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S.F. No. 350 - Relating to 2005 Deficiency Appropriations

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Date: January 19, 2005

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Section 1 is the appropriation summary.

Section 2 appropriates \$230,000 to the Board on Judicial Standards to pay for the costs of a contested case related to the removal of a judge from the bench. The board has recently reduced the request to \$199,000.

Section 3 appropriates \$7,681,000 to the Board of Public Defense to replace dedicated funding that was lost when the public defender co-pay legislation passed during the 2003 session was found to be unconstitutional.

Section 4 appropriates \$986,000 to the Department of Public Safety.

\$710,000 is to match federal disaster assistance money (FEMA) for flooding that occurred late in the summer of 2004 in southeastern Minnesota.

\$276,000 is to continue operation of the Criminal Gang Strike Force.

Section 5 appropriates \$4,370,000 to the Department of Corrections.

\$2,850,000 is for renting prison beds to accommodate a higher inmate population than was projected at the time of the original appropriation.

\$1,000,000 is for increased costs in the Department of Corrections health system due to higher inmate populations and higher than projected inflation costs for staff, supplies, and equipment.

\$520,000 (\$330,000 in community services and \$190,000 in operations services) is for the restructure of the civil commitment review process and increased staffing to manage sex offender revocation hearings.

Section 6 appropriates \$13,394,000 to the Department of Human Services. This appropriation is to accommodate higher numbers of patients in DHS forensic treatment programs (sex offenders who have been civilly committed and persons committed as mentally ill and dangerous) at the St. Peter state hospital. The \$13.4 million appropriation is offset by a 10 percent county share of \$1.6 million, for a net cost to the general fund of \$11.9 million.

The caseload need of the department is actually \$16 million (which produces the \$1.6 million county share figure). State-operated services is using \$2.7 million in carryforward funds to mitigate a portion of the increased cost, hence the lower deficiency appropriation.

Section 7 appropriates \$39,000 to the Department of Veterans Affairs for increased rent.

Section 8 appropriates \$4,705,000 to the Department of Administration to fund the lab and office space relocation costs of the Departments of Health and Agriculture. The cost is offset by the anticipated sale proceeds of \$4.8 million from the existing Department of Health lab building in Minneapolis.

Section 9. Sunsets uncodified language June 30, 2005.

Section 10. Funds \$25.1 million of the deficiency costs with a partial rollback of the November forecast allocation to the school payment shift from \$118 million to \$93 million. This changes the current year aid payment percentage from 81.9 percent to 81.5 percent.

Section 11 provides an immediate effective date.

CT:vs

SF 350 - 2005 Deficiency Bill

(with amendment changing DOC and Judicial Standards appropriations)

(dollars in thousands)

| | Total By Program | Total by Agency |
|-----------------------------|------------------|-----------------|
| Appropriations | | |
| Judicial Standards Board | | 199 |
| Hearings | 199 | |
| Public Defense Board | | 7,681 |
| Operations | 7,681 | |
| Public Safety | | 986 |
| FEMA Match | 710 | |
| Gang Strike Force | 276 | |
| Corrections | | 4,370 |
| Correctional Institutions | 3,850 | |
| Operations Support | 190 | |
| Community Services | 330 | |
| Human Services | | 13,394 |
| State operated Services | 13,394 | |
| Veterans Affairs | | 39 |
| Rent | 39 | |
| Administration | | 4,705 |
| Relocation - Health | 2,718 | |
| Relocation - Agriculture | 1,987 | |
| Total Appropriations | | 31,374 |
| Revenues | | |
| Human Services | | 1,609 |
| Fees | 1,609 | |
| Administration | | 4,853 |
| Health Bldg Sale (est) | 4,853 | |
| School District Payments | | 25,100 |
| Shift Percent Change | 25,100 | |
| Total Revenues | | 31,562 |
| Net Cost of SF 350 | | -188 |



2004

Statewide 911 Emergency Telephone

Service Program Report

December 15, 2004

***Minnesota Statewide
9-1-1 Program***



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Statewide 911 Emergency Telephone Service Program Report

I Executive Summary

Introduction

Minnesota's 911 emergency telephone service is a vital component of the State's emergency response system. Dialing 911 provides rapid and effective access to public safety services. Citizens of Minnesota expect that dialing 911 will link them directly to the right public safety agency and emergency personnel will have vital location information to help speed the responders to their emergency. From 1977 through 2003, the Minnesota Department of Administration was responsible for helping counties implement 911 service and funding part of the costs of getting 911 calls to a public safety answering point (PSAP), usually at county or city dispatch points. Pursuant to Minnesota Laws 2003, First Special Session, Chapter 1, Article 2, Section 125 the 911 responsibilities of the Commissioner of Administration were transferred to the Commissioner of Public Safety in December of 2004.

Reporting Requirement

Minnesota Statutes, Section 403.06, Subdivision 1a requires the Commissioner of Public Safety to prepare an annual report to the legislature detailing the expenditures for maintaining the 911 system, the 911 fees collected, the balance of the 911 fund, and the 911-related administrative expenses of the Commissioner. This Statewide 911 Emergency Telephone Service Program (911 Program) Report explains the 911 expense elements (Appendix A) and provides: (1) the required financial information as of November 1, 2004, (2) projections of the 911 program financial position through June 30, 2009, and (3) a brief summary of the status of enhancements and improvements to the Minnesota 911 system.

FY2004 Financial Update – Full funding in 2004

Fiscal year 2004 began with \$1,628,021 in the 911 Special Revenue Fund. Because the 911 fee cap of 33 cents had been increased to 40 cents by Laws, First Special Session 2003, Chapter 1, Article 2, Section 108, spending on 911 costs was less than the total revenue generated during the year. 911 system costs did, however, exceed the appropriation authority necessitating the increased appropriation authority provided by Laws 2004, Chapter 282 (S.F. 653). With that increased appropriation authority the 2004 911 program costs were fully funded.

The 911 Program collected \$25,838,597 during the year and expended \$23,792,931, which included \$452,155 for the 911-related administrative expenses and \$150,000 to conduct a PSAP consolidation study. On June 30, 2004, the fund balance was \$3,673,687. Of that balance, \$2,237,896 was encumbered in FY2005 to cover outstanding obligations from FY2004. These are obligations from FY2004 that had not been paid prior to the fiscal year closing. Viewed in isolation, fiscal year 2004 seems to indicate there is a healthy 911 fund. The 2003 legislation also increased the spending authority from this fund by over six million dollars (increased funds

directed to public safety radio system), and added another one million dollars to the appropriation authority (increased funding to PSAPs). This signaled a legislative intent to increase spending by seven million dollars in fiscal year 2005 which could not be addressed from available revenues.

In the 2003 Special Session, the Minnesota Legislature passed a law (Chapter 1, Laws 1Sp 2003) requiring a study of public safety answering point (PSAP) consolidation and minimum PSAP standards. The study came under the jurisdiction of the Minnesota Department of Public Safety, which asked the Department of Administration's Management Analysis Division to assist in meeting the requirements in the legislation. The study team proposed the creation and use of a fourteen member PSAP Advisory Committee to provide background information, technical expertise, feedback, and recommendations on specific topics.

The study makes recommendations on the feasibility of consolidating public safety answering points, considering a cost-benefit analysis of consolidations, the impact on public safety, interoperability issues, and best practices models, as well as recommendations regarding the development of minimum standards for public safety answering points and possible funding incentives for consolidation. Any Minnesota agency considering consolidation of 911 call taking or dispatch operations should consider the information provided in the study, available on the State 911 website at http://www.911.state.mn.us/PDF/psap_final_report.pdf.

Financial Projections (through June 30, 2009)

The 2002 projections of expense and revenues in the fiscal year 2004-2005 biennial budget showed the carry forward balance in the 911 Special Revenue Fund approaching zero by the end of fiscal year 2005. Later projections, taking into account early calendar year 2003 data, predicted a deficit situation by the end of fiscal year 2005. This was reported to the legislature in the 2002 911 Annual Report, which was submitted in February of 2003 (that report is available at <http://www.911.state.mn.us/PDF/2002MN911AnnualReport.pdf>).

Legislation was passed in 2003 to increase the fee cap to 40 cents, and the fee was increased to 40 cents effective August 1, 2003. The legislation also provided for additional expenses to be paid from the fund beginning July 1, 2004. Although the additional revenue from the 7 cents fee increase for 11 months of fiscal year 2004 (slightly more than \$4,000,000) was expected to replenish the fund balance, much higher than anticipated costs were encountered, consuming the added revenue. Prior year obligations initially estimated at \$9,211,000 resulting from the reduction in the certification period were much higher than previously anticipated. Additionally, the costs to complete the wireless 911 network and other database improvements were higher than anticipated. This was reported in the 2003 911 Annual Report, submitted in December 2003 (that report is available at <http://www.911.state.mn.us/PDF/2003MN911AnnualReport.pdf>).

Spending increases provided for by the legislature in enhanced 911 grants (1.5 cents) and debt service for revenue bonds (9 cents) could not be covered from existing revenues after providing for the current cost of providing 911 service and prior year obligations.

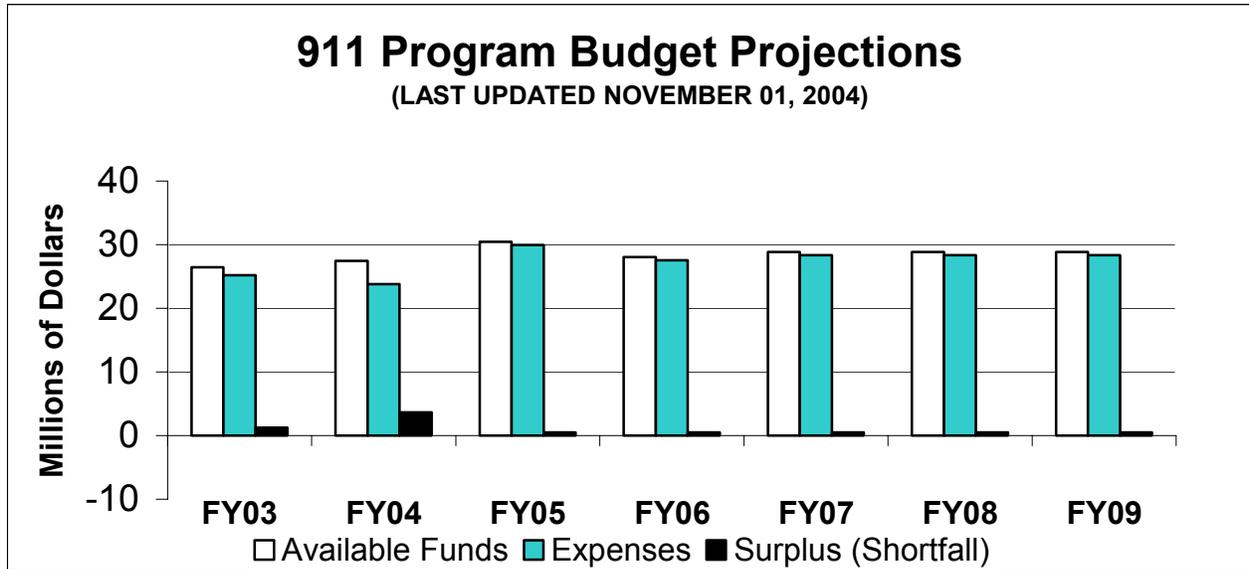


Figure 1. 911 Program Funding

No prior year obligations were paid in FY 2004. An estimated \$1.7 million from the \$8.2 million (reduced from initial estimates of \$9.2 million once previously certified and paid amounts were deducted) of prior year obligations will be paid in FY2005. By fiscal year ending June 30, 2009 the prior year obligation balance will be reduced by an estimated \$7 million.

Status of Enhancements and Improvements to the Minnesota 911 System

Maintaining, enhancing, and expanding 911 services for both wired and wireless technologies are required under Minnesota Statutes, Section 403.025, Subdivision 7. Significant progress has been made to integrate wireless 911 into the enhanced 911 systems, increase the interoperability of separate 911 systems, and position the state to be able to take advantage of enhanced 911 services for wireless. Appendix B shows the status of wireless enhanced 911 as of November 23, 2004. Status updates are regularly posted on the Minnesota 911 website, <http://www.911.state.mn.us/>.

Conclusion

The success of the 911 Program is a product of extensive cooperation among legislators, regulators, state and local government administrators and the telecommunications industry. Continued success will require appropriate funding and further cooperation to solve the current and worsening problems caused by the growth of wireless telephone service and emerging new technology.

II. Background

The 911 emergency number provides rapid access to emergency services, which saves time for the caller in dialing and reduces overall response time for emergency service providers. The 911 system is currently evolving into an enhanced 911 system that will allow caller location to be displayed even if the caller does not or cannot provide their address, or, in some wireless calls, has no address. Statewide 911 coverage is provided by 87 county systems plus 19 city systems and 13 public safety answering points (PSAPs) operated by state and other government agencies.

The universal emergency 911 number is available throughout the state of Minnesota on wired and wireless phone lines. For wireless telephones, Federal Communication Commission (FCC) rules (Title 47, CFR 20.18) require the wireless carriers to put all 911 calls through to a PSAP, even if the caller is a non-subscriber.

The 911 Program at the Department of Public Safety provides technical assistance to the cities and counties implementing, maintaining, and improving 911 systems, and oversees system standards. It also pays from money collected through a monthly statewide wired and wireless telephone fee the state's share of wired and wireless 911 costs authorized by Minnesota Statutes, Section 403.11 and contracted for with carriers; administers grant funds for 911 agencies in accordance with Minnesota Statutes, Section 403.113; and distributes funds to the Metropolitan Council for revenue bonds used to supporting the regional public safety radio system in accordance with Minnesota Statutes, Section 403.30.

The 911 fee is set by the Commissioner with the consent of the Commissioner of Finance. Effective August 1, 2003, the Commissioner of Administration (prior to turning over the program to the Commissioner of Public Safety) increased the fee from 33 cents to the cap of 40 cents in order to fund statutory costs. The fee collections are deposited in the 911 Special Revenue Fund, and these funds are appropriated by the Legislature to the Commissioner of Public Safety to cover the expenses authorized by statute.

III. FY2004 Expenditures and Prior Year 911 Obligations

Fiscal Year 2004 expenditures and prior year obligations required a spending rate of 48.8¢, an amount far in excess of available fee revenue.

- M.S. 403.11: Network and database charges for 911 (15.6¢)

Reimbursements were made to local exchange carriers and 911 service providers (Qwest and Independent Emergency Services (IES)) for costs incurred connecting telephone central offices with 911 networks. According to statute, contracted and certified costs *must* be reimbursed by the State.

- M.S. 403.113: Enhanced 911 Grants (PSAP payments) (10.0¢)

PSAPs in 87 counties, 3 other governmental entities, and State Patrol Communications centers receive grants from the State to help defray their 911 costs. Historically, 10 cents of the 911 fee has been distributed to the PSAPs.

- Laws, 2003, 1st Special Session, Ch. 1: PSAP Consolidation Study (0.2¢)

An appropriation of \$150,000 was made from the 911 Special Revenue Account for the costs associated with the PSAP Consolidation and Minimum Standards study. The study was coordinated by the Department of Administration, Management Analysis Division.

- M.S. 403.11: Wireless 911 Transfers (0.9¢)

2-cents of the wireless customer 911 fee was directly transferred to the Minnesota State Patrol to offset the costs, including administrative and staffing costs, incurred in handling 911 emergency calls made from cellular phones.

- M.S. 403.11: Enhanced Wireless 911 Implementation (4.9¢)

Wireless carriers sign agreements with the State to implement enhanced 911 wireless services. The implementation costs incurred by these carriers and by the 911 service providers were reimbursed by the State and after implementation, ongoing operations costs were reimbursed. *The reimbursement amounts increased as more carriers implemented the service and ongoing operations expenses increase.*

- M.S. 403.30: Public Safety Radio System Grants (4.0¢)

The Metropolitan Council approved an annual budget for the Metropolitan Radio Board. The Commissioner of Public Safety was required to distribute one twelfth of the approved appropriation to the Metropolitan Council each month as long as it did not exceed the equivalent of 4 cents on every customer line.

- M.S. 403.11: Administrative Expenses Including Salaries (0.7¢)

Total cost is based upon administrative expense allocations, bargaining unit contracts, travel, and other miscellaneous expenses.

- M.S. 403.11: Other Obligations (12.5¢)

A total of \$8.2 in prior year obligations was carried forward from fiscal year 2003. As part of a telephone industry initiative to revise the 911 law, the 2002 Legislature changed Minn. Stat. Section 403.11 (Minnesota Laws 2002, Chapter 237, Section 15) to encourage those companies that had not certified their prior and future charges to do so. Effective ninety days after January 1, 2003, the 911 Program was only allowed to reimburse telephone companies for old charges going back for two years, eliminating a bookkeeping headache caused by ever mounting uncertified obligations. This change led to hundreds of certifications being submitted in fiscal year 2003 where the costs were actually incurred in previous fiscal years. After years of estimating charges based on estimates and billings, intensive efforts by program staff in reviewing and reconciling the certifications resulted in firm estimates only after the close of Fiscal Year 2003, leaving much of the newly certified back payment obligations to be paid in subsequent fiscal years.

IV. Financial Outlook (through June 30, 2009)

Current projections of subscriber volumes are based on an assumption that subscriber growth will flatten as more people choose unregulated alternatives to wire line telephone service. Accordingly, no increase is projected in the annual collections from one cent for fiscal years 2008 and 2009. See Appendix A. Concern is noted over the impact of the recent FCC's Vonage decision dealing with state regulation of emerging telecommunication technologies, in particular broadband-based Voice over Internet Protocol (VoIP), (Declaratory Ruling concerning an Order of the Minnesota Public Utility Commission, FCC Docket No. 03-211, released November 12, 2004).

There is no cap on 911 system costs under Minn. Stat. Section 403.11. However, the spending authority is capped in session law by direct appropriations from the 911 Fund and 911 Fund revenues are capped at 40 cents a month on all wireless and wire line customers.

V. 911 Goals and Status

Goal: Control Costs and Predictability to the 911 Program

When the statewide 911 program was originally established the process of implementing 911 was reasonably clear. There were a finite number of incumbent local exchange carriers (ILEC) with telephone service discretely associated with fixed sites within each county. Deregulation of the telecommunication industry with the proliferation of competitive local exchange carriers (CLEC) and the wireless telephone industry changed the situation dramatically. In 1997, the legislature provided for reimbursement of the cost to implement and maintain enhanced 911 service for wireless carriers and in 2001 the legislature provided for the reimbursement of the recurring costs of CLECs as they implement service within Minnesota. As a result of these changes the complexity of the statewide 911 system has become overwhelming and the process of administering changes and the costs have been difficult to control.

Status: Ongoing. During the last year, procedures have been changed to provide that service level changes will not be reimbursed unless specifically authorized in a contract. Additionally, contracts and certifications no longer provide for retroactive payment of service. These changes are designed to eliminate the implementation and change of service levels unbeknownst to the state, allow for an evaluation of the most effective way to implement a change in service and allow for the encumbrance of funds to pay for changes in service levels. In addition to these procedural changes, the Department of Public Safety and the Department of Administration are currently implementing a master contract and competitive bidding process for qualified vendors to competitively bid upon providing enhanced 911 service on a county-by-county basis throughout the state. A similar competitive bidding process will be implemented for the provisioning of wireless enhanced 911 service throughout the state. The Department of Public

Safety will also oversee a more thorough evaluation of changes in system wide service level features and attributes and the state's share of the cost of those changes in the future.

Note: The following comment is relevant to the implementation of wireless enhanced 911 service throughout the state. Minn. Stat. Section 403.11, Subdivision 1(f) provides that the state will reimburse wireless carriers for installation costs and for their recurring costs for integrating wireless calls into the enhanced 911 system. This provision was enacted by Minnesota Laws 1997, Chapter 202, Article 3, Section 21. In 1999, the FCC ruled that wireless carriers were required to integrate into the 911 system irrespective of whether a state reimbursement provision was in place; Second Memorandum and Order, FCC Docket No. 99-352 revising FCC Docket No. 94-102, released December 8, 1999. Similarly, it is noted that reimbursement of competitive local exchange carriers (CLEC) did not begin until July 1, 2001. This provision was enacted by Minnesota Laws 2002, Chapter 372, Section 14. Prior to July 1, 2001, competitive local exchange carriers were required to and did provide 911 service without reimbursement of their expenses by the state.

Goal: Provide Enhanced 911 Benefits to Wireless 911 Callers

Although the present enhanced 911 systems routinely provide public safety responders an accurate location of each wired emergency caller when 911 is dialed from traditional landline telephones, it is more difficult to determine caller location from wireless telephones. The increasing use of cellular telephones by the public means that cellular 911 calls are becoming as likely to be placed from dwellings, sidewalks, boats or snowmobiles as from cars on highways. Wireless enhanced 911 implementation requires network, database, and PSAP equipment changes.

Status: Nearly complete. During calendar year 2004, Phase I carriers increased to 18 of the 19 carriers, and Phase II is now being provided in all 87 counties among 13 of the 19 carriers. Appendix B contains details. As of November 23, 2004, all the PSAPs have converted PSAP equipment to accept the Phase II information, which most wireless carriers are now providing. Status updates are regularly posted on the Minnesota 911 website, <http://www.911.state.mn.us/>.

Goal: Incorporate Wireless 911 Calls into Existing Enhanced 911 Systems

Minnesota Statutes, Section 403.08, Subdivision 7 requires cooperation among wireless carriers and 911 service providers to plan for and implement enhanced wireless 911. It also requires the Department of Public Safety to coordinate planning and Subdivision 10 requires us to contract with wireless carriers and 911 service providers to integrate wireless 911 calls into enhanced 911 systems.

Status: Completed. As required by Minnesota Statutes, Section 403.08, the 911 Program developed plans for integrating cellular service into the enhanced 911 systems. These plans have been updated periodically as new information is learned and changes occur in both the cellular and 911 systems. The latest planning information is contained in the Minnesota Wireless E-911 Criteria with Appendix A, a description of the current 911 systems. The document is updated periodically, and posted at <http://www.911.state.mn.us/PDF/mnwirelesscriteria.pdf>.

Goal: Route Existing Wireless 911 Calls to Local Public Safety Answering Points

In the early 1980's, as the first wireless systems were deployed in Minnesota, the Minnesota State Patrol was designated as the default answering point for basic 911 calls. In that era, up to 85% of wireless 911 calls were from cars on highways, and the technology was not readily available to reliably send calls to local PSAPs. As wireless communications developed, a larger number of 911 calls were placed from portable phones that were not on highways. The 911 law was changed in 1997 to provide for calls to be answered by local PSAPs pending implementation of enhanced wireless 911 service.

Status: Completed. Largely overtaken by events due to extensive implementation of Phase I and II, the goal is considered accomplished. A few cell sites, where carriers have not yet implemented Phase I or II have calls routed directly to a local PSAP rather than a district State Patrol communications center. This Phase 0 service is a temporary measure, pending implementation of Phase I, and then Phase II enhanced 911 service.

Goal: Improve the Interoperability Capabilities of Minnesota 911 Systems

Minnesota is in the forefront of enhanced 911 implementation and in a good position to implement wireless enhanced 911 statewide because over 99 percent of the state's wired telephones are served by selective router based enhanced 911 systems. Delivering emergency calls to 911 PSAPs through selective routers allows calls to be sent to the correct PSAP regardless of caller location, and facilitates transfers to neighboring PSAPs. This generally holds true only if the correct 911 PSAP is connected to the same 911 system as the caller's telephone exchange or cellular mobile switching center. The purpose of interoperability improvements is to allow 911 calls to be selectively routed and transferred between different systems. This applies both to different 911 service providers Qwest and IES in Minnesota, and to state border issues, such as between Washington and Goodhue served by Qwest 911 systems and Saint Croix and Pierce served by the SBC Ameritech 911 system.

Status: Implementation on hold for lack of funding. The enhanced 911 selective router contract with Qwest has been modified to have the five Lucent Model 5E 911 selective routers provided by Qwest connected together so that any 911 call on a Qwest selective router can be transferred to any PSAP served by another Qwest selective router. Likewise, IES has made similar interconnections among their seven CML Model ECS-1000 selective routers. The eventual goal is for these two different types of selective routers to be able to selectively route or allow transfers to each other too. Qwest and IES jointly developed plans and conducted tests during 2003 and 2004 to explore interoperability issues between their two different 911 network and database systems. Transfers between Qwest and IES selective router based 911 systems have been performed in tests. Current emphasis is on the borders between Carver and Scott on a Qwest 911 system and McLeod and Sibley on an IES 911 system. Technical testing has been successfully completed, and a preliminary budget estimate has been produced. The current restructuring of the wired network that may occur with competitive bidding and the potential restructuring of the wireless network may change the dynamics of accomplishing this goal.

Goal: Contract with Wireless Providers and 911 Service Providers

Implementation of Phase I wireless enhanced 911 involves extensive coordination with local PSAPs in order to help determine where calls should be answered and develop plain language cell sector descriptions for display at the PSAP.

Status: Ongoing. Fifteen of the nineteen wireless carriers are covered by eleven contracts for Phase I. These carriers provide wireless service to approximately 95 percent of all Minnesota customers. Several wireless carriers and 911 service providers are in various stages of the contracting or contract renewal process.

Goal: Develop the next generation of 911

The commissioner of Public Safety has directed the formulation of a 911 advisory committee composed of stakeholders in the 911 system to determine the present and future needs of the statewide 911 system. The 911 advisory committee will consider current status of the statewide 911 network and its funding levels but will also consider the need to determine a migration path from a traditional telecommunication system to the telecommunication systems of the 21st century.

Status: Ongoing. Initial meetings with 25 stakeholders from the public safety and telecommunications industry have been held. Discussions involve today's system, the vision for a new system, and funding issues.

VI. Added Considerations/Risks

While good progress to date has been made in the conversion to enhanced 911, the following challenges jeopardize the future effectiveness of the 911 Program:

Costs for maintaining and improving 911 are increasing

The 911 Program is making progress to integrate wireless 911 into the enhanced 911 systems and increase the interoperability of separate 911 systems in order to take advantage of future fully enhanced Wireless 911 services. Improving the enhanced 911 networks and connecting wireless carriers will continue to increase the required expenditures for the 911 Program. Appendix A contains a table showing the different expense elements for 911, where it is paid, and cent fee equivalents for each cost element in each fiscal year.

PSAP funding policy issue

Public Safety Communications Associations and local government agencies recognize that additional expensive upgrades are needed at PSAPs to deal with wireless issues. Specifically, mapping systems and 911 answering equipment will need to be upgraded to provide more complex information to 911 call takers and to interface with map coordinate based instead of address based location readouts. Minnesota local units of government pay for their 911 costs from a mix of property tax revenue and telephone 911 fee grant funds. Whether more of local

911 costs should be funded out of local taxes or telephone fees is a public policy issue the Legislature may be asked to decide.

More expenses may be incurred during migration to a new 911 system

The telecommunication industry is currently undergoing a significant change. The question concerning a transition to Voice over Internet Protocol (VoIP) technologies throughout the telecommunication industry is not considered a question of “if” but instead a question of “when it will occur.” There is a need to prepare for this transition, offer interim solutions and ultimately prepare to transition to a new packet switched system. It is also likely that it will be necessary to maintain the current system while providing a similar network for a substantial period of time causing increased costs to maintain the 911 systems.

911 revenue decline possible as subscribers abandon traditional wire line telephones

Revenue projections shown in this report are based on continued modest growth in wireless subscribers and a slight decline in wire line subscribers that are paying the 911 fee. A much greater decline in wire line and a decline in wireless subscribers paying the 911 fee is currently considered possible. A recent FCC Vonage decision prohibits the state from regulating telecommunication providers like Vonage that use the internet or similar broadband networks to provide voice communications service (VoIP). Depending on the growth of this new method of voice service, and whether fees are submitted voluntarily or through further FCC action, the revenue from 911 fees could fall drastically short of projections.

VII Conclusion

Even if wired and wireless customer volumes prove to be higher than projected, the resultant increase in income would not be enough to realistically cover the expenses, much of which do not change with customer volume.

The success of the 911 Program is a product of extensive cooperation among legislators, regulators, state and local government administrators and the telecommunications industry. Continued success will require appropriate funding and further cooperation to solve the current and worsening problems caused by the growth of wireless telephone service and emerging new technology.

Appendix A. –911 Revenue / Expenses Required by Statute

| ITEM | SOURCE | ACTUAL FOR FY 2003 | FY 2003 FEE EQUIV. | ACTUAL FOR FY 2004 | FY 2004 FEE EQUIV. | PROJECTED FOR 2005 | FY 2005 FEE EQUIV. | PROJECTED FOR 2006 | FY 2006 FEE EQUIV. | PROJECTED FOR 2007 | FY 2007 FEE EQUIV. | PROJECTED FOR 2008 | FY 2008 FEE EQUIV. | PROJECTED FOR 2009 | FY 2009 FEE EQUIV. |
|--|---|-----------------------|-----------------------------|-----------------------|-----------------------------|-----------------------|-----------------------------|-----------------------|-----------------------------|-----------------------|-----------------------------|-----------------------|-----------------------------|-----------------------|-----------------------------|
| INCOME | 911 FEE SUBMISSION | \$ 20,792,730 | 33.0 | \$ 25,838,597 | 39.4 | \$ 26,783,800 | 40.0 | \$ 27,534,480 | 40.0 | \$ 28,348,960 | 40.0 | \$ 28,348,960 | 40.0 | \$ 28,348,960 | 40.0 |
| EXPENSES | | | | | | | | | | | | | | | |
| 911 System Costs, Network and Database charges | 911 service providers (Qwest and Independent Emergency Services, llc) and Incumbent local and interexchange carriers | \$ 7,997,006 | 12.7 | \$ 10,208,399 | 15.6 | \$ 11,161,026 | 16.7 | \$ 11,161,026 | 16.2 | \$ 11,161,026 | 15.7 | \$ 11,161,026 | 15.7 | \$ 11,161,026 | 15.7 |
| Enhanced 9-1-1 Grants | Counties, Cities, UofM PD, Airport PD, and Red Lake Nation PD | \$ 5,986,202 | 9.5 | \$ 6,228,015 | 9.5 | \$ 6,361,153 | 9.5 | \$ 6,539,439 | 9.5 | \$ 6,732,878 | 9.5 | \$ 6,732,878 | 9.5 | \$ 6,732,878 | 9.5 |
| | Transfer to Minnesota State Patrol | \$ 315,063 | 0.5 | \$ 327,790 | 0.5 | \$ 334,798 | 0.5 | \$ 344,181 | 0.5 | \$ 354,362 | 0.5 | \$ 354,362 | 0.5 | \$ 354,362 | 0.5 |
| Wireless 9-1-1 Transfers | Transfer to Minnesota State Patrol | \$ 544,130 | 0.9 | \$ 609,694 | 0.9 | \$ 642,811 | 1.0 | \$ 674,595 | 1.0 | \$ 722,898 | 1.0 | \$ 722,898 | 1.0 | \$ 722,898 | 1.0 |
| Implement Wireless Enhanced 9-1-1 | 9-1-1 service providers (Qwest and Independent Emergency Services, llc) and wireless carriers | \$ 2,345,464 | 3.7 | \$ 3,194,558 | 4.9 | \$ 4,375,755 | 6.5 | \$ 4,507,028 | 6.5 | \$ 4,642,239 | 6.6 | \$ 4,642,239 | 6.6 | \$ 4,642,239 | 6.6 |
| Debt Service and Reserves for Bonds | Metropolitan Council | \$ 2,494,368 | 4.0 | \$ 2,622,321 | 4.0 | \$ 2,678,380 | 4.0 | \$ 2,753,448 | 4.0 | \$ 2,834,896 | 4.0 | \$ 2,834,896 | 4.0 | \$ 2,834,896 | 4.0 |
| Prior Year Obligations | 9-1-1 service providers (Qwest and Independent Emergency Services, llc) and Incumbent local, interexchange, and wireless carriers | \$ 5,064,282 | 8.0 | \$ - | - | \$ 1,699,414 | 2.5 | \$ 1,081,127 | 1.6 | \$ 1,421,633 | 2.0 | \$ 1,421,633 | 2.0 | \$ 1,421,633 | 2.0 |
| Fiscal Year 2004 Obligations | | | | | | \$ 2,237,846 | 3.3 | | | | | | | | |
| Consolidation and Minimum Standards Study | Management Analysis Division of the Department of Administration. | | | \$ 150,000 | 0.2 | \$ - | - | \$ - | - | \$ - | - | \$ - | - | \$ - | - |
| Administrative Expenses | Varies. Includes salaries and indirect allocations | \$ 428,944 | 0.7 | \$ 452,155 | 0.7 | \$ 468,459 | 0.7 | \$ 468,459 | 0.7 | \$ 468,459 | 0.7 | \$ 468,459 | 0.7 | \$ 468,459 | 0.7 |
| TOTAL CURRENT EXPENSES | | \$ 25,175,459 | 40.0 | \$ 23,792,932 | 36.3 | \$ 29,959,642 | 44.7 | \$ 27,529,303 | 40.0 | \$ 28,338,391 | 40.0 | \$ 28,338,391 | 40.0 | \$ 28,338,391 | 40.0 |
| CONTRIBUTION TO CARRYOVER/(DEFICIT) | | \$ (4,382,729) | (7.0) | \$ 2,045,665 | 3.1 | \$ (3,175,842) | (4.7) | \$ 5,177 | 0.0 | \$ 10,569 | 0.0 | \$ 10,569 | 0.0 | \$ 10,569 | 0.0 |

Fiscal Year 2003 Through 2009

**Appendix A. – Notes regarding 911 Expenses Required by Statute
(Continued from previous page)**

Notes

This 911 Funding Matrix shows projections of the different expense elements for 911 expenses in each fiscal year from 2003 and 2004 (actual revenues and expenses) through 2009 (projected figures).

Fee Equivalents are indicated to provide a general idea of funding needs. Fee amounts shown for each expense element are rounded to the nearest 0.1 penny and somewhat skewed by the wireless 911 transfer expense, which is assessed only on wireless customers rather than all fee payers.

| Assumed annual fee collection from one cent based on wired and wireless customer growth | | | | | | |
|---|----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| FY 2003 Actual collections | FY 2004 Actual collections | FY 2005 projected | FY 2006 projected | FY 2007 projected | FY 2008 projected | FY 2009 projected |
| \$ 630,083 | \$ 655,427 | \$ 669,595 | \$ 688,362 | \$ 708,724 | \$ 708,724 | \$ 708,724 |

The major cause of unanticipated obligations in 2004 is the estimated \$8,200,000 of prior year obligations (reduced from initial estimates of \$9.2 million once previously certified and paid amounts were deducted). In 2001, a 911 Law change set a deadline of March 31, 2003 for all carriers to certify their 911 charges in order to be reimbursed back to the in-service date of a 911 system modification. Over the past 5 years, 65 counties modified their 911 systems, but most carriers (multiple carriers per county) had not certified their charges. The new deadline caused a one-time bow wave of certifications at the end of March. A firm estimate of the obligation was not available until these certifications were reviewed and reconciled against prior certifications.

Comparing fiscal year 2003 and projected future years shows 911 system costs increase from 12.7 cents of the 911 fee to 15.7 cents and wireless enhanced 911 costs increase from 3.7 cents of the 911 fee to 6.6 cents related to implementing wireless enhanced 911.

