network.