



# **PROGRESS REPORT ON DEVELOPMENT OF THE INTEGRATED WIRELESS NETWORK IN THE DEPARTMENT OF JUSTICE**

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## **EXECUTIVE SUMMARY**

To enhance the ability of federal law enforcement agencies to communicate with each other, the Departments of Justice (DOJ), Homeland Security (DHS), and Treasury agreed in 2004 to jointly develop the Integrated Wireless Network (IWN), a secure wireless, nationwide communications network. As initially envisioned, IWN would support over 81,000 federal agents in 50 states and the U.S. territories when fully implemented. Estimated to cost over \$5 billion through 2021, IWN would address federal law enforcement requirements to communicate across agencies, allow interoperability with state and local law enforcement partners, and meet mandates to use federal radio frequency spectrum more efficiently.

DOJ law enforcement components expect IWN to replace or upgrade current legacy land mobile radio systems. IWN will likely be a combination of land mobile radio, cellular telephones, and walkie-talkie devices. IWN is planned to provide reliable, secure, nationwide wireless communications capabilities and land mobile radio functionality. IWN is also intended to enhance and simplify communications interoperability with other federal and non-federal wireless users through increased coverage and capabilities. Additionally, IWN is expected to reduce the capital and operational costs of nationwide wireless communications in support of federal law enforcement officers through economies of scale.

The following table details the number of potential IWN users in the DOJ, Treasury, and DHS. DHS currently is the largest potential federal user of IWN, with 64 percent of potential users.

## POTENTIAL IWN USERS

Agency/Component	Number of Total Users by Agency/Component	Percentage of Total Users
<b>Homeland Security</b>		
Animal and Plant Health Inspection Service	66	0.08
U.S. Customs and Border Protection	16,250	19.94
Federal Emergency Management Administration	2,954	3.62
Federal Law Enforcement Training Center	600	0.74
Federal Protective Service	1,244	1.53
Immigration and Customs Enforcement	17,636	21.64
Transportation Security Administration	7,317	8.98
U.S. Secret Service	6,124	7.51
Homeland Security Total	52,191	64.04
<b>Justice</b>		
Bureau of Alcohol, Tobacco, Firearms and Explosives	3,426	4.20
Federal Bureau of Investigation	12,751	15.64
Federal Bureau of Prisons	203	0.25
Drug Enforcement Administration	5,147	6.31
Office of the Inspector General	157	0.19
U.S. Marshals Service	3,089	3.79
Justice Total	24,773	30.38
<b>Treasury</b>		
Bureau of Engraving and Printing	279	0.34
Internal Revenue Service	2,868	3.52
Internal Revenue Service Facilities	601	0.74
Treasury Inspector General for Tax Administration	400	0.49
U.S. Mint	400	0.49
Treasury Total	4,548	5.58
<b>Total Users</b>	<b>81,512</b>	<b>100.00</b>

Source: Justice Management Division, Wireless Management Office, IWN Cost Model

### Office of the Inspector General (OIG) Audit

The OIG performed this audit to assess the status of the development and implementation of the IWN project. The specific objectives of the audit were to:

- assess the implementation of the IWN project, and
- assess whether DOJ legacy communication systems comply with the Department of Commerce's National Telecommunications and Information Administration (NTIA) requirements.

To assess the implementation of IWN, we examined documents provided to us by DOJ officials, including the memorandum of understanding (MOU) between DOJ, DHS, and Treasury; the fiscal year (FY) 2005 Program Plan; the IWN Strategic Plan for 2003 through 2008; the Program Weekly Status Reviews; and the IWN Executive Status Reports and other pertinent documents.

We conducted fieldwork at the DOJ Wireless Management Office in Fairfax, Virginia, at various DOJ offices including the Justice Management Division (JMD), Procurement Services Staff in Washington, D.C., and at the Seattle/Blaine Pilot Project in the Seattle, Washington area. We interviewed the Chief Information Officers (CIOs) of DOJ, DHS, and Treasury and the Directors of the DOJ and DHS Wireless Management Offices. We also interviewed the DOJ Deputy CIO, Information Sharing; Deputy Directors of the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), the Federal Bureau of Investigation (FBI), and the U.S. Marshals Service (USMS); and an Assistant Administrator of the Drug Enforcement Administration (DEA). In addition, we interviewed the DOJ Spectrum Manager, the DOJ IWN Program Manager, and the DOJ Wireless Management Office Administration Officer.

We assessed the progress of the 3-phase acquisition plan to contract with one or more non-government vendors to build IWN across the country. We reviewed the proposals of the four vendors selected to compete in Phase 2 of the acquisition plan and interviewed DOJ staff who served on the management and technical evaluation teams. We also interviewed the Assistant Director of DOJ's Procurement Services Staff.

To assess DOJ compliance with NTIA requirements, we interviewed the Chief of the Spectrum Support Division of the Office of Spectrum Management at NTIA. We also examined the Telecommunications Authorization Act of 1992 and the NTIA Narrowband Mandate of 1993. In addition, we obtained documents from NTIA that discussed the process for requesting waivers and the proposed rule of the Frequency Assignment Subcommittee to prohibit waivers for wideband operations that interfere with narrowband operations. We also reviewed NTIA reports of frequency assignments and waivers for noncompliant frequencies.

In the following sections we provide background to the IWN project before describing our audit findings on the status of IWN.

## Background

### *Spectrum Management*

Government, commercial, and public entities use federal frequency assignments and licenses for specific radio frequencies to provide mobile telephone, paging, satellite services, radio, and television broadcasts. The NTIA manages the complex allocation of radio frequency spectrum for all federal users through an application and frequency assignment process.

In an effort to further the efficient and effective use of the available radio frequency spectrum, in 1993 the NTIA mandated that all federal spectrum users cut their frequency usage by one-half. This process, known as “narrowbanding,” requires replacing all wideband land mobile radio network infrastructure and radios with narrowband-compliant technology. Specifically, the NTIA required that the channel bandwidth used by federal agencies be reduced from 25 to 12.5 kilohertz for very high frequency operations by 2005 and by 2008 for ultra high frequency operations.

### *DOJ Legacy Wireless Communications Systems*

DOJ law enforcement officers require many different types of wireless communications devices, such as portable radios and body transmitters to support criminal, counterterrorism, and counterintelligence investigations and other law enforcement operations.<sup>1</sup> Typically, DOJ law enforcement operations cannot rely on traditional communications equipment such as landline telephones. Therefore, wireless communications systems are critical to most DOJ law enforcement operations, usually providing an officer’s sole means of connectivity to other agents and supervisors. DOJ law enforcement officers primarily use land mobile radio technology that relies on radio frequency signals for tactical radio communications.<sup>2</sup>

As part of this review, DOJ components identified 4,163 different land mobile radio communications system sites currently in use within their components. The vast majority of these systems use technology that is over 10 years old. Most of DOJ’s current communications devices function in an analog rather than a digital mode, which means they have limited functionality and diminished voice communications quality.

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<sup>1</sup> For the purpose of this report, the term “DOJ law enforcement officers” includes Special Agents, Deputy Marshals, and other DOJ law enforcement officers.

<sup>2</sup> Land mobile radio is a mobile radio service operating between fixed base stations, and stations (mobile and hand-held) capable of surface movement. Radio frequency is any frequency within the electromagnetic spectrum.

The following table describes the DOJ law enforcement components' legacy wireless communications systems and shows the age and functional limitations of those systems. The DEA and the FBI reported the oldest radio systems within DOJ. As detailed below, we found that most DOJ systems: (1) cannot support over-the-air re-keying (OTAR) of encryption codes, which means re-keying must be done manually; (2) do not provide advanced encryption to ensure officer safety; and (3) are no longer supported by the manufacturer, which means spare parts are difficult to find, maintenance is essentially a customized service, and the failure rate of this equipment has become a reliability issue.<sup>3</sup>

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<sup>3</sup> A key is the code programmed into radios to allow encrypted communications within a system. To ensure security, these keys must be changed periodically. Over-the-air re-keying would allow a law enforcement officer to receive an updated encryption code rather than requiring manual reprogramming by a radio technician. OTAR capability is limited to the system capability. For example, even though individual radios may be OTAR capable, without the system being OTAR capable there is no OTAR functionality within the system.

## DOJ COMPONENT LEGACY COMMUNICATIONS SYSTEMS

Component	Number of System Sites <sup>4</sup>	Average Age of Systems (Years)	Percent of Systems Not Narrowband Compliant	Systems Frequency Type	Percent of Systems Lacking OTAR Capability	Percent of Systems Lacking AES <sup>5</sup>	Percent of Systems Obsolete <sup>6</sup>
<b>Bureau of Alcohol, Tobacco, Firearms, and Explosives<sup>7</sup></b>	466	10	0%	Very High Frequency	100%	100%	0%
<b>Drug Enforcement Administration</b>	640	13	76%	Ultra High Frequency	24%	100%	71%
<b>Federal Bureau of Investigation</b>	3,057	12	91%	Very High Frequency	95%	93%	84%
<b>U.S. Marshals Service<sup>8</sup></b>	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
<b>TOTAL</b>	4,163		79%		85%	95%	73%

Source: Information derived from DOJ components

Because the DEA's radio systems operate on the ultra high frequency band, which is not compatible with the very high frequency band, interoperability between DEA radio systems and those of the ATF, FBI, and USMS is more difficult, although not impossible to achieve.<sup>9</sup> As part of the implementation of the IWN program, the DEA is expected to transition to very high frequency operations. However, until IWN is completed, the DEA must purchase, operate, and maintain costly dual-band radios to allow interoperability with other law enforcement organizations, including those in the DOJ.

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<sup>4</sup> For the purpose of this audit, we are comparing the number of radio sites per reported system. Radio sites are typically the basic cost unit of a communications system.

<sup>5</sup> The Advanced Encryption Standard (AES) is an encryption algorithm that was approved by the National Institute of Standards and Technology in November 2001 for use by U.S. Government organizations to protect sensitive information. This algorithm replaces the Data Encryption Standard (DES) that has been in use since 1977 and is no longer approved for Federal use.

<sup>6</sup> For the purpose of this audit, obsolete systems are systems that are no longer supported by the manufacturer.

<sup>7</sup> The DOJ OIG uses ATF's systems for its radio communications.

<sup>8</sup> The USMS primarily uses FBI's systems for its radio communications. The USMS is in the process of installing a new radio system with multiple radio sites in the New York/New Jersey area.

<sup>9</sup> A DEA official told us that their communications systems are ultra high frequency because that spectrum was available when the DEA was established in 1972.



Moreover, the older radios are large, obtrusive, and less reliable. Several DOJ officials told us during the audit that because of these factors, DOJ agents are sometimes using commercial communications devices such as cellular telephones and walkie-talkies, which are vulnerable to interception, for communicating with each other instead of agency hand-held radios.