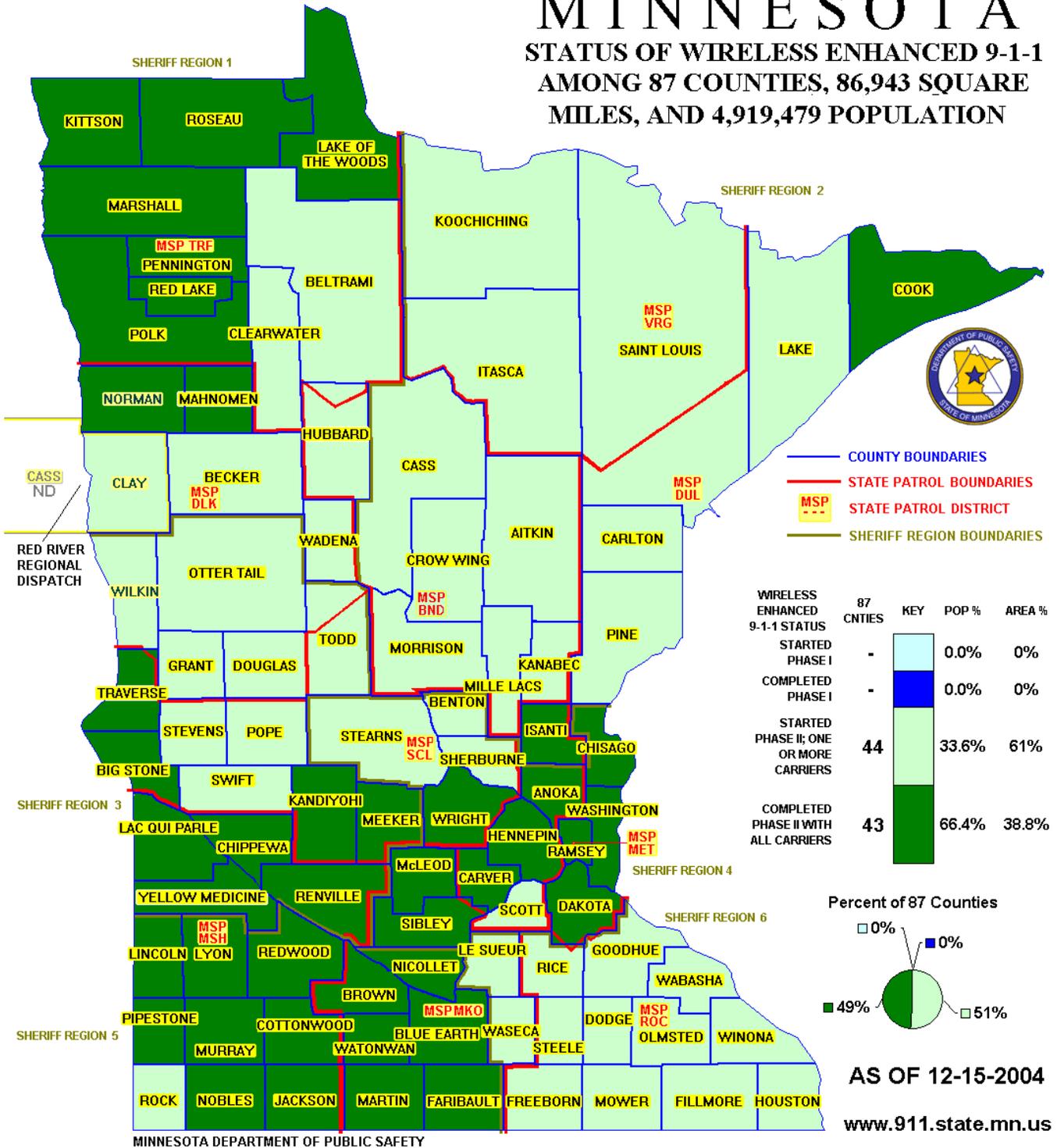
Expense element increases for enhanced 911 grants and wireless 911 transfers are directly caused by increases in the number of wire line and wireless customers paying the fee because they are based on a fixed number of cents of the fee. Although an additional cost increase was scheduled in fiscal year 2005 due to a scheduled grant increase from 10 cents to 11.5 cents, there was insufficient fee revenue after 911 system costs were paid to fund the increase.

The metropolitan region and state radio system grant amounts for debt service and reserves for bonds are limited by statute not to exceed 13 cents (a 9 cent increase, effective July 1, 2004), but there is insufficient fee revenue after 911 system costs are paid to fund the increase.

Appendix B. - Cellular 911 Status in Minnesota

MINNESOTA

STATUS OF WIRELESS ENHANCED 9-1-1
AMONG 87 COUNTIES, 86,943 SQUARE
MILES, AND 4,919,479 POPULATION



Eighteen of the nineteen wireless carriers have converted to Phase I wireless enhanced 911 with cell sector location and callback number. At least one carrier in each of the 87 counties is providing Phase I. In addition to Phase I, thirteen wireless carriers are providing Phase II wireless enhanced 911 that sends the latitude and longitude of the 911 caller. At least one of these carriers are providing the location service in each of the 87 counties, and 43 counties are 100% Phase II, receiving Phase II 911 calls from all wireless carriers in the individual county.

Sec. 3. Minnesota Statutes 2001 Supplement, section 403.11, subdivision 1, amended to read:

Subdivision 1. EMERGENCY TELEPHONE SERVICE FEE. (a) Each customer of a telephone company or communications carrier that provides service capable of originating a 911 emergency telephone call is assessed a fee to cover the costs of ongoing maintenance and related improvements for trunking and central office switching equipment for minimum 911 emergency telephone service, plus administrative and staffing costs of the department of administration related to managing the 911 emergency telephone service program. Recurring charges by a public utility providing telephone service for updating the information required by section 403.07, subdivision 3, must be paid by the commissioner of administration if the utility is included in an approved 911 plan and the charges have been certified and approved under subdivision 3. The commissioner of administration shall transfer an amount equal to two cents a month from the fee assessed under this section on cellular and other nonwire access services to the commissioner of public safety for the purpose of offsetting the costs including administrative and staffing costs, incurred by the state patrol division of the department of public safety in handling 911 emergency calls made from cellular telephones. Money remaining in the 911 emergency telephone service account after other obligations are paid must not cancel and is carried forward to subsequent years and may be appropriated from time to time to the commissioner of administration to provide financial assistance to counties for the improvement of local emergency telephone services. The improvements may include providing access to minimum service for telephone service subscribers currently without access and upgrading existing 911 service to include automatic number identification, local number identification, automatic location identification, and other improvements specified in revised county 911 plans approved by the department.

(b) The fee is ~~27~~ may not be less than eight cents nor more than 33 cents a month for each customer access line or other basic access service, including trunk equipment as designated by the public utilities commission for access charge purposes including cellular and other nonwire access services. With the approval of the commissioner of finance, the commissioner of administration shall establish the amount of the fee within the limits specified and inform the companies and carriers the amount to be collected. The commissioner shall provide companies and carriers a minimum of 45 days' notice of each fee change. For fiscal year 2003, the commissioner of administration shall provide a minimum of 35 days' notice of each fee change. The fee must be the same for all customers.

(c) The fee must be collected by each company or carrier providing service subject to the fee. Fees are payable to and must be submitted to the commissioner of administration monthly before the 25th of each month following the month of collection, except that fees may be submitted quarterly if less than \$250 a month is due or annually if less than \$25 a month is due. Receipts must be deposited in the treasury and credited to a 911 emergency telephone service account in the state revenue fund. The money in the account may only be used for 911 telephone service as provided in paragraph (a).

(d) This subdivision does not apply to customers of a telecommunications carrier as defined in section 237.01, subdivision 6.

Sec. 4. Minnesota Statutes 2000, section 473.891, subdivision 3, is amended to read:

Subd. 3. **FIRST PHASE.** "First phase" or "first phase of the regionwide public safety radio communications system" means the initial backbone which serves state and regional agencies the following nine-county metropolitan area: Anoka, Carver, Chisago, Hennepin, Isanti, Ramsey, Scott, and Washington counties.

Sec. 5. Minnesota Statutes 2000, section 473.891, is amended by adding a subdivision to read:

Subd. 10. **SECOND PHASE.** "Second phase" means the metropolitan radio board building subsystems for local government units in the metropolitan area that did not build their own subsystems in the first phase.

Sec. 6. Minnesota Statutes 2000, section 473.898, subdivision 1, is amended to read:

Subdivision 1. **AUTHORIZATION.** The council, if requested by a vote of at least two-thirds of all of the members of the metropolitan radio board may, by resolution, authorize the issuance of its revenue bonds for any of the following purposes to:

- (1) provide funds for regionwide mutual aid and emergency medical services communications;
- (2) provide funds for the elements of the first phase of the regionwide public safety radio communications system that the board determines are of regionwide benefit and support mutual aid and emergency medical services communication including, but not limited to, costs of master controllers of the backbone; ~~or~~
- (3) provide money for the second phase of the public safety radio communication system; or
- (4) refund bonds issued under this section.

Sec. 7. Minnesota Statutes 2000, section 473.898, subdivision 3, is amended to read:

Subd. 3. **LIMITATIONS.** (a) The principal amount of the bonds issued pursuant to subdivision 1, exclusive of any original issue discount, shall not exceed the amount of \$10,000,000 plus the amount the council determines necessary to pay the costs of issuance, fund reserves, debt service, and pay for any bond insurance or other credit enhancement.

(b) In addition to the amount authorized under paragraph (a), the council may issue bonds under subdivision 1 in a principal amount of \$3,306,300, plus the amount the council determines necessary to pay the cost of issuance, fund reserves, debt service, and any bond insurance or other credit enhancement. The proceeds of bonds

issued under this paragraph may not be used to finance portable or subscriber radio sets.

(c) In addition to the amount authorized under paragraphs (a) and (b), the council may issue bonds under subdivision 1 in a principal amount of \$12,000,000, plus the amount the council determines necessary to pay the costs of issuance, fund reserves, debt service, and any bond insurance or other credit enhancement. The proceeds of bonds issued under this paragraph must be used to pay up to 30 percent of the cost to a local government unit of building a subsystem and may not be used to finance portable or subscriber radio sets. The council must time the sale and issuance of bonds so that the debt service on the bonds can be covered by the additional revenue that will become available in the fiscal year ending June 30, 2005, generated under section 403.11 and appropriated under section 473.901.

Sec. 8. Minnesota Statutes 2001 Supplement, section 473.901, subdivision 1, is amended to read:

Subdivision 1. **COSTS COVERED BY FEE.** For each fiscal year beginning with the fiscal year commencing July 1, 1997, the amount necessary to pay the following costs is appropriated to the commissioner of administration from the 911 emergency telephone service account established under section 403.11:

- (1) debt service costs and reserves for bonds issued pursuant to section 473.898;
- (2) repayment of the right-of-way acquisition loans;
- (3) costs of design, construction, maintenance of, and improvements to those elements of the first phase and second phases that support mutual aid communications and emergency medical services; or
- (4) recurring charges for leased sites and equipment for those elements of the first phase and second phases that support mutual aid and emergency medical communication services; or
- (5) aid to local units of government for sites and equipment in support of mutual aid and emergency medical communications services.

This appropriation shall be used to pay annual debt service costs and reserves for bonds issued pursuant to section 473.898 prior to use of fee money to pay other costs eligible under this subdivision. In no event shall the appropriation for each fiscal year exceed an amount equal to four cents a month for each customer access line or other basic access service, including trunk equivalents as designated by the public utilities commission for access charge purposes and including cellular and other nonwire access services, in the fiscal year. Beginning July 1, 2004, this amount will increase to 5.5 cents a month.

Sec. 9. Minnesota Statutes 2000, section 473.902, subdivision 1, is amended to read:

Subdivision 1. **ALLOCATION OF OPERATING COSTS.** The current costs of the board in implementing the regionwide public safety radio communication plan

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system and the first phase and paid by the following radio system communicat

(1) the state of Minn counties;

(2) all local governm

(3) other eligible use

Sec. 10. Minnesota : read:

Subd. 3. **COMPON**

Each local government ar pay to the board all sums determined by the board. action that may be neces make them when due.

Sec. 11. Minnesota read:

Subd. 5. **DEFICIT** government using the fi board under subdivision auditor of the county in payment of the amount and extend the amount government unit for the by law or charter. This of the government unit, the county treasurer to t was levied.

Sec. 12. [473.907] MITTEE.

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Subdivision 1. **RULES.** The department of administration commissioner shall establish and adopt in accordance with chapter 14, rules for the administration of this chapter and for the development of 911 systems in the state including:

- (1) design standards for 911 systems incorporating the standards adopted pursuant to subdivision 2 for the seven-county metropolitan area; and
- (2) a procedure for determining and evaluating requests for variations from the established design standards.

Sec. 105. Minnesota Statutes 2002, section 403.07, subdivision 2, is amended to read:

Subd. 2. **DESIGN STANDARDS.** The metropolitan 911 board shall establish and adopt design standards for the metropolitan area 911 system and transmit them to the department of administration commissioner for incorporation into the rules adopted pursuant to this section.

Sec. 106. Minnesota Statutes 2002, section 403.07, subdivision 3, is amended to read:

Subd. 3. **DATABASE.** In 911 systems that have been approved by the department of administration commissioner for a local location identification database, each wire line telecommunications service provider shall provide current customer names, service addresses, and telephone numbers to each public safety answering point within the 911 system and shall update the information according to a schedule prescribed by the county 911 plan. Information provided under this subdivision must be provided in accordance with the transactional record disclosure requirements of the federal Electronic Communications Privacy Act of 1986, United States Code, title 18, section 2703, subsection (c), paragraph (1), subparagraph (B)(iv).

Sec. 107. Minnesota Statutes 2002, section 403.09, subdivision 1, is amended to read:

Subdivision 1. **DEPARTMENT AUTHORITY.** At the request of the department of administration commissioner of public safety, the attorney general may commence proceedings in the district court against any person or public or private body to enforce the provisions of this chapter.

Sec. 108. Minnesota Statutes 2002, section 403.11, is amended to read:

403.11 911 SYSTEM COST ACCOUNTING REQUIREMENTS; FEE.

Subdivision 1. **EMERGENCY TELECOMMUNICATIONS SERVICE FEE.**
(a) Each customer of a wireless or wire line telecommunications service provider that furnishes service capable of originating a 911 emergency telephone call is assessed a fee to cover the costs of ongoing maintenance and related improvements for trunking and central office switching equipment for 911 emergency telecommunications service, plus administrative and staffing costs of the department of administration commissioner related to managing the 911 emergency telecommunications service program.

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REQUIREMENTS; FEE.

TELECOMMUNICATIONS SERVICE FEE.
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Recurring charges by a wire line telecommunications service provider for updating the information required by section 403.07, subdivision 3, must be paid by the commissioner of administration if the wire line telecommunications service provider is included in an approved 911 plan and the charges are made pursuant to tariff, price list, or contract. ~~The commissioner of administration shall transfer an amount equal to two cents a month from~~ The fee assessed under this section on wireless telecommunications services to the commissioner of public safety must also be used for the purpose of offsetting the costs, including administrative and staffing costs, incurred by the state patrol division of the department of public safety in handling 911 emergency calls made from wireless phones.

(b) Money remaining in the 911 emergency telecommunications service account after all other obligations are paid must not cancel and is carried forward to subsequent years and may be appropriated from time to time to the commissioner of administration to provide financial assistance to counties for the improvement of local emergency telecommunications services. The improvements may include providing access to 911 service for telecommunications service subscribers currently without access and upgrading existing 911 service to include automatic number identification, local location identification, automatic location identification, and other improvements specified in revised county 911 plans approved by the department commissioner.

(c) The fee may not be less than eight cents nor more than ~~33~~ 40 cents a month for each customer access line or other basic access service, including trunk equivalents as designated by the public utilities commission for access charge purposes and including wireless telecommunications services. With the approval of the commissioner of finance, the commissioner of administration public safety shall establish the amount of the fee within the limits specified and inform the companies and carriers of the amount to be collected. When the revenue bonds authorized under section 473.898, subdivision 1, have been fully paid or defeased, the commissioner shall reduce the fee to reflect that debt service on the bonds is no longer needed. The commissioner shall provide companies and carriers a minimum of 45 days' notice of each fee change. ~~For~~ fiscal year 2003, the commissioner of administration shall provide a minimum of 35 days' notice of each fee change. The fee must be the same for all customers.

(d) The fee must be collected by each wireless or wire line telecommunications service provider subject to the fee. Fees are payable to and must be submitted to the commissioner of administration monthly before the 25th of each month following the month of collection, except that fees may be submitted quarterly if less than \$250 a month is due, or annually if less than \$25 a month is due. Receipts must be deposited in the state treasury and credited to a 911 emergency telecommunications service account in the special revenue fund. The money in the account may only be used for 911 telecommunications services as provided in paragraph (a).

(e) This subdivision does not apply to customers of interexchange carriers.

(f) The installation and recurring charges for integrating wireless 911 calls into enhanced 911 systems must be paid by the commissioner if the 911 service provider

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CRIME

Sec. 115. Minnesota Statutes 2002, section 473.898, subdivision 1, is amended to read:

Subdivision 1. **AUTHORIZATION.** After consulting with the commissioner of finance, the council, if requested by a vote of at least two-thirds of all of the members of the metropolitan radio board public safety radio communication system planning committee established under section 473.097, may, by resolution, authorize the issuance of its revenue bonds for any of the following purposes to:

(1) provide funds for regionwide mutual aid and emergency medical services communications;

(2) provide funds for the elements of the first phase of the regionwide public safety radio communications system that the board determines are of regionwide benefit and support mutual aid and emergency medical services communication including, but not limited to, costs of master controllers of the backbone;

(3) provide money for the second phase of the public safety radio communication system; or

(4) provide money for the third phase of the public safety radio communication system;

(5) to the extent money is available after meeting the needs described in clauses (1) to (3), provide money to reimburse local units of government for amounts expended for capital improvements to the first phase system previously paid for by the local government units; or

(6) refund bonds issued under this section.

Sec. 116. Minnesota Statutes 2002, section 473.898, subdivision 3, is amended to read:

Subd. 3. **LIMITATIONS.** (a) The principal amount of the bonds issued pursuant to subdivision 1, exclusive of any original issue discount, shall not exceed the amount of \$10,000,000 plus the amount the council determines necessary to pay the costs of issuance, fund reserves, debt service, and pay for any bond insurance or other credit enhancement.

(b) In addition to the amount authorized under paragraph (a), the council may issue bonds under subdivision 1 in a principal amount of \$3,306,300, plus the amount the council determines necessary to pay the cost of issuance, fund reserves, debt service, and any bond insurance or other credit enhancement. The proceeds of bonds issued under this paragraph may not be used to finance portable or subscriber radio sets.

(c) In addition to the amount authorized under paragraphs (a) and (b), the council may issue bonds under subdivision 1 in a principal amount of ~~\$12,000,000~~ \$18,000,000, plus the amount the council determines necessary to pay the costs of issuance, fund reserves, debt service, and any bond insurance or other credit

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enhancement. The proceeds of bonds issued under this paragraph must be used to pay up to 30 50 percent of the cost to a local government unit of building a subsystem and may not be used to finance portable or subscriber radio sets. The bond proceeds may be used to make improvements to an existing 800 MHz radio system that will interoperate with the regionwide public safety radio communication system, provided that the improvements conform to the board's plan and technical standards. The council must time the sale and issuance of the bonds so that the debt service on the bonds can be covered by the additional revenue that will become available in the fiscal year ending June 30, 2005, generated under section 403.11 and appropriated under section 473.901.

(d) In addition to the amount authorized under paragraphs (a) to (c), the council may issue bonds under subdivision 1 in a principal amount of up to \$27,000,000, plus the amount the council determines necessary to pay the costs of issuance, fund reserves, debt service, and any bond insurance or other credit enhancement. The proceeds of bonds issued under this paragraph are appropriated to the commissioner of public safety for phase three of the public safety radio communication system. In anticipation of the receipt by the commissioner of public safety of the bond proceeds, the metropolitan radio board may advance money from its operating appropriation to the commissioner of public safety to pay for design and preliminary engineering for phase three. The commissioner of public safety must return these amounts to the metropolitan radio board when the bond proceeds are received.

Sec. 117. Minnesota Statutes 2002, section 473.901, is amended to read:

473.901 ADMINISTRATION DEPARTMENT APPROPRIATION; TRANSFERS; BUDGET.

Subdivision 1. **STANDING APPROPRIATION; COSTS COVERED.** For each fiscal year beginning with the fiscal year commencing July 1, 1997, the amount necessary to pay the following costs is appropriated to the commissioner of ~~administration~~ public safety from the 911 emergency telephone telecommunications service account established under section 403.11:

- (1) debt service costs and reserves for bonds issued pursuant to section 473.898;
- (2) repayment of the right-of-way acquisition loans;
- (3) costs of design, construction, maintenance of, and improvements to those elements of the first and, second, and third phases that support mutual aid communications and emergency medical services;
- (4) recurring charges for leased sites and equipment for those elements of the first and, second, and third phases that support mutual aid and emergency medical communication services; or
- (5) aid to local units of government for sites and equipment in support of mutual aid and emergency medical communications services.

CRIME

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This appropriation shall be used to pay annual debt service costs and reserves for bonds issued pursuant to section 473.898 prior to use of fee money to pay other costs eligible under this subdivision. In no event shall the appropriation for each fiscal year exceed an amount equal to four cents a month for each customer access line or other basic access service, including trunk equivalents as designated by the public utilities commission for access charge purposes and including cellular and other nonwire access services, in the fiscal year. Beginning July 1, 2004, this amount will increase to 5.5 13 cents a month.

Subd. 2. RADIO BOARD BUDGET. The metropolitan council shall transmit the annual budget of the radio board to the commissioner of ~~administration~~ public safety no later than December 15 of each year. The commissioner of ~~administration~~ shall include all eligible costs approved by the radio board for the regionwide public safety communication system in ~~its~~ the commissioner's request for legislative appropriations from the 911 emergency ~~telephone~~ telecommunications service fee account. All eligible costs approved by the radio board shall be included in the commissioner of ~~administration's~~ administration's appropriation request.

Subd. 3. MONTHLY APPROPRIATION TRANSFERS. Each month, before the 25th day of the month, the commissioner of ~~administration~~ shall transmit to the metropolitan council 1/12 of its total approved appropriation for the regionwide public safety communication system.

Subd. 4. IMPLEMENTATION OF PHASES THREE TO SIX. To implement phases three to six of the statewide public safety radio communication system, the commissioner of public safety shall contract with the commissioner of transportation to construct, own, operate, maintain, and enhance the elements of phases three to six identified in the plan developed under section 473.907. The commissioner of transportation, under appropriate state law, shall contract for, or procure by purchase or lease (including joint purchase and lease agreements), construction, installation of materials, supplies and equipment, and other services as may be needed to build, operate, and maintain phases three to six of the system.

Sec. 118. Minnesota Statutes 2002, section 473.902, is amended by adding a subdivision to read:

Subd. 6. OPERATING COSTS OF PHASES THREE TO SIX. (a) The ongoing costs of the commissioner in operating phases three to six of the statewide public safety radio communication system shall be allocated among and paid by the following users, all in accordance with the statewide public safety radio communication system plan developed by the planning committee under section 473.907:

- (1) the state of Minnesota for its operations using the system;
- (2) all local government units using the system; and
- (3) other eligible users of the system.

(b) Each local government and other eligible users of phases three to six of the system shall pay to the commissioner all sums charged under this section, at the times

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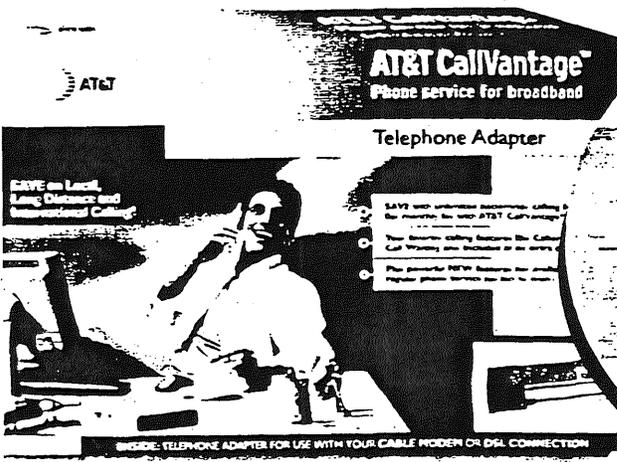
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| UK.....5¢ | Germany.....5¢ |
| New Zealand.....16¢ | |

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- Keep your current phone number or pick an area code of your choice

* does not include charges for broadband services.

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INTERNET PHONING

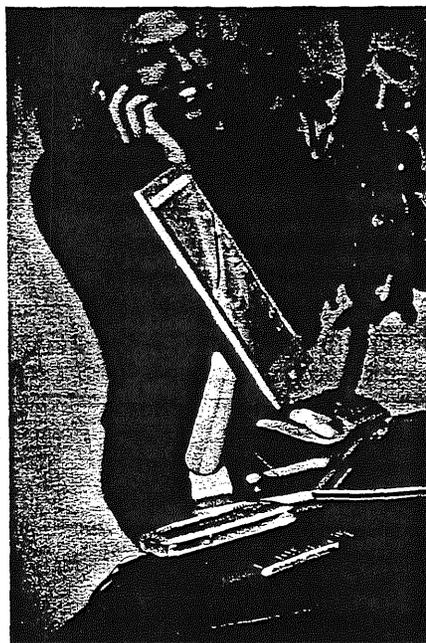
Should you try it?

By one industry estimate, this year some 1 million people will be using a new kind of phone service that sends calls over the Internet instead of regular phone lines. The main reason: Internet calling is cheap. But is it for you? We tested it to find out.

Phone service over the Internet, properly known as Voice over Internet Protocol, or VoIP, is now offered by just about every major telecommunications and cable TV company. AT&T, which is retreating from the residential long-distance and local landline markets, now offers VoIP. So do Verizon, the nation's largest phone company, Comcast, Time Warner Cable, and other cable providers. There are also VoIP-only companies, such as Vonage and 8x8 Inc.

VoIP plans offer domestic calling for as little as \$15 a month, and unlimited local and domestic long-distance for a flat \$25 to \$40 a month. That's significantly less than what regular landline companies charge, and providers include in the monthly fee caller ID, call waiting, voice mail, and nearly a dozen other features.

VoIP converts a voice call into "packets," or bits of digital data, routes them



NEEDED HARDWARE To send calls over the Internet, you have to plug your phone into an adapter that is linked to a broadband connection.

over the Internet, reassembles them into a voice signal at the other end, and feeds them into the call recipient's local telephone network.

The conversion is handled by a device called an analog telephone adapter, connected to your phone and to a broadband Internet connection. Any regular wired or cordless phone works with VoIP.

You can choose a new number, and

you can use the VoIP adapter away from home if you have broadband access. VoIP doesn't depend on your being in a fixed location. You can be across the country and call your next-door neighbors as if you're making a local call. But if you live in area code 609 and decide you want a 415 phone number, your neighbors will pay long-distance rates to reach you. Some VoIP providers can provide a "virtual" phone number that far-flung callers use to phone you at local rates.

To test VoIP, we recruited 10 volunteers at our Yonkers, N.Y., headquarters and our offices in Washington, D.C., and Austin, Texas, to sign up for service from five leading providers—AT&T, Optimum, Time Warner Cable, Verizon, and Vonage. Only one staffer tried Optimum; at least two staffers tried each of the others, using a mix of cable and DSL connections. We asked the staffers to get a new phone number and use the service at home for a month.

WHAT OUR TESTS SHOWED

Talk is cheap, but more than advertised. VoIP rates exclude the cost of the necessary broadband connection, which can be as much as \$40 per month. (For the one-fourth of U.S. households that already have broadband, there's no added expense.) Overseas calls are extra; rates vary according to VoIP provider and the country you are calling, but are lower than what other long-distance carriers charge. With Vonage, for example, calls to France or Hong Kong are 3 cents per minute.

We think you should figure on an additional expense with VoIP: \$20 or so per month to keep landline service for emergency calls. We don't think you should use VoIP as your only phone service, because it has no reliable way to connect to 911. See You Need to Know, at left. (Keeping

you need to know

WHY VoIP WON'T ALWAYS WORK IN EMERGENCIES

Voice over Internet Protocol (VoIP), which is different from traditional landline service, has not been integrated into the emergency calling network. The Federal Communications Commission and emergency-services agencies say that this issue must be addressed quickly.

At present, access to 911 from a VoIP connection amounts to a workaround, not the kind of fail-safe connection available with regular landline service. A VoIP number isn't connected to a fixed address, so

when you sign up for VoIP, the provider typically asks you to register an address that it uses to give the emergency-call center your location. Even VoIP providers that say they offer "enhanced 911" service ask customers to register an address.

But as a rule, VoIP providers do not have direct access to the 911 infrastructure because they are not considered phone companies. So even with location information, VoIP calls to 911 might not be properly routed to an emergency call center.

closeup

VoIP CREATES PROBLEMS FOR REGULATORS AND LAW ENFORCEMENT

A battle is brewing between VoIP providers and several states, including California, Minnesota, and New York. At stake are billions of dollars in taxes the states would like to levy on VoIP, as they do on other phone services. It's no accident that VoIP rates are low, because customers don't have to pay those taxes.

Proponents of VoIP say it's very different from regular phone service and should be treated differently. Michael Powell, chairman of the Federal Communications Commission, has said of VoIP: "To subject a global network to disparate local regulatory treatment by 51 different jurisdictions would be to destroy the very qualities that embody the technological marvel that is the Internet." Last November,

the FCC ruled that VoIP was largely exempt from state regulation, backing Vonage in a dispute with Minnesota regulators.

Minnesota and other states might challenge that ruling, insisting that local regulations and taxes are needed to ensure coverage in rural regions as well as public safety.

Other issues regarding VoIP service involve law enforcement. The widely scattered, "packetized" nature of conversations sent over VoIP makes it difficult for law-enforcement officials to tap or trace calls. As a result, those officials could have to monitor every download, e-mail message, and text message of an individual or a large group of innocent people just to track one suspect.

HOW VoIP SERVICES COMPARE

Here are details about the five services our panelists assessed. Other providers have similar rates and services. Listed in alphabetical order.

| | AT&T CallVantage | Optimum Voice | Time Warner Cable | Verizon VoiceWing | Vonage |
|------------------------|-------------------------|---|--|-----------------------------------|-------------------------|
| Unlimited calling rate | \$29.99 | \$34.95 | \$39.95 | \$34.95 | \$24.99 |
| Coverage | U.S. & Canada | U.S. & Canada | U.S. & Canada | U.S. | U.S. & Canada |
| Broadband type | Cable or DSL | Cable | Cable | Cable or DSL | Cable or DSL |
| Availability | Nationwide | Optimum customers in areas of Conn., N.J., N.Y. | Time Warner Cable customers in 30 cities | Nationwide | Nationwide |
| Contract required? | No | No | No | Yes; 1 yr. | No |
| Activation fee | \$29.99 | None | None | \$39.95 | \$29.99 |
| Termination fee | \$29.99 (in some cases) | None | None | \$19.95 (if contract ended early) | \$39.99 (in some cases) |
| Installation | Do it yourself | By company | By company | Do it yourself | Do it yourself |

the landline also lets you hedge your bets in case the VoIP provider goes bust.)

Voice quality may be uneven. Quality was OK most of the time, but some panelists said it didn't quite measure up to traditional landline service. They frequently used words such as "hollow" or "echoing" to describe the voice quality.

Incoming calls may not get through. Two panelists said that they failed to get some incoming calls or that the calls were dropped after a few minutes. One panelist said he tried six times to call home once.

Installing hardware yourself may be frustrating. Some VoIP providers send you the telephone adapter and setup instructions; others, usually the cable companies, will send an installer. Nearly all the staffers who tried installation on their own had to call the provider for help. The do-it-yourselfers generally needed several hours to get VoIP up and running. The pros needed less than an hour.

You may lose convenience and flexibility. The location of the VoIP adapter determines where your main phone goes. That's usually where the broadband service enters the house, and may not be

where you want a phone. The easiest way to put phones where you want them is to use a cordless phone that can support multiple remote handsets. With most VoIP providers, using existing extensions requires professional installation; Optimum Voice performs the service at no charge.

THE BOTTOM LINE

If you spend more than \$60 a month for local and long-distance, VoIP may save you money. Use the worksheet on page 14 to track what you now spend on local and long-distance service. If you're regularly spending more than \$60 a month, you're spending more than you would for unlimited VoIP and basic landline for emergencies. One of the few panelists who said he would consider keeping VoIP said its \$35 monthly rate would cut his costs nearly in half.

VoIP isn't yet the equal of landline. Judging from our panelists' experiences, installation difficulties, voice quality, and problems with incoming calls put VoIP at a disadvantage at present. Most panelists said they wouldn't want to keep VoIP. For them, the inconvenience outweighed the

prospect of lower bills.

Don't rely on VoIP alone. Most VoIP providers warn about the current inability of a VoIP call to connect consistently and reliably to a 911 emergency-call center and the inability of the technology to work in a power outage. We see those as major drawbacks. VoIP may also not work reliably with a home-security system to dial the security company's office.

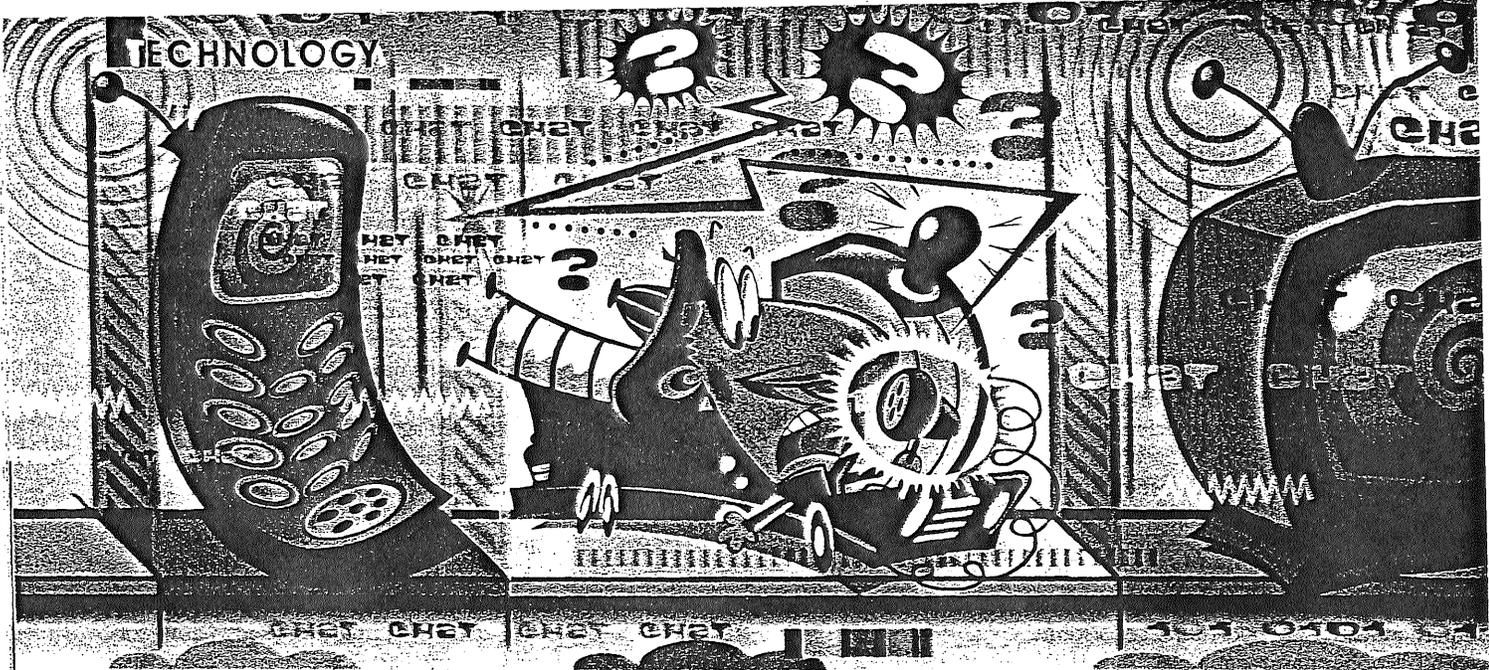
If you want VoIP, a cable connection may be the better way to go. More complaints about VoIP service quality came from panelists using a DSL connection. In our test, cable companies seemed to do the best job of providing quick, reliable installation and good voice quality.

Free at ConsumerReports.org

Want to know more about how VoIP works? See the schematic diagram of the hardware. Click on "Electronics and computers" on our home page.

For ConsumerReports.org subscribers

For Ratings of cordless phones, click on "Electronics and computers."



LF

ON THE SPECTRUM

Orange County, Florida, took a one-two punch during the hurricane season this year. First, there was Charley. Its winds took out a third of the tree canopy in the county, creating a pile of debris in the Citrus Bowl Stadium that reached the equivalent of six stories higher than the Empire State Building. Then along came Jeanne, bringing an overabundance of water. Nineteen lakes crested and the county was soaked.

With each storm, first responders from around the state came to help. But each time, they found themselves hampered. Many couldn't use the communications equipment they brought because it didn't work on the same radio frequency as Orange County's. The county passed out radios—buying some, renting others—for the National Guard and other emergency personnel. At one point, there were 16,000-plus users crowding onto just five channels on the county's 800 MHz radio system. "You can't have hundreds of responders on five channels," says Marilyn Ward, public safety communications

Editorial assistant Steven Weinberg provided research for this article.

