



ALACHUA COUNTY SHERIFF'S OFFICE

Sheriff Sadie Darnell
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November 10, 2015

Edward J. Bielarski, Jr.
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Dear Mr. Bielarski:

I am writing to you on behalf of the Radio Management Board (RMB) sub-committee tasked with providing input and direction regarding the viability and expansion of the public safety 800 MHz trunked radio system (TRS) that is owned, maintained and supported by GRU/GRUCom. The sub-committee was formed in 2014 due to a continued impasse as to how to move the TRS forward. There were competing interests and unresolved questions between GRU/GRUCom and its public safety subscribers secondary to the Interlocal revision that occurred in 2012. The sub-committee is comprised of public safety agency representatives appointed by voting members of the RMB. In addition, Mr. Solon Bellot has participated as the GRU representative.

For the past year or so, the sub-committee has worked on a position paper (please see attached) to articulate various concerns regarding the current, intermediate, and long term viability, reliability, and expansion of the TRS. The RMB formally approved the position paper in September of 2015.

In the position paper, two options were adopted by the RMB in an attempt to bring resolution to the challenges. The preferred option is for GRU/GRUCom to continue to administer and expand the system; and the RMB was advised at the October 8, 2015 meeting that GRU/GRUCom wished to continue to do so as well.

To date, after another sub-committee meeting on November 3rd, the sub-committee finds itself in a similar position as to which led to its creation, with serious concerns and questions that still can only be best answered by GRU/GRUCom. For example:

- What is the end of life for all current components of the TRS and what plans are in place to replace and upgrade them?
- What is the final cost and timeline to upgrade the system components to allow for fully functional P25 radio operations?
- What is GRU/GRUCom's position on maximizing potential partnerships with entities such as the City of Gainesville Traffic Management fiber optic system or Florida Department of Transportation to provide connectivity backhaul to areas where radio coverage is currently an issue?

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These questions, in addition to the issues identified in the position paper, need answers as soon as possible to allow for the appropriate budgetary, logistics and operational impacts to the TRS subscribers.

Please know that this letter is not being sent as a result of a perceived lack of effort or concern from the GRU/GRUCom staff we interact with on a regular basis. It is being sent because we feel intervention and action is needed from GRU/GRUCom Executive Leadership to provide a clear path forward, including a commitment to the mission critical and unique communications system needs of the public safety radio customers.

Thank you for taking the time to review this situation and I look forward to hearing further.

Sincerely,

SADIE DARNELL, SHERIFF

By: 

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Enclosure (1)

CC: City Manager's Office
County Manager's Office

TRS Viability Position Paper RMB Sub-Committee

ISSUE:

Ensuring viability and expansion of the public safety 800 MHz trunked radio system (TRS) as the current interlocal is due to expire in 2020.

DISCUSSION:

The initial TRS interlocal between the City of Gainesville (d/b/a Gainesville Regional Utilities (GRU)) and Alachua County was implemented in November of 1999 for the purposes of establishing a public safety 800MHz trunked radio system owned and managed by GRU, and supported fiscally with subscriber charges. Prior to the TRS interlocal, the radio system(s) for public safety and other governmental entities were operated as separate systems on analog VHF and UHF frequencies, with very limited interoperability and coverage. The original interlocal addresses reception and transmission capacity, tower location(s), infrastructure requirements, roles and responsibilities of the parties, and user fees/charges.

In addition, the TRS interlocal established a Radio Management Board (RMB) comprised of representatives from GRU and system customer agencies to provide oversight and direction within the boundaries of the interlocal agreement.*

**System expansion, capital funding, and similar functions currently fall outside the purview of the RMB.*

The TRS interlocal was amended in January of 2012, with a primary focus for the system to be "P25 capable and operational" by September 30, 2012, and any upgrades, replacements and/or new components of the system to be "P25 compliant" by 2020.

"P25" is an acronym for Project 25, which is a set of public safety digital radio standards that maximizes the ability for disparate systems to have local and regional interoperability, increased competitive vendor pricing options, greater radio frequency/channel/encryption efficiencies, system security and extended equipment life. P25 can also allow for greater chances for federal grant funding.

At this time, GRU has established three (3) P25 channels in the system and is making efforts to secure funding for more channels; however there is no set number of P25 channels established in the interlocal. Three (3) channels do not provide enough capacity for the larger subscriber agencies to function in the P25 environment.

Local agencies have made significant capital investments recently in portable and mobile radios that are P25 capable. In addition, law enforcement has purchased advanced encryption options that require a P25 operating environment to ensure effectiveness.