### *Origins of IWN*

In July 1998, Congress directed DOJ components to consolidate their individual efforts to replace their land mobile radio systems and created the DOJ Narrowband Communications Account to centrally fund conversion to narrowband radio communications. In addition, Congress directed DOJ's JMD to serve as the central purchasing agent for all DOJ communications equipment and to develop an integrated, department-wide strategic plan to meet the narrowband conversion and interoperability requirements of DOJ. In October 1998, the Attorney General created the Wireless Management Office within JMD to oversee and direct DOJ's consolidated approach to wireless communications and to centrally manage the consolidated wireless account.

Prior to FY 2002, DOJ and Treasury were independently pursuing solutions to meet the NTIA narrowband mandate. Due to the similar and complementary nature of the law enforcement missions and the co-location and overlapping geographic jurisdictions of the two departments, in November 2001, DOJ and Treasury signed a MOU agreeing to improve communications operability between and among their law enforcement agencies; improve communications operability between DOJ and Treasury and state, local, and other federal law enforcement agencies; achieve cost efficiencies; and meet the narrowband mandate.<sup>10</sup> The MOU also established the IWN Joint Program Office to provide day-to-day management of the IWN program. The Joint Program Office received senior executive oversight and staff from both departments.

### *Seattle/Blaine Pilot Project*

In September 2001, prior to the DOJ and Treasury combining efforts, the DOJ awarded a contract to identify and define the wireless communications requirements for DOJ components, convert the requirements to a recommended plan, and develop a design concept for a

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<sup>10</sup> In 2001, DOJ law enforcement components included the DEA, FBI, Immigration and Naturalization Service, and U.S. Marshals Service. Treasury law enforcement components included the U.S. Secret Service, U.S. Customs Service, and ATF.

consolidated approach to meet the wireless communications needs of the DOJ. In November 2001, the scope of the contract was expanded to include the requirements of Treasury's law enforcement bureaus. The contractor's final report, the 2002 IWN design, recommended a very high frequency land mobile radio design that used "trunking," a computer-controlled system that automatically allocates an open frequency from a pool of frequencies when a user initiates a radio call. The report recommended an aggressive implementation schedule beginning in January 2003 and ending in 2010.

Based on the results of the 2002 IWN design, in November 2002 the Joint Program Office awarded a contract to acquire the necessary hardware, software, and services for a pilot project to demonstrate the feasibility of the proposed technology. The pilot project, called the Seattle/Blaine Pilot Project, was initiated in the metropolitan Seattle, Washington, area and became fully operational in December 2004.

The pilot project provides a trunked, interoperable network that provides tactical wireless radio communications for over 600 federal users from 5 federal agencies, including the ATF, DEA, FBI, and USMS, which is interoperable with state and local law enforcement organizations in the Seattle/Blaine area. As part of the Seattle/Blaine Pilot Project, 17 radio sites were either built, purchased, upgraded, or borrowed from state and local organizations. These sites communicate with the individual users' radios and with the prime site. The prime site houses the computer hardware and software and circuit connections that comprise the "brains" of the network.

The communication system tracks users in the coverage area and assigns the frequency most readily available to receive and transmit their radio communications to the prime site. As a result, users do not have to manually change radio channels as they move from one channel's coverage area to another. Users are organized into talk groups based on their organization and functional requirements. Users in each talk group can communicate with other members in the same group, and users can communicate with other talk groups by requesting and receiving permission from other talk groups. The Joint Program Office funded the procurement of IWN compatible hand-held and mobile radios for the agencies participating in the Seattle/Blaine Pilot Project.

From its inception in November 2002 through September 2004, the Seattle/Blaine Pilot Project cost approximately \$32 million. According to the Seattle/Blaine Beta Benchmark Assessment, the Seattle/Blaine Pilot Project reduced the number of required radio frequency sites from 43 to 15 in the Seattle/Blaine area, which resulted in estimated annual savings of \$126,000

in site lease costs.<sup>11</sup> According to the assessment, the pilot project also successfully demonstrated 66 percent more efficient use of spectrum resources through the use of trunking technology, which in addition to meeting federal narrowbanding requirements reduced the number of radio frequency assignments from 331 to 114. Importantly, the pilot project demonstrated the feasibility of a government owned, managed, and operated integrated wireless network among five federal agencies and proved the viability of the technology identified by the 2002 IWN design.

However, in April 2003 the DOJ Deputy CIO for Information Sharing reported to the IWN Executive Board that while the IWN acquisition strategy used for the Seattle/Blaine Pilot Project would adequately address current communications requirements of the DOJ, DHS, and Treasury, it might not be flexible enough to meet any change in requirements and to integrate new technologies over the life of the procurement. In addition, the Deputy CIO said that expanding the IWN project nationwide using the design and acquisition process from the Seattle/Blaine Pilot Project would not have been a good business decision because the DOJ had identified only one vendor capable of meeting requirements of a contract to expand the Seattle/Blaine Pilot Project nationwide. He said that without competition, cost savings and technological advantages would have been minimized. Further, the 2002 IWN design did not include industry advances in wireless technology and did not incorporate commercial services into the solution. Therefore, in July 2004 the IWN Executive Board initiated the current acquisition strategy to implement IWN on a nationwide basis. The Joint Program Office is in the final phase of the acquisition and plans to award contracts to one or more vendors in the second quarter of FY 2007.

### *Current Partnership with Treasury and Homeland Security*

Creation of the DHS in November 2002 resulted in the transfer of several law enforcement agencies from Treasury and the DOJ to DHS, including components responsible for border protection and immigration and customs enforcement.

After the creation of DHS, in June 2004, the DOJ, DHS, and the Treasury CIOs signed a MOU whereby they agreed to develop, implement, and manage a joint wireless system.<sup>12</sup> To provide executive-level guidance and policy direction for the Joint Program Office, the new MOU established

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<sup>11</sup> The Seattle/Blaine Beta Benchmark Assessment, completed in May 2004, reported the progress of the project toward achieving the overall goals of the IWN program.

<sup>12</sup> A copy of the MOU between DOJ, Treasury, and DHS is in Appendix 4.

the Integrated Wireless Network Executive Board (IWN Executive Board) and designated the CIOs from each of the three sponsoring departments as co-chairs.

The IWN Executive Board's acquisition strategy envisioned selecting a single contractor to implement the entire IWN program after completing the following three phases.

Phase 1 was based on information submitted by vendors regarding their high-level conceptual approach, organizational experience, and past performance.<sup>13</sup> Four vendors elected to continue in the acquisition process. Phase 1 was completed in December 2004.

Phase 2 was the evaluation of detailed technical, management, and cost proposals received from four vendors to accomplish the entire IWN program. The evaluation resulted in the award of indefinite delivery/indefinite quantity contracts to two vendors to prepare and deliver a detailed system design for a specific geographic area, an implementation plan for that area, and a firm fixed price to accomplish the implementation. In addition, the chosen contractors are required to submit a projected incremental design and implementation plan for the complete IWN deployment.<sup>14</sup> Phase 2 was originally scheduled for completion in May 2005 but was not completed until June 2006.

Phase 3 is a design competition, expected to result in the selection of one or both contractors to implement the IWN program. The final contract will be for network integration, including planning, design, build-out, deployment, operations, program management, interoperability, technology refreshment/change, training, and maintenance of IWN. Phase 3 currently is scheduled for completion in the second quarter of FY 2007.

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<sup>13</sup> Phase 1 was an acquisition process whereby an agency publishes a pre-solicitation notice that provides a general description of the scope or purpose of the acquisition and invites potential offerors to submit information that allows the government to advise the offerors about their potential to be viable competitors.

<sup>14</sup> An indefinite delivery/indefinite quantity contract is a contract for supplies or services that does not specify a firm quantity of supplies or services other than a minimum or maximum quantity, and provides for the issuance of delivery or task orders during the contract period.

However, representatives from several DOJ law enforcement components told us they were extremely concerned with the length of time it is taking to implement IWN. The IWN project began in 2001 and the current acquisition strategy is about 15 months behind schedule. As discussed in the next section of the report, we found serious concerns regarding the funding of this crucial law enforcement program, fractures in the IWN partnership, and an ineffective governing structure for the program. As a result, successful completion of the integrated wireless network for the DOJ, DHS, and Treasury departments is in jeopardy.

## **OIG Audit Results**

The OIG performed this audit to assess the status of the development and implementation of the IWN project. We found that the IWN project, which may cost \$5 billion, is at high risk of failing to secure an integrated wireless network for use by DOJ, DHS, and Treasury.<sup>15</sup> The causes for the high risk of failure include: (1) uncertain funding for the project; (2) disparate departmental funding mechanisms that allow the departments to pursue separate wireless communications solutions apart from IWN; (3) the fractured nature of the IWN partnership; and (4) the lack of an effective governing structure for the project. Unless these issues are addressed, a joint wireless communication system may not be developed and the resulting separate agency communications systems may not be adequate in the event of another terrorist attack or natural disaster that requires a coordinated emergency response.

In the report sections that follow, we discuss our findings for each of these concerns before describing the potential consequences of the failure to develop IWN. We then provide our recommendations regarding the IWN project.

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<sup>15</sup> Under the current IWN partnership MOU, DOJ and DHS equally share the design and implementation costs of IWN. Assuming a similar cost sharing arrangement as the program goes forward, DOJ's share of the estimated \$5 billion in life cycle costs through 2021 is \$2.5 billion.

## Wireless Communication Funding Concerns

Two funding issues increase the IWN program's risk of failure. First, there is substantial uncertainty that the program will be adequately funded. Second, disparate funding mechanisms within the participating departments allow the DHS to upgrade, repair, or replace its components' legacy communication systems individually, while the DOJ operates under a mandate from Congress to develop a department-wide solution.

### *Uncertain Funding*

IWN is currently one of the most expensive items in the Department's Information Technology Investment Portfolio. The DOJ life cycle costs for IWN through 2021 are projected to exceed \$2.5 billion.<sup>16</sup> During our audit, the DOJ CIO told us that without a major increase in funding the IWN program will not be completed. The DOJ Deputy CIO for Information Sharing told us that if IWN is not implemented, DOJ will still need to invest about \$900 million to replace legacy communications equipment, such as mobile and hand-held radios, repeaters, and base stations that IWN was intended to upgrade. The DOJ CIO also noted that while replacing legacy equipment with new equipment would solve encryption problems and resolve the narrowband issue, it would not fully address the problem of "stove-pipe" communications among DOJ components and would only marginally address interoperability. In our judgment, if IWN is not implemented, DOJ will miss a critical opportunity to provide more effective communications support to its law enforcement agents in the field.

Through FY 2006, approximately \$772 million has been appropriated to fund the DOJ Narrowband Communications Account. However, instead of funding new technological solutions, almost two-thirds of this funding has been used to maintain the DOJ's antiquated legacy systems. As the DOJ equipment continues to age, these costs are expected to increase by 5 percent each year. Since the inception of the Narrowband Communications Account in FY 2000, the cost of operating and maintaining legacy communications has been between 38 percent and 80 percent of the total program costs each fiscal year.

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<sup>16</sup> Life cycle costs are the estimated costs associated with program planning, project implementation, and the operation and maintenance of legacy and IWN communications systems over a 15-year period.