**Interference.
Crowding.
Delays.
Will the feds ever
fix the kinks in the
band states and
localities use
for emergencies?**

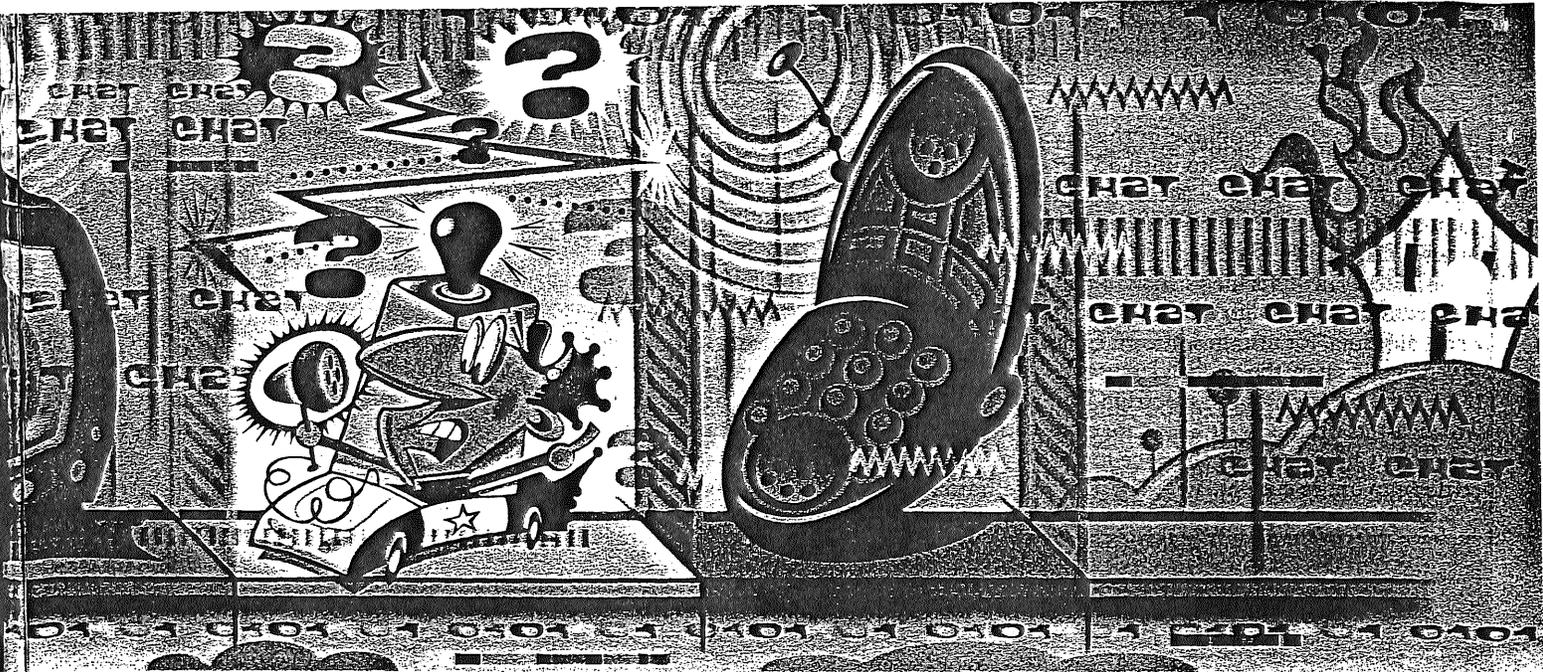
BY ELLEN PERLMAN

manager. "Management is very difficult." The ability of first responders to communicate with each other well, or at all, was elevated as an issue for state and local governments after the 9/11 terrorist attacks. Lack of space (available frequency) on the radio spectrum is a prob-

lem, as is the tangled placement of public safety channels with private channels on the 800 MHz band. The spectrum shortage for public safety users causes crowding of the airwaves and delays in communication. The placement of public safety frequencies too close to wireless companies' frequencies causes interference that can make radios go dead unexpectedly.

The spectrum dilemma varies by geography and is primarily a problem in major metropolitan areas. But that's exactly where the escalating need for services and the evolving terrorism issue has increased demand for radio time. "Almost every major metropolitan area will tell you the system is overloaded and burdened," says Harlin McEwen, chairman of the communications and technology committee of the International Association of Chiefs of Police.

Spectrum issues are complex, and fixes are not easy. Congress and the Federal Communications Commission are mired in several issues aimed at clearing channels on the spectrum for public safety needs. These include getting public safety and the private sector to swap places on one portion of the spectrum



and shoos television broadcasters off parts of the airwaves that have been promised to public safety.

CLEARANCE SALE

Spectrum is the entire range of radio frequencies used for every type of communication. There's only so much out there. "There's a fight for it and a fight to use what you have without your neighbor interfering with it," says Bob Gurs, director of legal and government affairs for the Association of Public-Safety Communications Officials. Things only got worse when Congress authorized the use of auctions more than a decade ago to dole out parts of the spectrum to the private sector and make money from it. Public safety's use of the spectrum doesn't, of course, generate funds. "There's always a struggle for these public services to get sufficient radio spectrum," Gurs says.

The FCC has taken steps to deal with the interference problem. Right now, frequencies used by commercial wireless companies are sandwiched between channels used by public safety—a sandwiching that is too close: Bands of frequency used by cellular telephone companies, principally Nextel, have been the main source of the interference. So, in August, the FCC opted for a plan that replaces the alternating slivers of commercial and first responder spectrum with separate, contiguous and non-interfering swaths. Nextel and its customers are pushed to one end of the spectrum and public safety to the other, and there is a buffer between them.

Nextel is required to pay equipment and consulting costs states and localities

incur in the changeover. These costs are estimated to run to \$850 million, and Nextel will have to put up a \$2.5 billion letter of credit in case it's more. In exchange, the FCC has agreed to give the company an unlicensed bit of spectrum space in the 1.9 GHz band. Verizon, a major competitor to Nextel, questioned the FCC's authority to grant Nextel that piece of spectrum without an auction and threatened to go to court over it. In November, however, Verizon decided to drop its opposition to the deal.

Meanwhile, state and local jurisdictions just want to move ahead with a clear-the-spectrum plan. "Interference needs to be corrected and quickly," says Charles Werner, deputy fire chief in Charlottesville, Virginia, where a new 800 MHz system is being put in place that is subject to possible interference. "There's no way to be up on it," Werner says. "What worked yesterday suddenly doesn't today. It's a ghost out there that continues to haunt you." And its implications are frightening. When two different frequencies collide, sometimes there's dead air. It means a firefighter in a burning building might be unable to call for help.

If the FCC plan moves ahead—which now seems likely—state and local governments will need to make changes to their radios. Every radio will have to be plugged into a computer and retuned, an exercise that will take time, money, planning and experts. "They have to break our system first to fix it," says Jim Charron, director of Fairfax County, Virginia's Public Safety Communications Center.

Smaller jurisdictions aren't as concerned

about what needs to be done as larger ones. York County, Virginia, for instance, has a much simpler system. In comparing more complex systems to those of the York region, Communications Manager Terry Hall says, "We're going to need a facelift; they're going to need a forklift."

Some departments have the in-house capability to retune their radios. Others don't or won't want to devote the resources to it. If a state or locality hires an expert, Nextel will pay the bill, under the deal the FCC offers. But during the transition, localities can't have half their radios unable to talk to the other half. So frequencies may have to be added alongside the old ones for a while so all of a department's radios can communicate. "The radio geeks plan to do this so it's transparent to the officer on the street," Gurs says. Regions with the most significant interference problems, generally those with the largest populations, are slated to go first. The process is expected to take up to three years.

THE BAND PLAYS ON

The plan to end the interference problem on the 800 MHz band is separate from another huge spectrum dilemma for public safety. Federal legislation passed in 1997 allocated a portion of the 700 MHz spectrum to public safety officials by 2006. But now that the year is near for that piece of the spectrum to be turned over to public safety, regions are finding that they won't be able to grab it anytime soon.

Television broadcasters, who were supposed to vacate channels 60 through 69 of the spectrum for public safety use, are tak-

ing advantage of a loophole in the law: They don't have to vacate until 85 percent of their viewers have access to digital television. In other words, in any place where more than 15 percent of viewers have access only to analog signals, broadcasters are not forced to move. In Southern California, for instance, the FCC has given public safety the go ahead to use the designated portion of the spectrum. But broadcasters on the West Coast are clogging those airwaves and cannot be forced to decamp under current law.

The U.S. Senate this fall passed an amendment to an intelligence bill that sets a firm date of December 2007 for TV stations to clear off the 24 MHz of spectrum that was allocated to public safety—or whenever public safety is ready to use it after that date. But the House did not include a TV-clearing provision in a companion bill, merely a “sense of the Congress” that the transition of digital television should be completed for all TV stations, effectively eliminating the 85 percent provision.

That, however, is not the same as legislating the issue.

State and local governments need a definite date. It takes three to five years to plan, contract for and build a radio system. Jurisdictions won't start the process until a date is set.

Companies that build radio equipment are also in a holding pattern. They don't want to make expensive equipment investments that turn out to be the wrong ones, depending on what Congress decides. “No one's going to plan for a system until they know spectrum is going to be available,” says McEwen. “Manufacturers of equipment aren't going to build products that are out of date before they're bought.”

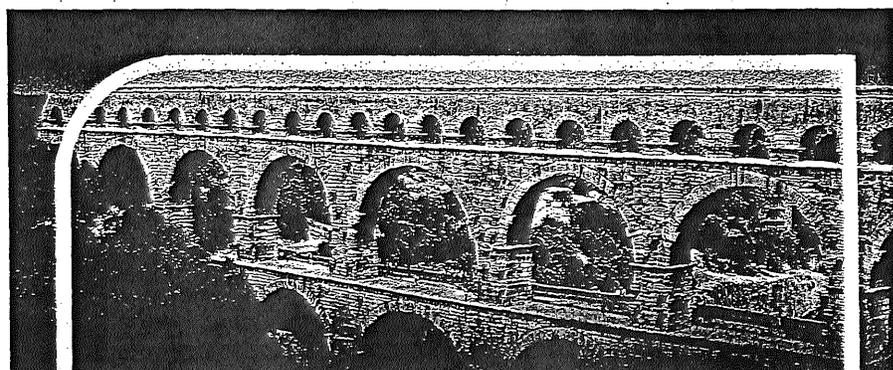
Emergency officials have the 9/11 Commission on their side. The commission's report urges Congress to support legislation that speeds up the assignment of spectrum and allocates an increased amount of spectrum for public safety purposes.

The Spectrum Coalition for Public Safety, a group of 30 jurisdictions and public safety organizations, is pushing for an extra 10 MHz of spectrum for wide-area public safety broadband uses. The coalition says broadband is needed for video cameras in train tunnels, GIS applications, remote doctor support and for other bandwidth-intensive uses. “There's a need for wireless broadband networks and citywide video for first responders in the field,” says Robert LeGrande, deputy chief technology office for wireless communications in the District of Columbia.

To counter the next terrorist attack, broadband would allow for remote surveillance, chemical and biological weapon detection, bomb squad support, helicopter video transmission and more—protection against things terrorists can already obtain through commercial services.

The District has an 18-month experimental license to deploy a wireless broadband public safety network citywide. The pilot network, now complete, demonstrates how such a system can be used. The regional network is exciting, forward-looking stuff that, based on the District's experience, could be replicated by other jurisdictions. But this can only happen, says LeGrande, “if the FCC and Congress can supply a missing ingredient—spectrum.” 

Ellen Perlman can be reached at eperlman@governing.com



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Current Projected 911 Distribution FY 2006

| | |
|------------------------------------|-----------------|
| • 911 System costs | 16.2 cents |
| • Enhanced 911 grants | 10.0 cents |
| • Wireless 911 Transfers | 1.0 cents |
| • Implement Wireless 911 | 6.5 cents |
| • MRB (debt service & maintenance) | 4.0 cents |
| • Prior Year Obligations | 1.6 cents |
| • Administrative Expenses | <u>.7 cents</u> |
| Total | 40 cents |

Stafford Proposal: Increase 911 surcharge to 84 cents

| | |
|------------------------------------|------------|
| Current 911 Surcharge | .40 |
| Clear deficit (temporary) (PSAP?) | .15 |
| Bonding to finish Phase II (metro) | .02 |
| Bonding to build Phases IV-VI | <u>.27</u> |
| Total | .84 |

Stafford Proposal Notes

- **National average surcharge is \$ 1.19**
- **Minnesota would still be well below national average**
- **Fee can be viewed as insurance**
- **Beneficiaries pay**
- **Fee is relatively easy to collect**

Stafford Proposal Notes

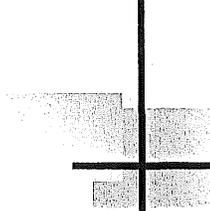
- **Eliminates competition for funds between public safety organizations**
- **Public accepts this approach**
- **Public already accepts much higher fees for call waiting, call forwarding and caller ¹⁰**

Metropolitan Radio Board

- **Special Purpose Political Subdivision**
- **Created by the Legislature in 1995 with 18 members**
- **Required to Produce a Plan for a Shared System—Locals to finance their portion**

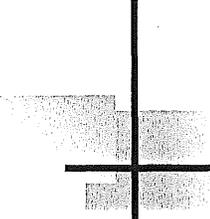
Advantages of Shared System

- Significantly improved interoperability between and among agencies
- Greater capacity and coverage through sharing of infrastructure
- Economic advantages of eliminating duplication of facilities
- Advanced expandable digital technology



First Phase

- First Phase of backbone financed in 1997
- State GO Bonds, Trunk Highway funds, 911 surcharge and revenue bonds backed by surcharge
- Issued Bonds in 1999
- Completed Construction of First Phase in 2002
- Local units of government paid for 100% of additions, but many locals opted out

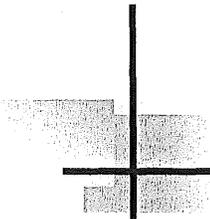


Second Phase Buildout

- New Bonding Authority Granted by 2002 Legislature after events of 9/11/01
- Goal: To Encourage all potential metro users to join system
- Bonding not accomplished due to 9-1-1 fund deficit
- 2004—21 members, added Isanti and Chisago Counties, DPS seat

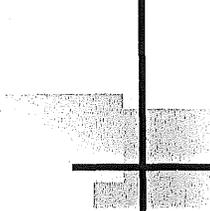
Status: Current Users

- State agencies in the Metro region
- 3 counties (Hennepin, Carver, Anoka)
- Independent PSAPs (Minneapolis, Richfield, Edina, Hopkins)
- Public and Private EMS Providers (North, Allina, others)
- Metro Transit, Metro Mobility
- MAC
- 10,000 radios on the system



Committed to be users

- Ramsey County, City of St. Paul
- University of Minnesota
- Dakota County
- Isanti and Chisago Counties
- Hennepin Independents except Eden Prairie
- 20,000+ radios potentially on system when all users on system



Under Consideration

- Washington County
- Scott County
- Health East
- Additional Independent PSAPs

Roles of the Board

- With MnDOT and local entities as partners, prepare and implement plans for an interoperable Metro public safety/public service communications system
- Provide a representative forum for critical decision making:
 - technical issues
 - financial issues
 - operational issues
 - legal issues

Roles of the Board, Continued

- Technical issues
 - Review and approve technical plans (with the help of the TOC and professional consultants)
 - Set technical standards
 - Test and certify equipment for use on the system

Roles of the Board (continued)

- Financial issues

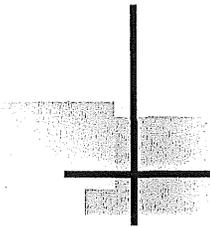
- Determine priorities on the spending of available dollars
- Determine how to spread costs of the system among users
- Provide a share of backbone capital financing
- Act as granting agent for federal and state funds, if and when available

Roles of the Board (continued)

- Operational Issues
 - Provide for adequate capacity and coverage
 - Set operating standards, priorities and protocols
 - Monitor compliance
 - Provide training for user agencies
 - Obtain liability insurance for system

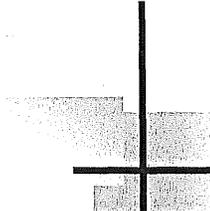
Roles of the Board (continued)

- Legal Issues
 - Prepare and enter into contracts and agreements with vendors and eligible users of the system.
 - Coordinate allocation of existing radio channels.



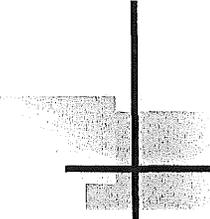
Board Financing

- The Board has three fund balances.
 - General fund
 - Bond fund (now at zero balance)
 - Debt service fund



General Fund

- Revenue source is 9-1-1 surcharge: 4 cents per month per line (wired and wireless statewide)
- Restricted in use:
 - Transfer to debt service
 - Capital expenditures
 - Maintenance
 - Leases and utilities
 - Assistance to local units of government

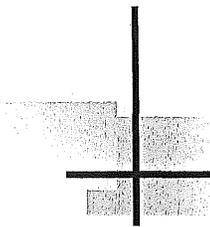


Bond Fund

- Paid for the Radio Board's share of construction of the regional backbone
- Now at a zero balance, due to lack of a bond sale

Debt Service Fund

- Must contain at least one full year's debt service reserves
- Interest earned may not be taken out of the fund
- Currently contains required reserves



Radio Board Future

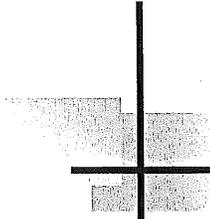
- Sunsets in law June 30, 2006
- Board has pledged to Governor to sunset June 30, 2005
- Some duties will transfer to the new Statewide Radio Board
- Metro Operations to be governed by a separate JPB or a merged JPB w/ Metro 9-1-1 Board

Issues Ahead

- Equitable cost allocation for ongoing maintenance and operation of metro portion of system
- Division of powers and duties between regional Joint Powers Board and Statewide Radio Board

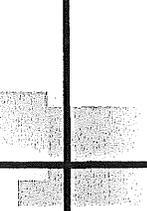
Division of Powers

- Agreement between DPS, Statewide Board and Radio Board now in process, most issues are decided
- Report will be made to the legislature by February 1.



Cost Allocation

- Committee now working on these issues
- Should costs to local governments be borne entirely locally, or should costs be divided between state and local governments?
- Will make recommendation shortly
- Chair: Washington County Commissioner **Dick Stafford**



Current Operating Costs

| | |
|--|----------------|
| ■ Annual Ongoing Costs: | |
| ■ Administration of Board | \$ 400K |
| ■ Site leases, utilities, insurance | \$ 450K |
| ■ Vendor provided maintenance | \$ 1.4 M |
| ■ MnDOT Provided maintenance | \$ 1.1 M |
| ■ Local subsystem site costs and maintenance | \$ 1.7M |
| ■ Software and system improvements | <u>\$ 300K</u> |
| Total | \$5.35M |

Financing: Where we are now

- Metro Region System Completion (Phase II)
 - \$18 M in authorized revenue bonds were not sold
 - Money for state share was replaced dollar for dollar for the entities that were ready to build by Federal Homeland Security Funds

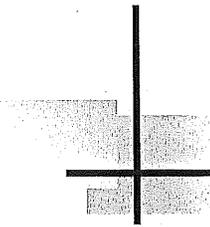
Financing: Where we are now

- Metro not finished. Entities waiting:
 - Washington County
 - Scott County
 - Isanti County
 - Chisago County

Need is approximately \$ 18 million

Local Share: \$10 M

State Share: \$ 8 M



Challenges Ahead

- Financing for metro entities not yet on the system is uncertain
- Competition for 911 surcharge revenue
- 911 surcharge long term stability in question due to technology and regulatory changes
- Extent of future Homeland Security funds unknown at this time

Possible Solutions

- Use 911 surcharge to leverage revenue bonds to finish metro and greater Minnesota build-out in the intermediate future
- Look for longer term stable source of financing to replace 911 surcharge



ARMER/911 Overview



Introduction

- Ron Whitehead, Program Director
- Bill Dean, Executive Director- MRB
- Dick Stafford, Chair MRB Cost Allocation Committee



ARMER/911 Overview



Summary

- ARMER Program
 - Status System Backbone
 - Status of Governance
- 911 Program
 - Status of 911 Special Revenue Account
 - Status "Prior Year Obligations"



ARMER/911 Overview



Driving factors- wireless communication

Late 1980/1990

- No frequencies, metro area problem 1980's
 - Lack of Interoperability
- [2000 Report to Legislature]
- Obsolete systems (1970's)
 - Digital vs. Analog
 - Re-farming frequencies- VHF & UHF



ARMER/911 Overview



[1998 NITA/FCC report]

- No VHF frequencies available
 - 800 MHz and 700 MHz frequencies
- September 11, 2001
- Interoperability as Homeland Security Priority

Shared Public Safety Radio System

- System backbone- state to build
- Local Infrastructure- local responsibility



ARMER/911 Overview



- Minnesota's 2004 Homeland Security Strategy and Assessment, Goal 7, as follows:

"Implement a statewide system of interoperable communication for local and state resources to be more effective and efficient in ensuring the safety of the citizens and emergency responders in Minnesota."



ARMER/911 Overview

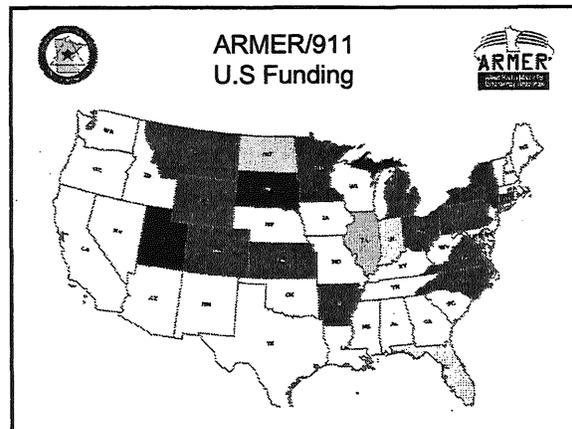
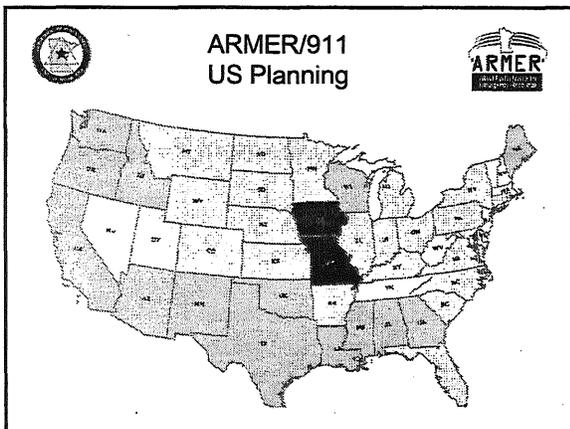
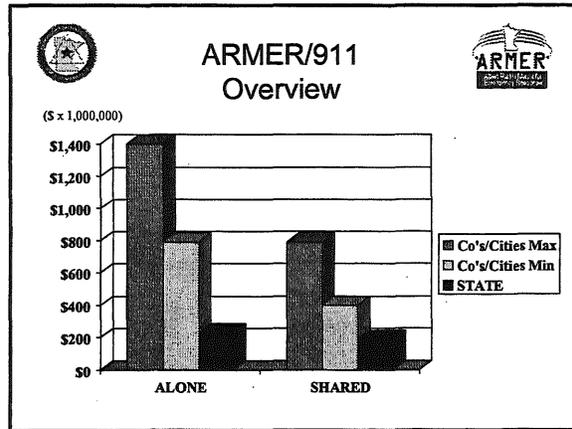
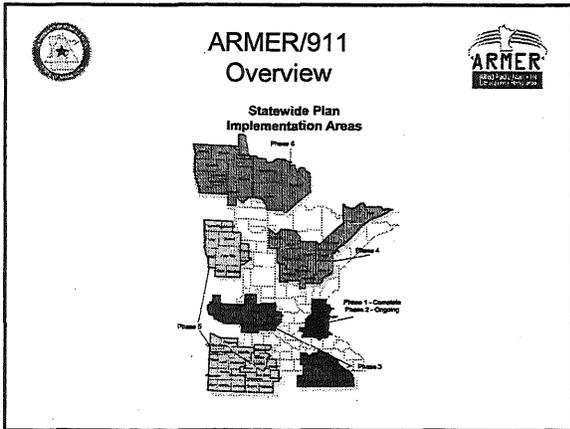


Metropolitan Radio Board

- Nine County Metro Area
 - Backbone & Interoperability Infrastructure
- [Further detail- MRB presentation]

Statewide Radio Plan

- 2000 Legislative Report



ARMER/911 Overview

ARMER Funding

- 2003 Legislature
 - 911 Revenue Bonds
 - \$18 million- Phase II (Local Enhancements)
 - \$27 million- Phase III Infrastructure
 - 911 Fee/Radio System
 - Not to exceed 4¢ per month to not to exceed 13¢ per month to be effective 7/1/2004
- 911 Funding problems
 - Bonds could not be sold

ARMER/911 Overview

2003 Homeland Security Funds
[Allocated in anticipation of 911 bonds]

- \$13.4 million
 - \$7.5 million- subscriber units (metro area)
 - \$6 million
 - St. Cloud System \$3 million
 - Rochester System \$2.2 million
 - Isanti & Chisago County \$0.7 million
 - 23 county grants for radio control stations



ARMER/911 Overview



911 Revenue Bonds

- Metro area
 - Sold through Metro Council- November 1999
 - Used for Metro area development
 - 15 year bonds
 - 1st backup: User fee
 - 2nd backup: Assessment of user fee against property tax base
 - Covenants on future bonding



ARMER/911 Overview



911 Funding issues

- Prior year obligations
- Increased costs of basic 911 service

Bonding issues

- Revenue bonds- not viable without 911 fix
- No backup to 911 revenue source
 - User fee
 - Property tax
- 2 year look back period (bond covenant)
- Voice over IP issue



ARMER/911 Overview



• 911 Revenue Bonds

- Bonding Issues in 2004
 - 911 Fund deficit- prior year obligations
 - 911 System- increased costs
 - 911 Fee problem- Technology based (Vonage decision)
 - Phase III- no property tax backup
 - 2 year look back period- 150% revenue



ARMER/911 Overview



2004 legislative session

- Alternatives discussed during session
 - Revenue Bonds
 - Lease/Purchase
- Session ended without any 911 fix
- 2004 HSEM funds had not been allocated at session end



ARMER/911 Overview



2004 Homeland Security Grant

- \$16.5 million
 - Metro Area

| | |
|-------------------|-------------|
| - Anoka County | \$2,078,753 |
| - Hennepin County | \$4,463,873 |
| - Ramsey County | \$4,290,866 |
 - Greater Minnesota

| | |
|-------------------|-------------|
| - Stearns County | \$2,794,854 |
| - Olmstead County | \$2,794,854 |
| - Planning | \$150,000 |



ARMER/911 Overview



ARMER Governance

- Planning Committee
 - Statewide Radio Board
 - Role
 - Statewide Plan
 - Technical & Operational Standards
- Metropolitan Radio Board
 - Regional Radio Board
 - Role
 - Continue regional (metro) enhancements
 - Set regional standards



ARMER/911 Overview



Statewide 911 Program

- Transferred from Dept. of Administration
 - December, 2003
- Statute requires state to contract with telephone companies
 - Contract period- 5 years
 - Certification period- 2 years (period to submit bills)



ARMER/911 Overview



- Major issues with 911 program
 - Prior year obligations
 - 2002 legislative action
 - Wireless Implementation
 - 1997 legislature action- state to reimburse wireless carriers for their costs
 - PSAP Up-grades
 - Enhanced 911 grants



ARMER/911 Overview



- Competitive Local Exchanges (CLEC)
 - 2002 legislative action- state to reimburse CLEC costs
- Voice over IP
 - Eroding regulator framework
 - Eroding fee structure



ARMER/911 Overview



- Prior Year Obligation Issue
- Wireless Implementation
- Competitive Local Exchanges
- Voice over I.P.



ARMER/911 Overview



End of 2004 legislative session

- No resolution of 911 issues
- Maintain the status quo
 - 4¢ MRB
 - 10¢ PSAP's
 - Continue to fund current 911 System expenses



ARMER/911 Overview



Maintain Status Quo

- 403.11- "commissioner must pay"
 - Wire line costs
 - Wireless costs
- 911 special revenue account; 403.11
 - Fee is specifically "assessed ... to cover the costs of ongoing maintenance and related improvements"
 - "Money in the account may only be used for 911 telecommunication services"



**ARMER/911
Overview**



Systemic changes- 911 system

- Re assert contract requirement
- Insert non-retroactive clause in contracts
- Re-engage counties in process
 - Update their plans
 - Fiscal requirements to system improvements



**ARMER/911
Overview**



- **Competitive bidding process**
 - 2 basic 911 service providers
- **Process to major system enhancements**
 - Full cost assessment
 - Commissioner level approval required
- **Other potential changes (discussion)**
 - Fee Increase
 - Reduce what we pay for
- **911 Network of the Future**

Senate Counsel & Research

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Senate

State of Minnesota

January 19, 2005

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To: Senator Jane B. Ranum

From: Peter S. Wattson, Senate Counsel
651/296-3812

Subj: History of 911 Fee

You have asked for a history of the 911 emergency telephone services fee, as authorized by Minnesota Statutes § 403.11.

The 911 emergency telephone system was created by Laws 1977, ch. 311, which mandated that each metropolitan county have a 911 system by December 15, 1982, and each remaining county have a 911 system by December 15, 1986. Costs of creating and operating the systems was to be paid by appropriations from the general fund, which were \$20,000 for fiscal year 1978 and \$180,000 for fiscal year 1979.

Laws 1985, First Sp. Sess. ch. 13, § 330, for the first time imposed a fee on telephone customers to pay the costs of the 911 emergency telephone systems. The fee was to be set by the Commissioner of Administration at the amount needed to cover all system costs, but no more than 30 cents nor less than eight cents per month. Proceeds of the fee were deposited in a new 911 emergency telephone services account in the special revenue fund. Appropriations to cover operating costs were \$2,748,800 for fiscal year 1996 and \$3,611,500.

Laws 1995, ch. 195, authorized use of the 911 emergency telephone services fee to pay the cost of creating an 800 MHz public safety radio communication system in the metropolitan area. Section 11 of that law, now coded as Minn. Stat. § 403.30, subd. 1, authorized up to four cents a month to pay debt service on bonds of up to \$10 million for that purpose.

Laws 2001, First Sp. Sess. ch. 10, art. 2, § 78, set the total fee at exactly 27 cents per month, rather than within the former range of 8 to 30 cents a month.

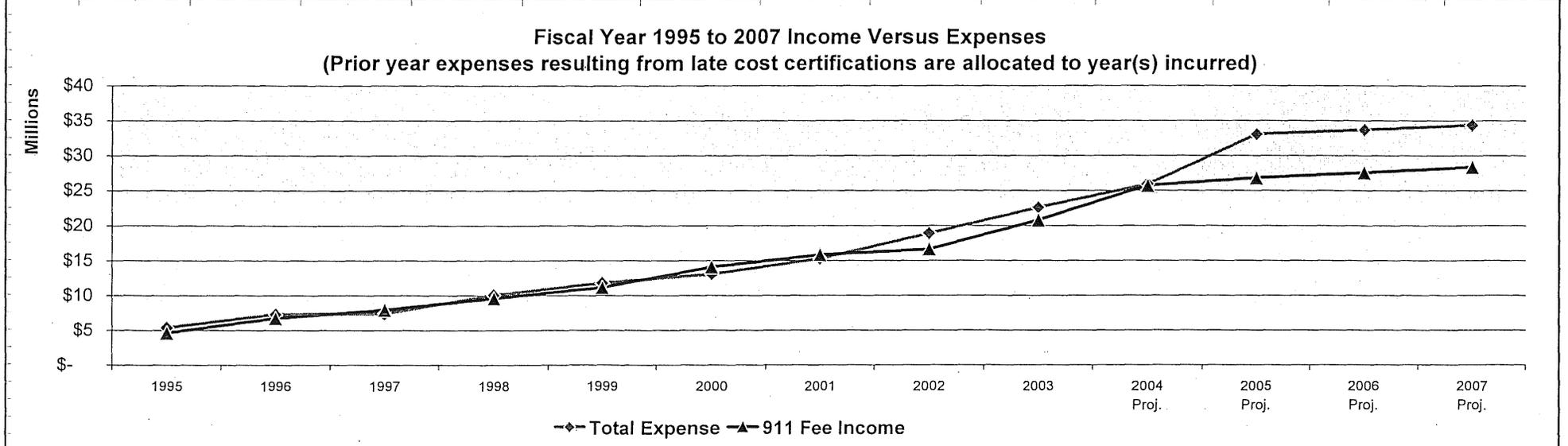
Senator Jane B. Ranum
January 19, 2005
Page 2

Laws 2002, ch. 401, art.1, § 3, restored the concept of a fee range, which it set at 8 to 33 cents a month. Section 8 of that law increased the amount available to pay debt service on bonds for the radio system to 5.5 cents beginning July 1, 2004.

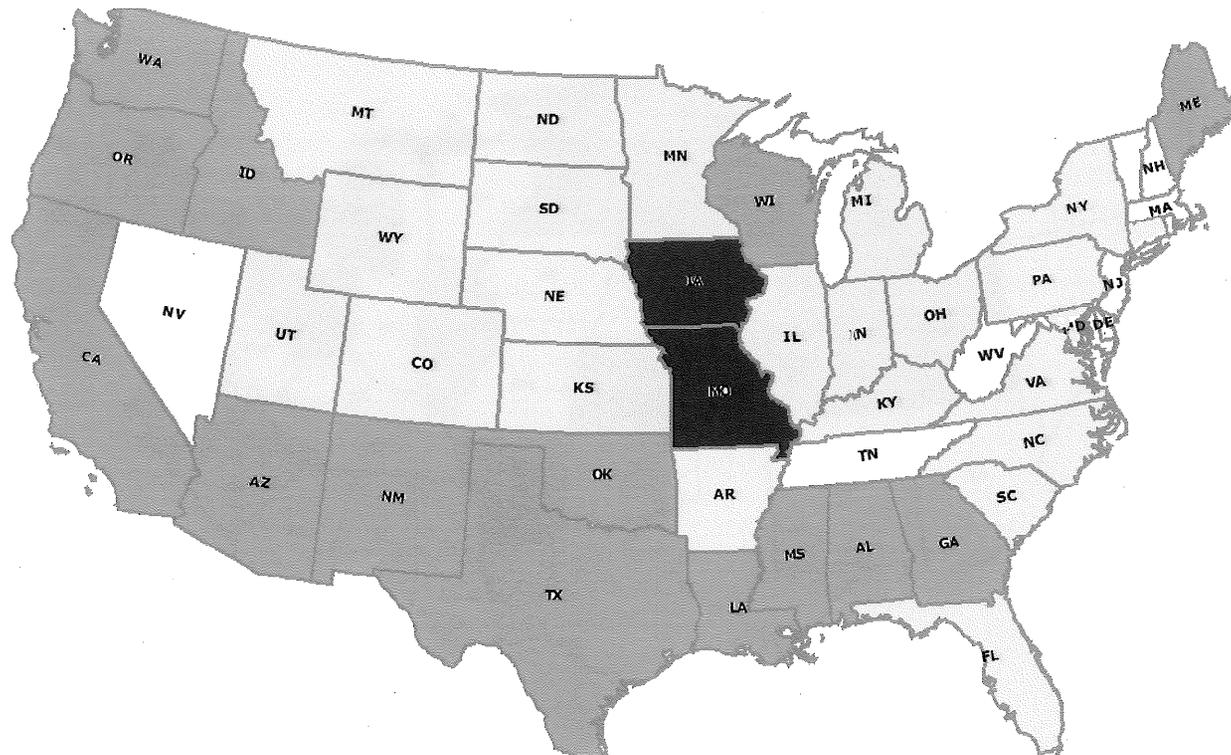
Laws 2003, First Sp. Sess. ch. 1, art. 2, § 108, increased the maximum fee to 40 cents. Section 117 of that law increased the amount available to pay debt service on bonds for the radio system to 13 cents, beginning July 1, 2004.

