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JWS-02-067
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National Communications Interoperability Assessment Project**

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From January 2001 through February 2002 The Johns Hopkins University Applied Physics Laboratory (JHU/APL) conducted the National Communications Interoperability Assessment (NCIA) study under the auspices of the National Institute of Justice (NIJ) Advanced Generation Interoperability for Law Enforcement (AGILE) Program. The objective of the NCIA study was to evaluate the operational utility of a cross-band repeater technology in enabling wireless voice communications for public safety agencies. The focus of NCIA was the Multiple Agency Radio Interoperability Program (MARIP) TRP-1000 Transportable Intelligent Interconnect System, commonly referred to as the MARIP TRP-1000. The Office of Domestic Preparedness (ODP) provided MARIP TRP-1000 units to public safety agencies nationwide, 23 of which participated in the NCIA study.

The NCIA Study considered Critical Operational Issues (COIs) that addressed the impact of the MARIP TRP-1000 on intra-agency and inter-agency communications and the suitability of this resource for the public safety operational environment. The data collection strategy developed to evaluate the three COIs included surveys and reports, observations, and interviews and outreach. In particular, three surveys were administered to assess status at the beginning, middle, and end of the NCIA effort.

At the completion of the NCIA study, participants were asked to indicate whether they had achieved key milestones in the deployment and employment of the MARIP TRP-1000 at their site. The milestones culminate in "Institutionalized Use," where the MARIP TRP-1000 has been incorporated into standard emergency response procedures and is used whenever needed. By the end of the NCIA study the majority of participants had not yet achieved institutionalized use though 65% of the sites indicated that the MARIP TRP-1000 was ready for use in 'real world' operations. Only 27% indicated that they envisioned using the MARIP TRP-1000 on a frequent basis.

Overall, the NCIA participants consider the MARIP TRP-1000 to be a valuable resource yet the transition from testing to operational and finally institutionalized use has been slow. Sites that have been successful in achieving timely institutionalized use have leveraged pre-existing relationships with partner agencies, particularly when they were already operating in the capacity of a service provider for communications. Factors contributing to delays in MARIP TRP-1000 employment are primarily institutional in nature and include the lack of a 'champion' leader, the lack of Memoranda of Understanding (MOUs) and the lack of Standard Operating Procedures (SOPs). Also, some sites have had difficulty obtaining the funds and resources to modify the

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standard MARIP TRP-1000 configuration in order to make the equipment compatible with radio systems used during standard operations.

Even more critical is that many sites perceive the MARIP TRP-1000 as being invaluable in special, large-scale emergencies but not serving a critical purpose during routine operations. Due to funding and personnel constraints, the focus of local and state agencies is on current operations and not on rare, large-scale incidents. This, and the fact that most agencies consider routine interoperability requirements to be satisfied either by the current infrastructure or planned upgrades, explains why 73% of the sites indicated that they envision the MARIP TRP-1000 being used only on special occasions.

As stated previously, the NCIA participants indicated that they consider the MARIP TRP-1000 to be a valuable resource that has expanded the capabilities of their agency to provide support. At the same time, however, about half of the sites indicated that the MARIP TRP-1000 has not had an impact on intra-departmental and/or inter-departmental communications, primarily because the resource is not being used on a regular basis.

Finally, of the 21 sites that responded to either the Interim or Final Survey, 18 of 21 sites indicated that they would recommend the MARIP TRP-1000 to another public safety counterpart with no or minimal reservations.

Some significant lessons were learned during the NCIA study that can potentially aid future Department of Justice initiatives. These include:

- Two models for deployment of MARIP TRP-1000 units in a region were demonstrated in the NCIA sites. The first model ("Service Provider") involves MARIP TRP-1000 units being provided to agencies that operate in the capacity of a communications service provider agency and make the MARIP TRP-1000 available to a large number of 'users'. The second model ("Individual User") involves MARIP TRP-1000 units being provided to a number of individual agencies in a state or region where each of these agencies is the primary user of its MARIP TRP-1000. Overall, the service agency model appears to better support quicker deployment and more widespread employment of the MARIP TRP-1000 in a state or region.
- Regular use of the MARIP TRP-1000 is essential to promoting preparedness and willingness to use this resource. One means of achieving regular use is to have the MARIP TRP-1000 available as a resource to a large number of users. Also, given that the situations in which the MARIP TRP-1000 will be used will involve different agencies with their own unique operating procedures, periodic inter-departmental training is critical to having all parties understand how the MARIP TRP-1000 will be incorporated into their operations.

- **Future efforts of the Department of Justice (DOJ) in aiding local and state public safety agencies could be enhanced if needs assessments are conducted before equipment is disbursed. Sites that are likely to deploy the equipment quickly and employ it on a regular basis could be identified and targeted as recipients. Though programmatic constraints may not allow equipment to be tailored to meet the needs of individual sites, prior needs assessments would provide DOJ with an understanding of the information and assistance required to facilitate deployment.**
- **On-going outreach with recipient sites is critical to the success of programs such the one which provided the MARIP TRP-1000 units to local and state public agencies. Structures (e.g., user web site) should be put in place to ensure that critical information is shared throughout the deployment cycle. During the NCIA study it was observed that staff reassignments occur on a frequent basis. A repository for technical, training and procedural information would assist those ultimately responsible for deployment and employment of the equipment.**

The NCIA study was successful and had a high level of participation because of continuous outreach activity. These efforts served first to establish rapport with the sites and then as a means of collecting valuable insights that can only be obtained by talking directly to points-of-contact. The most important reason why the NCIA study was a success, however, is the support of the dedicated personnel working in public safety. Their continued support during this study is a reflection of their overall commitment to public safety.

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