## *Disparate Departmental Funding Mechanisms*

Funding of all DOJ legacy land mobile radio systems, including IWN, is consolidated within the Narrowband Communications Account that is managed by JMD's Wireless Management Office. Because DOJ's wireless communications budget is consolidated, the Wireless Management Office is responsible for funding the components' legacy radio systems operations and maintenance needs. The Narrowband Communications Account's appropriation language directs that no DOJ component can develop or procure additional radio equipment or infrastructure without prior approval from JMD. Consequently, DOJ components receive funding to operate and maintain their legacy communications systems through reimbursable agreements with the Wireless Management Office.

The DOJ Deputy CIO for Information Sharing told us that if a DOJ component needs to replace legacy equipment, it must request funding approval from the Wireless Management Office. The components are required to demonstrate the imminent failure of a particular system to receive funding to upgrade or replace existing legacy equipment and infrastructure. The DOJ Deputy CIO said that any remaining funding after individual component legacy communications operations and maintenance needs are met is allocated to IWN related investments.

Unlike at the DOJ, funding for DHS components' legacy communications is not consolidated in a central account, which provides for significant flexibilities in decision making. The DHS has the flexibility to meet the immediate needs of their components by replacing and upgrading their legacy communications systems while still participating in IWN. Consequently, the DHS CIO can allocate narrowband conversion resources to individual components, programs, or geographic locations that he believes are in the best interest of the DHS. DOJ, in contrast, is required to develop an integrated department-wide solution because of the congressional requirement that all wireless communications spending be consolidated and managed by a central office. At a May 2006 Department Investment Technology Review Board meeting, the Deputy Attorney General expressed concern that this disparate funding structure is encouraging inefficiencies and the DOJ is losing the opportunity to create a truly integrated network.<sup>17</sup>

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<sup>17</sup> The Department Investment Technology Review Board is charged with overseeing the Department's IT investment management program by monitoring the selection and performance of IT investments that are high profile, high cost, and/or high risk.

## Fracture in the IWN Partnership

Our audit found strong indications that the IWN partnership is fractured. It appears that the DOJ and DHS are now pursuing separate wireless communications solutions instead of a single joint solution. The current MOU between DOJ, DHS and Treasury requires the departments to collaborate annually on a joint budget submission to request funding for the IWN program. For FYs 2005 through 2007, the departments collaborated on and submitted joint Office of Management and Budget Exhibit 300s.<sup>18</sup> However, DOJ and DHS submitted separate Office of Management and Budget Exhibit 300s for IWN for FY 2008. In our judgment, such a sharp departure from the MOU calls into question the nature of the IWN partnership.

In October 2006, the DHS CIO told us that DHS is fully committed to the IWN program and has demonstrated its commitment by contributing staffing and funding resources.<sup>19</sup> The DHS CIO also told us that DHS is consolidating its existing networks into a primary communications infrastructure called OneNet, similar to the DOJ's JUTNet, and expects all DHS networks to be operating on OneNet within a year.<sup>20</sup> In March 2006, the DHS Wireless Management Office Director stated that DOJ appears focused on using trunking technology in a single, nationwide solution.<sup>21</sup> However, he said that DHS wants to use the IWN contract or contracts to acquire the necessary supplies and services to implement individual solutions for its priority geographic locations rather than a single, integrated wireless communications solution. The Director stated that as DHS begins

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<sup>18</sup> The Office of Management and Budget requires agencies to submit Exhibit 300s for major information technology investments as part of its budget justification and reporting process. The Exhibit 300 demonstrates compliance with capital programming and planning and investment control policies and justifies new or continued funding for major acquisitions. The Office of Management and Budget uses the Exhibit 300 to make decisions about budgetary resources and to assess agencies' programming processes.

<sup>19</sup> As we explain later, there has been significant turnover in the DHS CIO position during IWN development.

<sup>20</sup> OneNet is a planned communications network that will result from the consolidation of the DHS components' sensitive but unclassified data networks. JUTNet is a planned single, secure network that will handle classified and sensitive but unclassified material to replace the Justice Consolidated Network.

<sup>21</sup> As previously defined, trunking is a computer-controlled system that uses all the available frequencies in a pool, automatically allocating an open frequency each time someone on the system initiates a radio call. Although trunking technology provides greater spectrum efficiency and functionality, this technology costs significantly more than conventional technology.



this process in each location, it will approach DOJ, Treasury, and other departments to determine if it is feasible to develop a joint solution.

We discussed DHS's and Treasury's participation in the IWN project with the DOJ Deputy CIO for Information Sharing. He stated that the DOJ had been the only major player in the project for a considerable period of time. He also said that while Treasury had been a major participant, their participation in the project was minimized as a result of the reorganization that resulted in the creation of DHS. However, the DOJ CIO stated that DHS has never participated at the level DOJ expected.

The DOJ Deputy CIO for Information Sharing also told us that DOJ is pursuing a single, integrated solution for IWN. He said that if DOJ cannot build IWN with DHS, at least it can develop an integrated communications network for DOJ. The Deputy CIO also told us that if DHS uses the IWN contract or contracts only as procurement vehicles, at least there would be some commonality in equipment, services, and vendors between the departments' individual solutions.

The IWN partnership currently appears to be fractured in its approach and disjointed in its goals to develop a secure, wireless, nationwide communication network. We believe that, as result, the system that results from this partnership likely will not be the seamless, interoperable system that was originally envisioned and therefore the communication systems may not be adequate in the event of another terrorist attack or national disaster.

### **Lack of Effective Governing Structure**

We found that the IWN project also does not have an effective governing structure because there is no practical mechanism to resolve disagreements between departments. The June 2004 MOU assigns the governance of IWN to the IWN Executive Board, and requires that decisions be made by consensus. However, as the DOJ Deputy CIO for Information sharing told us, if DOJ and DHS do not agree, IWN does not go forward. The MOU does not provide a process to move forward in the absence of consensus. This is of particular concern because, according to the Deputy CIO, repeated turnover in key DHS personnel has resulted in time consuming efforts to re-examine previous decisions with new DHS officials to reach consensus.

We were told that since the formation of the current partnership in June 2004, DHS has had two Wireless Management Office Directors, and that as of October 3, 2006, the position was vacant. During this same

period, DHS has had two CIOs and one acting CIO. Furthermore, language in DHS FY 2007 appropriations law established the Office of Emergency Communications and transferred IWN responsibilities to that office. Because IWN administration has been the DHS CIO's responsibility, we are concerned that DOJ will again be faced with the need to revisit previous decisions with new DHS personnel.

Radio program managers and senior managers from four DOJ components also expressed concern regarding IWN program delays, the nature of the IWN partnership, and their inability to influence IWN Executive Board decisions related to the IWN program. The consistency and critical nature of the issues raised by DOJ radio program managers and senior managers demonstrate the components' frustration with the development and implementation of IWN.

### **Consequences of IWN Project Failure**

The failure of IWN could have significant adverse consequences, even beyond the financial losses. A failure to upgrade DOJ components' antiquated communications systems, with or without IWN, represents a risk to the safety of DOJ law enforcement officers and agents. Further, failure of the IWN project will represent significant missed opportunities to achieve cost and spectrum efficiencies and needed communications interoperability between federal law enforcement agencies. In addition, because DOJ plans to address its narrowband requirements with IWN, failure of the program will require the DOJ to seek alternative solutions such as a department-wide network or a network developed by DOJ and Treasury.

**Safety:** Wireless communications systems are a critical part of most law enforcement operations, and usually provide the sole means of communications connectivity that is crucial to the overall operation. DOJ has been relying on IWN to address a myriad of problems with its current wireless communications systems. Over the years, the performance of its wireless communication systems has degraded in terms of coverage, reliability, and usability. The systems provide limited federal-to-federal and federal-to-state/local interoperability, do not use radio spectrum efficiently, and require extensive operations and maintenance funds.

The vast majority of DOJ legacy systems are comprised of technology that is over 10 years old. As a result, devices function only on wideband land mobile radio channels that are no longer compliant with NTIA policy, or only with a Digital Encryption Standard algorithm which is no longer supported by the National Institute of Standards and Technology and is recognized as "weak" security. We were told that the current encryption

standard used by the majority of DOJ's legacy systems is vulnerable to amateur hacking attempts, and that communications may be intercepted by unauthorized parties, thereby jeopardizing operations. Further, most of DOJ's current devices function in an analog versus digital mode, which means they have limited functionality and diminished voice communications quality.

We found that, due to the age of the equipment, 73 percent of DOJ's 4,163 radio system sites are no longer supported by the manufacturer and these obsolete radios are also large and obtrusive. Several DOJ officials told us that agents are sometimes using commercial service devices that are vulnerable to interception in lieu of hand-held radios. In our judgment, this represents a serious, unacceptable safety risk to agents and DOJ law enforcement operations.

**Cost Efficiency:** When the Narrowband Communications Account was created in 1998, one of the primary concerns expressed in the appropriations language was the need to increase efficiency and savings through shared infrastructure and common procurement strategies. The 2002 IWN cost model estimated approximately \$1.19 billion in additional investment costs if the departments do not collaborate and instead develop their own tactical communications solutions.

**Spectrum Efficiency:** DOJ is one of the largest users of very high frequency spectrum, with more than 14,000 frequency assignments. Approximately 70 percent of the radio frequencies assigned to DOJ are for tactical communications support, which is critical to agent safety and operational effectiveness. However, as of April 2006, only 22 percent of these frequencies are narrowband compliant.

The Chief of the Spectrum Support Division of the Office of the Spectrum Management at NTIA told us that for calendar years 2005 and 2006, agencies that had not met the narrowband requirement were allowed to request waivers to continue protected wideband operations on the frequencies subject to the NTIA mandate. The Chief of the Spectrum Support Division said that during the past 2 years NTIA had received and granted tens of thousands of waiver requests.

However, in September 2006 the NTIA's Frequency Assignment Subcommittee approved a change that will eliminate waivers that would allow continued protection for wideband operations on the frequencies subject to the NTIA mandate and instead require the NTIA's Frequency Assignment Subcommittee to adjudicate only unresolved conflicts that arise between agencies involved in overlapping narrowband and wideband

operations. As a result, beginning January 1, 2007, DOJ will be operating on a non-interference basis on 10,129 frequency assignments. This means that DOJ law enforcement communications on those frequency assignments may be subject to interference from narrowband communications of other agencies and that DOJ will have no basis to request the interfering operation to stop. Further, if DOJ wideband operations interfere with other users' narrowband operations, DOJ could be required to cease operating on the frequency.

**Interoperability:** The initial IWN design that was the basis for the Seattle/Blaine Pilot Project addressed interoperability by planning for gateways that would allow IWN users to communicate with state and local public safety communication systems. According to The National Commission on Terrorist Attacks upon the United States (9/11 Commission):

The inability to communicate was a critical element at the World Trade Center, Pentagon, and Somerset County, Pennsylvania, crash sites, where multiple agencies and multiple jurisdictions responded. The occurrence of this problem at three very different sites is strong evidence that compatible and adequate communications among public safety organizations at the local, state, and federal levels remains an important problem.<sup>22</sup>

We asked the IWN Executive Board representatives about IWN's progress toward achieving the goal of interoperability.

