

Regional Community Network Management Reporting Structure – Approved by Regional Council on 4/22/2009

The Regional Community Network (RCN) is a fiber optic communications network that, when completed, would connect all MAG member agencies for the primary purpose of coordinating traffic control operations between neighboring agencies. The RCN communications network will allow the sharing of video and live traffic count data, and would help each jurisdiction manage its signal network more efficiently, thus improving safety, and reducing traffic delay and emissions. In addition, the RCN may be a significant communications asset in the event of a regional emergency evacuation due to a natural or a man-made cause. The network will also be available to support other interagency data sharing applications, including videoconferencing, Information Technology, and possibly public safety communications.

A number of larger cities and towns in the region have developed Traffic Management Centers that serve as the coordination centers for traffic management. Efficient management of the regional road network relies heavily on efficient communications between these centers. At present a number of local agencies rely on local fiber networks as well as expensive leased phone lines for their agency-to-agency electronic communications. The RCN would eliminate the need for some leased fiber and/or phone lines and result in cost savings for those agencies. The RCN will also link the Arizona Department of Transportation's (ADOT) Freeway Traffic Operations Center, City of Phoenix's Transit Control Center, and METRO Rail's LRT Control Center to the rest of the regional traffic management network. The following is a subset of the information that will be shared:

- Real-time traffic conditions
- Crash bottlenecks
- Plans for relief routes
- Freeway cameras showing traffic heading toward local streets

The initial RCN design was developed as part of a study in which MAG examined ways to increase access to telecommunications and leverage existing agency infrastructure investments. Each agency agreed in principle to provide at least two fiber strands in key locations to allow the creation of a network connecting all MAG member agencies. The design called for filling key gaps to connect one agency's fiber to another's.

ADOT is currently overseeing the construction of Phase 1A of the RCN. This project will create the core ring and abbreviated East Valley and West Valley rings that will eventually be expanded into the full RCN. The original RCN concept specified a network carrying both general information technology data and transportation data, using advanced equipment to create multiple networks on a single pair of fiber. Limiting Phase 1A to accommodate the available budget reduced the scope to a single network carrying transportation data and supporting the Regional Videoconferencing System (RVS). The advanced electronics may still be added at a later date without discarding any equipment provided in Phase 1A.

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The RCN Working Group (RCNWG) is comprised of representatives of the member agencies serving on the MAG Technology Advisory Group (TAG) and the MAG Intelligent Transportation Systems (ITS) Committee. This group currently develops recommendations for the management and future expansion of the Regional Community Network. The Working Group forwards recommendations to the TAG and ITS committees for approval and from there the recommendations move through the normal MAG committee structure. Following completion of Phase 1A of the RCN, the design consultant, Kimley-Horn, and the selected turn-key solution provider, will manage the network for one year. This will give member agencies time to develop a funding mechanism for ongoing maintenance, a plan for the ongoing management of the network, and policies for its operation and expansion.

The RCNWG will work to identify a number of policies and procedures to assure that the network will fulfill the promise of increased access for Information Technology uses without compromising the primary transportation requirement imposed by the use of Federal Highway Administration (FHWA) funding for construction and purchase of equipment. Additionally, the RCNWG will recommend a network manager after the completion of the first year.

The TAG, ITS, and the RCNWG envision a formal structure whereby the day-to-day operations and routine addition of services to the network would be efficiently managed. To that end, the committees propose that they draft an initial set of policies and delineation of tasks to provide a framework for timely decisions while maintaining the oversight and policy role of the existing MAG process. The following details a suggested program.

Regional Council, Management Committee, Transportation Review Committee

- Approve the initial set of policies.
- Approve annual funding to support network management activities, including a small budget for incidentals as identified and included through the TIP process.
- Review and approve any requests for additional funding for system maintenance.
- Review and approve any requests for expansion funding.
- Review and approve any policy changes.
- Review and approve any removal of a previously approved agency service.
- Receive annual reports on the status and function of the RCN.

ITS and TAG

- Approve new services that have passed the RCNWG assessments.
- Review and recommend approval of RCNWG policies to the Transportation Review Committee (TRC).
- Approval of RCNWG guidelines.
- Review and recommend approval of annual funding to support network management activities including a small budget for incidentals.

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- Receive annual reports on the status and function of the RCN generated by the Network Manager and recommend them to the TRC.
- Identify expansion projects and recommend approval to the TRC.
- Approve no-cost expansions of the RCN on recommendation from the RCNWG.

RCNWG

- Recommend initial policies and guidelines.
- Develop a risk assessment procedure for new services.
- Develop a risk assessment procedure for expansions.
- Oversee the Network Manager and receive quarterly status reports.
- Recommend additional service support.
- Recommend expansion support.
- Recommend annual funding levels.

Network Manager

- Oversee the day-to-day operations of the RCN.
- Coordinate repairs and maintenance.
- Maintain the safety of the RCN.
- Act as a resource for the connected agencies in troubleshooting applications.
- Perform risk assessments for new services.
- Perform risk assessments for expansions.
- Generate quarterly status reports.
- Monitor bandwidth and enforce restrictions on usage per the defined policy.
- Identify bandwidth limitations and issues.

Member Agency RCN Representative

- Coordinate access to agency facilities for repairs and maintenance.
- Act as the main resource in troubleshooting applications and determining if the problem lies with the RCN.
- Act as the single point of contact for the Network Manager.