PSW:ph

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 Proj. | 2005 Proj. | 2006 Proj. | 2007 Proj. |
|--------------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 911 System Costs | \$ 3,497,793 | \$ 3,348,650 | \$ 3,436,250 | \$ 3,202,981 | \$ 3,590,751 | \$ 3,939,783 | \$ 4,287,697 | \$ 6,329,703 | \$ 7,997,006 | \$ 11,161,026 | \$ 11,161,026 | \$ 11,161,026 | \$ 11,161,026 |
| Prior Year Costs | | \$ 257,384 | \$ 257,384 | \$ 514,769 | \$ 1,057,848 | \$ 1,302,191 | \$ 1,500,320 | \$ 1,987,821 | \$ 2,479,100 | | | | |
| Enhanced 911 Grants | \$ 1,568,013 | \$ 3,072,996 | \$ 3,184,364 | \$ 4,418,696 | \$ 4,569,270 | \$ 4,966,699 | \$ 5,638,375 | \$ 5,890,693 | \$ 5,986,202 | \$ 6,197,040 | \$ 7,315,325 | \$ 7,520,355 | \$ 7,742,810 |
| E 911 to State Patrol | | | | \$ 199,343 | \$ 238,505 | \$ 260,047 | \$ 292,202 | \$ 307,405 | \$ 315,063 | \$ 326,160 | \$ 365,017 | \$ 395,808 | \$ 407,516 |
| Wireless To State Patrol | | \$ 103,018 | \$ 155,351 | \$ 214,677 | \$ 270,458 | \$ 335,539 | \$ 437,779 | \$ 502,466 | \$ 544,130 | \$ 600,134 | \$ 642,811 | \$ 674,595 | \$ 722,898 |
| Wireless Enhanced 9-1-1 | | | | | \$ 43,355 | \$ 25,407 | \$ 501,742 | \$ 1,042,683 | \$ 2,345,464 | \$ 4,496,207 | \$ 4,375,755 | \$ 4,507,028 | \$ 4,642,239 |
| Radio System Grants | \$ 93,000 | \$ 293,000 | \$ 93,000 | \$ 1,200,000 | \$ 1,712,224 | \$ 1,896,275 | \$ 2,220,816 | \$ 2,398,481 | \$ 2,494,368 | \$ 2,609,280 | \$ 8,704,736 | \$ 8,948,706 | \$ 9,213,412 |
| Administrative Expenses | \$ 189,393 | \$ 213,503 | \$ 223,957 | \$ 263,813 | \$ 270,049 | \$ 294,572 | \$ 371,468 | \$ 394,466 | \$ 428,944 | \$ 499,920 | \$ 468,459 | \$ 473,636 | \$ 479,028 |
| PSAP Study | | | | | | | | | | \$ 149,940 | | | |
| Total Expense | \$ 5,348,199 | \$ 7,288,551 | \$ 7,350,306 | \$ 10,014,279 | \$ 11,752,460 | \$ 13,020,513 | \$ 15,250,399 | \$ 18,853,718 | \$ 22,590,277 | \$ 25,889,767 | \$ 33,033,129 | \$ 33,681,154 | \$ 34,368,929 |
| Total less MSP | \$ 5,348,199 | \$ 7,185,533 | \$ 7,194,955 | \$ 9,600,259 | \$ 11,243,497 | \$ 12,424,927 | \$ 14,520,418 | \$ 18,043,847 | \$ 21,731,084 | \$ 24,963,473 | \$ 32,025,301 | \$ 32,610,751 | \$ 33,238,515 |
| 911 Fee | \$ 0.14 | \$ 0.22 | \$ 0.22 | \$ 0.22 | \$ 0.27 | \$ 0.27 | \$ 0.27 | \$ 0.27 | \$ 0.33 | \$ 0.40 | \$ 0.40 | \$ 0.40 | \$ 0.40 |
| 911 Fee Income | \$ 4,596,044 | \$ 6,685,356 | \$ 7,875,419 | \$ 9,556,502 | \$ 11,123,883 | \$ 14,058,536 | \$ 15,792,396 | \$ 16,573,556 | \$ 20,792,730 | \$ 25,712,280 | \$ 26,783,800 | \$ 27,534,480 | \$ 28,348,960 |

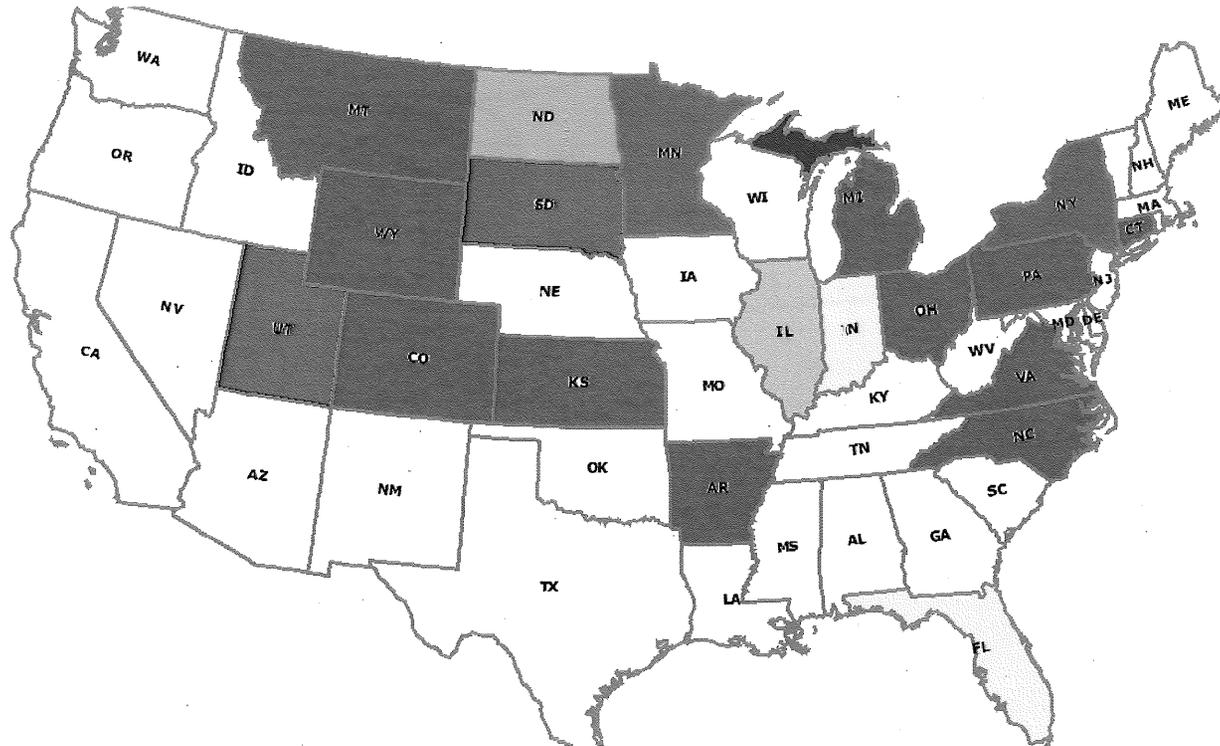


STATUS OF PLANNING



-  Interoperability planning- but no plan identified
-  Upgrade or new system plan in place
-  Plan in place- no significant system upgrade
-  Status- Underdetermined

FUNDING OF IMPLEMENTATION PLANS



- General funds or general obligation bonds.
- Grant funds and earmarked funds
- 911 Fee based financing
- Motor vehicle or boat licensing fees
- Vendor owned- user fee based
- Vendor Lease/Purchase

| State | Contact | Status | Funding | Misc. |
|-------------|-----------------------------------|--|--|---|
| Alabama | | Planning process only | No funding identified | |
| Alaska | Tim Woodall 907-552-8223 | Planning process only | No funding identified | |
| Arizona | | Planning process | | |
| Arkansas | Gary Underwood 501-682-3636 | Consolidation of 12 separate state systems | General Fund appropriation to State Patrol | |
| California | Don Root 916-845-8601 | Planning but no specific plan- multi-banded approach anticipated | No funding identified | 700 MHz frequencies will not be usable for many years in CA |
| Colorado | Paul Nelson 303-866-2341 | 800 MHz trunked system- 2/3 completed | Initial appropriation to trust fund (\$50 million)- annual appropriations to fund from general fund | Denver has EDACS- State system Motorola |
| Connecticut | George Pohorilak 860-695-8108 | 800 MHz trunked system | | |
| Delaware | Robert Pederson 302-739-4207 | | | |
| Florida | Fred Dickenson 850-487-3132 | 800 MHz trunked system | \$1.00 fee on MV and boat licenses (\$16 mill) | Covers operational costs |
| Georgia | Major D.A. Jewell 404-624-7016 | Planning but no funding- 800/700 MHz system | None specified | |
| Hawaii | | | | |

| | | | | |
|---------------|---------------------------------------|--|--|---|
| Idaho | Mark Lockwood 208-263-3105 | SIEC Planning process- planning only | None specified | |
| Illinois | Craig Allen 217-782-1513 | Implementing 800 MHz trunked system | Leased system from Motorola | Proposed cost \$50- 60/month |
| Indiana | Dave Smith 317-233-9169 | 1/3 completed- 800 MHz trunked system | \$1.25 fee on MV filings; shared with BCA | Insufficient funding to complete project |
| Iowa | Jerry Remhoff 515-281-8804 | Enhanced interoperability, no systemwide upgrade | None | |
| Kansas | | Up-grading existing 800 MHz trunked system | State general fund appropriation | |
| Kentucky | Ken Born 502-564-3193 | Statewide UHF system for State Patrol enhancements | Grant funds to expand interoperability | |
| Louisiana | | Planning only | | |
| Maine | Major Robert Williams 207-624-7000 | Planning a statewide VHF system | No funding defined | |
| Maryland | Alan Kealey 410-260-8887 | Intermediate plan- V- TAC,U-TAC and I-TAC plan | Grant funds | Long term plan- 700 MHz trunked system- \$5 million/year for towers |
| Massachusetts | C. Blair Sutherland 508-820-2264 | | | |
| Michigan | L.Col. Tom Miller 517-336-6450 | 800 MHz trunked radio system | State capital bonds | 16,000 users, \$200/year fee per radio |
| Mississippi | Donald Lopper 601-933-2603 | Planning process only at this time | | |

| | | | | |
|----------------|---------------------------------|--|--|--|
| Missouri | Steve Devine 573-526-6105 | No statewide plan- little state coordination | | |
| Montana | Jenny Hanson 406-444-2700 | Current RFP for VHF voice & data | Grants and appropriated general funding | |
| Nebraska | Mike Jeffres 402-471-3719 | Plan for 800 MHz trunked system | No funding | Recent effort to assess 50¢ on each electric customer failed |
| Nevada | | | | Recent 911 magazine article re: failed VHF system |
| New Hampshire | | | | |
| New Jersey | Ray Hayling 609-984-6995 | | | |
| New Mexico | | Planning only at this time | | |
| New York | Jim Adams 518-443-5078 | Planning 800 MHz trunked system | Partial funding from Wireless 911 fee | |
| North Carolina | Mike Hodgson 919-662-4440 | Expanding existing Motorola 800 MHz trunked system | State & county funds, earmarks and FEMA funds, HSEM grants | 38 of 239 sites built, 45,000 potential users |
| North Dakota | Larry Rubble 701-328-8100 | Up grade current VHF conventional system | HSEM funding- down payment and yr 1 lease | 8 year Lease/Purchase with yr 2-8 not yet funded |
| Ohio | Darrly Anderson 614-466-2257 | 800 MHz trunked system | \$271.9 million state capital bonds | User fee, \$240/year voice |
| Oklahoma | | Planning process only- plan 800/700 trunked system | None identified | |

| | | | | |
|----------------|--------------------------------|--|--|---|
| Oregon | Jeff Johnson 503-649-8577 | Planning process only- no specific plans yet | None identified | |
| Pennsylvania | Tom Reidy 877-838-8999 | 800 MHz trunked system | State capital bonds | MIA-COM Open Sky system |
| Rhode Island | | | | |
| South Carolina | Ken Harrel 843-832-0341 | 800 MHz trunked system | | |
| South Dakota | | VHF trunked system | HSEM grants and earmarks | Daschle- Senate Minority Leaders Home |
| Tennessee | Bill Pogue 615-257-5226 | | | |
| Texas | Bob Pletcher 512-424-5307 | No statewide plan, but regional plans | HSEM funds and local funding | 80% of state is 800 MHz system |
| Utah | Steve Proctor 801-840-4200 | 800 MHz trunked system 12 county area- No plan to expand | Federal grants, Olympic funding- user fees generate \$30 million per year (22.50 per radio) | Implemented in 12 county area in conjunction with winter Olympics- rest of state VHF system |
| Vermont | Terry LaValley 802-241-5215 | | | |
| Virginia | Tom Struzzieri 804-674-4604 | VHF trunked system | State G.O. Bonds | 800 MHz portables, with VHF in car repeaters |
| Washington | Dennis Hausman 360-702-3463 | Preparing plan- due March 2003 | None identified yet | |
| West Virginia | Lt. McCabe 304-746-2154 | No specific plan | | |
| Wisconsin | | Plan with alternatives prepared | None identified | |
| | | New Statewide VHF | General Fund- G.F. | |

| | | | | |
|---------|--|--------------|------------------------|--|
| Wyoming | | Radio system | surplus from royalties | |
|---------|--|--------------|------------------------|--|

Item noted of significance:

- Nebraska- Attempted to fund a statewide 800 MHz system with a 50¢ monthly fee on each electric utility customer. It was defeated and is considered dead issue.
- Indiana- Partially funded their statewide 800 MHz system with a \$1.25 motor vehicle registration fee. Revenue was split between the radio system and crime lab modernization. It has not produced enough revenue.
- Maryland- Has developed a short term (10 year) interoperability plan with a long term plan of spending \$5 million per year from the general fund to acquire land and towers for an 800/700 MHz trunked system to be implemented 10 years out.
- Missouri, Iowa, and Kentucky- Plan calls for interoperability through cross band repeaters and interoperability channels but have no significant plans to upgrade a statewide system with any shared resources. Wisconsin may be going a similar direction.
- North Dakota- Upgraded their existing VHF radio system (\$5.1 million) under an 8 year lease purchase agreement with Motorola, the down payment and 1st year lease payment will be made with HSEM funds; payments for succeeding years is not yet determined.
- Utah and South Dakota- System financed with grant funds, Utah received extensive grants in connection with the Winter Olympics. South Dakota was the benefactor of significant grants and earmarks when Senator Daschle was Minority Leader.
- Illinois- Reportedly is doing a vendor owned system with Motorola leasing usage. Cost is reportedly \$50-60/month (need more clarification here as the person reporting was not a fan of Illinois proposal).

Other sources of funding mentioned but not implemented anywhere are as follows:

- Traffic citation surcharge for certain offenses.
- Automobile insurance fee assessment- similar to that used for the Auto Theft Prevention program.

St. Paul Pioneer Press (MN)

January 11, 2005

Section: Business

Edition: St. Paul

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COMCAST TO ROLL OUT INTERNET PHONE CALLS

CABLE FIRM SETS NO DATE FOR TWIN CITIES

LESLIE BROOKS SUZUKAMO

Pioneer Press

Trying to shake loose customers from regional telephone giants like Qwest Communications International, **Comcast** Corp., the nation's largest cable operator, said Monday it will begin selling Internet-based phone service to 15 million customers this year.

Comcast already provides conventional circuit-switched telephone service to 1.2 million households nationwide, including an undisclosed number in St. Paul and its surrounding area.

Telephone industry experts expect that in coming years, new, more feature-laden Internet-based services, sometimes called Voice over Internet Protocol, or VoIP for short, will begin luring away tens of millions of residential and business customers from conventional service in the \$300 billion telecommunications industry.

Cable operators threaten traditional phone companies because they have their own lines into homes, and can offer TV programming and high-speed Internet services in attractively priced packages. Phone companies are responding with their own bundles of phone, broadband DSL, video (using satellite partners like DirecTV and Dish Network) and wireless phones, too.

"I think it's too soon to say who's going to win," said Lisa Pierce, a vice president for Forrester Research, a technology consulting group. Residential customers should think carefully about switching because VoIP doesn't offer the same emergency 911 service as conventional phones, and it dies in a power outage unless it has a back-up battery, she said.

Comcast will offer its "Digital Voice" service first in its home city of Philadelphia, Springfield, Mass., and Indianapolis, where it tested the phones last year. The company -- which is expected to charge \$40 a month for phone service -- expects to reach all 40 million of its current cable customers by the end of 2006, **Comcast** spokeswoman Mary Beth Schubert said.

Schubert declined to say when Digital Voice could be sold in the company's Twin Cities service area, a crescent-shaped territory that includes two-thirds of the metro area revolving around St. Paul.

Locally, the company spent \$250 million over the past four years upgrading a 7,400-mile network to convert its signal into digital. This enabled **Comcast** last month to begin offering new digital television services like on-demand video to 640,000 households from Plymouth on the west to River Falls, Wis. on the east, and from Ham Lake in the north to Eagan in the south.

Some analysts believe the Twin Cities may not be at the top of **Comcast's** list of markets to receive digital phone service this year, despite the investment. The company may prefer to begin selling in markets where it had no phone service; in St. Paul, it already has a base of customers, said Kate Griffin, a VoIP market analyst for the Yankee Group, a Boston-based technology research firm.

"They say they expect to have 8 million (phone) subscribers within five years -- that's pretty aggressive," Griffin said. "They've been doing this slow and steady and now they're announcing, 'We are here.'"

Qwest, the Baby Bell that holds two-thirds of Minnesota's 3.1 million phone lines, has been losing

customers to wireless and Internet phone providers like every Baby Bell, but it expressed no fear of the cable competitor.

"We remain focused on our customers," spokeswoman Sylvia McLachlan said.

Denver-based Qwest began offering VoIP to a limited number of customers in Minnesota in Dec. 2003, and it promised to roll out its own residential Internet phone service throughout its 14-state territory in 2004. McLachlan said any announcement has been delayed until later this year to allow for more testing.

Meanwhile, Qwest expanded its VoIP services for business customers in December to 100 more markets, bringing its total to 126 metro areas nationwide.

Time Warner Cable, the nation's second-largest provider, began VoIP service in Minneapolis and its suburbs last fall and that company has 200,000 VoIP phone customers nationwide, spokesman Keith Coccozza said.

Traditional phone companies like AT&T as well as start-ups like Edison, N.J.-based Vonage also are challenging the old order. Vonage has 400,000 customers, it said Monday.

Leslie Brooks Suzukamo covers telecommunications and technology and can be reached at lsuzukamo@pioneerpress.com or 651-228-5475.

The Associated Press contributed to this report.

Photo: Paul Connors, Associated Press

Comcast Chief Executive Officer Brian Roberts announces his cable-television and Internet company's plans to offer internet-based telephone service during his keynote address to a telecommunications conference Monday in Phoenix.

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MN Department of Public Safety
 9-1-1 Emergency telecommunications Service Account in the Special Revenue Fund
 Account Analysis November 2004 Forecast
 12/15/04

| | | Actual FY 2003 | Actual FY 2004 | Budgeted FY 2005 | Nov.04 Forecast FY 2006 | Nov. 04 Forecast FY 2007 | Nov.04 Forecast FY 2008 | Nov. 04 Forecast FY 2009 |
|--|---------|---------------------|---------------------|---------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|
| Annual fee collection from one cent | \$0.010 | \$630,083 | | \$669,595 | \$688,362 | \$708,724 | \$708,724 | \$708,724 |
| SOURCE OF FUNDING: | | | | | | | | |
| Balance Forward | | \$5,648,211 | \$1,628,021 | \$3,673,687 | \$497,796 | \$502,973 | \$513,542 | \$524,111 |
| 9-1-1 Receipts MS403.11 subd. 1(c) | | | | | | | | |
| Receipts \$0.33 @ mo. | \$0.330 | \$20,792,730 | | \$22,096,635 | \$22,715,946 | \$23,387,892 | \$23,387,892 | \$23,387,892 |
| Receipts \$0.07 @ mo. (11 months-fy04) | \$0.070 | \$0 | | \$4,687,165 | \$4,818,534 | \$4,961,068 | \$4,961,068 | \$4,961,068 |
| Total 9-1-1 Receipts | | \$20,792,730 | \$25,838,597 | \$26,783,800 | \$27,534,480 | \$28,348,960 | \$28,348,960 | \$28,348,960 |
| Total Source of Funding | | \$26,440,941 | \$27,466,618 | \$30,457,487 | \$28,032,276 | \$28,851,933 | \$28,862,502 | \$28,873,071 |
| Receipt Dedication: | | | | | | | | |
| Enhanced 911 Service costs MS403.113 | | | | | | | | |
| PSAPS MS 403.113 subd. 1 | \$0.100 | \$6,300,827 | \$6,555,805 | \$6,695,950 | \$6,883,620 | \$7,087,240 | \$7,087,240 | \$7,087,240 |
| FY 2005- > implied based on appr. | \$0.015 | | | \$0 | \$0 | \$0 | \$0 | \$0 |
| | | | | \$6,695,950 | \$6,883,620 | \$7,087,240 | \$7,087,240 | \$7,087,240 |
| Debt service & reserve for bonds issued MS403.30 | | | | | | | | |
| FY2004 | \$0.040 | \$2,520,331 | \$2,622,321 | \$2,678,380 | \$2,753,448 | \$2,834,896 | \$2,834,896 | \$2,834,896 |
| FY2005- Beginning 7/1/04 | \$0.090 | | | \$0 | \$0 | \$0 | \$0 | \$0 |
| | | | | \$2,678,380 | \$2,753,448 | \$2,834,896 | \$2,834,896 | \$2,834,896 |
| Appropriations: | | | | | | | | |
| Laws of 2003, 1st Spec Session, Ch.1, Art. 1, Sec. 29 Public Safety | | | | | | | | |
| PSAPS payments | | | \$6,970,000 | \$8,522,000 | \$8,522,000 | \$8,522,000 | \$8,522,000 | \$8,522,000 |
| PSAPS consolidation study | | | \$150,000 | | | | | |
| SF653, 5th Engrossment (Laws 2004, Ch. 282) | | | \$3,475,000 | | | | | |
| Unspecified portion of appropriation | | <u>\$24,008,000</u> | <u>\$15,892,000</u> | <u>\$21,118,000</u> | <u>\$21,118,000</u> | <u>\$21,118,000</u> | <u>\$21,118,000</u> | <u>\$21,118,000</u> |
| Total appropriations FY 2004-05 | | \$24,008,000 | \$26,487,000 | \$29,640,000 | \$29,640,000 | \$29,640,000 | \$29,640,000 | \$29,640,000 |
| PROJECTED COSTS: | | | | | | | | |
| Enhanced 911 Service costs MS403.113 | | | | | | | | |
| PSAPS 9-1-1 grants (non-State Patrol 95%) | \$0.100 | \$5,986,202 | \$6,228,015 | \$6,361,153 | \$6,539,439 | \$6,732,878 | \$6,732,878 | \$6,732,878 |
| Transfers to State Patrol- PSAPS (5%) | | <u>\$315,063</u> | <u>\$327,790</u> | <u>\$334,798</u> | <u>\$344,181</u> | <u>\$354,362</u> | <u>\$354,362</u> | <u>\$354,362</u> |
| Total- Enhanced 911 Service costs | | \$6,301,265 | \$6,555,805 | \$6,695,950 | \$6,883,620 | \$7,087,240 | \$7,087,240 | \$7,087,240 |
| 911 System cost MS403.11 (10% variable) | | | | | | | | |
| Network & Database charges for 911 under contract-recurring charges by | | \$7,997,006 | \$10,208,399 | \$11,161,026 | \$11,161,026 | \$11,161,026 | \$11,161,026 | \$11,161,026 |

MN Department of Public Safety
 9-1-1 Emergency telecommunications Service Account in the Special Revenue Fund
 Account Analysis November 2004 Forecast
 12/15/04

| | Actual FY 2003 | Actual FY 2004 | Budgeted FY 2005 | Nov.04 Forecast FY 2006 | Nov. 04 Forecast FY 2007 | Nov.04 Forecast FY 2008 | Nov. 04 Forecast FY 2009 |
|--|---------------------|---------------------|----------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|
| wire line telecommunications service providers; 10% variable with # of phones | | | | | | | |
| Estimated prior year obligations-\$8,204,114 Nov. 04 | \$5,064,282 | \$0 | \$1,699,414 | \$1,081,127 | \$1,421,633 | \$1,421,633 | \$1,421,633 |
| Estimated prior year obligations-\$9,357,896 Feb. 04 | | | | | | | |
| Prior Year obligations from FY 2003 & 04-Wireless | | | \$1,742,220 | | | | |
| Prior Year obligations from FY 2003 & 04-Wired | | | \$495,676 | | | | |
| Implement Wireless Enhanced 911- Reimbursement of wireless carriers for installation and recurring charges incurred for integrating wireless 911 calls into enhanced 911 system (45% variable with # of wireless phones) | \$2,345,464 | \$3,194,558 | \$4,375,755 | \$4,507,028 | \$4,642,239 | \$4,642,239 | \$4,642,239 |
| Reimbursement of costs incurred by State Patrol for 911 wireless emergency calls (was two cents a month on wireless customers (45% 2004, 47% 2005, 48% 2006 and 49% 2007)) | \$544,130 | \$609,694 | \$642,811 | \$674,595 | \$722,898 | \$722,898 | \$722,898 |
| PSAPS consolidation study | \$0 | \$150,000 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Administrative Expense (including indirect cost) | <u>\$428,944</u> | <u>\$452,155</u> | <u>\$468,459</u> | <u>\$468,459</u> | <u>\$468,459</u> | <u>\$468,459</u> | <u>\$468,459</u> |
| Total 911 System costs | \$16,379,826 | \$14,614,805 | \$20,585,361 | \$17,892,235 | \$18,416,255 | \$18,416,255 | \$18,416,255 |
| Debt service & reserve for bonds issued MS473.901 Based on approved budget for MRB | \$0.040 | \$2,494,368 | \$2,622,321 | \$2,678,380 | \$2,753,448 | \$2,834,896 | \$2,834,896 |
| Increased funding for debt service | \$0.090 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Total- Debt service & reserve for bonds | \$2,494,368 | \$2,622,321 | \$2,678,380 | \$2,753,448 | \$2,834,896 | \$2,834,896 | \$2,834,896 |
| Total projected cost | <u>\$25,175,459</u> | <u>\$23,792,931</u> | <u>\$29,959,691</u> | <u>\$27,529,303</u> | <u>\$28,338,391</u> | <u>\$28,338,391</u> | <u>\$28,338,391</u> |
| PSAP grants-proj. budget surplus\deficit | | \$414,195 | \$1,826,050 | \$1,638,380 | \$1,434,760 | \$1,434,760 | \$1,434,760 |
| PSAP report-proj. budget surplus\deficit | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Unspec. approp.-proj. budget surplus\def. | | <u>\$2,279,873</u> | <u>(\$2,145,741)</u> | <u>\$472,317</u> | <u>(\$133,151)</u> | <u>(\$133,151)</u> | <u>(\$133,151)</u> |
| PROJECTED BUDGET SURPLUS\DEFICIT | (\$1,167,459) | \$2,694,069 | (\$319,691) | \$2,110,697 | \$1,301,609 | \$1,301,609 | \$1,301,609 |
| PROJECTED YEAR END CASH BALANCE | \$1,265,482 | \$3,673,687 | \$497,796 | \$502,973 | \$513,542 | \$524,111 | \$534,680 |
| 9-1-1 Receipts over projected costs | (\$4,382,729) | \$2,045,666 | (\$3,175,891) | \$5,177 | \$10,569 | \$10,569 | \$10,569 |
| Accounts Payable-Prior Year Obligations | | \$9,357,896 | \$6,504,700 | \$5,423,573 | \$4,001,940 | \$2,580,307 | \$1,158,674 |

MN Department of Public Safety

9-1-1 Emergency telecommunications Service Account in the Special Revenue Fund

Account Analysis November 2004 Forecast

12/15/04

| Actual FY 2003 | Actual FY 2004 | Budgeted FY 2005 | Nov.04 Forecast FY 2006 | Nov. 04 Forecast FY 2007 | Nov.04 Forecast FY 2008 | Nov. 04 Forecast FY 2009 |
|-------------------|-------------------|---------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|
|-------------------|-------------------|---------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|

FY2003 appropriation to DOA- Laws of 2001, 1st Spec. Session, Ch. 10, Art. 1, Sec. 12, subd. 4 \$19,784,000

FY2003 appropriation to DOA- Laws of 2002, Ch. 401, Art. 2, Sec. 2 \$4,244,000

Assumption is made that PSAP grant payments will remain at \$.10 in FY 05.

PSAP grant payments will be capped each year based on receipt collections.

Projected budget surplus/deficit is calculated comparing appropriation authority to projected cost.



FY05 Budget Deficiencies

Prison Population (\$2.85 million)

- Prison population is greater than projected in 2003.
- Population increases due to steadily increasing new commitments, offenders serving longer sentences, and an increase in releasee returns.
- Approximate costs for renting beds in FY05 are \$6.5 million.

Health Services (\$1 million)

- **Increased costs due to inflation of operating supplies and equipment - \$1.2 million.**
The annual amount for supplies and equipment per inmate was \$145 per year in 1999. In 2005 this amount decreased to \$72. This funding pays for all medical and dental supplies and equipment. There has also been a 6% inflation increase in this area, which is not even considered in the figure. Funding for operating supplies and equipment is not included in the forecasted per diem for population increases.
- **Employee salary and benefits - \$1.6 million.**
Increased number of behavioral health staff, un-funded step, insurance, and cost of living increases. For example, in FY02-03 the nurses negotiated five percent cost of living increases totaling over \$561,000. These costs are not included in the forecasted per diem for population increases.
- **Increased costs for health services due to inflation of contracted medical services and possible major medical expenses - \$500,000 - \$1 million.**
The cost of this is that claims may be paid at a higher reimbursement rate than anticipated under the contract thereby obligating the department for additional payment to Correctional Medical Services. The cost of this based on utilization and is anticipated to be between \$500,000 and \$1 million.
- **A significant increase in methamphetamine users who have a multitude of health and behavior concerns - \$200,000 - \$500,000.**

Sex Offender Management (\$520,000)

- Hearings Officers to manage offender revocation hearings in a timely manner to ensure offenders are placed into appropriate programming and/or secure placement to ensure public safety. **This funding is for 2 hearing officers and 1 support staff.**
 - Restructure of civil commitment review process to ensure all appropriate sex offender are referred for consider of civil commitment. **This funding is for 2 support positions, 2 psychologists, and 1 management analyst.**
-

1 Senator moves to amend S.F. No. (05-0948) as
2 follows:

3 Page 1, line 25, delete "230,000" and insert "199,000"

4 Page 2, line 41, delete "and 3" and insert "to 4"

5 Page 2, line 42, delete "4,180,000" and insert "3,850,000"

6 Page 2, after line 43, insert:

7 "Subd. 4. Community Services 330,000"

1 A bill for an act
 2 relating to state government; providing deficiency
 3 funding for certain state agencies; appropriating
 4 money.

5 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

6 DEFICIENCY APPROPRIATIONS

7 Section 1. [APPROPRIATIONS.]

8 The sums shown in the columns marked "APPROPRIATIONS" are
 9 appropriated from the general fund, or another named fund, to
 10 the agencies and for the purposes specified in this act, to be
 11 available for the fiscal year indicated for each purpose, and
 12 are added to appropriations in Laws 2003, First Special Session
 13 chapters 1, 2, and 14. The figure "2005," where used in this
 14 act, means that the appropriation or appropriations listed under
 15 it are available for the year ending June 30, 2005.

16 SUMMARY BY FUND

| | 2005 | TOTAL |
|------------|---------------|---------------|
| 17 | | |
| 18 General | \$ 31,405,000 | \$ 31,405,000 |
| 19 TOTAL | \$ 31,405,000 | \$ 31,405,000 |

20 APPROPRIATIONS
 21 Available for the Year
 22 Ending June 30
 23 2005

24 Sec. 2. BOARD ON JUDICIAL
 25 STANDARDS 230,000

26 This appropriation is added to
 27 appropriations in Laws 2003, First
 28 Special Session chapter 2, article 1,

1 section 7.

2 Sec. 3. BOARD OF PUBLIC DEFENSE 7,681,000

3 This appropriation is added to
4 appropriations in Laws 2003, First
5 Special Session chapter 2, article 1,
6 section 8.

7 Sec. 4. PUBLIC SAFETY

8 Subdivision 1. Total
9 Appropriation

10 General Fund 986,000

11 This appropriation is added to
12 appropriations in Laws 2003, First
13 Special Session chapter 2, article 1,
14 section 9. The amounts that may be
15 spent from this appropriation for each
16 program are specified in subdivisions 2
17 and 3.

18 Subd. 2. Emergency Management 710,000

19 [FEMA MATCHING FUNDS.] This
20 appropriation is to provide matching
21 funds for FEMA funds received for
22 natural disaster assistance payments.
23 This appropriation is available until
24 June 30, 2007.

25 Subd. 3. Law Enforcement and
26 Community Grants 276,000

27 [GANG STRIKE FORCE.] This appropriation
28 is for grants to the Criminal Gang
29 Strike Force under Minnesota Statutes,
30 chapter 299A.

31 Sec. 5. CORRECTIONS

32 Subdivision 1. Total
33 Appropriation

34 General Fund 4,370,000

35 This appropriation is added to
36 appropriations in Laws 2003, First
37 Special Session chapter 2, article 1,
38 section 13. The amounts that may be
39 spent from this appropriation for each
40 program are specified in subdivisions 2
41 and 3.

42 Subd. 2. Correctional Institutions 4,180,000

43 Subd. 3. Operations Support 190,000

44 Sec. 6. HUMAN SERVICES

45 Subdivision 1. Total
46 Appropriation 13,394,000

47 This appropriation is added to
48 appropriations in Laws 2003, First
49 Special Session chapter 14, article
50 13C, section 2, subdivision 8. The
51 amounts that may be spent from this
52 appropriation for each program is

1 specified in subdivision 2.

2 Subd. 2. State-Operated
3 Services 13,394,000

4 This appropriation is for the forensic
5 treatment programs operated by
6 state-operated services.

7 Sec. 7. VETERANS AFFAIRS 39,000

8 This appropriation is added to
9 appropriations in Laws 2003, First
10 Special Session chapter 1, article 1,
11 section 17.

12 Sec. 8. ADMINISTRATION 4,705,000

13 This appropriation is to the Department
14 of Administration for relocation costs
15 for the Departments of Health and
16 Agriculture and is available until June
17 30, 2006. Notwithstanding any law to
18 the contrary, proceeds from the sale or
19 disposition of the Department of Health
20 land and building at 717 Delaware
21 Street in Minneapolis, after paying all
22 expenses incurred in selling or
23 disposing of it, estimated to be
24 approximately \$4,853,000, must be
25 deposited in the general fund.

26 Sec. 9. [SUNSET OF UNCODIFIED LANGUAGE.]

27 All uncodified language in this act expires June 30, 2005,
28 unless another date is specified.

29 Sec. 10. [FORECAST ALLOCATION.]

30 The commissioner of finance shall reduce the amount
31 allocated on the basis of the November 2004 general fund
32 forecast for the purpose of Minnesota Statutes, section 16A.152,
33 subdivision 2, paragraph (a), clause (3), by \$25,100,000.

34 Sec. 11. [EFFECTIVE DATE.]

35 Sections 1 to 10 are effective the day following final
36 enactment.

800 MHz Executive Team Report to the 2001 Minnesota Legislature

800 MHz Statewide Shared Public Safety Radio System

Prepared by the 800 MHz Executive team.
The team includes representatives from the
Minnesota Department of Public Safety,
Department of Administration &
Department of Transportation

February 1, 2001



Commissioners:

David Fisher, Department of Administration
Elwyn Tinklenberg, Department of Transportation
Charles Weaver, Department of Public Safety

800 MHz EXECUTIVE TEAM MEMBERS

Michelle Beeman, Department of Natural Resources,
Legislative Director
Anne Beers, Chief, Minnesota State Patrol
Bill Bernhjelm, Department of Natural Resources, Director,
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Director of Legislative Affairs
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Office of Electronic Communications
Tim Worke, Department of Transportation, Director,
Government Relations
Jack Yarbrough, Department of Administration,
Assistant Commissioner Intertechnologies Group

Special thanks to the following groups
for their participation in the development
of the communications survey:

Rochester/Olmsted County Communications
Rochester Public Works & Parks Department
St. Cloud Information Technology Group
Owatonna/Steele County Pearl Street
Communications
St. Louis County Communications
Moorhead/Clay County Communications

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February 2001

Pursuant to 2000 Minnesota Session Laws chapter 475, Section 15, I am pleased to submit the planning committee report of the 800 Megahertz (MHz) statewide shared public safety radio system. The planning committee, also referred to as the 800 MHz Executive Team (E-Team), is comprised of individuals designated by the commissioners of Administration, Public Safety and Transportation, but also includes representatives from other agencies, including the Departments of Natural Resources and Corrections, the Minnesota State Patrol, the Metropolitan Radio Board and the Association of Minnesota Counties.

Over the past eight months, the E-Team developed a survey with input from local users, officials and radio system managers to determine the common issues facing public safety radio users. This survey was distributed to radio users in over 800 cities and 80 counties. The survey results assisted the E-Team in determining the current status and needs of public safety radio users, and is the basis of this report and recommendations.

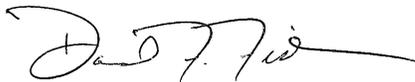
In addition, this report, in draft form, was distributed and discussed among local users in ten community meetings across the state. Nearly 100 individuals attended the meetings. Individuals included representatives from police and fire departments, sheriff's offices, State Patrol, highway and transit departments, emergency management divisions, utilities divisions, city and county administrators and state agency representatives. The feedback received from these meetings, as well as other comments received after the report was more widely distributed by those in attendance, has been incorporated into this report. Comments include views expressed by over 50 local agencies and 37 communities throughout the state.

E-Team recommendations recognize the benefits of a shared statewide radio system, as well as training and transmission standards required should the 800 MHz radio project advance. In addition, the report outlines options for governance structure and funding, but does not include recommendations in these areas until further research is conducted and local input can be incorporated.

The Ventura Administration is not requesting funds in the FY 2002-03 budget to implement a statewide 800 MHz radio system. Instead, state agency and local government representatives should work together over the next two years to explore options for a statewide system that addresses the needs of users outside the seven county metropolitan area. This work includes performing additional design and cost analysis of system options, exploring and refining alternatives for shared financing of a statewide system and establishing a framework for governance that responds to local concerns outside the Metropolitan area as well as within it. The active cooperation of radio system users at all levels of government will be necessary if this project is to go forward.

The goal of the Department of Administration is to assure that any investment in technology such as the public safety radio system adds value to the state and its users. I look forward to your own comments regarding this project.