According to the DHS CIO, DOJ and DHS can achieve interoperability, including wireless communications interoperability, through gateways between JUTNet and OneNet, the two primary departmental networks. The DHS CIO told us that because the DHS cannot wait for IWN, it has included the requirement for IWN interoperability in its recent Secure Border Initiative contract.

According to the DOJ Chief Information Officer, DHS's following an independent approach would not rule out interoperability, but the resulting communication system would not be as well coordinated as a system developed through an integrated approach and would make interoperability more difficult and costly to achieve.

The Treasury Chief Information Officer advised us that if DHS pursues an independent approach, "interoperability will be fuzzy" and that as long as

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<sup>22</sup> National Commission on Terrorist Attacks Upon the United States, *Final Report of The National Commission on Terrorist Attacks Upon the United States* (2004)

one department is free to go their own way, nothing can be done to improve interoperability. He also stated that the goal of all the departments is to increase interoperability, not only for emergency situations, but for day-to-day operations.

The level of interoperability described by the IWN Executive Board representatives does not reflect the seamless communications capability originally envisioned for the network and, in our judgment, may not be adequate in the event of another terrorist attack or natural disaster.

## **Conclusion**

Our audit found that the IWN program is facing significant challenges and a high risk that the joint narrowband communications network originally envisioned for the DOJ, DHS, and Treasury will not be realized. Despite over 6 years of development and more than \$195 million in funding for IWN, apart from one pilot system DOJ law enforcement agents have received little in the way of new, secure, compliant radio equipment through IWN. We found that the causes for the risk of failure include uncertain funding to complete the project, disparate departmental funding mechanisms, a fractured IWN partnership, and the lack of an effective governing structure for the project.

A failure of the IWN project would represent a significant missed opportunity to achieve needed communications interoperability among federal, state, and local law enforcement agencies. In addition, failure of the joint IWN project will require DOJ and other agencies to independently create communications networks, which we believe would result in substantially increased overall costs and less efficient use of the radio spectrum. Moreover, failure to upgrade DOJ components' antiquated communications systems with or without IWN would represent an unnecessary risk to the safety of DOJ law enforcement agents and Department law enforcement operations.

DOJ has been relying on IWN to address a myriad of problems with its current wireless communications systems, which consist of multiple stove-piped land mobile radio systems with infrastructure dating back 15 to 20 years. Over the years, the performance of these systems has degraded in terms of coverage, reliability, and usability. Of the Department's 4,163 radio system sites, 3,022 are no longer supported by the manufacturer, which means spare parts are difficult to find and maintenance is essentially a "custom service." In addition, much of the Department's current radio equipment is large and obtrusive. We were told that the size of current hand-held radios, combined with their limited functionality and

decreasing reliability, has lead some DOJ agents to use commercial cellular telephones and walkie-talkies that are vulnerable to interception in lieu of hand-held radios.

Just to replace its antiquated legacy wireless communications equipment would cost DOJ approximately \$900 million. However, DOJ will require more than twice that amount to fund its share of IWN. Consequently, for the DOJ, DHS, and Treasury to complete IWN as planned, a major infusion of funding will be required over the next several years.

Our audit found that the fractured nature of the current IWN partnership and the disjointed approach of the two primary partners to achieve the IWN goals seriously threatens the success of the IWN program. In order to salvage the intended multi-agency project, we believe IWN requires a partnership among the agencies involved, with a commitment to common goals and methods to achieve those goals. DOJ, DHS, and Treasury need to commit to a joint IWN solution rather than addressing individual communications issues in their respective departments. The three departments also must develop a cohesive management approach to direct IWN development and deployment.

The current ineffective governing structure of the IWN program has led to significant delays in the program. Valuable time has been spent reaching decisions between agencies that are revisited due to turnover of key personnel. Due to the complexity, expense, and critical nature of this program, a coordinated and effective governing structure is imperative for IWN to succeed.

## **Recommendations**

Our report contains four recommendations. We recommend that DOJ establish an agreement with the DHS and Treasury departments that accurately reflects each agency's commitment to the IWN project. This agreement should explicitly state the shared goals, equitable responsibilities, and comparable resource contributions and funding requirements of the sponsoring departments.

If the departments are unable to reach agreement on a unified approach, we recommend that the DOJ notify Congress and the Office of Management and Budget that the IWN project is not viable as a joint project with DHS, and that DOJ and Treasury are pursuing their own IWN strategy to meet their department's wireless communications requirements.

In addition, if DOJ is unable to reach agreement on a unified approach with DHS and Treasury, the DOJ must develop and implement a departmental plan to upgrade its legacy wireless communications systems.

We also recommend that the Assistant Attorney General for Administration ensure that an agreement is reached that allows DOJ to continue its wideband operations on very high and ultra high frequencies without interference.

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# **PROGRESS REPORT ON DEVELOPMENT OF THE INTEGRATED WIRELESS NETWORK IN THE DEPARTMENT OF JUSTICE**

## **INTRODUCTION**

To enhance the ability of federal law enforcement agencies to communicate with each other, the Departments of Justice (DOJ), Homeland Security (DHS), and Treasury agreed in 2004 to jointly develop the Integrated Wireless Network (IWN), a secure wireless, nationwide communications network. As initially envisioned, IWN would support over 81,000 federal agents in 50 states and the U.S. territories when fully implemented. Estimated to cost over \$5 billion through 2021, IWN would address federal agency requirements to communicate across agencies, allow interoperability with state and local law enforcement partners, and meet mandates to use federal radio frequency spectrum more efficiently.

DOJ law enforcement components expect IWN to replace or upgrade current legacy land mobile radio systems. IWN will likely be a combination of land mobile radio, cellular telephones, and walkie-talkie devices. IWN is planned to provide reliable, secure, nationwide wireless communications capabilities and land mobile radio functionality. IWN is also intended to enhance and simplify communications interoperability with other federal and non-federal wireless users through increased coverage and capabilities. Additionally, IWN is also expected to reduce capital and operational costs of nationwide wireless communications in support of federal law enforcement officers through economies of scale.

The following table details the number of potential IWN users in the DOJ, Treasury, and DHS. DHS currently is the largest potential federal user of IWN, with 64 percent of the users.

**POTENTIAL IWN USERS**

Agency/Component	Number of Total Users by Agency/Component	Percentage of Total Users
<b>Homeland Security</b>		
Animal and Plant Health Inspection Service	66	0.08
U.S. Customs and Border Protection	16,250	19.94
Federal Emergency Management Administration	2,954	3.62
Federal Law Enforcement Training Center	600	0.74
Federal Protective Service	1,244	1.53
Immigration and Customs Enforcement	17,636	21.64
Transportation Security Administration	7,317	8.98
U.S. Secret Service	6,124	7.51
Homeland Security Total	52,191	64.04
<b>Justice</b>		
Bureau of Alcohol, Tobacco, Firearms and Explosives	3,426	4.20
Federal Bureau of Investigation	12,751	15.64
Federal Bureau of Prisons	203	0.25
Drug Enforcement Administration	5,147	6.31
Office of the Inspector General	157	0.19
U.S. Marshals Service	3,089	3.79
Justice Total	24,773	30.38
<b>Treasury</b>		
Bureau of Engraving and Printing	279	0.34
Internal Revenue Service	2,868	3.52
Internal Revenue Service Facilities	601	0.74
Treasury Inspector General for Tax Administration	400	0.49
U.S. Mint	400	0.49
Treasury Total	4,548	5.58
<b>Total Users</b>	<b>81,512</b>	<b>100.00</b>

Source: Justice Management Division, Wireless Management Office, IWN Cost Model

In July 2004, the sponsoring departments initiated a procurement process to develop IWN. Currently, the sponsoring departments are in the final phase of the acquisition of a communications system and are awaiting detailed system design and implementation plans and cost proposals from two vendors for a wireless communications system to meet the needs of the sponsoring departments in the Southwest Border area. Once these submissions are received and evaluated, a selection will be made for one or both vendors to implement IWN nationwide.

## Office of the Inspector General (OIG) Audit

The OIG performed this audit to assess the status of the development and implementation of the IWN project. The specific objectives of the audit were to:

- assess the implementation of the IWN project, and
- assess whether DOJ legacy communication systems comply with the Department of Commerce's National Telecommunications and Information Administration (NTIA) requirements.

To assess the implementation of IWN, we examined documents provided to us by DOJ officials, including the memorandum of understanding (MOU) between DOJ, DHS, and Treasury; the fiscal year (FY) 2005 Program Plan; the IWN Strategic Plan for 2003 through 2008; the Program Weekly Status Reviews; and the IWN Executive Status Reports and other pertinent documents.

We conducted fieldwork at the DOJ Wireless Management Office in Fairfax, Virginia, at various DOJ offices, including the Justice Management Division (JMD), Procurement Services Staff in Washington, D.C. and at the Seattle/Blaine Pilot Project site in the Seattle, Washington area. We interviewed the Chief Information Officers (CIOs) of DOJ, DHS, and Treasury and the Directors of the DOJ and DHS Wireless Management Offices. We also interviewed the DOJ Deputy CIO, Information Sharing; Deputy Directors of the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), the Federal Bureau of Investigation (FBI), and the U.S. Marshals Service (USMS); and an Assistant Administrator of the Drug Enforcement Administration (DEA). In addition, we interviewed the DOJ Spectrum Manager, the DOJ IWN Program Manager, and the DOJ Wireless Management Office Administration Officer.

We assessed the progress of the 3-phase acquisition plan to contract with one or more non-government vendors to build IWN across the country. We reviewed the proposals of the four vendors selected to compete in Phase 2 of the acquisition plan and interviewed DOJ staff who served on the management and technical evaluation teams. We also interviewed the Assistant Director of DOJ's Procurement Services Staff.

To assess DOJ compliance with NTIA requirements, we interviewed the Chief of the Spectrum Support Division of the Office of Spectrum Management at NTIA. We also examined the Telecommunications Authorization Act of 1992 and the NTIA Narrowband Mandate of 1993. In

addition, we obtained documents from NTIA that discussed the process for requesting waivers and the proposed rule of the Frequency Assignment Subcommittee to prohibit waivers for wideband operations that interfere with narrowband operations. We also reviewed NTIA reports of frequency assignments and waivers for noncompliant frequencies.

In the following sections we provide background to the IWN project before describing our audit findings on the status of IWN.

## **Background**

Federal law enforcement agents at the DOJ primarily use land mobile radio technology that relies on radio frequency for tactical communications. A radio frequency signal is an electromagnetic wave, oscillating at a specific frequency of cycles per second. The combined spectrum of these radio frequency signals is the medium that allows wireless communications of all kinds.

### *Spectrum Management*

Government, commercial, and public entities use federal frequency assignments and licenses for specific radio frequencies to provide mobile telephone, paging, satellite services, radio, and television broadcasts. The Federal Communications Commission regulates interstate and international radio, television, wire, satellite, and cable communications. The NTIA manages the complex allocation of radio frequency spectrum for federal users through an application and frequency assignment process.

