

ATTN: Potential Land Mobile Radio Systems Integrators

The Commonwealth of Virginia will be issuing a Request for Proposal in the near future to establish a Contract with a Systems Integrator to upgrade the existing State Police LMR and Microwave Networks into a Shared LMR Network. Additional information concerning this project is available at <http://www.vsp.state.va.us/>.

The Commonwealth's Contractor, Hayes, Seay, Mattern & Mattern, Inc./CTA Communications, Inc. will make appointments for potential Systems Integrators to review the core technical portion of the Draft Functional Specification for the purpose of a question and answer session to determine suggested additions or deletions to the Functional Specification document. This process is being provided to reduce the time necessary for offerors to prepare their proposals and limit future RFP addendums.

Appointments are available the first two weeks of June 2001 (06/04/01 – 06/15/01) from 9:00 a.m. to 4:00 p.m.

Location: CTA Communications, Inc.  
20715 Timberlake Road, Suite 106  
Lynchburg, VA 24502

Contact: Cheryl Giggetts, Vice President, CTA Communications, Inc. at 804-239-9200 or via e-mail at <mailto:cgiggetts@ctacommunications.com> for an appointment. Only one firm will be provided an appointment on any given day and only one day will be provided to a potential Systems Integrator.

Potential System Integrators will have from 9:00 a.m. – 12:00 noon to review the document and 1:00 p.m. to 4:00 p.m. for a question and answer session.

**Please refer to the following Schedule of Attributes (SOA) to determine whether your firm would be capable of providing System Integrator services for the Commonwealth of Virginia Statewide Shared LMR Network:**

**Statewide Agencies Radio System (STARS)  
Schedule of Attributes (SOA)  
Version 3  
May 23, 2001**

Objective: STARS shall be a shared radio network providing statewide two-way radio voice and data communications service to participating Virginia and Federal agencies.

Plan of Action: Competitively procure from a single Systems Integrator an upgrade to the existing State Police LMR and Microwave networks to facilitate a shared radio network, including LMR, Microwave, Mobile Data, Intranet, and all

Physical Facilities, providing opportunity for innovation in the use of technology in design, ownership, partnership, and financing.

Procedure:

1. Establish a baseline Functional Operational Requirements List (FORL) using a process whereby all operational considerations are listed, and that list is then progressively limited until the FORL reflects a realistic level of capability at a reasonable budget.
2. Based on the FORL, develop system architecture, allowing the opportunity for new and state-of-the-art technologies to be incorporated into the system design.
3. Develop procurement documentation which establishes specific baseline technical criteria, and which encourages offeror to provide innovative technical, ownership, partnership, and financing solutions.
4. Establish evaluation criteria and processes that will allow fair and objective evaluation of the offerings resulting from the procurement documentation described above. Part of the evaluation criteria will be a statement of Required Core Attributes, which will establish an evaluation benchmark.
5. Review all offerings for provision of “Required Core Attributes”. An offering that does not comply with all Required Core Attributes may, at the option of the evaluation team, be disqualified from further evaluation.
6. Remaining offerings will be evaluated in detail using the established evaluation criteria, and will be ranked in order of evaluated value to the Commonwealth, cost, spectrum utilization, and other factors being considered.
7. The Commonwealth will then begin negotiations with two or more offerors, the objective being to successfully agree to a contract.

Required Core Attributes: Required Core Attributes will continue to evolve until release of solicitation.

1. The system will present a radio communication platform(s) that facilitates voice and data. The expectation is that the platform(s) will take the process well beyond simply adding data to a system designed around voice.
2. The system will provide wide area communications throughout the Commonwealth to the participating user agencies. The expectation is that the following criteria will be specifically included:

- Scarce spectrum resources will be carefully utilized, and used efficiently. The maximum use of the currently licensed radio frequencies is extremely important.
  - There will be flexibility in shifting capacity resources (channels) to areas of peak activity on an ad-hoc basis.
  - The Systems Integrator shall provide and guarantee required coverage, in the manner specified and tested as described in the procurement documentation. In addition, the Systems Integrator shall guarantee existing radio users within the Commonwealth will not be interfered with.
3. The LMR system will be designed to work in the VHF (150-174 MHz) band. The expectation is that the following activities and criteria will be specifically included as part of the evaluation:
- The offerors shall have available for testing during the offering evaluation period, equipment that will demonstrate the ability to provide both infrastructure and subscriber equipment in the VHF band.
  - Fixed repeater equipment shall be available to demonstrate the ability to transmit at the ERP and input power levels allowed by the Commonwealth's licenses.
  - Ancillary equipment such as a vehicular repeater will be available for testing in sufficient quantities that the operational characteristics of multiple responding vehicles may be ascertained.
  - The offeror shall demonstrate the ability to operate with the existing VSP infrastructure and vehicular repeaters, as well as demonstrate the backward capabilities of the offered equipment.
  - Subscriber equipment shall be available in sufficient quantities that the operational characteristics of equipment including group operation, operation in an interference environment, and operation in a low signal environment may be demonstrated and tested.
  - Infrastructure (control and repeater) equipment shall be available and installed by the offeror at a site of the Commonwealth's choosing in the VHF band using narrowband Commonwealth licensed frequencies to demonstrate the above operations.
  - The offeror shall demonstrate single site trunked operations.
4. The technology will be evaluated in part on its ability to meet or to exceed co- and adjacent-channel rejection specifications currently available for NBFM

equipment. Co-channel interference is defined as any situation where the foreign/local carrier frequency separation is less than  $\frac{1}{2}$  the sum of the allocated bandwidths. Adjacent-channel interference is defined as where that separation is greater than  $\frac{1}{2}$  the sum of the allocated bandwidths. The evaluation will be based on measured data used as a baseline, and will consider both static and multipath conditions.

The technology will also be evaluated in part on its ability to coexist with current equipment at specific radio sites during the migration period, such that access, performance, and feature sets of the Commonwealth's current equipment is not degraded or compromised.

5. The Commonwealth is seeking innovative ownership, partnership, and financing options. These may range from lease-purchase ownership including full operation of the system by the Commonwealth, to full ownership and operation of the system by the Systems Integrator, with incremental ownership/operation and leasing criteria in between. The expectation is that the following important ownership/financing considerations will be met:
  - The system, sites, and operation shall be physically secure and will include reliability, redundancy, and maintainability provisions commensurate with a public safety grade of operation.
  - The implementation including design review, quality assurance, project management, testing, and documentation, shall be open to monitoring, and will include the ability for Commonwealth oversight throughout the process.
  - Additional third party use of the system will be considered after each phase of the system is demonstrated to be acceptable for Commonwealth use. Commonwealth migration to the system will be given prime consideration as each phase is implemented. The Commonwealth will approve the technical conditions under which each third party user is offered service, and that priority will always be given to Commonwealth needs and requirements.
  - The migration from the current Commonwealth systems to the new systems shall be under the control of the Commonwealth.
  - The system capacity shall support the projected 10-year Commonwealth operational needs as determined by the Commonwealth, with reserve capacity for additional growth and emergency requirements.
  - The Commonwealth will retain ownership of the existing land, towers and buildings and any other currently owned assets that may be used in the

upgrade of the existing infrastructure. It is highly desired that the Commonwealth owns the land, towers and buildings.

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