Sincerely,



David Fisher
Commissioner
Department of Administration

Chapter No. 475

H.F. No. 2891

- 17.35 Sec. 15. [PUBLIC SAFETY RADIO SYSTEM STUDY.]
- 17.36 Subdivision 1. [PLANNING COMMITTEE.] The commissioners of
- 18.1 administration, transportation, and public safety shall convene
- 18.2 a planning committee to report to the Legislature on a plan for
- 18.3 development of an 800 megahertz statewide shared public safety
- 18.4 radio system. The planning committee must provide a means for
- 18.5 inclusion of input from representatives of local governments and
- 18.6 major system user groups.
- 18.7 Subd. 2. [REPORT CONTENTS.] The committee shall review:
- 18.8 (1) current and future needs and capacities of radio
- 18.9 systems in outstate areas;
- 18.10 (2) the potential for implementation of a multi-agency and
- 18.11 multijurisdictional shared radio system;
- 18.12 (3) potential guidelines for governance and system
- 18.13 participation by state and local units of government; and
- 18.14 (4) statutory changes required to implement a statewide 800
- 18.15 megahertz shared public safety radio system.
- 18.16 Subd. 3. [REVIEW CONSIDERATIONS.] In performing the
- 18.17 duties
- 18.18 under this section, the planning committee may consider:
- 18.19 (1) assessment of current uses, needs, and capacities,
- 18.20 including growth and expansion capacities, by each local
- 18.21 government and by each major user group;
- 18.22 (2) estimates of future needs by each local government and
- 18.23 by each major user group;
- 18.24 (3) estimates by each local government and by each major
- 18.25 user group of the anticipated level and timeline for utilizing
- 18.26 the radio system;
- 18.27 (4) analysis of the expected costs of implementing the
- 18.28 radio system; and
- 18.29 (5) proposed funding mechanisms, including options for
- 18.30 allocating costs among local governments and user groups.
- 18.31 Subd. 4. [PUBLIC MEETINGS.] After completing its duties
- 18.32 under subdivisions 2 and 3, the planning committee shall prepare
- 18.33 a draft report to local governments and major user groups in all
- 18.34 outstate areas. The draft report must also be made available to
- 18.35 the public. After preparing and disseminating the draft report
- 18.36 and before presenting the final report to the Legislature, the
- 19.1 planning committee shall meet with representatives of local
- 19.2 governments and user groups in each department of public safety
- 19.3 radio communication district to explain the report and seek
- 19.4 comment.
- 19.4 Subd. 5. [REPORT.] By February 1, 2001, the commissioner
- 19.5 of administration shall report to the Legislature on the
- 19.6 findings and recommendations of the planning committee. The
- 19.7 report must also identify any changes in statutory authority and
- 19.8 funding options necessary to provide for implementation of the
- 19.9 statewide, 800 megahertz, shared, public safety radio system.
- 19.10 Sec. 16. [EFFECTIVE DATE.]
- 19.11 Sections 2 to 11 and 13 to 15 are effective the day
- 19.12 following final enactment.

800 MHz Statewide Shared Radio System Initiative

Origins of the Initiative

In the early 1990s, cities, counties and state agencies (primarily in the Twin City Metro area) experienced rapid growth in radio communications. The increased radio traffic on the public safety systems in the Metro created a severe interference problem among existing users. All FCC radio frequencies within the Metro area were in use, which limited system expansion and, in some cases, prohibited growth of radio systems. Interoperability among public safety agencies was hampered and cumbersome. The 1996 Minnesota Legislature funded the construction of a Metro-wide 800 MHz regional backbone system (Chapter 463, Sec.19, Subd. 3) to meet the demands of the Metro area, and provide capacity for local subsystems to join the network. The implementation of this system is in progress and will be operational in 2002. The problems in Metro are not unique to the area. Outstate public safety communications systems are facing many of the same problems that Metro faced ten years ago. For that reason, the 2000 Legislature directed the commissioners of the departments of Administration, Transportation and Public Safety to convene a planning committee to report to the Legislature on a plan for the development of a statewide, shared public safety radio system. The legislation further directed the planning committee to develop a means to include input from representatives of local governments and major system user groups. As a result of the legislative directive, an 800 MHz Executive Team was formed to study and assess the current and future wireless communication requirements, needs and concerns of the local units of government and major system user groups such as the state of Minnesota, the Emergency Medical Services (EMS) community and school districts.

Local Involvement in Developing Report

From the beginning, the 800 MHz E-Team recognized that implementing a statewide radio system would require a collaborative approach because of the common issues and overall benefits for all public safety radio users. Members from the 800 MHz E-Team conducted briefings with radio system managers, users and local officials around the state to communicate the technical and regulatory issues that are facing wireless users in each region. In order to determine the current status and needs of public safety wireless communication users throughout Minnesota, the 800 MHz E-Team developed a communications survey. To ensure that the survey was understandable and contained the appropriate questions, members from the E-Team conducted several focus group meetings with public safety officials in selected communities to identify issues and refine survey questions. The survey was then mailed to all cities, counties and other major wireless user groups (excluding the Metro area). The responses to the survey helped determine the level of need for improved communications and also helped develop recommendations for this project.

A draft report was developed by the 800 MHz E-Team and then distributed to local governments throughout Minnesota. Ten (10) regional meetings were held throughout Minnesota. With the assistance of organizations such as the Association of Minnesota Counties, League of Minnesota Cities, Minnesota Sheriff's Association, Association of Minnesota Chiefs of Police and the Association of Minnesota Fire Chiefs, the 800 MHz E-Team sent invitations to county and city

administrators requesting their agency's and department's participation at the nearest regional meeting to review and discuss the draft report to the Legislature. The comments received as a result of the regional meetings are reflected in Appendix D of this report. In addition, the report is posted on the Office of Electronic Communications Web page at: www.dot.state.mn.us/oec/os800Report.html.

Major Survey Findings

1 Spectrum Issues

The VHF and UHF radio frequency bands are heavily used by public safety agencies throughout Minnesota. This congestion makes using these bands for today's radio systems very difficult. Expansion of these systems, while maintaining a relatively clear channel, is nearly impossible. Not only do co-channel assignments cause interference, adjacent channel assignments also cause harmful interference to existing users.

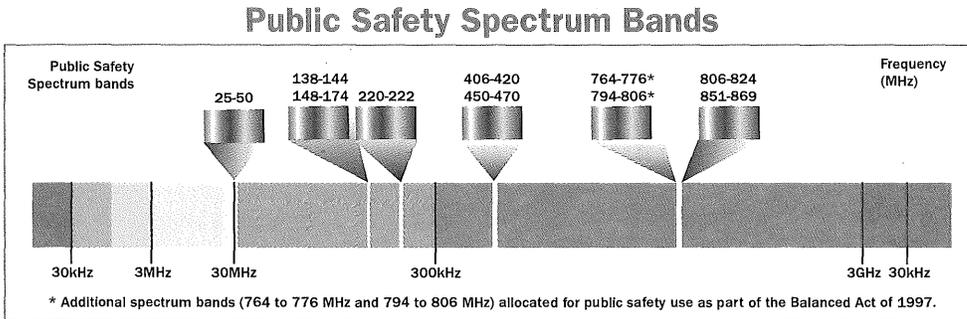


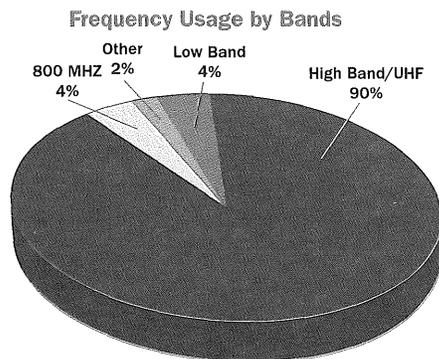
Figure 1 Nearly 90% of all respondents to the survey indicated that they operate

on either the VHF or UHF frequencies. Comment: *This finding lends support to the argument that VHF/UHF frequency bands are saturated with users, thus limiting system expansion for many agencies and departments.*

"On a daily basis too many agencies using one frequency. During any multi-agency response radio system almost becomes useless."

Fire Department -

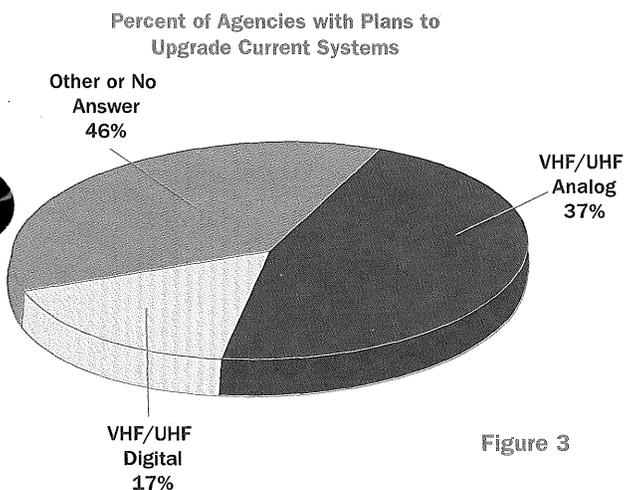
"When Fire, EMS, Sheriff's and Police cars are involved in a major incident or if separate incidents occur at the same time we only have one frequency that we all can communicate on (sheriff's frequency). Individuals begin to interfere with each other as well as the dispatch. The adjustment (if you want to call it that) is to use different frequencies that are unique to Fire and EMS. This eliminates dispatch and law enforcement cars being able to communicate with them." - Sheriff -



Almost half of the respondents indicated that the lack of sufficient VHF/UHF radio channels was a problem.

At least 77% of those questioned share their radio frequencies with other departments or agencies to obtain the necessary level of interoperability. Sharing also occurs as a result of partnerships in order to save money.

Figure 2



Nearly 30% indicated that they are planning to upgrade their radio systems within the next six years.

Thirty-seven percent of the agencies that plan to upgrade plan to stay within the VHF/UHF frequency band. Of those who plan to upgrade, 46% do not know which frequency band they should use for their next system. Comment: *Based on survey responses, it appears that a lack of knowledge of technological advances in radio, a lack of funding and the need to remain compatible with agencies in surrounding communities are key*

Figure 3

factors for community radio systems to remain in the congested VHF/UHF frequency bands.

- ⊕ The conversion from the heavily used VHF/UHF radio spectrum seems more prevalent in larger departments and coincides with a growing national trend. Individual states and larger communities realize that there are not enough frequencies in these bands to accommodate their growing needs. (Source: U.S. Department of Justice, National Institute of Justice Report "State and Local Law Enforcement Wireless Communications and Interoperability: A Quantitative Analysis".
- ⊕ Nearly 50% of survey respondents indicated that frequency congestion is now occurring within their area of operation in rural Minnesota.

2 Technology Issues

New technological advances in radio will help resolve the frequency congestion problems noted above. However, the vast majority of public safety radio systems used in Minnesota today are the old analog wideband technology and not the new digital narrowband technology. Although the migration from analog to digital has been underway for nearly four years, few departments outside of the Metro area have migrated to the new digital narrowband technology.

- ⊕ The average age of radio system infrastructure (when the system was designed and first installed) in Greater Minnesota is 18.1 years. Systems range from 1 to 50 years old. The actual equipment (mobiles, portables and base stations) used on those systems also vary over a wide range from 1 to 45 years old, with the average age of 15.4 years.

- ⊕ Nearly 55% of those responding to the survey indicated that outdated equipment was a problem for their operations. Another 40% indicated that they did not have enough equipment to adequately outfit employees in their department or agency. Comment: *The survey responses suggest that outdated or insufficient equipment is a contributing factor to the declining performance of radio systems in Greater Minnesota. Many agencies in Minnesota cannot integrate the new digital technology available in radio systems today into their existing infrastructure. This is due mainly to the fact that a majority of the systems use wideband analog technology and the two technologies are not compatible.*

- ⊕ Sixty-three percent indicated that their radio systems have dead spots within their jurisdictions. Another 60% said that their systems had inadequate range, 53% stated that frequency interference was a major problem to their systems and atmospheric skip caused problems to over half of those who responded to the survey question. Comment: *These findings suggest that technical problems plague a majority of the systems in operation today.*

"Our system's city channel is shared by utilities, public works, police and fire departments. During emergencies communicating is difficult to impossible we all need to support separate channel use." – Utility Department –

"There is a lack of technology in greater Minnesota. State and federal agencies have different radio frequencies than local agencies." – Sheriff –

"On a rescue call and a house fire that were both about 4 miles from town we could not communicate with our base station or our trucks." – Fire Department –

Problems with Existing Radio Systems

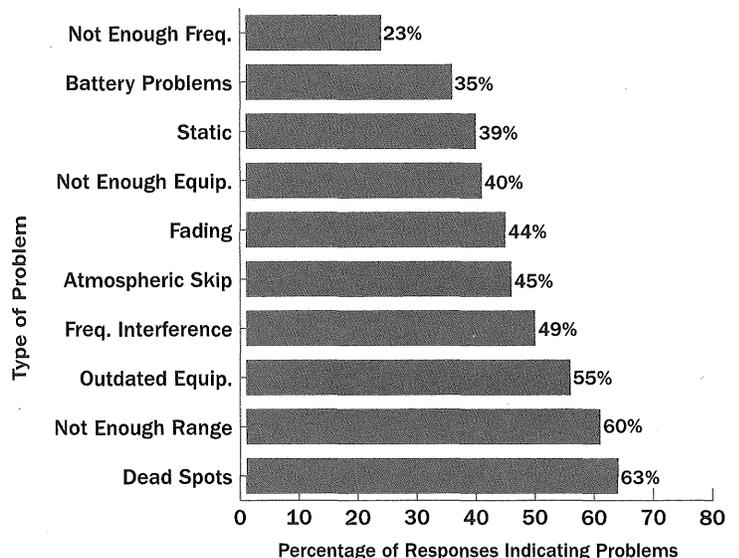


Figure 4

3 Regulatory and Standards Issues (FCC and Industry)

Rapidly advancing technology in radio communications systems, coupled with the introduction of several competing and non-compatible digital standards, has made it difficult for radio-systems managers to navigate through the maze of options available for modifying or replacing their present systems. To keep pace with the technological advances, the Federal Communications Commission made rule changes to deal with these new technologies. Most significant of these changes is FCC Docket 92-235, also known as the "Refarming Docket." This docket was adopted to create additional spectrum through the use of a technology called "narrowband" (see glossary). Other regulations that are influencing public safety radio communications systems are restrictions on system antenna heights and limits on transmitter power.

The Refarming Docket has been successful in creating the new frequencies. However, in order to use the new frequencies, radio users must purchase radio equipment that uses the new narrowband technology. The FCC did not set mandatory dates for radio users to change-out or replace older, existing radio equipment. In fact, the existing equipment can be used indefinitely. However, older equipment is not capable of operating on the new frequencies. Also, the Refarming Docket includes a second equipment migration that will open the door to even more radio frequencies in 2005. However, this migration will require manufacturers to develop radios that use another new technology called "digital" (see glossary).

In response to the requirement for a digital product, a national effort was undertaken to define a digital industry standard that the marketplace would embrace. Communications officials and organizations from across the country have defined a standard known as Project 25. There are five objectives of the Project 25 standard: a) Frequency efficiency using narrowband channels b) Interoperability among agencies and different levels of government c) Backward compatibility d) Graceful system migration (forward and backward) and e) Scaleable trunked and conventional capabilities.

In spite of the FCC's efforts at "refarming," it has made little impact on the radio frequency shortage problem that exists not only in Minnesota, but nationwide. Why? For whatever reason, radio users have been reluctant to migrate to the new narrowband technology required to use the new frequencies, opting to stay with their existing crowded analog systems. Another contributing factor is the uncertainty among manufacturers about specific technical details of the Project 25 standard. This has delayed the certification by the American National Standards Institute (ANSI) and thus slowed the introduction of affordable digital equipment. Another factor that may be affecting the migration to the new technology is the lack of knowledge or understanding of these issues. Many managers may not be sure how these changes will affect their departments; nor do they understand how these new technologies and standards will benefit them.

So, what is the impact of these two issues? Some users may choose to stay with their existing equipment indefinitely. However, manufacturers now have a standard to follow and are manufacturing narrowband digital equipment. Since the current allotments of existing frequencies are used up, the manufacturers see little economic value in continuing

"It should be mandatory for all agencies in Public Service to have the same emergency statewide channel to operate on in a large emergency." – Sheriff –

to manufacture the older equipment. Users will eventually have problems finding equipment compatible to their older technology radios. Parts to repair their equipment will become harder and harder to find. Interoperability will be harder to accomplish, if not impossible, with the various non-compatible technologies in use.

⊕ Findings show that nearly 90% of the respondents were either not familiar, or had little familiarity, with industry standards such as Project 25 and TERrestrial Trunked RAdio (TETRA). Predictably, 90% also indicated that industry standards were of little importance to their agencies. Of the respondents who indicated that industry standards were very important to their systems, all were very familiar with the industry standards issues. Comment: *The findings suggest that there is a direct correlation between knowledge of standards and the importance of standards to their systems.*

⊕ The majority of individuals (75% of those polled) responsible for making decisions related to the operation, maintenance and upgrading of their agency radio system are not familiar with industry standards and their relationship to their current and future radio systems.

⊕ Only half of the individuals who are responsible for daily management of their radio system have any involvement in the decision-making process for that system.

⊕ Only 27% of the agencies with plans to upgrade their radio systems within the next six years plan to implement systems using the newer digital technology.

⊕ Over half of the agencies that plan to upgrade their systems did not know if they would adopt Project 25 or TETRA standards in their next radio system.

⊕ Almost 90% of respondents indicated that interoperability was an important or extremely important feature for their next radio system. Comment: *System standards are significant for agencies trying to obtain interoperability.*

⊕ The majority of respondents to the survey did not know what frequency band, or how many frequencies, they would need to implement or upgrade their system.

4 Funding Issues

The vast majority of comments received from survey respondents indicated that funding is their biggest concern. Many survey respondents, especially from smaller agencies and/or departments, indicated in their comments that participating in a statewide, shared system was not feasible due to cost considerations.

⊕ Only 57% of all respondents indicated they had a budget for their radio system. They ranged from \$25 to \$1.25 million. The median

Percent of Agencies Familiar with Standards

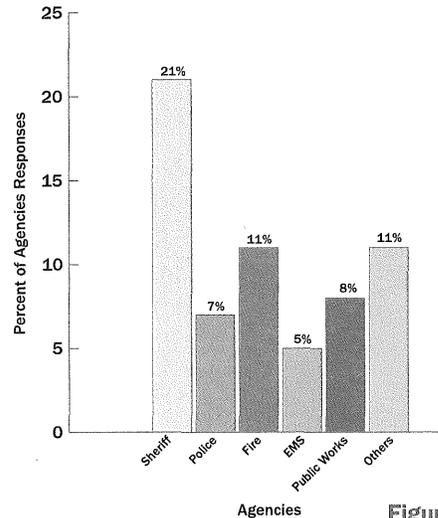


Figure 5

“Use a frequency that is easy for all types of equipment to access and that is affordable for small community.” – City Administrator –

range was approximately \$2,300. The average budget overall was approximately \$38,000. However, if the top 15 budgets for the larger state and county departments are removed, the average budget is cut in half, or \$16,000 per year.

- ⊕ Larger government agencies (state, county and city) tend to have larger budgets, while smaller agencies have little or no budgets.
- ⊕ A majority of those polled (70%) share radio systems with other governmental agencies. While at least 77% of those questioned share their radio frequencies with other departments or agencies.
Comment: *This finding would appear to be significant as it indicates a willingness to share resources in order to save money already exists.*
- ⊕ The primary concern of respondents was adequate funding for the statewide shared system. Many respondents stated that their communities are concerned that the state will mandate the system and require the local units of government to pay for a share of the infrastructure regardless of their participation in the system. Ongoing operational costs are also a concern of the local units of government, especially the smaller departments.

5 Governance Issues

At present, few formal linking mechanisms exist to encourage and support coordination and partnership between local jurisdictions and the state. Strengthening the partnership between state and local units of government will require a comprehensive strategy. There is no simple solution to address the full range of obstacles.

- ⊕ A large majority (71%) of respondents to the survey stated that they would be willing to participate in a multi-agency, multi-jurisdictional shared radio system.
- ⊕ The method of governance most preferred (51%) by those responding was state government with local governance representation by those agencies participating on the radio system within the same region. State governance, along with some fashion of local involvement, accounted for another 17%. While 32% of those responding indicated that this decision would have to be made at a higher level than the individual completing the survey. Comment: *Based on written comments, it was clear that outstate local units of government did not feel that they could get equal status and representation if there was Metro involvement in the governing structure within their region.*

6 Interoperability Issues

The ability to intercommunicate (interoperability) with other local and state agencies today is difficult and, in some cases, non-existent. The requirement for interoperability among multiple agencies and jurisdictions is a critical component of today's radio systems. With our fast pace and the need to exchange information among agencies and beyond jurisdictions, interoperability is a key piece in any communication system.

- ⊕ A large majority (71%) of respondents to the survey stated that they would be willing to participate in a multi-agency, multi-jurisdictional

"Our concern is funding for small County and Local Agencies to acquire the new technology." – Sheriff –

"If planning and implementation take place local entities not just metro entities must be involved." – Sheriff –

shared radio system. Comment: *This demonstrates a need and the desire for interoperability.*

- ⊕ Interoperability was important to 88% of those responding to the survey. Comment: *This is extremely significant.*
- ⊕ In order to obtain some level of interoperability, nearly 70% of those surveyed indicated that they share their radio infrastructure with other public safety agencies.
- ⊕ Nearly 80% of local units of government in Minnesota made it clear that interoperability was very important and some form of multi-jurisdictional interoperability would best meet their needs. Another 20% said that statewide interoperability is required. A small number of respondents felt that interstate communications was essential.
- ⊕ The survey sought information on the amount and frequency of interoperability that now exists among local units of government and state and federal government agencies. It was found that nearly 71% of all respondents have communications on a daily basis with other local government agencies. Day-to-day communications between local jurisdictions and the state happens less frequently with 22% indicating that this is a need, while 44% indicated that they never talk to the state. A mere 2% indicated that they have a need to talk to the federal agencies on a daily basis and 80% said they never have a need to talk to these agencies.
- ⊕ Nearly 80% indicated that they share their frequencies with other departments and agencies. Comment: *This finding suggests that agencies share frequencies in order to be able to intercommunicate with one another.*

“During St. Peter tornado, interoperability was a problem with locals. It was difficult to manage crisis. – State Agency –

“A major train derailment in Otter Tail County involved several departments not on our radio system.” – Sheriff –

Recommendations

The State Should Take the Lead in Planning and Design

An 800 MHz digital trunked radio system is proposed to replace the current collection of stand-alone radio systems. The state should take the lead in the design, implementation and maintenance of an 800 MHz digital trunked radio system that will be available to all jurisdictions across the state. This system will serve as a key to ensuring that public safety entities across the state have an effective, reliable tool to perform their duties today and well into the 21st century.

Why the State Should Take the Lead

The state should take the lead for this project because the three major state radio users (the Minnesota State Patrol, the Department of Natural Resources and the Department of Transportation) have the most significant need for statewide radio communications. In order to meet this requirement, the state will have to construct the infrastructure to provide the necessary services. The single infrastructure of the state could be capable of supporting all local government services as well as the state's. Designing and implementing a statewide system to meet both state and local needs will require close cooperation and coordination among local agencies responsible for wireless communications in their jurisdictions and the state (primarily Mn/DOT).

“Don't make mandates or Laws without making sure there are monies available for Local government agencies to use.”
– Fire Department –

However, some local agencies, such as Rochester/Olmsted County, St. Cloud, Moorhead, Rice/Steele Counties, etc. have already begun the process of building partnerships with others and, in some cases, to coordinate and share systems or components of their systems. In order to achieve the vision of a shared statewide interoperable radio system, coordination will be required on a statewide basis, and the state of Minnesota is in the best position to oversee or lead this process.

The following recommendations are the first steps in facilitating the cooperation and coordination, and ultimately the construction and operation, of a shared, statewide radio system.

1. Based on the findings from our research, an incremental approach is recommended, beginning with efforts to achieve voluntary participation among governmental jurisdictions. Stronger intervention through legislative mandates to obtain participation is not recommended.
2. Education, training and technical support are essential first steps that may go a long way toward achieving the necessary level of cooperation and consistency among the jurisdictions on a voluntary basis.
3. Develop a governance system that will give local units of government in Greater Minnesota fair and equal representation. Establish regional planning committees of state, county and municipal officials to incorporate local needs and concerns into the initial planning of the system and the identification of necessary next steps.
4. Full statewide consistency among jurisdictions may not be achievable through education and voluntary cooperation alone. The Legislature should mandate adoption of industry standards for the radio system, and give the state technical oversight of local decisions impacting access to the system, the design of the system and the overall implementation of the system.
5. Cooperative cost participation guidelines and associated procedures for the proposed outstate 800 MHz trunked radio system will need to be developed. Costs associated with the project should be borne by the unit of government benefiting from the element of the project.

Start with Standards, Preliminary Design and Education

1. Establish Radio System Standards as Guidelines

To provide a common basis for decision-making by all jurisdictions, the state should establish the standards and recommended guidelines for components of the system. The state should consult with the affected local jurisdictions to communicate the fundamental benefits of the standards or guidelines to the overall system and users.

2. State Develop Preliminary Design

The state, in cooperation with local units of government, should appoint a committee of engineers, planners and others involved in communications for each of the yet-to-be-determined regions of the state. These committees are intended to ensure that all aspects of

the system design are considered and appropriate input from local jurisdictions is received.

3. Provide Education to Potential Users of System

The state should initiate an education program for state and local officials that will be affected by the implementation of the statewide radio system. The education effort should include, but not be limited to, the following: FCC rules and regulations, Industry Standards, public safety market, technology, partnership/governance.

4. Planning and Transition

Implementation of the new 800 MHz digital trunked radio system needs to be carefully planned for orderly growth. A complete network infrastructure including towers, base stations, controllers, switching equipment, microwave links and fiber optics (Connecting Minnesota) must be installed in order to provide a functioning system. The initial system technical design must take future growth into consideration to ensure that adequate facilities are implemented to accommodate future requirements. Therefore, a great deal of the planning effort will be directed toward the transition from the current radio system over to the new 800 MHz trunked system.

While it may appear to be financially desirable to extend the implementation of the entire system over a period of seven to 10 years, that may not be practical from a technical standpoint. Implementing portions of the 800 MHz system in limited areas around the state, while leaving other portions of the state still operating with the old VHF/UHF systems, could pose some challenging operational problems. Additionally, maintaining two distinct radio systems places a large technical and financial burden on state resources. Realizing that agencies will be at different stages of budgetary readiness for the transition to the new system presents additional difficulties.

Therefore, the 800 MHz E-Team recommends that the system should be implemented in phases over a five year period. This implementation plan will reduce the amount of time and money the state must invest in maintaining two radio systems. The system should first be installed in areas where there is already interest from the communities (Rochester/Olmsted County and St. Cloud).

Governance Alternatives

Introduction

There are several options that could be considered for governance of a statewide public safety radio system. These include:

- ⊕ Establishing a statewide board that would incorporate the functions of the existing Metropolitan Radio Board.
- ⊕ Assigning the responsibility for either the non-Metropolitan area or the entire state to an existing state agency (e.g., the Department of Transportation, the Department of Public Safety or the Department of Administration).
- ⊕ Establishing a separate board for the counties, cities and other local units of government outside of the Metro area.

“There should be uniform radio language protocol and protocol for radio procedures (operations).” – Ambulance –

“Smaller agencies lack the personnel with enough knowledge to properly operate radio systems and the money to properly maintain them.”
– Public Works –

Alternative 1

Statewide Board

A board could be created with responsibility for planning, technical oversight, coordination among users, financial administration and other functions. This organization could receive revenue, including legislative appropriations and authority to issue bonds, for construction of a statewide public safety radio system. Members would include representatives of the state agencies most affected – the Department of Transportation, the Department of Natural Resources, the Department of Public Safety and representatives of local governments. It could be given powers of a state agency, such as the power to enter into contracts, incur debt and the like. The board would employ an executive director and staff. Depending on the funding options chosen, the board could be the organization empowered to make grants and/or loans to local units of government for costs attributable to those organizations. The Metropolitan Radio Board would be abolished and the newly created statewide board would assume all of its responsibilities. The Metropolitan area could be represented by an organization of its own choosing, or Metropolitan counties and cities could determine how they would be represented in the same manner as outstate local units of government determined their representation.

Advantages:

1. This could provide a single statewide focal point for leadership and coordination of this program.
2. Broad representation and participation in decision making could occur through membership on the board by representatives from a variety of organizations.
3. Decisions would have greater local involvement, resulting from participation by persons who may better understand local needs and concerns.

Disadvantages:

1. The new board could be so large that it would be hard to make decisions by consensus.
2. There could be some difficult transitional problems associated with abolition of the Metropolitan Radio Board (note that the Board is scheduled to sunset on July 1, 2002).

Alternative 2

State Agency Leadership

Under this alternative, the overall planning, technical oversight and related functions could be assigned to a state agency – e.g., the Department of Transportation, the Department of Public Safety or the Department of Administration. This agency could establish various advisory and planning committees to assure participation by local government and other affected interest groups.

Advantages:

1. The responsibility for the development and leadership for the 800 MHz system would be clearly defined so that accountability is clear.
2. Legislative appropriations could be directed to the chosen state agency, whose commissioner would report directly to the governor.
3. Relying on an existing state agency could reduce the start-up difficulties and the need to establish basic administrative processes (e.g.,

accounting and human resource functions).

Disadvantage:

1. There may be a perception that a board directed by a state agency in St. Paul would be less receptive to addressing the concerns of local governments, particularly those outside of the Metropolitan area.

Alternative 3

Separate Board for Non-Metropolitan Counties

This option is similar to Alternative 1, except that the Metropolitan Radio Board would continue to handle its existing responsibilities for the seven county Metropolitan area. A separate board could be created with responsibility for planning, technical oversight, coordination among users, financial administration and other functions. This organization could receive revenue, including legislative appropriations and authority to issue bonds for construction of a statewide public safety radio system. Members would include representatives of the state agencies most affected – the Department of Transportation, the Department of Natural Resources, the Department of Public Safety and representatives of local governments. It could be given powers of a state agency, such as the power to enter into contracts, incur debt and the like. The board could employ an executive director and staff. Depending on the funding options chosen, the board could be empowered to make grants and/or loans to local units of government for costs attributable to those organizations. Different areas of the state could form regional committees for consolidating planning and choosing representatives to serve on the non-Metro statewide board.

Advantages:

1. A separate organization representing the non-Metropolitan area could deal with the concerns of the rest of the state.
2. Broad representation and input to decision making would occur through membership on the board by representatives from a variety of organizations.
3. Decisions would have greater local involvement, providing for participation by representatives from outside the Metro area who may better understand local needs and concerns.

Disadvantages:

1. The greatest difficulty would be ensuring the compatibility and interoperability of public safety radio systems across the geographic boundary between the Metro and non-Metro systems. Having two separate systems would require careful timing of funding and extensive negotiation and coordination of infrastructure and equipment selection decisions.
2. The new board might be so large that it would be hard to make consensus decisions.
3. Since the Metropolitan Radio Board would continue to exist, the two separate boards would compete for available funding (the Metropolitan Radio Board is scheduled to sunset on July 1, 2002).

Funding Alternatives

Introduction

The discussion of funding options is divided into three parts:

- I. Initial infrastructure needs;

- II. Initial equipment needs; and
- III. Ongoing maintenance requirements.

Under each part, several possible funding alternatives are presented. There are probably other alternatives that could be developed.

I. Initial Infrastructure Needs

This discussion assumes that state revenues will be used to pay for the initial capital infrastructure costs associated with a statewide public safety radio system, except for costs incurred specifically to meet needs that are unique to a local government (Final financing plans may make a different assumption). Infrastructure includes land, towers and shelters and will cost an estimated \$183 million over five years.

Alternative 1

General Obligation Bonds of the State of Minnesota

The state could issue general obligation bonds (in most cases 20-year repayment scheduling) and use the bond proceeds to fund these capital costs. The bonds could be repaid with state general fund revenues. Proceeds from the sale of trunked highway bonds could be used to pay for infrastructure directly related to trunk highway system needs. The trunk highway bonds would be repaid with revenues from the trunk highway fund (e.g. gas tax revenues) or a combination of general obligation and trunk highway bonds could be used.

Advantages:

1. Bonds carry a known repayment schedule and provide predictable cash flow.
2. Bonds could provide an up-front commitment of funds for the entire project.
3. The money provided by the sale of bonds would reduce the need for cash general fund appropriations.

Disadvantages:

1. Interest on bonds adds to the cost of the project.
2. Bond proceeds can be used only to purchase capital assets, not consumable items such as equipment.
3. Because the Legislature has a policy that only 3% of state revenues may be used for debt service, the total amount of state general obligation bonds that may be authorized each biennium is limited, resulting in intense competition to have projects included in the state bonding bill.

Alternative 2

Direct Appropriation by the Legislature

Direct appropriations from the state's general fund and/or trunk highway fund could be made to fund the infrastructure costs. Under this scenario, a state agency, such as Mn/DOT, Department of Administration or Public Safety, could receive and expend or distribute the funds so appropriated. Since appropriations are made on a two-year budget cycle, and expenditures for this project are planned over a five-year time period, it would be necessary to return to the Legislature for financial resources in future years.

Advantages:

1. Statewide needs could be met with state funds.
2. There would be no interest payments.
3. State funding would relieve local governments of the need to find money they will be unable to obtain individually.

Disadvantages:

1. Competition for state funding is intense and this project would compete with other important needs such as school aid, human services and tax reduction strategies.
2. Trunk highway funds could be used to fund only the parts of the infrastructure that served a trunk highway purpose.

Alternative 3

Public Facilities Authority

The state Public Facilities Authority operates similar to a traditional banking institution in that it makes low-interest loans to public entities, principally local governments, to finance public works projects. This option would require some "seed money" to provide capital for initial loans. A specific governmental body could enter into a loan agreement and commit to repayment based on revenues at its disposal, which could include a dedicated revenue source such as 9-1-1 fees, future federal funds, property tax levies or user fees. This option would require amending Minnesota Statutes, chapter 446A to allow the PFA to make loans for costs or projects associated with the construction of the statewide public safety radio system.

Advantages:

1. Loans could be made for both capital and consumable equipment.
2. This would allow borrowers to avoid the competition for general obligation bonding authority.
3. The PFA offers lower interest rates to borrowers than state general obligation bonds.

Disadvantages:

1. This would require statutory amendments
2. Interest on the bonds would add to the total project cost.

Alternative 4

Lease Agreements with Private Sector for Tower Capacity

With a change in state law, the state could lease its excess tower capacity and use those receipts to offset the trunk highway system costs of the public safety radio system.

Advantages:

1. This would provide a new, non-tax source of revenue.
2. There would be a direct relationship between this revenue and the public safety radio system.
3. Sharing tower space could potentially reduce the proliferation of towers.

Disadvantage:

The amount of revenue that could be derived from tower leases is unknown.

II. Initial Equipment Requirements

This discussion assumes that a combination of state and local dollars, depending on ownership of the equipment, will be used to fund the initial equipment requirements. Equipment requirements are defined as antenna systems, repeaters, controllers, receivers, consoles, microwave dishes and radio units. The initial equipment costs for complete conversion are estimated to be \$36.5 million. State bond proceeds cannot be used for these costs, since the life cycle for this equipment is less than would qualify for state bonding.

Alternative 1

State General Fund Loan Account

The Legislature could create and fund an account to provide loans, grants or both to state agencies and local governments to pay for equipment. Loan repayments would be deposited in the general fund as non-dedicated receipts (to avoid creating a revolving account). Direct appropriations could be made to fund this account.

Advantages:

1. This would provide up-front funding for local governments and allow them to spread repayment over a longer time period.
2. Grants to local governments would provide an incentive for them to participate in the statewide system.
3. Grants could be directed to local government entities with the greatest need.

Disadvantages:

1. Competition for state funds is intense.
2. Trunk highway funds could be used only for the part of the radio system that served the trunk highway system.

Alternative 2

Public Facilities Authority

The PFA, as described above, could be used to fund the initial equipment requirements up to the expected lifetime of that equipment. The advantages and disadvantages are the same as described in that section.

Alternative 3

9-1-1 Fee

Currently, a portion of the statewide 9-1-1 fee collected by the Department of Administration is made available to the Metropolitan Radio Board for 800MHz operations in the Metropolitan area. The Legislature could increase this fee to provide additional funds for the construction and operation of a statewide public safety radio system.

Advantages:

1. This would provide an ongoing and broad-based revenue source.
2. The cost to an individual telephone customer is small.

Disadvantages:

1. An increase in the 9-1-1 fee may be seen as an indirect tax increase.
2. The amount of funds that can be raised through an increase in the 9-1-1 fee may not be large enough to fund both debt service and on-going maintenance.

Alternative 4

Special Taxes/Fees

Any one or more of a variety of new fees, surcharges and/or special taxes could be used to generate revenue to purchase needed equipment. Approaches used by other states to fund 800MHz initiatives have included emergency room surcharges, ambulance surcharges, special excise tax on radio equipment and traffic violation surcharges. Any new special tax or fee would likely need to meet the test of a direct, or at least indirect, relationship between benefits received from the new system and payment of the tax, fee or surcharge. The Legislature could enact a new fee or surcharge or could authorize local governments to impose or raise fees or special taxes.