Demand for radio frequency spectrum, which is a finite resource, is increasing due to the expansion of technology and the development of more radio frequency-based applications, such as personal communications services, multimedia messaging services, mobile intranet/extranet access, and mobile internet access. In addition, the use of wireless services is increasing in national defense, emergency rescue, air traffic safety, law enforcement, and disaster relief efforts. Because there is little additional spectrum to allocate, more efficient use must be made of the spectrum already allocated in order to meet the increasing requests for radio spectrum assignments.

In an effort to advance the efficient and effective use of the available radio frequency spectrum, in 1993 the NTIA mandated that all federal spectrum users cut their frequency usage by one-half. This process, known as narrowbanding, requires replacing all wideband land mobile radio network infrastructure and radios with narrowband-compliant technology.

Specifically, the NTIA required that the channel bandwidth used by federal agencies be reduced from 25 to 12.5 kilohertz for very high frequency operations by 2005 and by 2008 for ultra high frequency operations.<sup>23</sup>

### *DOJ Legacy Wireless Communications Systems*

Law enforcement officers from DOJ, DHS, and Treasury require a secure and reliable means of communication to perform their law enforcement operations effectively and to ensure their safety and that of the public. Federal law enforcement requires a range of communication tools, from hand-held portable radios for internal communications to nationwide and world-wide airborne communications.

DOJ law enforcement officers require many different types of wireless communications devices, including portable radios and body transmitters to support criminal, counterterrorism, and counterintelligence investigations and other law enforcement operations.<sup>24</sup> Typically, DOJ law enforcement operations cannot rely on traditional communications equipment such as landline telephones. Therefore, wireless communications systems are critical to most DOJ law enforcement operations. These wireless systems usually provide the law enforcement officers' sole means of connectivity to other agents and supervisors. DOJ law enforcement officers primarily use land mobile radio technology that relies on radio frequency signals for tactical radio communications.<sup>25</sup>

As part of this review, DOJ components identified a total of 4,163 different land mobile radio communications system sites currently in use within their components. The vast majority of these systems use technology that is over 10 years old. Most of DOJ's current communications devices function in an analog rather than a digital mode, which means they have limited functionality and diminished voice communications quality. The following table describes the DOJ law enforcement components' legacy

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<sup>23</sup> Very high frequency and ultra high frequency are internationally recognized subdivisions of the electromagnetic spectrum. The very high frequency band is the range of frequencies from 30 MHz to 300 MHz and the ultra high frequency band is the range of frequencies from 300 MHz to 3000 MHz.

<sup>24</sup> For the purpose of this report, the term "DOJ law enforcement officers" includes FBI, DEA, and ATF Special Agents, Deputy Marshals, and other DOJ law enforcement officers.

<sup>25</sup> Land mobile radio is a mobile radio service operating between fixed base stations, and stations (mobile and hand-held) capable of surface movement. Radio frequency is any frequency within the electromagnetic spectrum.

wireless communications systems, their age, and the functional limitations of the systems.

**DOJ COMPONENT LEGACY COMMUNICATIONS SYSTEMS**

<b>Component</b>	<b>Number of System Sites<sup>26</sup></b>	<b>Average Age of Systems (Years)</b>	<b>Percent of Systems Not Narrowband Compliant</b>	<b>Frequency Type</b>	<b>Percent of Systems Lacking OTAR Capability<sup>27</sup></b>	<b>Percent of Systems Lacking AES<sup>28</sup></b>	<b>Percent of Systems Obsolete<sup>29</sup></b>
<b>Alcohol, Tobacco, Firearms, and Explosives<sup>30</sup></b>	466	10	0%	Very High Frequency	100%	100%	0%
<b>Drug Enforcement Administration</b>	640	13	76%	Ultra High Frequency	24%	100%	71%
<b>Federal Bureau of Investigation</b>	3,057	12	91%	Very High Frequency	95%	93%	84%
<b>U.S. Marshals Service<sup>31</sup></b>	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
<b>TOTAL</b>	4,163		79%		85%	95%	73%

Source: Information derived from DOJ components

<sup>26</sup> For the purpose of this audit, we are comparing the number of radio sites per reported system. Radio sites are typically the basic cost unit of a communications system.

<sup>27</sup> A key is the code programmed into radios to allow encrypted communications within a system. To ensure security, these keys must be changed periodically. Over-the-air re-keying would allow a law enforcement officer to receive an updated encryption code rather than requiring manual reprogramming by a radio technician. OTAR capability is limited to the system capability. For example, even though individual radios may be OTAR capable, without the system being OTAR capable there is no OTAR functionality within the system.

<sup>28</sup> The Advanced Encryption Standard (AES) is an encryption algorithm that was approved by the National Institute of Standards and Technology in November 2001 for use by U.S. Government organizations to protect sensitive information. This algorithm replaces the Data Encryption Standard (DES) that has been in use since 1977 and is no longer approved for Federal use.

<sup>29</sup> For the purpose of this audit, "obsolete systems" are system sites that are no longer supported by the manufacturer.

<sup>30</sup> The DOJ OIG uses ATF's systems for its radio communications.

<sup>31</sup> The USMS primarily uses FBI's systems for its radio communications. The USMS is in the process of installing a new radio system in the New York/New Jersey area.

As shown in the table, 73 percent of the Department's communications system sites are no longer supported by the manufacturer and therefore are "obsolete," which means spare parts are difficult to find and maintenance is essentially a customized service. According to the DOJ Deputy CIO for Information Sharing, the failure rate for this older equipment is becoming a reliability issue. In addition, 95 percent of the system sites do not meet 2002 federal Advanced Encryption Standards, and 85 percent of the system sites cannot support over-the-air re-keying (OTAR) of encryption codes, which means re-keying must be done manually.

As shown in the table above, the DEA and FBI use the most radio system sites and also have DOJ's oldest systems. Further, because the USMS relies on the FBI radio systems, all DOJ law enforcement operations except ATF rely on radio communications technology that is over 10 years old. This dated technology includes devices that function only on wideband land mobile radio channels and do not provide adequate encryption security. Due to the age and outdated technology of these systems, many DOJ law enforcement officers are experiencing degraded coverage, reliability, and usability in their tactical radio communications.<sup>32</sup> In addition, these antiquated radio systems are "stove-piped" and provide limited federal-to-federal and federal-to-state and local interoperability.

Because the DEA's radio systems operate on the ultra high frequency band, which is not compatible with the very high frequency band, interoperability between DEA radio systems and those of the ATF, FBI, and USMS is more difficult, although not impossible to achieve.<sup>33</sup> As part of implementation of the IWN program, the DEA is expected to transition to very high frequency operations. However, until IWN is completed, the DEA must purchase, operate, and maintain costly dual-band radios to allow interoperability with other law enforcement organizations, including those in the DOJ.

Moreover, the older radios are large and obtrusive. We found that, when combined with their limited functionality and decreasing reliability, the size of current hand-held radios is such that agents are much less inclined to use them. Several DOJ officials told us during the audit that because of these factors, agents are sometimes using commercial communications devices such as cellular telephones and walkie-talkies, which are vulnerable

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<sup>32</sup> Degradation is the reduction in the ability of a system to perform its intended function. Usability describes the ease of operation with a minimum of user intervention.

<sup>33</sup> A DEA official told us that their communications systems are ultra high frequency because that spectrum was available when the DEA was established in 1972.

to interception, for communicating with each other, instead of using agency hand-held radios.

### *Origins of IWN*

In response to the 1993 NTIA mandate that all federal spectrum users cut their frequency usage by one-half, DOJ law enforcement components separately developed plans for replacing their land mobile radio systems. In 1998, however, in response to DOJ's budget submission addressing the components plans to comply with NTIA's mandate, Congress directed that any DOJ narrowband conversion initiative must be based on a comprehensive strategy to increase spectrum efficiency, to achieve communications interoperability among all DOJ components and other federal law enforcement agencies, and to maximize efficiencies and savings through shared infrastructure and common procurement strategies.

As a result, in July 1998 Congress created the DOJ's Narrowband Communications Account to centrally fund the conversion of DOJ's legacy radio communications systems to narrowband systems. DOJ's JMD was directed to serve as the central purchasing agent for all DOJ communications equipment and to develop an integrated, department-wide strategic plan to meet the DOJ narrowband conversion and interoperability requirements. In October 1998, the Attorney General created the Wireless Management Office within JMD to oversee and direct DOJ's consolidated approach to wireless communications and to centrally manage the consolidated wireless account.

The Wireless Management Office was directed to provide day-to-day management of wireless communications' architecture development and planning, management, acquisition, financial planning, and technical services for DOJ components. To ensure that components could influence the design and capabilities of DOJ's wireless systems, the Wireless Management Office received guidance from the Wireless Communications Board, which was chaired by the DOJ's CIO and composed of senior managers from DOJ components.

Prior to FY 2002, DOJ and Treasury were independently pursuing solutions to meet the NTIA narrowband mandate. Due to the similar and complementary nature of the law enforcement missions and the co-location and overlapping geographic jurisdictions of the two departments, DOJ and Treasury officials began discussing a joint project in August 2001.<sup>34</sup>

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<sup>34</sup> In 2001, DOJ law enforcement components included the DEA, FBI, Immigration and Naturalization Service, and U.S. Marshals Service. Treasury law enforcement components included the U.S. Secret Service, U.S. Customs Service, and ATF.



In November 2001, the DOJ Acting Assistant Attorney General for Administration and Treasury's Acting Assistant Secretary for Management signed an MOU agreeing to improve communications operability between and among their law enforcement agencies; improve communications operability between DOJ and Treasury and state, local, and other federal law enforcement agencies; achieve cost efficiencies; and meet the narrowband mandate.

The MOU established the IWN Joint Program Office to provide day-to-day management of the IWN program. The Joint Program Office was composed of staff from both DOJ and Treasury and received high-level program guidance from the Integrated Wireless Network Executive Board (IWN Executive Board), which was composed of executives from DOJ's Wireless Communications Board and Treasury's Wireless Executive Committee. The IWN Executive Board's role was to ensure a coordinated approach to IWN by DOJ and Treasury that would meet each department's requirements and provide a forum for resolving programmatic issues, such as acquisition strategy, overall concept of operations, and security policies.

#### *Seattle/Blaine Pilot Project*

In September 2001, prior to the DOJ and Treasury combining efforts, the DOJ awarded a contract to CTA Communications, Inc., to identify and define the wireless communications requirements for DOJ components, convert the requirements to a recommended plan, and develop a design concept for a consolidated approach to meet the wireless communications needs of the DOJ. In November 2001, the scope of the contract was expanded to include the requirements of Treasury's law enforcement bureaus. The contractor's final report, the 2002 IWN design, recommended a very high frequency, land mobile radio design that used "trunking," a computer-controlled system that automatically allocates an open frequency from a pool of frequencies when a user initiates a radio call. The report also recommended an aggressive implementation schedule beginning in January 2003 and ending in 2010.