In addition to the shortfall in the number of P25 channels and capacity, the current interlocal does not address the issue(s) related to infrastructure expansion to ensure reliable radio system transmission and reception coverage in all service areas. For example the southwest area of Alachua County has expanded in population and requests for services; subsequently there is a need for radio capacity via another TRS tower being built; however this is a significant capital expense that is not provided for in the interlocal. In addition, as the overall amount of TRS subscribers will most likely continue to increase (for

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TRS Viability Position Paper RMB Sub-Committee

example, the Regional Transit System (RTS) is experiencing a large increase in radio inventory and utilization), and the City of Gainesville experiences an expansion of vertical building (which will impact radio signal penetration in the urban core) these factors compound the need for system capacity expansion (not provided for in the interlocal).

The competing interests/complexities of short and long term funding, technology, equipment longevity, equipment replacement, and maintenance and system management are on a potential collision course as 2020 (and the 21st year of the system existence) approaches.

A common challenge currently faced by the radio system vendor industry, the FCC, and federal, state, local, municipal and other entities is how to best maximize utilization of current radio system infrastructure with evolving technologies such as 4G/LTE. The marriage of current with new technologies presents an opportunity to extend the life of a system while also allowing for the ability to increase the capabilities and efficiencies of the system. The current interlocal does provide a framework to maintain the current system; however a revision of the interlocal to encompass the present and pending challenges would be potentially outside the scope of local (non GRUCom) resources without engaging significant consulting firm expense.

RECOMMENDATION:**Option 1 (preferred):**

As GRU currently owns and maintains the TRS, and in addition has expertise and substantial resources available, GRU is in a unique position to initiate and manage the evolution of the TRS. The return on investment for GRU to pursue this would not only be to continue to manage a program already in place, but to also utilize the capabilities of GRU (such ability to secure financing, provide network and other connectivity as a revenue stream) to balance provision of a mission critical public safety need and a radio system for GRUCom itself, with the opportunity to build out their infrastructure and expand their range of services.

Also, GRU has good working relationships with radio system consulting resources that have familiarity with the evolution of the system-both past and current. Such resources could assist GRU with formulating different radio system business models for presentation to the client agencies to address immediate needs and (as needed) future challenges and considerations.

Potential Initial Course of Action (GRU/GRUCom); Draft a revised interlocal agreement in the context of a "living document" for presentation to the TRS subscriber agencies/entities that allows for issue(s) resolution such as:

1. Implementation of sufficient P25 channel capacity and capability to meet subscriber needs (to include encryption, allowance of non-Motorola P25 radio purchases by subscriber agencies, interoperability with external counties, etc).
2. Solution(s) to identify and enhance TRS coverage to a satisfactory level in the SW and other areas of inadequate TRS coverage within Alachua County. Consider migration of Austin-Cary site into simulcast system by GruCOM.

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3. Enhancement/Replacement schedule for core infrastructure (CEB's, etc) that includes immediate or near future needs and will also take TRS Interlocal past 2020.
4. Minimum subscriber connectivity rates and/or other financing model options to meet P25 expansion and infrastructure replacement; and in addition to include language that would allow flexibility for GRUCom to present options/solutions to TRS subscriber agencies if unanticipated coverage and/or infrastructure issues arise during the span of the Interlocal.
5. Provide recommendations to subscriber agencies on mitigating situations (or potential situations) such as those due to impacts of new/retro-fitting construction on structures or interference from distributed antenna systems (DAS) and/or bi-directional antenna systems (BDA).
6. Maximizing evolution of P25 and other technologies such as 4G/LTE, radio area networks (RAN), FirstNet/FloridaNet as there may be opportunities for the TRS to capitalize on this and improve the system (and potential system life) while potentially decreasing cost to the subscribers and GRUCom; the subscriber rates could be adjusted without a complete re-write of the Interlocal.

Option 2 (fallback option if option 1 is not available):

Option 2 would potentially involve two (2) phases but would require governmental entities to secure significant amounts of funding.

Phase I: Via an RFP process-secure the services of a public safety radio consulting firm in FY 15-16 with a scope of work that would include evaluation and recommendation of parameters such as: current performance of the system, immediate and/or potential short term efficiency gains available under the current interlocal, forecasting infrastructure needs/timelines (with associated funding and cost models) for system, and governance model(s).

Phase II: Utilize public safety radio consulting firm to provide subject matter expertise with implementation and consultation for the next generation of the TRS program (a.k.a. forklift upgrade)