Advantage:

There is a strong relationship between the local benefits of the public safety radio system and fees to taxes imposed to construct and maintain it.

Disadvantage:

There may be resistance to the imposition of new taxes for fees at both state and local government levels.

Alternative 5

Federal Grants

There are a number of federal programs that provide grants to states, counties and cities for public safety purposes. The following list of federal programs is illustrative only:

COPS MORE

Edward Byrne Memorial State and Local Law Enforcement Assistance

Local Law Enforcement Block Grant

Rural Outreach Network Development Program

FEMA Grants

TOPS Grants

DOJ Assets Forfeitures Funds

Advantage:

Reduce the need for state or local financial resources.

Disadvantages:

1. This program would compete with other criminal justice and law enforcement programs for these funds.
2. It is unknown whether the public safety radio system would be eligible for the kinds of grants listed above.

III. Ongoing Maintenance Requirements

This discussion assumes that local units of government will be responsible for the ongoing maintenance of the subscriber equipment.

Subscriber equipment refers to mobile and portable equipment and other components directly benefiting their jurisdiction. The state will be responsible for maintaining its subscriber and dispatch-related equipment. The following alternatives are methods that can be used to generate revenue to pay for the ongoing maintenance and upgrade of the infrastructure that is being used by all users of the system. This includes items such as infrastructure component repairs, software upgrades to the system controller(s), but does not include system

expansion for new transmitter locations.

Alternative 1

Annual Radio Fee for Users of the 800 MHz System

If the state were responsible for maintaining the statewide public safety radio system (infrastructure), it could charge an annual radio user fee. The fee could be cost averaged based on the number of subscriber radios used on the entire statewide system by all agencies including the state.

Advantages:

1. An annual fee lowers the ongoing operational and maintenance costs for all users of the system. The more users, the lower the annual fee.
2. Since the annual fee is fairly constant (adjusted periodically based on the number of system users), entities can budget each year for the cost of operating on the radio system as opposed to incurring costs on a case-by-case basis.

Disadvantage:

1. Local governments would have to find a way to generate the revenue needed each year to pay the annual fee.

Alternative 2

General Local Revenues

As stated above, it is assumed that a local unit of government would have responsibility for maintaining its radios and component equipment. This alternative discusses ways that local units of government could obtain revenue to pay for the annual fee as well as money to pay for the repair of their subscriber equipment. This alternative could involve direct payment of these expenses from a local revenue source. The predominant source of local revenue is property taxes.

Alternative 3

Subscription Charges

This option would involve the local unit of government assessing local users of the system who are operating on the system under the authority of the local unit of government, a one-time (or recurring) subscription fee. These receipts could then be used to pay for local equipment maintenance or perhaps offset future equipment replacement costs. Examples of "local users" that could be assessed the subscription charge may include schools districts, private tow truck operators under contract with a governmental entity, the media, private hospitals or it could even include all agencies within their jurisdiction.

Summary

Funding options and governance options should not be viewed in isolation. In order to create a system that serves both state and local needs, a governance structure that addresses and responds to local concerns and needs outside the Metropolitan area must be developed. Because of the large capital costs of the radio system and the widely varying sizes and budgets of its potential users, a combination of approaches will be necessary to provide adequate funding. These two issues are both very complex and very political. Additional discussions and plan-

ning that includes representatives of radio users outside the Metropolitan area will be necessary to move this project forward.

800 MHz Digital Trunked Radio System Benefits

What is Trunking?

First, what is a trunk? A trunk is a communications path between two locations. Communication needs of a large number of users can be provided for by efficiently sharing a small number of trunks. In the context of this report, trunking means the automatic sharing of a group of communication paths (trunks) among a large number of users. A trunked radio system simply uses multiple radio repeaters controlled by a central processor device that allows a large number of mobile or portable radio users to share the repeaters. This is similar to the technology used by the telephone companies for the shared use of telephone lines. A single radio system can be shared by a number of different user groups, eliminating the need for each group to own, operate and maintain its own system.

Spectrum Considerations

The 800 MHz digital trunked radio system will make optimal use of spectrum that is already assigned to the state and local jurisdictions through a previous frequency plan. The 800 MHz trunked system will provide 95% reliable coverage for "on the street" portable radios throughout the state. The statewide system will be fully compatible with, and utilize components implemented in, the Metro 800 MHz system.

Technology Changes

The proposed system is a quantum leap in technology, going from the old 1965 technology, to the state of the art system for the next century. The digital network represents improved performance, increased capacity and new capabilities. The proposed system will meet the current industry standards for digital trunked radio systems. The central processor devices (Zone Controllers) that will be used in the Metro 800 MHz system can be used to control many of the transmitter sites throughout Minnesota. This will reduce the number of controllers required for the outstate system. Units (radio users) traveling from out-state Minnesota to the Metro area will be able to communicate while en-route as well as within the Metro area. The same holds true for Metro users traveling throughout Minnesota.

Interoperability Issues

The statewide shared system or network will enable instantaneous interoperability among multiple state agencies as well as those jurisdictions routinely working with state agencies. The proposed 800 MHz digital trunked radio system will enable users in one area of the state to communicate to another individual, or group of individuals, in another area of the state. It will create a seamless statewide system or network. This single shared system could gradually replace the hundreds of individual radio systems currently operating and could provide for a high degree of reliability and interoperability among state agencies as well as among local, state and federal agencies.

Direct Benefits

The digital network represents improved performance, increased

capacity and new capabilities. The system would be capable of supporting not only state operations, but could also be shared with local jurisdictions throughout the state.

- ⊕ Shared resources such as frequencies, towers, land and infrastructure equipment
- ⊕ Enhanced radio coverage
- ⊕ Multi-agency, multi-jurisdictional interoperability
- ⊕ Capacity to accommodate local units of government
- ⊕ Wide-area communications
- ⊕ Shared or lowered costs
- ⊕ Digital transmissions that make it difficult for unauthorized monitoring of frequencies
- ⊕ Lost or stolen radios can be disabled by the agency that will prohibit unauthorized use

Approaches to a Statewide Radio System

Why 800 MHz? Why not cellular or personal communication services? Has satellite been considered? What about leasing radio services from a commercial system? These are commonly asked questions that the E-Team heard when meeting with local officials from across the state. The answer is yes; all of the above have been given consideration, as well as some other options that are discussed below. Each of the above options has its pros and cons and a niche that it fulfills. However, because of the unique requirements of public safety, each was dismissed from consideration.

Why is public safety unique? Public safety radio systems provide communications to and among fleets of vehicles, officers and or employees. Interoperability among dissimilar departments is critical to public safety operations. Many departments operate their communications equipment on a 24-hours-per-day/seven-days-per-week basis. Therefore, the equipment used in a public safety system must meet very high standards for reliability and durability along with a high degree of functionality. Public safety systems must be versatile and capable of meeting daily operational and administrative needs. They must also meet the needs of special operations such as S.W.A.T. units, drug interdiction units, undercover operations and emergencies such as floods, tornadoes, aircraft accidents and acts of terrorism. Law enforcement systems are typically designed to provide 90 to 95% reliability and coverage within a department's geo-political boundaries.

Following is a brief explanation of why the options noted above were dismissed:

Cellular/PCS -PCS is basically a digital version of the older analog cellular systems, only PCS has greater capacity and functionality. Cellular/PCS commercial systems have developed comprehensive systems that provide service or coverage to a large portion of the population of Minnesota. However, cellular and PCS services are mainly concentrated in urban areas and along the main highway systems of the state. This is especially true for digital PCS services. Cellular and PCS services are primarily a one-to-one mode of communications. A public safety dispatcher communicating to a fleet of officers or employees

with cellular/PCS would have to generate numerous calls to communicate a single message to each officer. Precious time would be lost informing police officers that shots have been fired, or a dozen firemen that a burning building must be evacuated using cellular/PCS technology.

Satellite –Satellite has found a niche in the wireless communications market. The trunking industry has found satellite communications to be a useful means of keeping track of shipments and truck drivers on a national basis. However, satellite has a major drawback for public safety, because it does not work if the radio unit is not within line-of-sight to the satellite. Buildings, parking garages, tunnels and large stands of trees can all obscure a radio's ability to communicate to the satellite. This would not be acceptable for critical communications such a police, fire and emergency medical incidents. Satellite is not frequency efficient for land mobile operations contending for channels against users from all over the U.S. or worldwide.

Leased service – Several wireless companies now provide wireless radio systems that use much of the same technology that this report is recommending for the statewide 800 MHz system. These systems are sometimes referred to as Specialized Mobile Radio Systems. SMRS are widely used by contractors, other non-critical business operations and private citizens for communications. SMRS are implemented in highly populated urban areas where there is a high financial return on the investment of constructing and operating such a system. These systems are not designed to provide the degree of reliability and coverage required by public safety. This is not to say that a commercial wireless provider could not design and build a system that would meet user needs. However, the cost to do so would undoubtedly be passed onto the subscriber through monthly lease rates. Since SMRS are primarily used by thousands of non-public safety users, there is always a chance that the system would not have a channel available during critical situations. A busy channel, even if only for three seconds, could be like an eternity for an officer calling for help.

The E-Team gave consideration to three additional options. Each of these options involve making use of existing systems or constructing a new dedicated private system.

State and local officials can take three basic approaches to upgrade or replace their aging radio systems:

- I. Do nothing
- II. Upgrade to VHF/UHF digital radio systems
- III. Upgrade to 800 MHz digital trunked systems

Each of these approaches has its strengths and limitations. All three approaches provide different levels of performance, interoperability, functionality and cost.

I. Do Nothing Approach

Agencies, including the state, that have new or adequate systems may choose the wait-and-see approach. However, planners and managers should be aware that purchasing replacement equipment in the future will become complicated and expensive due to FCC type acceptance

requirements (Refarming Docket 92-235) for future narrowband and backward compatible radios. While it may appear to be more cost effective to do nothing now, eventually the current radio systems will become old and obsolete. Therefore, replacement is inevitable.

Drawbacks to this approach are:

- ⊕ The current analog systems cannot deliver the new features that are offered with the new digital radio systems.
- ⊕ Current radio systems are unable to meet user needs of delivering fast, reliable, secure communications to the officer or employee in the field.
- ⊕ Equipment failures will become more common and repair costs will increase as system components become more difficult to obtain.
- ⊕ Interference from co-channel and adjacent channel users will increase due to frequency congestion.
- ⊕ Opportunities will be lost for partnerships and for sharing resources and costs.
- ⊕ Interoperability will continue to rely on a patchwork of systems.

II. Upgrade to VHF/UHF Digital System

This approach involves replacing the current VHF or UHF wideband analog system with a digital VHF or UHF narrowband system. This requires that all components of the existing system be replaced. Although this approach will provide a new system, there will still be some inherent problems typical of the VHF and UHF frequency bands. This approach incorporates all of the current FCC requirements for type acceptance for narrowband systems. However, the FCC has mandated one additional type acceptance migration to take place on January 1, 2005. Therefore, this approach could require considerable upgrading in just a few short years.

Drawbacks to this approach are:

- ⊕ Co-channel and adjacent-channel interference from existing and new users
- ⊕ Expensive system change-out.
- ⊕ FCC mandated migration to 6.25 kHz in 2005
- ⊕ Inherent characteristics of VHF band will still be present and users will still be plagued with atmospheric skip.
- ⊕ Interoperability remains a patchwork of systems.

III. Upgrade to 800 MHz Digital Trunked Radio System

As with the VHF/UHF digital upgrade, changing to 800 MHz also requires a complete system change-out. Therefore, it is also an expensive option. However, this is the best option when considering the performance and features offered compared to VHF/UHF conventional or trunked digital systems or 800 MHz conventional or trunked analog systems. This type of system offers clear channel assignments and greater expansion opportunities. An 800 MHz trunked system offers interoperability to all participating agencies, as well as simulcast capability for better spectrum efficiency. FCC rules have already been incorporated into the design of 800 MHz subscriber equipment. Therefore, there is no type acceptance migration to contend with at a later date.

Drawbacks to this option are:

- ⊕ Expense

Additional towers required to obtain the high level of coverage desired (95% for portables on the belt, on the street).

System Costs

Costs

Due to its size, there are certain economies of scale and predicted cost savings that can be realized by sharing in the implementation and use of the statewide 800 MHz system. There is not a specific detailed design for the 800 MHz digital trunked radio system. Preliminary planning has been completed for budgetary and general guideline purposes. Specific detailed engineering planning will be completed at a later date.

Preliminary Cost Estimates Are As Follows:

Infrastructure equipment (land, towers, shelters, generators, antenna systems, repeaters, controllers, microwave)

Infrastructure sub-total \$183,124,000.00

Subscriber Equipment (mobile and portable radios)

The exact number of radios required cannot be determined at this time. Therefore, 8,500 radios was used for budgetary purposes. The number of radios was based on estimated users for the state of Minnesota agencies (State Patrol, Mn/DOT, DNR, BCA, Emergency Management, colleges, hospitals, etc.) only.

Subscriber sub-total. \$20,000,000.00

Additional Costs:

*The exact number of Zone Controllers cannot be determined until the system design and number of users has been determined. Therefore, the following costs are estimates for budgetary purposes.

| ITEM | NUMBER REQUIRED | COST |
|--|-----------------|------------------|
| Zone Controller with Omni link. | *3 | \$12,000,000.00 |
| Interoperability costs. | | \$ 4,500,000.00 |
| STATEWIDE GRAND TOTAL. | | \$219,624,000.00 |

Unified Approaches to a Statewide Radio System

A trend that has continued since the early 1990's is that public safety and local government radio communications needs throughout the state have grown steadily and are expected to grow significantly. At the same time that communications needs are growing so rapidly, the ability of governmental and public safety agencies to upgrade their existing VHF/UHF systems is limited due to the lack of available frequencies, lack of funding and limitations caused by the aging technology of their equipment and system design in general (refer to findings).

For these reasons, the 800 MHz E-Team believes that a single system can best meet the needs of all governmental and public safety entities at significant savings to the taxpayers of Minnesota.

Individual Systems (Alone)

Without a doubt, the cost for the state to design and build a single system will cost in the hundreds of millions of dollars. However, if each agency designs and installs its own system the cost to tax payers could, by some estimates, come close to one billion dollars. Worse yet, independent systems will be islands unto themselves with little or no capability for interoperability with other governmental agencies. Or, at best, agencies will have to continue with the patchwork of systems to obtain the desired level of interoperability.

Taxpayer monies are used to purchase multiple systems within a jurisdiction. For example, city "A" may have a police radio system, a fire system and public works system that taxpayers will eventually have to pay for. The county that city "A" resides in may also have three systems: county sheriff, highway department and parks radio systems that will be paid for with city and county taxes. The state of Minnesota also maintains multiple radio systems such as the State Patrol, Mn/DOT and DNR systems that are funded by city, county and state taxes.

Table 1 reflects cost projections for system replacement or upgrade based on typical costs for systems serving a general range of population. These projections exclude the nine-county Metro area and state of Minnesota government agencies

Table 1 Cost Projections if Agencies Upgrade Alone

| No. & Pop. of Community | # of Radios | Min/Max.Cost |
|------------------------------------|----------------|--------------------------------|
| 3 entities w/pop over 100k | 600 + radios | \$14 million |
| 30 entities w/pop between 50k-100k | 450-600 radios | \$ 75 million |
| 48 entities w/pop between 25k-50 | 350-450 radios | \$ 48 - \$120 mil. |
| 60 entities w/pop between 10K-25K | 250-350 radios | \$ 60 - \$150 mil. |
| 949 entities w/pop under 10k | 50-250 radios | \$ 475 - \$ 949 mil. |
| TOTAL 1,090 entities | | \$672 mil - \$1.30 bil. |

*Typical industry costs based on numbers of radios:
 System upgrade costs include fixed & subscriber equipment:
 System serving 600 + radios @ \$4.7 million each
 System serving 300-600 radios @ \$2.5 million each
 System serving 100-300 radios @ \$1 million each
 System serving 100 or less radios @ \$500,000 each*

Source: Motorola C&E and Transcript Intl.

Shared System

Using the shared system approach, there is only one infrastructure, resulting in significant savings to taxpayers. With either scenario, the state cost remains constant. There may be a slight savings to the state with the shared approach due to sharing of land or tower facilities. The costs reflected in Figure 6 for the shared approach represents the cost of mobiles, portables, console upgrades and other enhancements required or desired by the local jurisdictions.

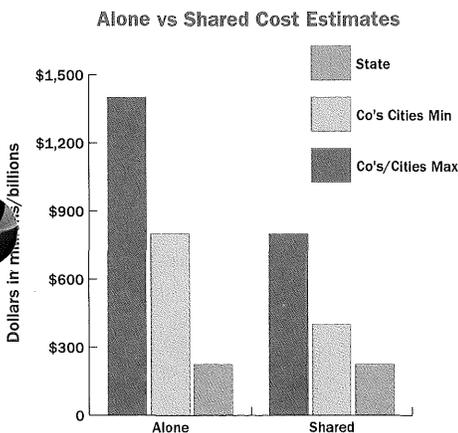


Figure 6

Obstacles to a Shared Statewide Radio System

Many local communities around the state are willing to work closely with the state to develop a comprehensive plan for a shared, statewide radio system. But the degree of coordination and cooperation is not sufficient for a successful plan and eventual implementation of a system.

Our investigation has identified a variety of obstacles to developing this project with local communities and impeding the progress of this project.

Many players

Planning for a statewide radio system involves many players - landowners, neighborhood groups, local elected officials and the state - each having somewhat differing goals and perspectives. Each tries to maximize its benefits and minimize its costs, often seeking to shift costs from one to another or even to future generations by postponing or rejecting recommended changes to their current systems.

Time lags

Large problems arise over time, from many small, uncoordinated decisions. Many local officials are simply not aware of the problems that can result from poor decisions made with regard to the present radio systems. Radio system problems may not show up immediately. But when the problem becomes apparent, the best solution is no longer available, and they must struggle with their prior decisions.

Knowledge

While we do not have any concrete evidence, it appears from our discussions with representative from local units of government that many local elected officials are not aware of the importance of the radio systems used by their agencies. They may not be fully acquainted with the strategies, technology and regulatory changes that impact their radio systems

Staffing

Because the radio communications planning function is not a core business for most local units of government, staff resources always seem to be in short supply. Based on discussions with communications managers in smaller communities, the management of communication systems is handled by staff that have other major responsibilities or have not been trained to deal with wireless communication issues.

Cost-effective

A shared statewide system may be cost-effective in the long run, but it requires significant up-front investment. Local communities may have inadequate funding for planning and construction of a system. Local funding options through assessments or general taxes may be limited.

Glossary of Terms

ANSI – The American National Standards Institute. ANSI facilitates the development of national standards by establishing consensus among qualified groups. ANSI promotes the use of U.S. standards internationally, advocates U.S. policy and technical positions in international and regional standards organizations, and encourages the adoption of international standards as national standards where these meet the needs of the user community.

APCO – Associated Public-Safety Communications Officers, Inc., International

AVL – Automatic Vehicle Location – a technique using radio frequency energy to automatically determine the location of vehicles and to report their positions to a central control facility. Typically done via global positioning system.

Analog – Analog is the way humans hear the human voice over most broadcast radio, television, telephones and two-way radios.

Digital – The radio converts the analog voice information into 1's and 0's in much the same way as a computer handles data. The radio then transmits the digitized data packets over the airwaves. This process is then reversed at the receiving radio.

FCC – Federal Communications Commission

GHz – Gigahertz unit of frequency measurement; one Gigahertz is equal to one billion events (cycles) per second. Frequencies in this range are usually called microwaves.

Industry Standards – Standards such as TETRA and Project 25 are examples of industry standards. Standards are established for a frequency efficient digital trunked radio communication system and provide integrated voice/data services on one secure digital trunked radio system.

Interoperability – The ability of radio users in one agency to talk to radio users of another agency.

kHz – The abbreviation for Kilohertz - 1000 cycles per second.

MHz – Megahertz a unit of frequency measurement; one Megahertz is equal to one million events (cycles) per second.

Multi-site – Multi-site is a trunking technique using multi-site controllers. These controllers track the location of every mobile or portable unit and determine which transmit site has coverage. This allows wide area coverage without using simulcast. Multi-site technology can connect several different trunked systems, some of which are simulcast and some not. (In effect, a multi-site controller treats a simulcast system as if it were a single site system.) Multi-site systems require more frequencies to cover a specific geographical area than does a simulcast system.

Narrowband – A channel plan that splits existing VHF frequencies

from 15 kHz spacing to 7.5 kHz and UHF frequencies from 25 kHz spacing to 12.5 kHz. After Jan 1, 2005, the channel will be further split to 6.25 KHz spacing.

Project 25 – Project 25 was developed within the standards process driven by the Project 25 Steering Committee, which is made up of customer representatives from federal, state and local public safety organizations. The Project 25 standards are developed under the guidance of the Telecommunications Industry Association whose standard formulating committees include manufacturer representatives. There are five objectives of the Project 25 standard:

- a) Spectral efficiency using narrowband channels.
- b) Interoperability between agencies and different levels of government.
- c) Backward compatibility.
- d) Graceful system migration (forward and backward).
- e) Scaleable trunked and conventional capabilities

Repeater – A fixed radio transmitter/receiver device operating on two separate frequencies. One frequency to transmit and one to receive. This device is normally located at an equipment shelter at the base of a communications tower. The repeater is connected to an antenna via a coaxial cable. A repeater receives the transmission from one radio and relays (repeats) that transmission to another mobile radio. Repeaters are used to obtain a wider area of coverage for mobile and portable radios.

SMRS – Specialized Mobile Radio Systems.

Simulcasting – A technique of transmitting from two or more separate sites simultaneously on a common frequency. Careful control of both audio and radio frequencies at each site is required to preclude destructive interference in regions covered by more than one simulcasting transmitter. Simulcast systems use fewer frequencies to cover a specific geographical area than does a multi-site system.

Site – A location that accommodates the transmitter and receiver equipment for the radio system. Typically, a site consists of a tower, equipment shelter, back-up generator with LP tank, antennas, coax cable and other ancillary equipment. A site can also be the roof-top of a building.

TDMA – Time Division Multiple Access. In TDMA, the channel is accessed in separate slots in a time sequence. Users have different time slots for each call that is set up.

TETRA – TERrestrial TRunked RAdio is a European open digital trunked radio standard. It is defined by the European Telecommunications Standards Institute under the cooperative development of manufacturers, users, operators and other experts. TETRA, which defines standardized interfaces to a digital trunked radio system, is not a product or a system platform. TETRA's main objectives are to establish standards for a frequency efficient digital trunked radio communication system and provide integrated voice/data/telephony services on one secure digital trunked radio system. TETRA uses four time slot Time Division Multiple Access technology to achieve four channels in a single 25 kHz bandwidth.

Trunked System – A trunk is a communications path between two locations. Trunking in the context of this report: Trunking is the automatic sharing of a group of communication paths (trunks) among a large number of users. A trunked radio system simply uses multiple radio repeaters controlled by a central processor device that allows a large number of mobile or portable radio users to share the repeaters. This is similar to the technology used by the telephone companies for the shared use of telephone lines. A single radio system can be shared by a number of different user groups, eliminating the need for each group to own, operate and maintain its own system.

UHF – Ultra High Frequency (450-470 MHz) Public Safety

VHF – Very High Frequency (150-170 MHz) Public Safety

Wideband – A channel plan that assigns frequencies using 15 kHz spacing between frequencies in the VHF frequency band and 25 kHz spacing between frequencies in the UHF band.

800 MHz–Frequency band most commonly used for trunked radio systems (806-859 MHz) Public Safety

Appendix "A"

Statewide Radio Communications Survey Results and Respondents' Comments (September, 2000)

Response Statistics:

The overall response was outstanding with a total 648 survey forms returned:

Survey forms sent out to:

862 Cities

80 Counties (did not include the seven-county Metro area)

Survey responses returned from:

Counties: 70 out of 80 Greater Minnesota counties

(88% of total) representing 138 county departments.

Cities: 273 cities representing 483 city departments

Independent School Districts: 16

State agencies/education institutions: 11

SECTION I. ADMINISTRATIVE INFORMATION

Q1: Survey responses returned from:

| | |
|------------------------------------|-----------------------------|
| County responses: | 138 surveys returned |
| County sheriff's office: | 57 |
| County public works (Highway Dept) | 47 |
| County administration: | 16 |
| County transit: | 8 |
| County hospital: | 5 |
| County ambulance: | 4 |
| County parks: | 1 |
| Total: | 138 |

| | |
|--|-----------------------------|
| City responses: | 483 surveys returned |
| Volunteer fire department: | 122 |
| City police: | 20 |
| City public works (Street Dept): | 92 |
| City administration: | 55 |
| City ambulance: | 29 |
| City fire: | 22 |
| City utilities: | 18 |
| City parks: | 12 |
| City transit: | 6 |
| City hospital: | 5 |
| Special police department | 2 |
| Total: | 483 |
| Independent School District responses: | 16 |
| State agency/educational institutions: | 11 |
| GRAND TOTAL RESPONSES RETURNED: | 648 |

Q2: Dispatch for multiple agencies, or dispatch for agencies outside of your agency, or no dispatch center.

| | |
|--|------------|
| Consolidated dispatch center serving both city and county agencies: | 274 (44%) |
| Consolidated dispatch center serving either the city or county only: | 110 (18%) |
| None of the above pertain to my operation: | 237 (38%) |

Comment: Almost half (44%) have consolidated dispatch centers serving both city and county agencies. Only 18% have dispatch centers serving only their local government entity.

Q3: Number of full-time employees. Including volunteers. Average size

The average number of full-time employees of the departments responding to this survey was 31 people.

Q4: Population served. Broken into categories.

| Community size | Number of Communities |
|-----------------|-----------------------------|
| 1000 or less | 45 |
| 1001-10,000 | 110 |
| 10,001-50,000 | 77 |
| 50,001-1000,000 | 5 |
| Over 100,000 | 8 (Include state responses) |

Q5: Existing radio systems: (Most local units of government have some type of radio systems.

| |
|---|
| 589 91% of 648) have radio systems |
| 59 (9% of 648) did not have a radio systems |
| 50 city agencies |
| 9 county agencies |

Q6: Familiarity with Industry Standards: (603 responses to this question).

| | |
|--|-----------|
| 1. (Not Familiar) | 459 (76%) |
| 363 cities | |
| 91 counties | |
| 5 state institutions (colleges, hospitals, park) | |
| 2. (Little Familiar) | 83 (14%) |
| 61 cities | |
| 21 counties | |
| 1 state (college) | |
| 3. (Familiar) | 45 (7%) |
| 26 cities | |
| 17 counties | |
| 2 state (courts & state patrol) | |
| 4. (Very Familiar) | 7 (1%) |
| 3 cities | |
| 4 counties | |
| 5. (Extremely Familiar) | 9 (1%) |
| 3 cities | |
| 3 counties | |
| 3 state agencies/institutions | |

Comment: 90% of all respondents were either not familiar or had little familiarity with the industry standards such as Project 25 and TETRA. 89% (536/603) of the respondents were local government entities who were either not familiar or had little familiarity with the industry standards.

Q8: Are Industry Standards Important: 521 (438 +83) responses or 90% (521/581) stated that industry standards were not important or were little important. Direct correlation between familiarity of industry standards and whether believe standards are important. Of the 521 (438 + 83) responses who stated that industry standards were not or little important, 230 (44%) had no or little familiarity with industry standards. To the contrary, of the 16 responses that stated that industry standards were very or extremely important, 13 (81%) were very or extremely familiar with the industry standards.

| | |
|--------------------------------------|-----|
| 1. (Not important) | 438 |
| Familiarity with Industry Standards: | |
| Not familiar | 147 |
| Little familiar | 54 |
| Familiar | 135 |
| Very familiar | 53 |
| Extremely familiar | 49 |
| 2. (Little important) | 83 |
| Familiarity with Industry Standards: | |
| Not familiar | 5 |
| Little familiar | 24 |
| Familiar | 22 |
| Very familiar | 22 |
| Extremely familiar | 10 |

| | |
|--------------------------------------|----|
| 3.(Important) | 44 |
| Familiarity with Industry Standards: | |
| Not familiar | 2 |
| Little familiar | 3 |
| Familiar | 20 |
| Very familiar | 10 |
| Extremely familiar | 9 |
| 4.(Very important) | 7 |
| Familiarity with Industry Standards: | |
| Not familiar | — |
| Little familiar | — |
| Familiar | 2 |
| Very familiar | 2 |
| Extremely familiar | 3 |
| 5.(Extremely important) | 9 |
| Familiarity with Industry Standards: | |
| Not familiar | — |
| Little familiar | — |
| Familiar | 1 |
| Very familiar | 1 |
| Extremely familiar | 7 |

Q9: Average annual budget to operate, maintain and upgrade owned radio system).

| | |
|-----------------------|---------------------|
| Responses | 374 |
| Range: | \$25 to \$1,250,000 |
| Median: | \$2,300 |
| Average: | \$38,143 |
| Average (w/o top 15): | \$16,346 |

Comment The largest counties and cities skew the average results due to their size and cost compared to the smaller counties and cities. Most of the counties and cities annual budget for radio systems is \$2,000-\$3,000.

Q10: Average annual budget to lease radio system.

Comment: 26 departments responded to this questions. The highest annual lease was \$265,000. This figure skewed the results to obtain the average annual lease budget. Discounting the above noted lease, the average annual lease rate for those responding was \$3,400.00 Based on other data contained in each of he responses that indicated that they leased communication services, we assume that these figures reflect fees for cellular, and paging and in some instances for two-way radio services.

SECTION II. OPERATIONS

Q1: Number of agencies that share radio frequencies with other organizations.

| | |
|-----|-----------|
| YES | 381 (77%) |
| NO | 113 (23%) |

COMMENT: Most of the entities (77%) share frequencies with other organizations.

Q2: How often does your agency have radio communications with the following levels of public safety and/or public service organizations?

| | Day to Day | Weekly | Monthly | Yearly | Never |
|----------------|------------|----------|----------|----------|-----------|
| Local Level: | 341 (71%) | 59 (12%) | 35 (7%) | 12 (3%) | 35 (7%) |
| State Level: | 104 (22%) | 60 (13%) | 54 (11%) | 49 (10%) | 205 (44%) |
| Federal Level: | 9 (2%) | 12 (3%) | 24 (5%) | 47 (10%) | 380 (80%) |

Comment: By far the major requirements are at the local level on a day-to-day basis. There is some requirement at the state level and minimal at the federal level. Most of the requirements are driven by the type of emergency situation or disaster.

Q3: What level of interoperability would best serve your agency?

| No. of Responses | |
|------------------------------------|-------------------|
| Local region (multi-jurisdiction): | 351 (76%) |
| State-wide: | 87 (19%) |
| Multi-state: | 9 (4%) |
| Nation-wide: | 2 (1%) |
| Total: | 459 (100%) |

Comment: The major requirements (76%) are at the local level. There is some requirement at the state level (19%) and multi-state (4%) for the border towns and counties. Most of the requirements are driven by the type of emergency situation or disaster.

Q4: Does your agency have the ability to patch across frequencies?

| | |
|-----|-----------|
| YES | 76 (18%) |
| NO | 353 (82%) |

Comment: Most entities (82%) DO NOT have the ability to patch across frequencies.

Q5: If answered NO to question above, do you feel that having capability to patch across frequencies a useful feature?

| | |
|-----|-----------|
| YES | 166 (47%) |
| NO | 187 (53%) |

Comment: Almost half (47%) believe this would be a useful feature.

Q6: Does your agency currently use encryption or scrambling devices on your current radio system?

| | |
|-----|-----------|
| YES | 36 (8%) |
| NO | 397 (92%) |

Comment: Most entities (92%) DO NOT use encryption or scrambling devices on their current radio systems.

Q7: If answered NO to question above, do you consider encryption or scrambling important to your agency?

| | |
|-----|-----------|
| YES | 131 (33%) |
| NO | 266 (67%) |

Comment: Only one-third of the entities consider encryption or scrambling important.

Q8: Does your agency share radio system infrastructure (towers, base stations/antenna systems, etc.) with other organizations?

| | |
|-----|-----------|
| YES | 330 (70%) |
| NO | 141 (30%) |

Comment: Over two-thirds (70%) share radio system infrastructure with other organizations.

Q10: How involved is your agency in the decision-making process related to the operation of the shared system noted in the question above?

| | |
|--------------|-----------|
| Extensively | 98 (23%) |
| Considerably | 51 (12%) |
| Somewhat | 66 (15%) |
| Little | 76 (18%) |
| Not at all | 140 (32%) |

Comment: About half of the entities are somewhat to considerably involved with the decision making process related to the operation of the shared system.

SECTION III. Communications

Q1: Frequencies Used:

| Frequency | Number of Responses | % of Total |
|-------------------------------|---------------------|------------|
| Low Band VHF (25 – 50 MHz) | 14 | 4% |
| High Band VHF (150 – 174 MHz) | 308 | 79% |
| UHF (450 – 470 MHz) | 43 | 11% |
| 800 MHz (806 – 869 MHz) | 15 | 4% |
| Other | 8 | 2% |

Comment: The frequency used by a vast majority of the respondents is high band VHF reported by 79% . The second highest frequency was UHF, which was far behind with 11% of the respondents.

Q2: Age of Oldest Piece of Equipment: 401 Responses

| | |
|----------------------|--------------|
| 401 Responses | |
| Range of age: | 1 – 45 years |
| Median age: | 15 years |
| Average age: | 15.4 years |

Comment: The radios being used today are fairly antiquated with an average age of 15 years.

Q2a: How long used current radio system:

| | |
|----------------------|------------|
| 400 responses | |
| Range of age: | 1-50 years |
| Median age: | 18 years |
| Average age: | 18.1 years |

Comment: The radio systems being used today are analog and are also antiquated with an average age of over 18 years.

Q3: Number of radio units in agency:

| No. of Radios | Responses | % of Total |
|------------------------|-----------|------------|
| Less than 10 radios | 147 | 33% |
| Between 11 – 20 radios | 134 | 30% |

| No. of Radios | Responses | % of Total |
|--------------------------|-----------|------------|
| Between 21 – 30 radios | 65 | 15% |
| Between 31 – 50 radios | 51 | 12% |
| Between 51 – 60 radios | 17 | 4% |
| Between 61 – 70 radios | 4 | 1% |
| Between 71 – 80 radios | 5 | 1% |
| Between 81 – 90 radios | 5 | 1% |
| Between 91 – 100 radios | 6 | 1% |
| Between 101 – 150 radios | 5 | 1% |
| Between 151 – 200 radios | 0 | <1% |
| Between 201 – 250 radios | 1 | <1% |
| Between 251 – 300 radios | 1 | <1% |
| Between 301 – 400 radios | 2 | <1% |
| Between 401 – 500 radios | 2 | <1% |
| Greater than 500 radios | 2 | <1% |

Q4: Problems with current radio system: (Listed in order of most serious)

1. Dead spots:

| Seriousness | Number of Respondents |
|------------------------|-----------------------|
| 5. Major problem | 97 (24%) |
| 4. Significant problem | 81 (20%) |
| 3. Problem | 78 (19%) |
| 2. Minor problem | 72 (17%) |
| 1. Not a problem | 84 (20%) |
| Total: | 412 (100%) |

2. Not enough range:

| Seriousness | Number of respondents |
|------------------------|-----------------------|
| 5. Major problem | 92 (22%) |
| 4. Significant problem | 70 (17%) |
| 3. Problem | 89 (21%) |
| 2. Minor problem | 58 (14%) |
| 1. Not a problem | 105 (26%) |
| Total: | 414 (100%) |

3. Outdated equipment:

| Seriousness | Number of Respondents |
|------------------------|-----------------------|
| 5. Major problem | 55 (13%) |
| 4. Significant problem | 70 (17%) |
| 3. Problem | 101 (25%) |
| 2. Minor problem | 74 (18%) |
| 1. Not a problem | 112 (27%) |
| Total: | 412 (100%) |

4. Frequency interference:

| Seriousness | Number of Respondents |
|------------------------|-----------------------|
| 5. Major problem | 51 (13%) |
| 4. Significant problem | 63 (15%) |
| 3. Problem | 85 (21%) |
| 2. Minor problem | 100 (24%) |
| 1. Not a problem | 112 (27%) |
| Total: | 411 (100%) |

5. Atmospheric skip:

| Seriousness | Number of Respondents |
|------------------------|-----------------------|
| 5. Major problem | 40 (10%) |
| 4. Significant problem | 54 (13%) |
| 3. Problem | 88 (22%) |
| 2. Minor problem | 101 (25%) |
| 1. Not a problem | 126 (30%) |
| Total: | 409 (100%) |

6. Fading:

| Seriousness | Number of Respondents |
|------------------------|-----------------------|
| 5. Major problem | 45 (11%) |
| 4. Significant problem | 45 (11%) |
| 3. Problem | 88 (22%) |
| 2. Minor problem | 86 (21%) |
| 1. Not a problem | 145 (35%) |
| Total: | 409 (100%) |

7. Not enough equipment

| Seriousness | Number of Respondents |
|------------------------|-----------------------|
| 5. Major problem | 32 (8%) |
| 4. Significant problem | 40 (10%) |
| 3. Problem | 90 (22%) |
| 2. Minor problem | 89 (22%) |
| 1. Not a problem | 161 (39%) |
| Total: | 412 (100%) |

8. Static:

| Seriousness | Number of Respondents |
|------------------------|-----------------------|
| 5. Major problem | 16 (4%) |
| 4. Significant problem | 48 (12%) |
| 3. Problem | 91 (23%) |
| 2. Minor problem | 106 (26%) |
| 1. Not a problem | 139 (35%) |
| Total: | 400 (100%) |

9. Battery problems:

| Seriousness | Number of Respondents |
|------------------------|-----------------------|
| 5. Major problem | 24 (6%) |
| 4. Significant problem | 28 (9%) |
| 3. Problem | 81 (20%) |
| 2. Minor problem | 99 (24%) |
| 1. Not a problem | 167 (41%) |
| Total: | 409 (100%) |

10. Not enough frequencies:

| Seriousness | Number of Respondents |
|------------------------|-----------------------|
| 5. Major problem | 29 (7%) |
| 4. Significant problem | 19 (5%) |
| 3. Problem | 47 (11%) |
| 2. Minor problem | 75 (18%) |
| 1. Not a problem | 239 (59%) |
| Total: | 409 (100%) |

Comment: *The most serious problem experienced by users is that of "dead spots" where their radios won't work. Sixty-three (63%) percent of the respondents indicated this was a problem. Forty-four (44%) percent indicated this was a significant or major problem.*

The second most serious problem listed was "not enough range". Sixty (60%) percent indicated this was a problem. Thirty-nine (39%) percent indicated this was a significant or major problem.