Based on the results of the 2002 IWN design, in November 2002 the Joint Program Office awarded a contract to acquire the necessary hardware, software, and services for a pilot project to demonstrate the feasibility of the proposed technology. The pilot project, called the Seattle/Blaine Pilot Project, was initiated in the metropolitan Seattle, Washington, area and became fully operational in December 2004. Since the pilot project became

operational, the Joint Program Office has initiated Seattle/Blaine Phase II and the Northwest Expansion of the project.<sup>35</sup>

The pilot project created a trunked, interoperable network that provides tactical wireless radio communications for over 600 federal users from 5 federal agencies. The system is also interoperable with state and local law enforcement organizations in the Seattle/Blaine area. The FBI Telecommunications Manager in Seattle described the project as a series of networked communications sites. He told us that as part of the Seattle/Blaine Pilot Project, 17 radio sites were either built, purchased, upgraded, or borrowed from state and local organizations. These sites communicate with the individual users' radios and with the prime site. The prime site houses the computer hardware and software and circuit connections that comprise the "brains" of the network.

The communication system tracks users in the coverage area and assigns the frequency most readily available to receive and transmit their radio communications to the prime site. As a result, users do not have to manually change radio channels as they move from one channel's coverage area to another. Users are organized into talk groups based on their organization and functional requirements. Users in each talk group can communicate with other members in the same group, and these users can communicate with other talk groups by requesting and receiving permission from other talk groups. The Joint Program Office funded the procurement of IWN compatible hand-held and mobile radios for the agencies participating in the Seattle/Blaine Pilot Project. Because this was a new communications system, users were given training in the operation of the radios and the protocols for interoperable communications.

From its inception in November 2002 through September 2004, the Seattle/Blaine Pilot Project cost approximately \$32 million. According to the Seattle/Blaine Beta Benchmark Assessment, the Seattle/Blaine Pilot Project reduced the number of required radio frequency sites from 43 to 15 in the Seattle/Blaine area, which resulted in estimated annual savings of \$126,000 in site lease costs.<sup>36</sup> According to the assessment, the pilot project also successfully demonstrated 66 percent more efficient use of spectrum resources through the use of trunking technology, which in addition to

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<sup>35</sup> Seattle/Blaine Phase II includes coverage for aircraft operations and to fill in existing coverage gaps. The Northwest Expansion is to provide coverage for Portland, Oregon, the Oregon Coast, Eastern Washington, and the northern border.

<sup>36</sup> The Seattle/Blaine Beta Benchmark Assessment, completed in May 2004, reported the progress of the project toward achieving the overall goals of the IWN program.

meeting federal narrowbanding requirements reduced the number of radio frequency assignments from 331 to 114. Importantly, the pilot project demonstrated the feasibility of a government owned, managed, and operated integrated wireless network among five federal agencies and proved the viability of the technology identified by the 2002 IWN design.

The following table shows the federal components, number of users, and level of system usage for the Seattle/Blaine Pilot Project from January through September 2006.

**SEATTLE/BLAINE PILOT PROJECT SYSTEM USAGE**  
**January through September 2006**

Component	Average Number of Radios	Total Radio Calls Initiated
Bureau of Alcohol, Tobacco, Firearms, and Explosives	33.33	7,360
U.S. Customs and Border Protection	19.44	3,952
Drug Enforcement Administration	88.56	53,953
Federal Bureau of Investigation	147.56	30,849
Federal Communications Commission	0.11	9
Immigration and Customs Enforcement	255.67	88,763
Internal Revenue Service, Criminal Investigations	15.33	707
National Oceanic and Atmospheric Administration	4.56	1,607
Social Security Administration, Office of the Inspector General	3.78	5,741
Treasury Inspector General for Tax Administration	6.44	700
U.S. Marshals Service	50.44	24,190
U.S. Secret Service	0.33	22
Total	625.55	217,853

Source: OIG Analysis of DOJ Wireless Management Office system usage data

To assess the level of interoperability achieved by the Seattle/Blaine Pilot Project, we asked the FBI Telecommunications Manager for the results of interoperability tests of the Seattle/Blaine Pilot Project. This official told us that FBI and DEA agents and USMS deputy marshals use interoperable IWN talk groups on a regular basis for activities such as investigations, surveillance, and intelligence gathering.<sup>37</sup> The pilot project also provides interoperability between federal, state, and locals users. This functionality, which is tested quarterly, was used in a full scale communications exercise in September 2006 involving DOJ and DHS, Washington State Patrol, eight local police departments, six local fire departments, three sheriffs' offices, three emergency management operations centers, two communications centers, two public and one private emergency medical response organizations, and one county public health department.

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<sup>37</sup> A talk group is a subgroup of radio users who share a common functional responsibility. The Seattle/Blaine Pilot Project includes talk groups such as the FBI bomb squad, ATF bomb squad, and Seattle Police Department bomb squad.

In addition, the FBI telecommunications official cited four arrests between August and October 2006 in which federal and local agencies used the interoperable talk groups to communicate in their investigations. One of the joint arrests involved the FBI, DEA, Immigration and Customs Enforcement, Seattle Police Department, and King County Sheriff's Office. In addition, the FBI official cited joint operations between the USMS and King County Sheriff's office and between ATF and the Seattle Police Department that used IWN.

Representatives from ATF, FBI, and USMS that we interviewed cited the following benefits of the Seattle/Blaine IWN network compared to their previous radio systems:

- Ease of use (no need to change channels when moving from one channel's coverage area to another and capable of over-the-air re-keying)
- Increased officer safety due to increased radio usage and an emergency alert button on the hand-held radios that allows an officer to notify the dispatcher of an emergency situation by pressing the button
- Better coverage
- Improved clarity
- Interoperability with state and local agencies (no need to swap radios)

DEA representatives expressed the opinion that the Seattle/Blaine Pilot Project was designed primarily for border, port, or major urban areas and therefore does not provide adequate coverage for DEA operations.

However, in April 2003 the DOJ Deputy CIO for Information Sharing reported to the IWN Executive Board that while the IWN acquisition strategy used for the Seattle/Blaine Pilot Project would adequately address current communications requirements of the DOJ, DHS, and Treasury, it might not be flexible enough to meet any change in requirements and to integrate new technologies over the life of the procurement. In addition, the Deputy CIO said that expanding the IWN project nationwide using the design and acquisition process from the Seattle/Blaine Pilot Project would not have been a good business decision because the DOJ had identified only one vendor capable of meeting requirements of a contract to expand the Seattle/Blaine

Pilot Project nationwide. He said that, without competition, cost savings and technological advantages would have been minimized. Further, the 2002 IWN design did not include industry advances in wireless technology and did not incorporate commercial services into the solution. Therefore, in July 2004 the IWN Executive Board initiated the current acquisition strategy to implement IWN on a nationwide basis. The Joint Program Office is in the final phase of the acquisition and plans to award contracts to one or more vendors in the second quarter of FY 2007.

#### *Current Partnership with Treasury and Homeland Security*

After the September 11 terrorist attacks, the original impetus of meeting the federal mandate to improve spectrum efficiency was overshadowed by the need to develop a secure, wireless, interoperable communications system for federal, state, and local law enforcement and emergency personnel. However, the IWN project's goals already included improving communications interoperability among the participating departments and state, local, and other federal law enforcement agencies.

Yet, changes in the structure of federal law enforcement agencies after the September 11 attacks required increased coordination among these agencies in the development of IWN. When DHS was formed in 2002, several law enforcement agencies from the Justice and Treasury Departments were transferred to the new agency. The following chart shows the DOJ, Treasury, and DHS components participating in IWN after establishment of the DHS.

**THE IWN PARTNERSHIP AFTER CREATION OF DHS**

DOJ	Treasury	DHS
Bureau of Alcohol, Tobacco and Firearms	Bureau of Engraving and Printing	Customs and Border Protection
Drug Enforcement Administration	Internal Revenue Service – Criminal Investigations	Federal Law Enforcement Training Center
Federal Bureau of Prisons	The Treasury Inspector General for Tax Administration	Immigration and Customs Enforcement
Federal Bureau of Investigations	U.S. Mint	U.S. Secret Service
Office of the Inspector General	Office of the Inspector General	Transportation Security Administration
U.S. Marshals Service		Emergency Preparedness and Response
		Office of the Inspector General

**PRIOR TO MARCH 2003**

DOJ Agency
Treasury Agency
Other than DOJ or Treasury Agencies
Comprised of DOJ and Treasury Agencies

Source: OIG Analysis of the Joint Program Office FY 2005 Program Plan and Homeland Security Act of 2002

When several DOJ and Treasury components were transferred to the DHS, the Joint Program Office continued to pursue a consolidated management approach to meet the communications requirements of those components transferring as well as the communications requirements of the components that remained with the DOJ and Treasury. This was consistent with the Office of Management and Budget’s expectation that the agencies transferring to the DHS would continue to participate in IWN on a cost-sharing basis.

In June 2004, the DHS joined the DOJ and Treasury in the IWN partnership, and the three departments’ CIOs signed a new MOU to develop, implement, and manage a joint wireless system.<sup>38</sup> To provide executive-level guidance and policy direction for the Joint Program Office, the new MOU established the IWN Executive Board and designated the CIOs from each of the sponsoring departments as co-chairs. The MOU also

<sup>38</sup> A copy of the MOU between the DOJ, Treasury, and DHS is included as Appendix 4.

specified that decisions by the IWN Executive Board would be reached through consensus among the three co-chairs.

The MOU describes identical responsibilities for and resource contributions from DOJ and DHS. Under the terms of the MOU, Treasury is not required to share the costs of designing and building IWN, given its few remaining law enforcement personnel after creation of the DHS, but it is required to fund its specific equipment requirements and contribute to IWN commensurate with its level of participation in the program. We were advised by the DOJ Wireless Management Office Administrative Officer that the DOJ Wireless Management Office has assumed the responsibility of staffing and managing the Joint Program Office to allow the program to move forward.

In July 2004, the IWN Executive Board initiated a 3-phase acquisition strategy to award a contract for:

- Reliable, secure, nationwide wireless communications capabilities;
- Enhanced interoperability, operational effectiveness, and support through increased coverage and capabilities;
- Simplified interoperability with other federal and non-federal wireless users through the consistent application of standards developed from this effort; and,
- Reduced capital and operational costs through economies of scale.

The IWN Executive Board's acquisition strategy envisioned selecting a single contractor to implement the entire IWN program after completing the following three phases.

Phase 1, was based on information submitted by vendors regarding their high-level conceptual approach, organizational experience, and past performance.<sup>39</sup> Four vendors elected to continue in the acquisition process. Phase 1 was completed in December 2004.

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<sup>39</sup> Phase 1 was an acquisition process whereby an agency publishes a pre-solicitation notice that provides a general description of the scope or purpose of the acquisition and invites potential offerors to submit information that allows the government to advise the offerors about their potential to be viable competitors.

Phase 2 was the evaluation of detailed technical, management, and cost proposals received from the four vendors to accomplish the entire IWN program. The evaluation resulted in the award of indefinite delivery/indefinite quantity contracts to two vendors to prepare and deliver a detailed system design for a specific geographic area, an implementation plan for that area, and a firm fixed price to accomplish the implementation.<sup>40</sup> In addition, the chosen contractors are required to submit a projected incremental design and implementation plan for the complete IWN deployment. Phase 2 was originally scheduled for completion in May 2005 but was not completed until June 2006.

Phase 3 is to result in the selection of one or both contractors through a formal task order competition to implement the IWN program. The final contract was to be for network integration, including planning, design, build-out, deployment, operations, program management, interoperability, technology refreshment/change, training, and maintenance of IWN. Phase 3 currently is scheduled for completion in the second quarter of FY 2007.

Representatives from DOJ law enforcement components told us they were extremely concerned with the length of time it is taking to implement IWN. The IWN project began in 2001 and the current acquisition strategy is about 15 months behind schedule. As discussed in the next section of this report, we found serious concerns regarding the funding of IWN, fractures in the IWN partnership, and an ineffective governing structure for the program. As a result, we concluded that the successful completion of the integrated wireless network for the DOJ, DHS, and Treasury departments is in jeopardy.

The following table details key events of DOJ's narrowband conversion effort and the IWN project development, beginning with the creation of the Wireless Management Office in 1998.

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<sup>40</sup> An indefinite delivery/indefinite quantity contract is a contract for supplies or services that does not specify a firm quantity of supplies or services other than a minimum or maximum quantity, and provides for the issuance of delivery or task orders during the contract period.



**NARROWBAND CONVERSION KEY EVENTS AND  
IWN DEVELOPMENT AND IMPLEMENTATION TIMELINE  
(By Fiscal Year)**

<b>1998</b>	DOJ Establishes the Wireless Management Office	Wireless Management Office Develops Justice Wireless Network For Land Mobile Radio And Commercial Wireless Services			
<b>1999</b>	Wireless Management Office Assesses Availability of Standards Compliant Technology				
<b>2001</b>	DOJ Issues Contract for System Design Concept	DOJ and the Treasury Sign Memorandum of Understanding	DOJ Amends System Design Contract to Include Requirements of Treasury's Law Enforcement Components		
<b>2002</b>	Contractor Completes System Design Concept	DOJ and Treasury Initiate IWN	DOJ and Treasury Establish the Joint Program Office	Joint Program Office Awards Seattle/Blaine Pilot Project Contract	DHS Formed
<b>2003</b>	Joint Program Office Initiates Seattle/Blaine Pilot Project				
<b>2004</b>	DOJ, DHS, and Treasury Sign Memorandum of Understanding	IWN Executive Board Adopts New 3-Phase IWN Acquisition Strategy	IWN Acquisition Phase I Request For Proposals Released	Seattle/Blaine Pilot Project Becomes Operational	IWN Acquisition Phase I Completed
<b>2005</b>	IWN Acquisition Phase II Request For Proposals Released	IWN Acquisition Phase II Proposals Received From Four Vendors			
<b>2006</b>	IWN Acquisition Phase II Completed With The Selection of Two Vendors	IWN Acquisition Phase III Task Orders Awarded			

Source: OIG Analysis of Justice Management Division, Wireless Management Office IWN data.

## **OIG AUDIT FINDING AND RECOMMENDATIONS**

### **SUCCESSFUL COMPLETION OF THE INTEGRATED WIRELESS NETWORK FOR THE DOJ, DHS, AND TREASURY DEPARTMENT IS IN JEOPARDY**

We found that the proposed \$5 billion IWN program is at high risk of failing to develop an integrated wireless communications network for use by the DOJ, the DHS, and Treasury. The causes for this high risk include: (1) uncertain funding for the project; (2) disparate departmental funding mechanisms that allow departments to pursue separate wireless communications solutions apart from IWN; (3) the fractured nature of the IWN partnership; and (4) the lack of an effective governing structure. As a result, there is a potential risk to effective law enforcement operations and to the safety of officers and agents who are currently relying on independent, antiquated, and obsolete communications systems. Without a coordinated approach to accomplish the shared goals of the IWN project, the resulting separate agency communications systems may not be adequate in the event of another terrorist attack or natural disaster that requires a coordinated emergency response.

The IWN program, a multi-agency wireless network intended to provide secure, interoperable communications to over 81,000 federal agents nationwide, is in significant jeopardy of failing. Implementation of the project by the DOJ, DHS, and Treasury has been extremely slow, and agreement among the departments regarding the design and implementation of IWN must occur if the project is to continue.

We found that, even though IWN is intended to be a joint project, the DOJ and DHS are pursuing different approaches for implementing IWN. DOJ's preferred approach is to continue efforts to replace its legacy communications systems for its law enforcement components with a single, integrated wireless network. DHS's preferred approach is to consolidate existing wireless communications systems onto its planned departmental communications system and achieve necessary interoperability through

gateways rather than building a single wireless network.<sup>41</sup> The communication systems that result from these different approaches will not result in the seamless interoperable system that was originally envisioned.

We also found that the lengthy IWN development and implementation process that began in 2001 has left DOJ components waiting for upgraded communications equipment. DOJ components still conduct their law enforcement and counterterrorism operations with aging equipment that does not meet current encryption standards. As a result of the amount of time it has taken to move forward with IWN, the DOJ has also spent increasingly significant amounts of money to maintain its legacy communications systems, thereby depleting available funding for IWN.

In addition, the lengthy IWN development and implementation presents security-related concerns. During our audit, we were told that some law enforcement officers and agents occasionally resort to nonsecure forms of wireless communications, such as cellular telephones and walkie-talkie devices, when their DOJ radio equipment or communications system are inadequate to accomplish their mission. We were also told that some agents have had to interrupt surveillance operations in order to manually reprogram their radios with updated encryption keys.

The following sections of the report discuss the causes for IWN's high risk status, identifies the potential consequences if IWN is not implemented, and provides recommendations to help redirect the effort toward successful completion.

### **Wireless Communication Funding Concerns**

Two funding issues increase the IWN program's risk of failure. First, there is substantial uncertainty that the program will be adequately funded. Second, disparate funding mechanisms within the participating departments allow the DHS to upgrade, repair, or replace its components' legacy communication systems individually, while the DOJ operates under a mandate from Congress to develop a department-wide solution. In our judgment, this fundamental disparity in commitment of funds by the sponsoring departments has facilitated the breakdown of the IWN partnership. Adequate funding and departmental coordination and concentration of resources on IWN are necessary to ensure the program's success.

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<sup>41</sup> A gateway is a hardware and software-driven interface that will interpret control protocol of different radio systems and allow them to be compatible with the network.

## *Uncertain Funding*

IWN is currently one of the most expensive items in the Department's Information Technology Investment Portfolio. The DOJ life cycle costs for IWN through 2021 are projected to exceed \$2.5 billion.<sup>42</sup> During our audit, the DOJ CIO told us that without a major increase in funding the IWN program will not be completed. The DOJ Deputy CIO for Information Sharing told us that if IWN is not implemented, DOJ will still need to invest about \$900 million to replace legacy communications equipment, such as mobile and hand-held radios, repeaters, and base stations that IWN was intended to upgrade. The DOJ CIO also noted that while replacing legacy equipment with new equipment would solve encryption problems and resolve the narrowband issue, it would not fully address the problem of "stove-pipe" communications among DOJ components and would only marginally address interoperability. In our judgment, if IWN is not implemented DOJ will miss a critical opportunity to provide more effective communications support to its law enforcement agents in the field.

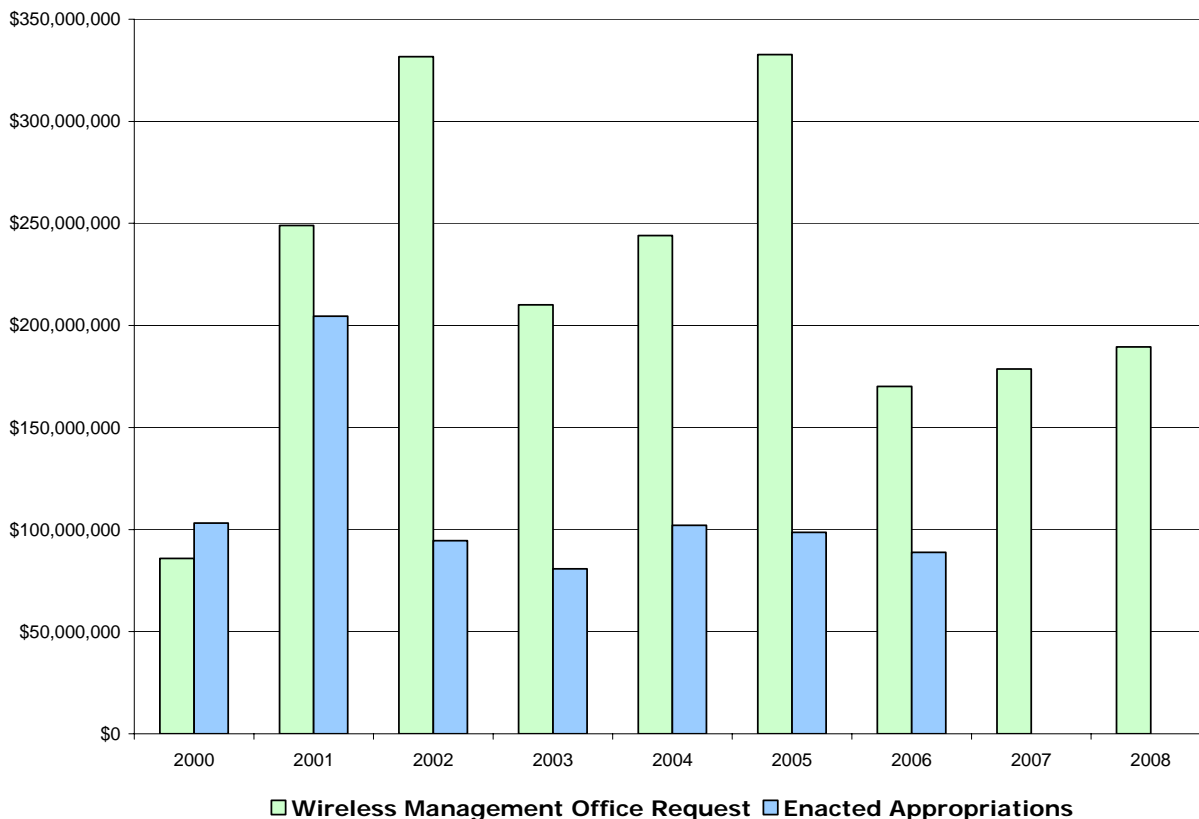
The following chart shows DOJ funding for the Narrowband Communications Account from FY 2000 to the present.

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<sup>42</sup> Life cycle costs are the estimated costs associated with program planning, project implementation, and the operation and maintenance of legacy and IWN communications systems over a 15 year period.

Under the current IWN partnership MOU, DOJ and DHS equally share the design and implementation costs of IWN. Assuming the cost-sharing arrangement continues as the program goes forward, DOJ's share of the estimated \$5 billion in life cycle costs through 2021 is \$2.5 billion.