The third most serious problem was "outdated equipment". Fifty-five (55%) percent indicated this was a problem for them. Thirty (30%) percent indicated this was a significant or major problem. This probably reflects the fact that the average age of the oldest piece of radio equipment is 15.4 years and the average age of the radio systems is 18.1 years.

SECTION IV. FUTURE CONSIDERATIONS**Q1: Plan to replace or substantially upgrade radio system:
(470 responses)**

| | |
|------|------------------------------|
| Yes: | 125 responses (27% of total) |
| No: | 345 responses (73% of total) |

Q2: Approximate time frame for replacement or upgrade:

| Time Frame | Number of Responses | % of Total |
|--------------|---------------------|-------------|
| 1-2 Years | 59 | 47% |
| 3-4 Years | 32 | 26% |
| 5-6 Years | 26 | 21% |
| 7+ Years | 8 | 6% |
| Total | 125 | 100% |

Comment: *A little more than one fourth of the respondents stated they plan on replacing or substantially upgrading their radio system within the next seven years.*

Q3: Preference for next radio system: (125 responses)

| Type of Radio System | Number of Responses | % of Total |
|-------------------------------------|---------------------|------------|
| VHF or UHF Analog (150 or 450 MHz) | 46 | 37% |
| VHF or UHF Digital (150 or 450 MHz) | 21 | 17% |
| Trunked Digital (800 MHz) | 13 | 10% |
| Trunked Analog(800 MHz) | 5 | 4% |
| Unknown | 40 | 32% |

Comment: *The large number of unknown preferences and the preferences for analog systems seems to be a reflection of the fact that there is a definite lack of knowledge and understanding regarding this technology, standards, and future trends.*

Q4: Likelihood agency will adopt Project 25 or TETRA Standards for next radio system:

| Likelihood | Number or Responses | % of Total |
|-----------------------------------|---------------------|-------------|
| 5. Highly likely | 6 | 4% |
| 4. Somewhat likely | 7 | 5% |
| 3. Likely | 7 | 5% |
| 2. Maybe | 4 | 3% |
| 1. Highly unlikely | 9 | 7% |
| U. Unknown | 76 | 56% |
| Don't know about Project 25/TETRA | 26 | 19% |
| Total: | 135 | 100% |

Comment: Only 14% of the respondents indicated they were likely to highly likely to adopt Project 25 or TETRA standards. This coupled with the high number (19%) of respondents who indicated they didn't know about Project 25 or TETRA standards indicates the limited knowledge that most have regarding this technology and trends.

Q5: How important will interoperability issues be to your agency when purchasing a new radio system?

| Importance | Number or Responses | % of Total |
|------------------------|---------------------|-------------|
| 5. Extremely important | 84 | 45% |
| 4. Somewhat important | 49 | 27% |
| 3. Important | 29 | 16% |
| 2. Little importance | 16 | 9% |
| 1. Not important | 5 | 3% |
| Total: | 183 | 100% |

Comment: 88% of the respondents indicated that interoperability is important to extremely important for radio systems. This is an indicator of the end user requirements rather than a knowledge of the technology. Per the notes from the survey forms, there is a need for interoperability among local police, sheriff, highway department (snow plows, etc.), ambulances, etc. especially during an emergency or a disaster situation.

Q6: Identify the radio frequencies your agency needs for its next system.

| Low Band/# of Dept. | VHF/# of Dept. | UHF/# Dept. | 800 MHz/# of Dept. |
|---------------------|----------------|-------------|--------------------|
| 15/4 | 413/67 | 40/12 | 197/14 |

Q7: Would your agency/department consider participating in a multi-agency, multi-jurisdictional shared radio system?

| | |
|-----|-----------|
| YES | 326 (71%) |
| NO | 136 (29%) |

Comment: Overwhelming majority of responses said they would be willing to participate in a share radio system.

Q8: Preferred method of governance for shared radio system.

| | |
|---|-------------------|
| State government only: | 2 (<1%) |
| State & county government: | 49 (13%) |
| State & local government participants in same region: | 187 (51%) |
| State & regional government representation, including non-participating agencies: | 5 (2%) |
| Governing board including state & local government and Metro Radio Board: | 6 (2%) |
| Decision would have to be made on a higher level: | 118 (32%) |
| Total: | 367 (100%) |

Comment: *Of those that responded to this question, a majority (51%) indicated the governance should be state and local government participants in the same region. 13% indicated that governance should be at the state and county level. These two categories indicated that 64% of the respondents feel that governance should be between the state and some local level of participation.*

SECTION V. COMMENTS

Following are the comments received as a result of the survey.

Question 1: Has your agency experienced a situation where the ability to inter-operate with other agencies was impeded? Yes or No If yes, briefly describe the situation and adjustments that were made. NOTE: Please do not include 9-1-1 issues, this question pertains to radio situations only.

Municipal Fire Department

- ⊗ Multiple users on the only county fire frequency.
- ⊗ Mutual aid fire operation – departments did not have shared channels – the East Range Fire Department coalition has developed a radio system, which provides multiple channels for fire department operations. So far, we have developed 5 channels including 2 repeaters for use. The DNR and USFS have access to these channels.
- ⊗ Over loaded channel on mutual aid calls
- ⊗ Our jurisdiction has mutual aid with a fire department in another state (Wisconsin).
- ⊗ On a daily basis too many agencies using one frequency. During any multi-agency response radio system almost becomes useless.
- ⊗ Unable to talk to other departments at mutual aid calls. Only shared channel is the county paging channel. We also have some bad areas in our territory where a radio or pager will not work.

Volunteer Fire

- ⊗ Trying to work with state DNR and Federal Fire departments.
- ⊗ Departments are on different frequencies could not match them.
- ⊗ We are in need of more radio towers. The hills and bluffs hamper our ability to communicate with the Winona law enforcement center and also our mutual aid, fire and EMS departments.
- ⊗ In 1997 a tornado hit our area causing power outage. Were unable to communicate with anyone. Has been corrected by installation of back-up generator.
- ⊗ On a rescue call and a house fire that were both about 4 miles from town we could not communicate with our base station or our trucks.
- ⊗ Multi jurisdictions – Multi agency situations. Major fires and emergencies.
- ⊗ The frequencies are too busy when multiple agencies are using it. The other county's system dominates our counties system. (both counties share the same frequency) They broadcast over other users on the system without regards.
- ⊗ We have too many spots in our County where the signal is not strong enough for good transmissions. We use the Sheriff's channel for relay if needed and even then sometimes there are still dead spots.
- ⊗ Range has been a problem, we are on the far end of our County, problems reaching dispatch.
- ⊗ Major barn fire – trucks could not communicate with Iowa fire personnel. Found one portable radio with one matching frequency.
- ⊗ There are times that we respond to areas outside our normal response area and work with the fire Departments that do not have the same radio frequencies.
- ⊗ Inability to communicate with New Prague Police Department & New Prague Ambulance at some training sessions.
- ⊗ Inability to talk from truck to truck in our own Fire Dept area.
- ⊗ Statewide fire does not utilize repeater in our area. This hinders communications with other departments.
- ⊗ Ability to communicate on mutual aid fires. Received permission to use neighboring Department frequencies.
- ⊗ Ambulance service has trouble switching to fire frequencies.
- ⊗ Have difficulty communication with neighboring towns with whom we have mutual aid agreements.
- ⊗ Communication with DNR for wildfires situation was made better with newer multi channel radios.

School District

- ⊖ None

Ambulance

- ⊖ Could not talk point to point because of poor radio reception. Putting in a repeater.
- ⊖ Due to the large rural area we serve there have been times when radio communications was impeded because we were simply too far from the base station or repeater tower.
- ⊖ In 1997 a tornado hit our area causing power outages. We were unable to communicate with anyone. Has been corrected by installation of back-up generator.
- ⊖ Limited range at present. Need repeater or relay tower which will hopefully be erected soon. Designated telephone communications should be better soon hopefully reducing expense.
- ⊖ County law enforcement frequencies vary and many times the only communications we have is through our dispatch center to the other counties dispatch center and eventually down to the other counties or city law enforcement level.

Hospital

- ⊖ None

Utility

- ⊖ Interoperability is not desired or substantially beneficial.
- ⊖ Radio system is city channel shared by utilities, public works, police and fire departments. During emergencies communicating is difficult to impossible we all need to support separate channel use.
- ⊖ Not able to patch to other frequency users.

County Emergency Management

- ⊖ During a major disaster (Tornado).
- ⊖ I can not answer for sheriff's dispatch.
- ⊖ Communication among inter-state units and among federal, state and county units.

City Administration

- ⊖ Coordination among Police, Fire, Ambulance, as well as airport and public works functions. Dead spots police radio systems. No local emergency operations center all distributed separate radio systems and locations. No facility with backup electrical power capabilities.

Animal Control

- ⊖ None

City Parks Department

- ⊖ None

Transit

- ⊖ Only when cell phone does not have enough signal.
- ⊖ Communication with maintenance workers from other governmental agencies during snow removal operations. Call between offices and rely messages.
- ⊖ City crew and police departments along with 3 members of ambulance have the very same 16 channel radios. Fire department has radios that are older than 20 years – communication is very limited. Batteries on fire radio don't last over 2 years.
- ⊖ We have installed the frequencies of neighboring counties in our mobile units.
- ⊖ Unable to communicate with Sheriff vehicle and snowplow during emergency situation in snowstorm.
- ⊖ Too much traffic.
- ⊖ Major storm clean up. The lack of ability to communicate directly with other agencies to coordinate the clean up efforts.

Public Works

- ⊖ During storm disasters communication among highway departments, police and fire departments would have been helpful – rare occurrences.
- ⊖ Yes, at times getting hold of Sheriff dispatcher has been problems busy monitor set low.

- ⊗ County highway would have liked the ability to inter-operate with Mn/DOT but they would not allow the county to access their TX frequency.
- ⊗ Surrounding city carries our emergency channel we can usually receive but not send to their radio system many dead spots.
- ⊗ Sometimes the law enforcement center does not scan our city frequency, therefore it is impossible to contact them other than by phone line.

Civil Defense.

- ⊗ Only do during emergencies and have no communication unless they have one of our radios
- ⊗ Fire department and City maintenance have to work together.
- ⊗ Smaller agencies like Townships and smaller cities lack the personnel with enough knowledge to properly operate and maintain radio systems within FCC rules. They also do not or cannot allocate money to properly maintain the system or share costs.

Sheriff's Department

- ⊗ The Minnesota River Valley presents lay of the land problems. In the process of installing a repeater system to help with this problem.
- ⊗ Otter Tail County was the site of a major train derailment that involved several departments not on our radio system. The command center programmed monitors to cover the other frequencies, borrowed portables and used the cell phone extensively.
- ⊗ When Fire, EMS, Sheriff's, and Police cars are involved in a major incident or if separate incidents occur at the same time we only have one frequency that we all can communicate on (sheriff's frequency). Individuals begin to interfere with each other as well as the dispatch. The adjustment (if you want to call it that) is to use different frequencies that are unique to Fire and EMS. This eliminates dispatch and law enforcement cars being able to communicate with them.
- ⊗ State money for county and local agencies to update equipment for law enforcement and emergency services.
- ⊗ Skip from other agencies. Lack of technology in Greater Minnesota. Different radio frequencies that state and federal agencies have compared to local agencies.
- ⊗ Inter-agency cooperation in criminal cases is impeded due to lack of common radio frequencies to encryption devices. At the present time only unencrypted radio frequencies are available, telephone, cell phones are also utilized.
- ⊗ Repeater on main sheriff's channel failed. Difficulty occurred when trying to make radio contact with officers out in the field due to distance of office from sheriff's dispatch. (Repair repeater). Uninterrupted power source (UPS) did not provide radio support. Equipment adjusted, problem solved no problems since equipment adjusted.
- ⊗ VHF Skip.
- ⊗ In house portable coverage – funding from state for system.
- ⊗ During tornado (07-25-00) could not talk to state emergency management and other state agencies.
- ⊗ We have problems talking to our own jurisdictions.
- ⊗ Forest fires 1999 blow down
- ⊗ We have had situations where local deputies were unable to talk to Federal officers who were working in our area.
- ⊗ When we need to talk to a trooper by radio, we sometimes can't get a hold of them because they need to be monitoring our frequency to hear us and they can't always do that. In order to resolve this we must call State Patrol dispatch and ask them to contact the trooper.
- ⊗ Dispatch problems during transition. Not familiar with new equipment (dispatcher training).
- ⊗ St. Cloud PD uses 800 and we don't so we can't communicate on portable or in squads. We can now use MDC's and share portables on special operations.

Municipal Police Department

- ⊗ Due to not having enough repeaters in the county it is often difficult to communicate with other agencies in the county including the Sheriff's deputies who may be on the other end of the county
- ⊗ In trying to communicate among Fire, Ambulance and Police during an emergency drill at our airport we found the command post was not getting all traffic and as the drill started the first personnel on scene were not able to communicate to these other agencies to coordinate set-up measures.
- ⊗ Other agencies in other parts of the state and other states having the same frequencies. Skipping over our communications. Main terminal "county dispatch" complete new system our agency also upgrade our radios with

- new frequency. Dead spots within community – upgrade our entire radio system put in trip repeater prior to county upgrade.
- ⊕ Our radio system uses VHF frequency channels. The portables cannot receive or transmit on many occasions. They are useless at times. Portables are static and garbled. The squad trunking radio sometimes is weak and scratchy at times.
 - ⊕ For several years our county had different frequencies. Several times officers in our area on major incidents that affect safety. We had to upgrade to scan radios so we could monitor. The same situation is beginning to happen, presently; due to small departments not able to upgrade to mobile computer equipment due to costs of yearly maintenance.
 - ⊕ When monitoring city channel we have problems with paging tones on our frequency. At times unable to locate source and channel can not be left in scan mode on portable units or base when monitoring channel.
 - ⊕ Lack of frequencies. Congested existing frequencies. Unable to talk directly to State Patrol on our main frequency.
 - ⊕ Currently the department is dispatched by the Pearl street dispatch center out of Owatonna. At times it is very difficult to get airtime due to the radio traffic. Officers also cover one another. Also as a smaller agency we are not given enough input verses the larger agencies in Rice and Steele Counties.
 - ⊕ Transmission dead spots within the city limits atmospheric conditions affect transmission and receiving.
 - ⊕ Frequently distance between cars is too great and lack of repeater towers make it difficult to communicate. Problem is even more pronounced with portable hand-held radios.
 - ⊕ Mutual aid situations where no common frequency other than statewide existed.
 - ⊕ Dead spots within county. Inability to communicate with other agencies/officers with hand held and mobile radios except when in close proximity.
 - ⊕ Portables are not able to communicate with dispatch both. Hearing dispatch and transmitting to dispatch.
 - ⊕ Mainly in hand held use not good enough reception.
 - ⊕ Interop during flooding was difficult.
 - ⊕ Worked around by having dispatch relay for us. Or we will go to the cell phone and use that for communication purposes. Some time it may be a dead spot and by moving the vehicles it helps.
 - ⊕ On certain specific days and evening we get a lot of "skip" from the Metro departments we cannot hear our dispatcher at times and some departments that are coming across on skip have the same call numbers as ours. Therefore were not sure if dispatch is calling or not!
 - ⊕ Not for a long time. 911 dispatch center and radio frequencies, inter-operating with 5 other law enforcement agencies pretty much problem free.
 - ⊕ Can't talk directly to state patrol on the radio unless they have our channel in their radio. They won't allow us to program their frequency into our radio.
 - ⊕ City administration support, City council support, County board support, Township support, state legislative support, financial support (city and state), technological changes, fee change to digital, governance issues (control).
 - ⊕ Out of the area radio skips.
 - ⊕ Our most common problem is monitoring and communicating with the LaCrosse, Wisconsin Police department, which we border. We operate on high band. The LaCrosse police department operates on 800 MHz.
 - ⊕ Local agencies in St. Louis County are unable to communicate on our frequencies. This sometimes hinders our ability to get information to them.
 - ⊕ The radio was bad, had it fixed
 - ⊕ Worn out Radio System. Skip Interference.
 - ⊕ Problems with range and dead space.
 - ⊕ Outstate, and Iowa.
 - ⊕ Distance factors
 - ⊕ Repeater tower failed.
 - ⊕ Police and Fire Department were involved in a mock disaster drill. Fire Department does not monitor police car to car frequency. Police do not monitor Fire Departments. On scene frequency. Not able to interact or assist each other as well as we could. Adjustments: making sure we can contact each other on one known channel.
 - ⊕ RFI problems or problems in radio and scanning priorities.
 - ⊕ Sometimes the county West of us overpowers our communication and interferes with our communication with dispatch.
 - ⊕ Several situations where units have been out of Dispatch area and have been unable to communicate with other Departments.

- ⊕ It is difficult for us to communicate with dispatch on portable from inside structures, such as The City Hall, the Local schools, etc. It is almost impossible. Portables "hear" but do not transmit with enough strength.
- ⊕ Flood of 1997 inundated our base, rendered our system useless. State and Private Radio people got a system set up in a matter of a few hours.
- ⊕ Current Rice County Radio shop cannot adequately manage all the users. We have had situations where officer safety was jeopardize because officers can't get on the radio to request help. The joint dispatch project for Rice and Steele Counties is dysfunctional. There have been no corrective actions taken.
- ⊕ Being on the Western border of Minnesota, we many times need to contact agencies from either North Dakota or South Dakota. With different bands and frequencies we find ourselves going through dispatch and calling on the telephone, as it is the quickest. This should not be, we should have direct contact.
- ⊕ Can't use Statewide channel 4.
- ⊕ We can no longer hear the Ely Police Departments frequencies from the squads.

Special Police

- ⊕ None

State Government

- ⊕ Numerous cross-jurisdictional surveillances where communications were not possible with involved jurisdictions due to differences in frequency bands. Numerous surveillances with federal counterpart with same problem as listed above.
- ⊕ St. Peter tornado – interoperability was a problem with locals. Difficult to manage crisis.
- ⊕ Among states at our borders, land, water and air. Disasters – St. Peter, Granite Falls, floods.

Question 2: What operational, technological or political issue do you or your agency think should be considered in the planning and implementation of a statewide radio network for public safety and emergency preparedness entities at all levels of state, and local government, including the federal government?

Municipal Fire Departments

- ⊕ A statewide radio system would infringe on the radio rights of the private operators.
- ⊕ Multiple frequencies available. Separate paging frequency, not for operations.
- ⊕ It's the old adage: Too many chiefs spoil the broth. I have tried to work with state, federal, county and local units of government to establish radio networks and there were major issues over jurisdiction, use of the network, which operations had priority. The development of networks should be done regionally with a clear "up front" understanding of these types of issues.
- ⊕ Cell phone systems, Fax from dispatch to land and mobile.
- ⊕ Maintain local involvement. Listen to rural and local government needs.
- ⊕ During any multi-agency response radio system almost becomes useless.
- ⊕ Ease of using. Better quality. Products / availability open to departments. Cost efficiency.
- ⊕ There needs to be multiple channels for Fire departments to use on fire ground to communicate to each other.

Volunteer Fire

- ⊕ What impact it will have on each entity. Their current system and the need to upgrade, if any. The frequency (how often) there is a need to communicate with other agencies that they aren't communicating with already. The ability to finance the upgrade. How compatible their existing system is versus the new system. Is there a real need to go statewide versus Metro?
- ⊕ Funding for low budget emergency service providers.
- ⊕ We need to be able to keep our own radio communication frequency.
- ⊕ The cost – who pays for it- making sure it is simple – easy to operate.
- ⊕ A cooperative where small departments like us could purchase communication equipment including hand held and pagers.
- ⊕ Many outstate volunteer departments do not have the funds or the knowledge to upgrade and or operate to their current equipment. If a higher level of government gets involved, ROI may get too cumbersome for some members.
- ⊕ Operationally – at least for the fire service we're pretty will set at least in Lake City. Those organizations that need a state implemented system – fine, for those that don't leave well enough alone.

Fire and Law Enforcement people that went through the tornadoes in the past 2 years state that there was so many people using state and local channels often no one could communicate. Will this be a problem when a major situation occurs.

- ⊕ It should be mandatory for all agencies in Public Service to have the same emergency statewide channel to operate on in a large emergency.
- ⊕ Try and keep agencies on their own frequency. Eliminating all of the skip static. Also try to regulate scanner capabilities.
- ⊕ I believe it would be very easy to complicate the fire and rescue process with too much information being monitored at once. I believe the current county wide network works very well.
- ⊕ I think we have this. We need to train more on this and hold agencies accountable to use the correct frequencies.
- ⊕ I would request additional information on this prior to commenting.
- ⊕ Try to use equipment that can upgrade easily. Keep the politics out of it completely. Try to keep it cost effective for us small entities.
- ⊕ Will be in on 800 MHz trunking system approximately 4-2000 with Carver county fire department.
- ⊕ Keep dispatch center with county sheriff departments.
- ⊕ Keep it easy to use.
- ⊕ Political issues should have no part of public safety or emergency preparedness. As a small department (Fire) that in a years time we use our radio's very little. We just hope that our radio's work when we need them. With a very limited budget, we have to do with what we got.
- ⊕ Many outstate volunteer departments do not have the funds or the knowledge to upgrade and/or operate their current equipment. If a higher lever of government gets involved, ROI may get too cumbersome for some members.
- ⊕ What impact it will have on each entity. Their current system and the need to upgrade, if any. The frequency (how often) there is to communicate w/other agencies that aren't communicating with already. The ability to finance the upgrade. How compatible their existing system is versus the new system. Is there a real need to go statewide versus Metro?
- ⊕ Multiple channels should be considered that cross emergency response teams. One for on-site personnel, another for voice traffic associated with the incident command to handle site team and other response teams independent of each other.
- ⊕ Funding is #1. When re-farming of radios comes into effect funding could be a key.
- ⊕ Make the system affordable and accessible to local fire departments. We are currently not given 1st priority when comes to paging system use.
- ⊕ The implementation needs to be done with all users involved in decision making. There needs to be special note that this is a statewide deal and not done with the METRO area in mind only with the outstate lost in the shuffle.
- ⊕ Issues should be left to local units of government to work out. The more units of government involved the bigger the communication problems become. If local units need to communicate with state units, it is best to follow chain of command, i.e. local to county to state and back.
- ⊕ Whatever it takes to get the job done. Regional fire districts communications committees, which would recommend to a "state" Committee.
- ⊕ Statewide won't work, leave at County level.
- ⊕ Most of our radios don't have the new bandwidth spacing.
- ⊕ Keep Local control with County being one point of contact with the state.
- ⊕ Don't make mandates or Laws without making sure there are monies available for Local government agencies to use.
- ⊕ Making sure that carry over does not happen from radio traffic. Keeping frequencies apart from areas in close areas (such as some frequencies a town or two away).
- ⊕ Must have enough towers/transmitters for adequate range for radios 20-25 mile radius.
- ⊕ Full funding @ state level
- ⊕ State or Federal funding for radio and pager upgrades.
- ⊕ Local resources able to operate the radio system, many have volunteers and have limited contact.

School District

- ⊕ None

Ambulance

- ⊕ Availability, simplicity used in instructions, a phone number or help to understand the system.
- ⊕ Cost for small services to upgrade radios to meet new standards
- ⊕ Make sure that radio contact can be made anywhere.
- ⊕ Scrambling signals so scanners can't pick it up.
- ⊕ It would need to be affordable. Also would need to be tested extensively in rural areas. Too often things are simply for Metropolitan areas and simply do not work well in the rural setting.
- ⊕ Police, Fire, EMS should have a better radio system than our highway department.
- ⊕ It is important with a volunteer service that operation channels and frequency selection be simple. Many don't have the experience and time for training is limited with state mandated training already required for EMTs.
- ⊕ Cost is probably the most important issue. Any cost share from where?
- ⊕ Leave under local control. State and Federal people do not understand local needs.
- ⊕ Any mandate needs to be fully funded.
- ⊕ More towers eliminating dead areas where communications not good.
- ⊕ Anytime statewide regulations are mandated to control local issues political problems arise – they are far too numerous to list here.
- ⊕ Uniform radio language protocol and protocol for radio procedures (operations).
- ⊕ Confidentiality

Hospital

- ⊕ Need to work set-up Metro (Pls./St. Paul) first and work your way out to rural areas. Digital radios for clarity is a must.

Utility

- ⊕ Operational/Political. Our utility does not want to be forced to participate and spend money for a system that won't substantially enhance operations.
- ⊕ I've felt for some time that a statewide utility channel would greatly enhance mutual aid.
- ⊕ Number 1 issue is cost. Our current system allows for us to adequately communicate for our needs. We also communicate with other city departments on their system, which works quite well. The various city agencies have their systems at various sites which avoids the "all eggs in one basket" scenario. In law enforcement, hospital, or another agency would move from the VHF band to say 800 MHz, and extreme burden would be placed on all other agencies should they deem it necessary to continue communications. If we were forced to change frequency bands, we would be abandoning a 3-4 year old VHF repeater system along with portable and mobile radios, which are mainly less than 7 years old. We are very pleased with our current system. And communications abilities with all other city government agencies.

County Emergency Management

- ⊕ Adequate portable and paging coverage in remote rural areas. High level of responsiveness to local needs. Strong local control.
- ⊕ Able to communicate with all agencies during emergencies and amateur radio also is a must.

City Administration

- ⊕ I think it would be very important especially in care of flood and tornadoes. Presently we rely on a bar that closes at 1 p.m. to react when one of the above conditions arises.
- ⊕ Use a frequency that is easy for all types of equipment to access. Make it affordable for small communities.
- ⊕ Our radio system needs to be kept to local radio traffic only. Too much radio traffic would cause confusion during normal day to day operations.
- ⊕ Remember we have unique problems in rural Minnesota especially in Bluff County.
- ⊕ The system should be dependable, it should have full capabilities of radio communication. It should be easily accessible.
- ⊕ Separate frequency just for Emergency Management. Standardized frequencies each community.
- ⊕ Training, shared resources.
- ⊕ Need for inter-agency communication in disasters and day to day response. Need for local emergency operations center with backup electrical power and capabilities to communicate with local (and mutual aid) assistance.

How much will it cost local tax payers; sounds like a good idea; how many frequencies would we have to add; we can presently dispatch/communicate with Fire, Ambulance, County Sheriff, through Fire and Ambulance Frequency.

Animal Control

- ⊕ In helping other cities, a statewide channel would be helpful.

City Parks Department

- ⊕ None

Transit

- ⊕ Our Transit repeater shares a local Government repeater with the County Highway department and county school districts. We have no other control or planning issues.
- ⊕ Cost to local units of Government.
- ⊕ Keep it simple with no new costs to counties.
- ⊕ Cost and compatibility with all equipment both new and existing privacy.
- ⊕ Maintain a local attitude for response to local situations in a timely manner.
- ⊕ Funding for equipment. Full coverage of all areas. Develop technology to use cell phones instead of radios. Everyone will be carrying some type of communication device. Cell phone tower coverage is in-place. We are developing to many parallel redundant systems. Radio tower, cell phone towers, pager towers. Consolidate technology to eliminate the need to carry a fire, pager, cell phone, two-way radio etc. In order to communicate with various entities. Are two-way radios going to be around 5 to 10 years from now?
- ⊕ Better communications among different cities within local area mutual aid for whatever most departments are able to talk to each other more towers are needed.
- ⊕ Responsibility for maintenance and the ability of other agencies using the system to get their problems resolved. (The state is non-responsive in dealing with other problems under their responsibility is some cases). Priority usage during emergency operations. Designated inter-agency contact people. (Authority) specific procedure as to when inter agency contact should be made (under what circumstances)
- ⊕ Cost is a major factor.
- ⊕ The level of flexibility each agency would have percent of cost to each agency would there be a priority agency or equal?
- ⊕ Make sure it is extremely easy to use, any complications in ease of use will bring down time. Consider separate systems for emergency or public safety purposes and local government use purposes.
- ⊕ This looks like a very large system with many control problems. It will be interesting to watch this develop.
- ⊕ Provide enough frequencies so each unit can keep outside "chatter" to a minimum.
- ⊕ A better paging system.
- ⊕ Have no comment and am not interested in joining with others e.g. state.
- ⊕ To assure an open and enough frequencies to ensure use of all times.
- ⊕ To make this affordable for all participants and not send down some mandate that is not supplied by money to help pay for it! The system works now does bigger government have to interfere to try to fix something that isn't broke.
- ⊕ A pager with voice attachment.
- ⊕ The true effectiveness and advantages of this system. The current conditions and life expectancy of the existing system. The ability for entities to pay for a new system.
- ⊕ We would be concerned about the costs.
- ⊕ If a statewide radio network is implemented. I wonder if the equipment costs and the maintenance costs are going to be excessive for a small community like ours.
- ⊕ Do not mandate participation and protect frequencies.

Public Works

- ⊕ It would be and extreme waste of money.
- ⊕ Participation in planning and development.
- ⊕ Not that knowledgeable.
- ⊕ Do not have any comments at this time.
- ⊕ In cases of mutual aid a statewide channel would be helpful.

- ⊕ There should be the ability of different levels of Government to be able to communicate in times of emergencies. It is very hard to effectively communicate with different government agencies unless we can all go to a specific frequency that all can use. It would be nice if there was one statewide frequency that all agencies could use during emergencies. You would have to train how to use them and have a designated net control operator when using that frequency.
- ⊕ The ability to communicate with all agencies in our region for emergency work and sharing of resources.
- ⊕ I don't believe we have a need for a statewide radio system in our department because our radio system is adequate for our use.
- ⊕ Keep it simple to use, have a statewide channel for all agencies to use in situations where different levels of government are working together.
- ⊕ The cost of implementing a statewide radio network would have to be kept within reason.
- ⊕ The decision would have to be made on a higher level.
- ⊕ The emergency response personnel are able to use our frequency when situations such as disasters occur. So that we may monitor forecast and local emergency channel when necessary.
- ⊕ The safety of our staff is also important.
- ⊕ No mandates with out funding. If a statewide network is institutional it should be an addition to and not a replacement for local systems outside the Metro area. I believe that there is a better way to use the resources we now have. There is more than enough equipment cluttering the landscape already.
- ⊕ Need frequency of use, cost/ benefit.
- ⊕ Interference.

Sheriff's Department

- ⊕ The monies needed to pay for a statewide radio network would be a huge problem for outstate agencies with limited budgets. We just installed new consoles and updated mobile radios. We cannot afford more updates for a long time. However we also believe it is important to be able to communicate with all other entities and are working on this issue.
- ⊕ Local control over policy issues, state funds to defray costs take extreme care not to end up with too much radio traffic on the same frequency.
- ⊕ Rural regional planning needs to be considered as to the individual needs of that area. I'm not sure if a Metro Radio Board has the ability to recognize the uniqueness of the individual agencies.
- ⊕ If planning and implementation take place local entities not just Metro entities must be involved. Many agencies such as our county have already upgraded their systems. How would these effect agencies such as ours? Counties such as ours won't support unfounded mandates or negative changes to our current system
- ⊕ If the system is going to be implemented then it should be for all public safety agencies not just a select few. However it is a good idea for larger jurisdictions to go to the 800 MHz system that will add a lot new frequencies for those who don't change cost would be a major factor for this county it would be over 5,000,000.00 from a previous survey/study. Renting towers and equipment maybe a cheaper route.
- ⊕ In the rural areas of the state the State Patrol district boundaries could be utilized to make it more workable on a local level. State government needs to set-up the parameters that all systems will operate on with impute from the sheriff's associations.
- ⊕ The two issues that come to mind are will this system work in certain areas, with hills, valleys, etc. Is it right for everyone? Financing without state and or federal money many small emergency services, cities etc. Including my agency will not be able to afford changing out all the portables, mobiles, dispatch stations etc. Matching funds aren't much help.
- ⊕ Law enforcement, Fire and EMS are all on the same repeater system in our county. When an emergency occurs we have problems because different agencies are using the repeater at the same time. When we design our new system law enforcement will have its own repeater system that is encoded or digital for privacy. EMS needs a statewide repeater system Fire needs a statewide repeater system.
- ⊕ I don't have a problem with a state network. I'm not interested in regional dispatch. We have our own local concerns and I don't want an outside agency telling us what to do or how to do it.
- ⊕ Geographic location, knowledge of dispatchers, elimination of "skip" and bleed over. The state has been running a surplus for some time while local jurisdictions have had to rely on property tax increases to provide the most basic of services. This has left no money to improve infrastructure that is vital for new equipment such as radios etc. Maybe it is time to set priorities right.
- ⊕ The problems I see with a statewide radio system are many. Unable to get on air because of heavy usage. Lack of control as for us usage, equipment etc.

- ⊕ Cost, size, area
- ⊕ All agencies should be able to talk to each other
- ⊕ Money
- ⊕ What do you get? Who pay for it? Funds not available on local levels. Frequency coordination throughout state.
- ⊕ For us and one statewide frequency with us for federal department.
- ⊕ Something that works and isn't out dated before it's installed.
- ⊕ The interests of public safety need to be considered and needs and interests must be balanced with available resources.
- ⊕ Funding new system is a problem. Control of the system could cause political problems. I'm sure it could be done with current technology but the funding and political barriers are considerable.
- ⊕ If a change is made for pager frequencies all small town Fire and ambulance services would need to buy pager and radios. Political Price tag!
- ⊕ Radio networking across state lines
- ⊕ Who will maintain equipment? Who will manage traffic on frequencies?
- ⊕ The cost of implementing a shared system who is going to pay for all new equipment such as 800 MHz.
- ⊕ The system cannot be so complex that the user has to stop what they are doing to figure out how to operate it.
- ⊕ I feel MDT needs to be installed in all outstate law enforcement vehicles better communications will save lives and save money.
- ⊕ Allow for local government impute prior to decisions being made.
- ⊕ Cost and who will pay. Fairness in allocating resources. Big city / small county
- ⊕ The main concern I have is that this does not end up being another non-funded mandate from the federal or state government down to the local level this seems to be the way the state is doing business these days.
- ⊕ The majority of the funding and at a minimum regional change over not just 1 or 2 counties or cities.
- ⊕ Not able to cross talk to border patrol.
- ⊕ Cost to local government.
- ⊕ Consider leaving Northwest Minnesota as is, thing are working fine.
- ⊕ Left up to local government.
- ⊕ Funding – who is going to fund the project.
- ⊕ Need for many frequencies. Coverage for all jurisdictions. Who will administrate and how will representation be chosen.
- ⊕ To be sure all radios work for all agencies consistently. Cost carefully for reception

Municipal Police Department

- ⊕ Keep it regional in division. Too many departments on same frequency would cause delays in radio traffic.
- ⊕ First I see a problem with budget and money allocated for such projects in outstate. In our present leadership outstate appears to be left out. Our area presently has an 800 MHz tower operated privately that has better communications abilities then our present system. Teaming with private industry in our area could prove helpful.
- ⊕ I'm assuming this statewide network would be similar to law enforcement's statewide frequency. Educating when to use network. Who picks up the cost of upgrading systems in operation now.
- ⊕ Keep the planning and implementation at a county level
- ⊕ Consider having representatives from smaller agencies on the planning and implementation committee. Use as much of the existing equipment each agency has. Should upgrades or outdated equipment need to be replaces, financial assistance should be provide to smaller agencies that have limited funds for the costly changeover
- ⊕ I do not want to wait for 10-28 and 10-US (plate registration and DL information). What will the wait be on a statewide system? The cost to our small low budgeted department? Will everyone on the system would on each other? How many users per area or region.
- ⊕ Make it affordable to the smaller agencies. Metro departments obtain many from Legislature; leaving small departments behind.
- ⊕ Each department works the radio/communication system differently. Such as running vehicle registrations or drivers license checks or use of dispatchers for phone calls and notifications. Local dispatchers also know the communities they serve as well as the people who live in that community. Problems with dispatch outside the area may arise and the public may not get or feel they were given the same type of service as in the past.

- Keep all operational technological issues as local as possible. Poetically I can't see how system could work beyond local area. Too much impute to operation and budget if system to broad. Smaller departments such as ours would have hard time with cost of operation of large system if we had no say where system located.
- ⊕ Strict users guide for all with local involvement in planning. Will there be enough frequencies. What will be the cost? Who will pay? Will it be "mandated" by state.
 - ⊕ Consider multi-channels for talk around Versus Emergency traffic get everyone's impute. Have policies in place and guidelines up before starting or going live.
 - ⊕ Funding – federal – state- vs. city. If the city has to purchase the equipment give us notice so that there is time to convince council the need and budget for the equipment.
 - ⊕ Trunked, digital, non-800 MHz. In our part of the state skip/congestion is minimal. But in a consolidated dispatch S.O. put everyone on one frequency. We have enough frequencies that could be pooled and provide much better coverage to field units. Too spread out for cost effective 800 towers.
 - ⊕ Smaller local government municipalities – will not be able to fund for this Fire, Police.
 - ⊕ Too complex to describe here.
 - ⊕ Cost, timing
 - ⊕ Staffing competency. Users and techs make decisions they should rather than some know nothing politician.
 - ⊕ All areas of the state should have access/coverage regardless of population.
 - ⊕ Just so they do not overcrowd the airways so people walk all over each other's conversations.
 - ⊕ Co-operation with Stearns County Sheriff's department would have to be must. Also cost would be a large factor.
 - ⊕ Severe weather alerts need to be addressed.
 - ⊕ More repeaters and towers. Ability to communicate with all emergency service entities from all hand held and mobile radios.
 - ⊕ Each unit of government is unique each has its own operational methodology as well as different missions. Attempting to coordinate the different methodology will be difficult at best.
 - ⊕ Cost to small agencies, reliability of system, we are looking for something better than what we have.
 - ⊕ Affordable for all agencies
 - ⊕ Consider all agency and government to the same don't let state or fed take command and do it their way. Don't let only one big name radio company try telling everyone what's needed.
 - ⊕ Due to the increasing radio traffic with the volume of police calls- more dispatchers – for the reason of officer safety.
 - ⊕ Outstate regions represented equally with Metro area. Under operations - who pays for maintaining system/updating. Would there be cost to any all who use system. Don't see much benefit to a statewide system as far as our department.
 - ⊕ It should have enough repeaters so that local and outlying areas are covered unlike MNSEF.
 - ⊕ The facts need to be set in stone prior to any agreement. "Financial and control of system.
 - ⊕ HIGH PRIORITY! Mobile data terminals access for rural agencies.
 - ⊕ System needs to be kept simple and easy to operate.
 - ⊕ Digital technology at no cost to municipality.
 - ⊕ You would need to sell local councilmen and to have money or grant to pay for system if it is a high cost to Small City it will not happen.
 - ⊕ I don't think it an issue.
 - ⊕ Expand the number of statewide frequencies that can be used for Public Safety.
 - ⊕ Range of towers, the ability to communicate with agencies further than 6 miles.
 - ⊕ I believe it is very important to be able to access all other agencies with one radio. There must be enough channels for every one to have access to, without having to wait. Funding to pay for it.
 - ⊕ Enough channels and distance for rural Minnesota.
 - ⊕ Involvement or representation from each entity involved for the implementation process. Technological consideration for future updates, expansion. Provide privacy/security for transmissions.
 - ⊕ Frequencies that are not scannable to the Public. Laws prohibiting Public from scanning any Law enforcement activity.
 - ⊕ Constant access and method of payment.
 - ⊕ Do not believe this to be an issue. I believe we should have this technology already.
 - ⊕ Keeping in mind that smaller agencies don't have the capital to keep up with technology. If changes are mandated, make sure there are grants available so we can afford it.

One of the biggest issues will be money. Will there be state or federal monies made available for small agency upgrades?

- ⊕ Solve communication problems listed above.
- ⊕ I would worry that dispatchers would give certain agencies priority because they are perceived as bigger and more powerful rather than priority given to the seriousness or potential seriousness of the call.
- ⊕ We would just like to have a safe, clear line of communications.
- ⊕ Low Band Frequencies on mobile units so one does not cover other units in use. A strict guide policy using the radio network only in emergency use.
- ⊕ Funding for small County and Local Agencies to acquire the new technology.
- ⊕ System should be an open-ended design with the flexibility to adapt to specific locales. Should integrate both voice and data systems. Politically, a lot of turf issues will have to be resolved. 800 trunked systems handle volume of traffic but you still have to spend money to staff adequate levels of dispatchers.
- ⊕ It should be "inter"-state.
- ⊕ Don't forget remote Rural areas where numbers of possible officers for response are limited.
- ⊕ What considerations are to be given Greater Minnesota outside the 7 County Metro area? Will there be regional operations points? What are cost factors to be considered for rural small communities?

Special Police

- ⊕ A statewide radio system would infringe on the rights of the private radio operators.

State Government

- ⊕ Data privacy
- ⊕ Should have full state coverage with seamless operation to radio user. Should include in building coverage should have a high level of voice security available in all areas. System should permit secure in-agency communications and seamless secure interoperability with local and federal jurisdictions. A continuing funding source not dependent on specific agency budget should provide equipment and other system costs. Operations standards should be uniform throughout the state.
- ⊕ Funding, staffing, equipment (compatibility with existing)
- ⊕ We will follow the lead of the state patrol. Cross communications are very important to us.

Question 3: Place additional comments here.

Municipal Fire Department

- ⊕ None

Volunteer Fire

- ⊕ I have been Fire Chief for 8 months and this is reflected in my response. I have a concern of having multi-users on our radio channel. I would like to maintain our present system.
- ⊕ We are a very small town, with a number of calls each year. Radio Communication is very important as we are out as far as possible in one County. Pagers, Radios, and our current radio system is not that old (we have spent a lot of money to update in the last 5 years). Refarming of Radios is beyond our budget, but know that it is needed to improve our system. Waseca County is currently trying to upgrade their system, which is going to put a major strain on our budget.
- ⊕ More funding to small fire departments

School District

- ⊕ Radios need to be small and mobile so they can be used beyond the vehicle and accessible 100% of the time. They need to be on the person, not the vehicle.
- ⊕ To be able to have long-range communication that is clear and static free without the ability of home scanners to listen. Also to be able to communicate with local authorities.
- ⊕ Our system is simply for our bus operators to communicate with the school office and bus contractors base and garage.

Ambulance

- ⊕ Need a radio system that works and a service department that does work for police ambulance fine on a timely basis. More frequencies with repeaters more towers all over our area, to many dead spots.

- ⊕ Our biggest problem is with 911 paging. We are near the county line and the only ways Douglas County can page us is by telephone/encoder or calling Otter Tail county dispatcher and having them relay the information. Either way is out of normal dispatch procedures and delays our being dispatched. In regard to section 3 Question 4 our biggest problem with range is on our local government frequency on our local tower. More than 3-4 miles out we have to shift to Otter Tail Sheriff Vining tower, which is already a very busy channel.

Hospital

- ⊕ We are a hospital, which operates an ambulance service we use the standard HEAR radio system for base and mobile operations. We also operate a paging base for internal use.

Utility

- ⊕ Due to organizational control and operational money benefit issues, Rochester public utilities would limit its participation to having its independent dispatch center participate on a trunked system. For emergency needs only if at all. All mobiles and portables would remain on our own VHF and UHF frequencies. Our dispatch center is staffed 24/7 and is in a better position to relay instructions rather than interoperability directly to individual units.

County Emergency Management

- ⊕ The maintenance department use two-way portable radios for communications between two buildings and a total of 41,000 square feet.

City Administration

- ⊕ We are a small community of 52 people. We contract all our services and have no full time employees. Work that can be done by council members is done for pay by the hour otherwise its hired done. Police and Fire protection is contracted.
- ⊕ We have one radio in the car and one radio in the office – shared system with Highway department.
- ⊕ We have a CB radio between the City Hall and the Grader operator. We can also call Pine County and a garage in Pine City with this CB. We have no plans for any other type radio.
- ⊕ Approximately 3 times a year – depends on if assistance is needed by other city personnel. Share a repeater station with Fire, Ambulance when operating on these frequencies.

Animal Control

- ⊕ The city of Madelia, Animal Control does at times use the police channel in which the county law enforcement has the licenses.

City Parks Department

- ⊕ We prefer cell phones. Hearing constant talk on the radios is very annoying and when you need it the most you are out of range.

Transit

- ⊕ We believe that some kind of center based radio dispatch system will be needed soon in order to take our small system to the next level of expansion or to consolidate it with neighboring systems.
- ⊕ Our transit system has vehicle units of the highway department two-way radios but we seldom use them. We deal with cellular phones.
- ⊕ The public safety departments – Police, Fire and County Sheriff have much more of a need to talk to outside agencies – any communication with the street department (during an emergency or disaster) can be through those departments. Street department needs are simple with no need to scramble (all those scanners have to have somebody to listen to it might as well be street) and no need to communicate with state or federal agencies over a two-way radio. In the last 2 disasters of recent years the record flood of 1197 and the windstorm in 1998. Any contact the street department had with the state or federal agencies would not have taken place over the radio.

Public Works

- ⊕ The city of Madelia – street department does use the city channel for our use this channel does belong to the city of St. James, Minnesota
- ⊕ There have been times when we could have used the state DOT frequency when working with them during times of emergencies. When we installed our new radio system we went multi-channel with some room for additional channels for just such future use. We went this route for emergency preparedness reasons, so that all county

agencies could use some frequency in case one system went down due to tornadoes etc. This way all county and city units can be radio controlled on any frequency by the CD director and Sheriff department. It would be nice to have that capability with the state agencies also.

- ⊕ This survey was difficult to complete because of a lack of expertise involving the technical end of radio communications.
- ⊕ We currently use cellular telephones for communications.

Sheriff's Department

- ⊕ Grant planning needs to start including the entire state not just Metro. I'm not aware of any grants going out-state except for Olmsted County.
- ⊕ Maintenance over all according to radio area experts would be costly but they all agree would be an over all good system. Clear better distance and fit the modern technology changes. Public works need to stay in the VHF system.
- ⊕ I answered some of the questions "never plan to use". It doesn't mean that we "never" will plan to use them. We just don't have plans in place to use them "within" 5 years. The MDT and MDC is something that I would believe we could use and be of benefit to my department. Again it is money that prevents us from either having them or planning for them.
- ⊕ While no plans are made to replace the "system" we are finding the need to replace units. The older units do not have the capabilities of the newer models. I would say that within a few years replacing base stations might need to be addressed.
- ⊕ #8 - As sheriff I'd expect to remain in control of our radio and dispatching services for our county. As an elected official I'm responsible for all emergency services in the county.
- ⊕ A regional dispatch study was done 4 years ago. Project was rejected for lack of saving money, staff, cross training to do multi-task jobs. Loss of efficiency. Loss of contact with community. Loss of economy. Concern from public on loss of local control.
- ⊕ Instead of returning the money in the form of refunds and other quick fixes, money that is already been paid in the form of taxes should be used to upgrade vital emergency services functions.
- ⊕ We communicate well with other agencies using the statewide radio frequency for our area that's all we need.
- ⊕ While this department utilizes the listed # of radios other public safety providers use the same radio frequencies.
- ⊕ A trunked system capability is certainly desirable. Will the 800 MHz system work here?

Municipal Police Department

- ⊕ Section I – because of the immensity of the county and that the county seat (Dispatching Center) is so far away, we have difficulty communicating with the Sheriff's office with our portable radios. Most of our calls for service come through civilian answering service hired by the city. The answering service does not have radio contact with us they page us on our pagers and then we call them by phone, either cellular or landline. We feel this works better for us because the Sheriff's office couldn't handle the additional workload plus it would be a long distance phone call for a resident to call the S.O. In summary, the radios systems is archaic at least, certainly unreliable.
- ⊕ The New Prague Police department utilizes radio frequencies from Scott, Rice and Le Sueur Counties due to our geographical location. A 800 MHz trunking system would not be feasible for our agency. If Scott county was included in a 800 MHz trunking system (Scott County is our primary dispatch) we would have to maintain two systems in area to communicate with Rice and Le Sueur counties who may not be included in 800 MHz trunking.
- ⊕ Will there be grounds for small, low budgeted departments? The cost? Is it necessary to consolidate? What is the benefit? What is the plan if the system fails? Down time etc.
- ⊕ Great need to help smaller agencies get at least MDT's in not MCTs
- ⊕ Unsure at this time.
- ⊕ Technology is changing so fast and so rapidly updating seems to be a situation where we are running only to stand still. By the time the seed is planted to the time some new system gets implemented could be five years. Within that time frame tech. Could be much more advanced.
- ⊕ I think a very good system can be built and work, but it needs time and work to be put together. Planning for 20 or 30 years down the road. I remember the last radio program back in the 70's and it was only good for 2 years before department went on their own.
- ⊕ Cooperative efforts of all governments

- ⊕ I think that local, county and state government should all provide shared funding to have enforcement agencies equipped with MDT or MDC devices.
- ⊕ HIGH PRIORITY! We would like to see mobile data terminal access for rural Minnesota.
- ⊕ Access to surrounding law enforcement records via MDT's would be of great help. Today's society is very mobile. Anything that can be done to assist in obtaining or disseminating information among law enforcement agencies would enhance our effectiveness for enhancing public safety.
- ⊕ APCO is too involved in the allocation of Public Safety radio systems. At minimum, all Police frequencies should reside at the UHF range or better. All equipment, like Radar Units, Mobile Video, and remote transmitters operate between 122.00 – 165.00 UHF. This interfered with mobile radio operations as does high power transmission lines and peripheral electronic devices and computers. I've been told that all the frequencies are used up in our area and we can't obtain additional ones. I don't understand this as I was led to believe that Police had priority for radio frequencies. The state needs to lobby the FCC directly for more available frequencies.

Special Police

- ⊕ None

State Government

- ⊕ We are a statewide agency and work with federal, state and local counterpart's everyday. We need interoperability with them on a secure radio system, which has in-building coverage throughout the state. We also need statewide secure car to car coverage among our investigators on a daily basis.

Appendix "B"

Statewide Public Safety Radio Communications Initiatives in Other States

Statewide Public Safety Radio Communications Systems in Other States

Submitted by Pam Newsome, Mn/DOT Library

October 17, 2000

The object of this project to gather information from several states regarding safety radio communications systems, in order to determine: whether there is a trend toward the implementation of statewide systems; how systems are authorized and funded; how system governance works and how the relationship among member agencies works; what technology is being used; and how migration from older systems is handled.

Among the states that were successfully contacted, Delaware, North Dakota and South Carolina have systems in place. Colorado, Florida, Michigan and Ohio are well along in the implementation process for new systems. Alaska, Nebraska and Wisconsin are in preliminary or planning stages. Kentucky, Louisiana and Washington state do not have statewide systems.

Statewide public safety radio communication systems provide interoperability among state, federal and local public safety agencies in a state. They include law enforcement, corrections, natural resources, transportation, fire and emergency medical personnel. Some states have, or are implementing, such all-inclusive systems and some are more limited in scope. The following table gives a summary of each state that was included in the study. A state-by-state narrative is available upon request.

Statewide Public Safety Radio Communications Systems in Other States

The table below summarizes the status and characteristics of statewide public safety radio systems in ten other states. Seven are fully or partially implemented; three are in the planning stages. Of the systems that are in place or being implemented, most use 800 MHz technology. The North Dakota system, which has been operational since 1977, uses VHF. In four of the states, the agency responsible for the system is the agency that handles telecommunications/technology for the state. Two systems are under the State Police/State Patrol, two are under Management & Budget & Control Boards, and one is governed by a multi-agency steering committee. In Delaware, implementation was under the Department of Administrative Services and ongoing maintenance is under the Department of Public Safety. Most of the systems were funded with state bonds and one through a state trust fund. Only one system has any federal funding. Several of the systems have or are planning user fees to help pay for equipment and/or ongoing operation and maintenance costs.

| State | State Governance | Advisory Bd./User Group | Status of System | System Users | Technology | Funding Sources | Cost | Web site URL |
|--------------|---|--|-----------------------------------|-----------------------|-------------------------------|---|------------------------|---|
| Alaska | Dept. of Admin, Info. Technology Group | | Engineering evaluation being done | State, Local, Federal | To be determined | To be determined | | |
| Colorado | Dept. of Personnel, Telecom. Services | Cooperative Communication Network of Colorado | In Phase 3 of implementing | State, Local | 800 MHz | Public safety trust fund; local users purchase their equip. | \$150-200 million est. | http://www.state.co.us/gov/dir/gss/cits/comm/dtrs/dtrsindex.htm |
| Delaware | Dept. of Telecom. & Tech; Dept. Public Safety | Informal user committee | In place since 1998 | State, Local | 800 MHz | Bonds; general fund and local funds for ongoing cost | \$52 million | http://www.state.de.us/pcomm/800a.htm |
| Florida** | State Technology Office | Joint Task Force | 50% of state is covered | State law enforcement | 800 MHz | \$1 of each vehicle registration and voter registration fee | \$220 million est. | http://www.stste.fl.us/dms/tools/plnpol/r9p1n10.pdf |
| Michigan | State Police | Local user meeting; planning a formal user committee | In Phase 4 of implementing | State, Local, Federal | 800 MHz | Bonds (State Bldg. Authority); user fees and general fund of upgrades.maintenance | Approx. \$200 million | http://www.mpscs.com/ |
| Nebraska | Dept. of Admin. Services | Public Safety Wireless Communication Advisory Board | Planning the system | State, Local | Will be either VHF or 800 MHz | To be determined; will include state funding and user fees | \$210 million est. | http://www.doc.state.ne.us:80/radiotf/intro-towebpage.html |
| North Dakota | Office of Mgmt. & Budget, Radio Communications Div. | N.D. Peace Officers Communication Committee | In place since 1977 | State, Local, Federal | VHF | 75% federal grant, 25% general fund to implement. Ongoing from general fund and county 9-1-1 rev- | | http://www.state.nd.us/radio |

** The state of Florida information above may no longer be applicable. Florida has made an administrative decision to privatize their state radio facilities. Information not available as of this writing.

| State | State Governance | Advisory Bd./User Group | Status of System | System Users | Technology | Funding Sources | Cost | Web site URL |
|----------------|---|--------------------------|--|----------------------|--------------------|--|--|---|
| Ohio | Six-agency Steering Committee | No local users yet | Beginning to implement | State, open to local | 800 MHz | Bonds (State BLDG. Authority); member state agencies pay ongoing costs | \$275 million | http://www.state.oh.us/das/dcs/marcs |
| South Carolina | Budget & Control Bd., Info. Resource Office | Users advisory committee | 75% of state covered | State, Local | 800 MHz | Paying fees to share infrastructure owned by utilities; seeking leg. approp. to purchase | \$16 million est. tp purchase sites form utilities | |
| Wisconsin | State Patrol | State /local committee | Planning the system; conducting pilots | State, Local | Leaning toward VHF | To be determined | | |

Appendix "C"

800 MHz Executive Team Methodology

In order to determine the current status and needs of public safety wireless communication users throughout Minnesota, the 800 MHz Executive Team met once every month. The process began by educating 800 MHz E-Team members on the issues that are, or will impact, wireless communication users. The 800 MHz E-Team then identified main categories that they felt needed to be addressed. Those issues include:

1. Spectrum (radio frequencies)
2. Technology issues
3. FCC regulatory issues
4. Funding
5. Governance
6. Interoperability

The 800 MHz E-Team then determined that additional information would be required to assess the impact of a shared statewide wireless system. The 800 MHz E-Team listed the following:

1. What are other states doing?
2. Is there any interest in a shared statewide system by the local public safety agencies in Minnesota?

In order to get a better understanding of the above issues, the 800 MHz E-Team developed a questionnaire with specific questions pertaining to each issue. The survey was mailed to all city, county and other major wireless user groups on August 4, 2000. The survey responses were used to help the 800 MHz E-Team gain a better understanding of several of the issues raised in the legislation. Those issues include:

1. Current and future needs and capacities of radio systems in outstate areas.
2. The potential for implementation of a multi-agency, multi-jurisdictional shared radio system.
3. Potential guidelines for governance and system participation by state and local units of government
4. Statutory changes required implementing a statewide shared public safety radio system.
5. Expansion capacities of each local government and major user group.
6. Estimates of local government and major user groups of the anticipated level and timeline for using the radio system.
7. Analysis of the expected costs of implementing the radio system.
8. Proposed funding mechanisms, including options for allocating costs among local governments and major user groups.

The survey data was compiled and analyzed by members of the 800 MHz E-Team. (See Appendix A for an itemized account of each question contained in the survey.) The 800 MHz E-Team developed proposed recommendations based on the findings from the survey and other data gathered. Those final recommendations are included in this report.

A draft report was developed by the 800 MHz E-Team and then distributed to local governments throughout Minnesota. Ten (10) regional meetings were held throughout Minnesota. With the assistance of organizations such as the Association of Minnesota Counties, League of Minnesota Cities, Minnesota Sheriff's Association, Association of Minnesota Chiefs of Police and the Association of Minnesota Fire Chiefs, the 800 MHz E-Team sent invitations to county and city administrators requesting their agency's and department's participation at the nearest regional meeting to review and discuss the draft report to the Legislature. The comments received as a result of the regional meetings are reflected in Appendix D of this report

Appendix "D"

Local Input to Draft Report

Local Reaction to Statewide, Shared 800 MHz System Report

The final component of preparing this report entailed a series of meetings with local entities. Ten meetings were held throughout the state to review the draft report findings and recommendations. Notices were again sent out to county and city administrators. They were asked to distribute the meeting notice to any radio users within their jurisdictions. The meetings were conducted in informal settings and attendees were encouraged to give verbal feedback during the meetings. The attendees were also given comment sheets that they could fill out anonymously and send back to the 800 MHz E-Team. They were also asked to take additional copies of the report back to their communities for further distribution to any other stakeholders they felt may have an interest in the issue of a shared statewide radio system.

There were approximately 90 attendees at the regional meetings. There was representation from the following departments at all meetings: sheriff's office, police department, fire department and Minnesota State Patrol. There was also representation from the highway departments, utility departments, park departments, public works departments, city and county administrators and school districts at some of the meetings. As of January 3, 2001, fifty (50) of the departments represented at the meetings have sent their comment sheets to the 800 MHz E-Team.

Metro Input

Although the report is centered around Greater Minnesota communications issues, it was pointed out to the E-Team that the governance alternatives included discussions about the Metro area and specifically the Metropolitan Radio Board. Because of this, the E-Team met with members of the Metropolitan Radio Board, and other government and communications officials from within the seven (7) county Metro area, to discuss this report. Comments from the Metro meeting are also included in this appendix.

Comments:

Six specific questions were asked on the comment sheet as well as to the participants at the regional meetings. These questions with responses follow:

1. Which of the governance options presented in the report do you believe would be best suited for your type of government service?

Of those responding, 42% indicated that a Statewide Board that included the Metro Area (Alt. 1) would best suit their needs. 8% said that the State Agency Leadership (Alt. 2) would be the best governance board.

40% indicated that Two Separate Boards (Alt. 3), one for Greater Minnesota and one for the Metro, would be best suited to their needs.

10% indicated that some other alternative should be explored.

- ⊕ Three (3) boards based on geographic locations.
- ⊕ We have no options, we are too small.
- ⊕ Needs to have equal representation from Greater Minnesota
- ⊕ Three (3) boards; one Metro, one for small agencies and one for large agencies. All three coordinate for legislation and funding.
- ⊕ Can have separate subcommittees, Metro, non-Metro, state. Also must have non-participants in the planning to facilitate growth and coordination.

2. Which of the funding options presented in the report do you believe would be best suited for your type of government service? This pertains to Item II, Initial Equipment Requirements.

16% selected the State General Fund Loan Account (Alt. 1) as the best method.

10% indicated that the PFA (Alt. 2) would be the best source of funding for their equipment.

18% indicated that 9-1-1 Fees (Alt. 3) would be best suited to fund their equipment needs.

0% Alt. 4.

0% Alt. 5.

Of those responding, 50% believed that Federal Grants (Alt. 6) would be the best way to obtain money to fund the purchase of the equipment they would need.

6% felt that some other method should be examined.

- ⊕ The state pays for everything.
- ⊕ Use a combination of the three alternatives.
- ⊕ Some type of lease arrangement.

2a. Which of the funding alternatives presented in the report do you believe would be best suited to your type of government service? This pertains to Item III, Ongoing Maintenance Requirements.

Of those responding, 34% indicated that Annual Radio Fees (Alt. 1) would best suit their needs.

22% selected General Local Revenues (Alt. 2) as the best method to cover maintenance costs.

36% believed that Subscription Charges (Alt. 3) would best meet their needs.

8% offered other methods to obtain maintenance revenues.

- ⊗ Time for federal government to step in and help the local governments in updating their system.
- ⊗ State pays for everything.
- ⊗ Combination of local revenues and annual fees.

3. Based on the recommendations in the report, do you believe that your government agency could get fair representation in the planning and operational control of the system?

80% believed that their agency could get fair representation based on the board make-up described in the governance section of the report.

20% indicated that they did not believe their agency could get fair representation. All indicated that because of their small community size that they would be at an unfair advantage.

Reasons why they felt they could not get fair representation:

- ⊗ Too small of a department (to get equal representation).
- ⊗ You should have one entity leading the charge on this issue. It should be responsible to all on an equal basis.
- ⊗ We're not really sure why at this point.
- ⊗ Outstate Minnesota is insignificant.
- ⊗ Smaller agencies get run over by the larger ones. It all comes down to dollars and is evident in the report.

4. Based on the report, would your agency/department give serious consideration to participate in a shared statewide 800MHz radio system?

68% indicated that they would consider participation in a shared statewide radio system.

32% indicated that they would not participate. Comments on why they would not participate:

- ⊗ Need more information on costs. (Several comments)
- ⊗ Just bought a new VHF radio system.
- ⊗ Somebody else fund it.
- ⊗ Need more local input. Too much is decided in the Metro. Needs to be better representation in Greater Minnesota.
- ⊗ Just spent money to upgrade our current radio system

5. Does the report address all of your (agency) concerns and or issues?

56% indicated that the report addressed all of their issues.

44% indicated that the report did not satisfy all of their issues.

Concerns:

- ⊗ Where will the money come from? How much will it cost locals?
- ⊗ Are there plans to be able to talk across state borders with the new system? We need to be able to talk to North Dakota officials. (Several comments)
- ⊗ The report doesn't discuss funding for small departments.

- ⊕ Will the system talk across state lines?
- ⊕ We could not afford the expense of changing over to a new 800 system.
- ⊕ The report does not present any clear funding mechanism.
- ⊕ The report does not explain how the education will be done and how the money will be made available.
- ⊕ Should discuss data issues.

6. Other comments or concerns?

- ⊕ Needs to provide for equal partnership responsibilities. Local participation is critical for success.
- ⊕ A mixture of alternatives for funding and governance would be best. Any federal funds would be positive, but I think there is limited availability.
- ⊕ Our radio budget is \$8,000. A shared 800 system is not sensible due to cost considerations without a state or federal grant.
- ⊕ No interest lease arrangements may be necessary to provide for local participation.
- ⊕ The state doesn't have to stay completely out of the governance. Just leave local decisions to local officials and keep the locals informed throughout the process.
- ⊕ I believe, at least in NW Minnesota that you should look at a public/private partnership in setting up the system. With the vast area that needs to be covered and the low population, I believe that this can be more effectively done through this type of a partnership.
- ⊕ We are interested, but only if we have some control of policy and funding choices.

The Following Comments Were Received Through Discussions at the Regional Meetings Held in Greater Minnesota.

Tabulated below are the comments, both verbal and written, from representatives of the local units of government. The comments are sorted into categories matching the recommendations of the report.

State Take the Lead Allowing for Voluntary Local Participation:

- ⊕ Can this (the radio project) happen based on Governor Ventura's administration cutting back on other services to cities and counties (dollars and cents)?
- ⊕ The vision for project is good. There needs to be some global direction set by the state.
- ⊕ Need to sell other advantages of the system such as Mobile Data Computers, officer safety, tools and capabilities.
- ⊕ Must have phased in process.
- ⊕ Why is state sending back rebates when locals need to raise money to fund participation?
- ⊕ What is time frame for the statewide shared radio system?

Education and Technical Assistance:

- ⊕ What are the capabilities of the system, will it provide coverage to fill in holes?
- ⊕ You will have no problem selling law enforcement on the idea. However, you need to hit (make presentations to) the county boards.

Education- your presentations will have to go way back to basics of radio and how the system will meet the needs. Your education program should be targeted on decision makers.

- ⊕ Are controllers located in counties?
- ⊕ Did your survey find out how important communications is within the total scheme of things on a day-to-day basis verses an emergency or critical incident?
- ⊕ VHF band has problems with interference.
- ⊕ Operationally will it be easy to use for officers and dispatchers (patches, channel selection, etc.)?
- ⊕ Does the trunking concept work with analog or digital technology?
- ⊕ Have you talked with Association of Minnesota Counties?
- ⊕ What about cellular (is this a viable option)?
- ⊕ What about statewide roaming?
- ⊕ What about coverage with 800 MHz verses VHF?
- ⊕ What about private industry systems, will they have better foundation?
- ⊕ What about the present equipment on our systems, can it be used on the new network?
- ⊕ How will small agencies like ours get educated on the features and capabilities of the system?

Establish Local Planning Committees:

- ⊕ What is your plan for migration from the old systems to the new system?
- ⊕ Who's responsible for coverage guarantees?
- ⊕ How will all this participation take place and what is the timing?
- ⊕ Does everyone need to talk statewide or just on a regional basis?
- ⊕ Need migration strategy, from now and into the future so we can prepare for this.
- ⊕ Need a migration plan to address timing of people joining the system.

Establish Standards:

- ⊕ What if some departments go onto the system and some don't? What happens if all surrounding agencies go on system, but our agency does not? How will the new system work? We need migration options.
- ⊕ Will this system give us in-building coverage?
- ⊕ This system must form a solid technical foundation so locals can use for the next 20 years.
- ⊕ What is the back-up scenario? Is the proposed system fail-safe?
- ⊕ Will there be two radios in vehicles?
- ⊕ Will we be able to join later to use mobile data but not the voice system? (unbundle)

Develop Cost Participation Guidelines:

- ⊕ What will the system cost the local units of government?
- ⊕ How will you use tower space to generate revenue? What will that money be used for?

Cost figures need to look at the size of the geographic areas, especially in large areas like St. Louis Co. There will be cost differences due to greater hardware demand.

- ⊕ Needs migration plan and put money aside to make the leap.
- ⊕ What does it cost?
- ⊕ Why do the locals have to pay maintenance on backbone or infrastructure of the system?
- ⊕ The state should pay for everything and run the whole system.
- ⊕ The feds should help the locals out like they did with the L.E.A.A grants.
- ⊕ Our community has no money for participation in a system like this. What will the state do to provide assistance?
- ⊕ Who will pay for this?
- ⊕ The report does not discuss how small departments can generate revenue to support the use of this system.
- ⊕ Our department just bought a new system, do you expect us to come over to this new system and just throw out our new system?

Determine Governance Structure:

- ⊕ What about breaking state into regions?
- ⊕ Can we use different alternatives in different regions? Needs in geographic areas may dictate different solutions. However, the state should still provide the overall plan and vision for this project.
- ⊕ Different regions may get by with different approaches.
- ⊕ What about the layout of the board and who will be on it? We need equitable representation.
- ⊕ What about the 60% of survey respondents that have no plans to change out their radio systems within the next six years, do they pay now or later after the system is up and running?
- ⊕ If Metro is funded separately, they will get more money than Greater Minnesota, we want equal representation.
- ⊕ Because of the size of this system and the governing board, the small local agencies will have no input into the design and operation of the system. (At least six (6) comments were received stating the same thing)
- ⊕ Why don't you consider making three boards? One for northern Minnesota, one for southern Minnesota and one for the Metro area.

Determine Funding Options:

- ⊕ Would join if they could lease radios (Fillmore Co.).
- ⊕ How will small local agencies pay for installing the equipment?
- ⊕ Planners and legislators cannot separate the concept from the cost. Local agencies need to know how much to put aside to make the transition.
- ⊕ Do not want to dip further into 9-1-1 fee (there are other needs that are tapping 9-1-1 fees).
- ⊕ Some counties have more money than others.
- ⊕ Is there a possibility of a joint public/private partnership in the rural areas? Wouldn't this offer a lower cost system?
- ⊕ A word of caution about using grants. Look at what happened in the L.E.A.A. days. Federal grants were given to locals. However, the grant money could not always be used for what the county felt was

best. Some grant programs have hooks that restrict how the grant money can be used.

- ⊕ Money issue needs to be defined like back in L.E.A.A. days.
- ⊕ It all comes down to money.
- ⊕ Let's not battle over funding like we did with 9-1-1.
- ⊕ Our utility department does not see a need and cost justification for a system like this.
- ⊕ What is typical cost for county/city?

Other General Comments:

- ⊕ Will the system be phased in to provide mobile data capacity?
- ⊕ A northern county sheriff supports the shared radio system concept and he needs a replacement system. He needs to somehow inform his county board of what the state is working on. Will we (E-Team members) be available to discuss this with his board?
- ⊕ Will Mobile Data Computers operate on this system?
- ⊕ Please keep in mind as you plan the system that day-to-day service is vital to most public safety operations.
- ⊕ If our system is working good today, how can I justify going to the new system?
- ⊕ Will paging be a part of the new system?
- ⊕ A southwest sheriff has lots of problems with radio system, has to do something soon! Is now leasing services on a commercial analog 800 MHz trunking system.
- ⊕ Most of the systems installed in 1974 are still in operation today.
- ⊕ Interference on VHF channels is getting worse.

Metro Comments

Following are comments received at the Metropolitan area meeting that was held on January 5, 2001.

- ⊕ Why is there such a negative perception of the Metro and the Radio Board in Greater Minnesota?
- ⊕ At what level were the regional meetings held? Were policy makers involved, or were the meetings with supervisory or below staff members?
- ⊕ Developing standards for the radio system are well underway in the Metro, do you plan to use these standards in Greater Minnesota or create new ones?
- ⊕ Whatever the governance model selected, the Metro area needs significant representation.
- ⊕ Your efforts need to streamline governance and have representation balanced with power base and money.
- ⊕ Consider three (3) governing boards, north, south and central.
- ⊕ This discussion today on governance is mirroring what occurred in the Metro ten (10) years ago while we were developing the Metropolitan Radio Board. The Greater Minnesota governance will need a lot of work. You need to assure balanced representation.
- ⊕ You need to involve a core group of decision-makers to resolve the governance issues.
- ⊕ All cities and counties need money. Funding issues are not unique to entities in Greater Minnesota; money issues are still pertinent in the Metro.
- ⊕ Alternatives presented in the report do set the stage for discussion. However, a governance structure does exist here in the Metro, it is called the Metropolitan Radio Board. This Board could be modified

- to be representative of the entire state. Their powers already exist. Representation could be drawn from the regions in dealing with local operational and technical issues.
- ⊕ The report recommended education campaign – you need to get the League of Minnesota Cities and the Association of Minnesota Counties involved in your process.
 - ⊕ Representatives of the Metro feel that the financial benefits given to Greater Minnesota local government entities, needs to be equitable with the investment government entities have put into the Metro system.
 - ⊕ Eight or nine separate regions/districts would be difficult to manage in terms of convening and coordinating local input and decision making. No more than four local user regions should be established. Consider organizing local governance groups around the four State Tourism Districts: south, north central/west, northeast, and Twin Cities.
 - ⊕ Only one statewide system "policy board" is needed, not one in each region/district and not a separate one for the Metro area. The policy board should primarily be made up of local elected officials accountable directly to the voters and should be "evolved from" the current Metro Radio Board by statutory changes.
 - ⊕ Each region/district should have a "user group/technical operations committee" that recommends policy and makes local decisions. The regional group should be made up of government administrators and user agency representatives.
 - ⊕ There should be one statewide "system managers group" made up of the technical managers accountable to the "system owners" who administer the system and implement policy.
 - ⊕ Implementation of two State Patrol districts at a time over four to five years is a good plan. A better plan would be to first implement along the major freeway corridors and the top four or five population centers. This would provide the greatest benefit to the largest number of citizens the fastest and cheapest and would be the easiest initial deployment plan to support from a political perspective.

Survey information and copies of the report are available upon request.

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Or visit our Web site at www.dot.state.mn.us/oec/os800Report.html

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