**NARROWBAND COMMUNICATIONS ACCOUNT BUDGET SUMMARY  
FY 2000 – 2008**



Source: OIG analysis of Justice Management Division, Wireless Management Office and Budget Staff budget data

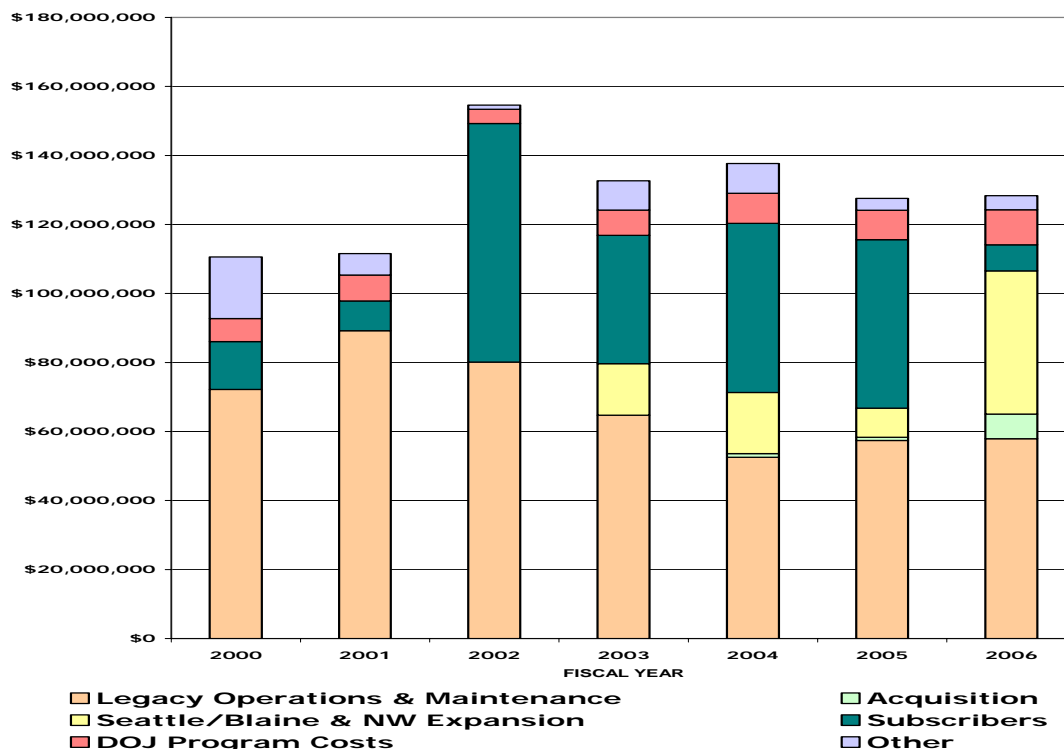
Through FY 2006, approximately \$772 million has been appropriated to fund the DOJ Narrowband Communications Account. However, since FY 2000, the enacted appropriation for IWN has been consistently less than the DOJ Wireless Management Office budget request. For FY 2007 and FY 2008, the DOJ Wireless Management Office request has increased in anticipation of the IWN contract awards. DOJ officials told us, however, that they expect to receive approximately 50 percent of their requested funding. The DOJ CIO told us that the current level of IWN funding is not sufficient to implement IWN nationwide.

Moreover, the DHS Wireless Management Office Director told us in March 2006 that DHS officials do not believe funding will be available for DHS and DOJ to implement the new nationwide replacement system using the same design demonstrated by the Seattle/Blaine Pilot Project.

We asked for an estimate of the total amount of IWN project costs from the DOJ Wireless Management Office Administrative Officer. Although the DOJ Wireless Management Office has assumed the responsibility for

managing the Joint Program Office, we were advised by the DOJ Wireless Management Office Administrative Officer that an estimate of total IWN project costs is not available because DHS costs are not reported to the Joint Program Office. We also requested this information from DHS in April 2006 and again in October 2006, but DHS did not provide this data. As a result, the following chart illustrates only the costs incurred by DOJ, through September 30, 2005, for IWN-related projects and equipment, and for operation and maintenance of existing DOJ legacy communication systems.

**DOJ NARROWBAND COMMUNICATIONS ACCOUNT BY PROJECT<sup>43</sup>**  
**FY 2000 - FY 2006**



Source: OIG analysis of Justice Management Division, Wireless Management Office cost data

As the graph demonstrates, over the past 7 years almost two-thirds of the money in the DOJ's Narrowband Communications Account has funded the maintenance of existing legacy systems instead of new wireless solutions. Since the inception of the Narrowband Communications Account in FY 2000, the cost of operating and maintaining legacy communications has been between 38 percent and 80 percent of the total program costs for a single fiscal year. In FY 2004, legacy costs accounted for \$52.5 million of the total program cost of \$137.6 million, while in FY 2001 legacy costs

<sup>43</sup> The cost data contained in this chart was not audited by the OIG.

accounted for \$89.2 million of the total program cost of \$111.5 million. According to estimates from the Wireless Management Office, operating and maintenance costs for legacy systems are expected to increase by 5 percent annually. At that rate, by FY 2008 legacy systems operations and maintenance costs will consume 72 percent of the Narrowband Communications Account at the current funding level.

### *Disparate Departmental Funding Mechanisms*

Funding for all DOJ legacy land mobile radio systems, including IWN, is consolidated within the Narrowband Communications Account managed by the DOJ's Wireless Management Office. Because DOJ's wireless communications budget is consolidated, the Wireless Management Office is responsible for funding the components' legacy radio systems operations and maintenance needs. The Narrowband Communications Account's appropriation language directs that no DOJ component can develop or procure additional radio equipment or infrastructure without prior approval from JMD. Consequently, DOJ components receive funding to operate and maintain their legacy communications systems through reimbursable agreements with the Wireless Management Office.

The DOJ Deputy CIO for Information Sharing told us that if a DOJ component needs to replace legacy equipment, it must request funding approval from the Wireless Management Office. This official said that components are required to demonstrate the imminent failure of a particular system to receive funding to upgrade or replace existing legacy equipment and infrastructure. He said that any remaining funding after individual component legacy communications operations and maintenance needs are met is allocated to IWN-related investments.

An example of this approval process occurred in 2004 when the FBI requested replacement of its Las Vegas, Nevada, field office radio system. Because the FBI demonstrated that the system was failing, the Wireless Management Office approved and funded replacement of the old legacy system. The new system is a very high frequency, narrowband compliant system that meets the Advanced Encryption Standard.

According to the DOJ CIO, while the DHS supports IWN, the DHS has not always lived up to its commitments to the IWN project, in part because DHS components receive independent funding for their wireless communications needs. The DOJ CIO stated that this makes it more difficult for the DOJ to obtain cooperation and compliance because narrowband conversion funds are not centrally managed and distributed by DHS, as is the case in the DOJ. At a May 2006 Department Investment Technology

Review Board meeting, the Deputy Attorney General expressed concern that this disparate funding structure is encouraging inefficiencies and resulting in a lost opportunity to create a truly integrated network.<sup>44</sup>

The DHS CIO told us that DHS appropriations are not structured the same as DOJ's and that DHS has separate funding for IWN and for its legacy communications systems. In the joint FY 2006 Office of Management and Budget Capital Asset Plan and Business Case (Exhibit 300), DHS reported its intent to consolidate narrowband conversion funding within DHS in a manner similar to the funding approach used by DOJ.<sup>45</sup> However, in contrast to this document, in October 2006 the DHS CIO told us that DHS does not intend to consolidate narrowband funding of DHS components into a central account. Consequently, the DHS CIO can continue to allocate narrowband conversion resources to individual components, programs, or geographic locations that he believes are in the best interest of the DHS. This allows the DHS CIO to meet the immediate needs of DHS components' by replacing and upgrading their legacy communications systems while still participating in IWN. DOJ, in contrast, is required to develop an integrated department-wide solution because of the congressional requirement that all wireless communications spending be consolidated and managed by a central office.

### **Fracture in the IWN Partnership**

Our audit also found strong indications that the IWN partnership is fractured. It appears that the DOJ and DHS are pursuing separate wireless communications solutions instead of a single joint solution. The current MOU between DOJ, DHS and Treasury requires the departments to collaborate annually on a joint budget submission to request funding for the IWN program. For FYs 2005 through 2007, the departments collaborated on and submitted joint Office of Management and Budget Exhibit 300s. However, for FY 2008, DOJ and DHS submitted separate Office of Management and Budget Exhibit 300s for IWN. In our judgment, such a significant departure from the current MOU calls into question the nature of the IWN partnership.

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<sup>44</sup> The Department Investment Technology Review Board is charged with overseeing the Department's IT investment management program by monitoring the selection and performance of IT investments that are high profile, high cost, and/or high risk.

<sup>45</sup> The Office of Management and Budget requires agencies to submit Exhibit 300s for major information technology investments as part of its budget justification and reporting process. The Exhibit 300 demonstrates compliance with capital programming and planning and investment control policies and justifies new or continued funding for major acquisitions. The Office of Management and Budget uses the Exhibit 300 to make decisions about budgetary resources and to assess agencies' programming processes.



We were advised by the DOJ and DHS CIOs that the current partnership MOU needs to be revised and that the departments are currently in the process of re-negotiating this critical document. Senior DOJ officials have told us that DOJ is looking for a master agreement with annual program plans that detail the specifics of IWN implementation for the immediate year and the responsibilities and contributions expected from each department. The DHS CIO told us that DHS will insist on contracting authority on IWN contracts, which would allow DHS to independently write task and delivery orders against IWN contracts once they are awarded. According to the DHS CIO, without contracting authority for DHS the MOU is a "no go."

In March 2006, the DHS Wireless Management Office Director stated that DOJ appears focused on using trunking technology in a single, nationwide solution.<sup>46</sup> However, he said that DHS wants to use the IWN contract or contracts to acquire the necessary supplies and services to implement individual solutions for its priority geographic locations rather than a single, integrated wireless communications solution. In our opinion, this shows DHS's pursuit of individual solutions rather than a single integrated wireless communications solution.

In October 2006, the DHS CIO told us that DHS is fully committed to the IWN program and has demonstrated its commitment by contributing staffing and funding resources.<sup>47</sup> The DHS CIO also told us that DHS is consolidating its existing networks into a primary communications infrastructure called OneNet, similar to the DOJ's JUTNet, and expects all DHS networks to be operating on OneNet within a year.<sup>48</sup>

However, in addition to the separate Office of Management and Budget Exhibit 300 submissions and the ongoing MOU negotiations, recent decisions made by the DHS provide further indications that the partnership is fractured. For example, in March 2006 the DHS CIO decided to relocate

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<sup>46</sup> As previously defined, trunking is a computer-controlled system that uses all the available frequencies in a pool, automatically allocating an open frequency each time someone on the system initiates a radio call. Although trunking technology provides greater spectrum efficiency and functionality, this technology costs significantly more than conventional technology.

<sup>47</sup> As we explain later, there has been significant turnover in the DHS CIO position during IWN's development.

<sup>48</sup> OneNet is a planned communications network intended to consolidate DHS components' sensitive but unclassified data networks. JUTNet is a planned single, secure network that will handle classified and sensitive but unclassified material and will replace the DOJ's current Justice Consolidated Network.

most of the DHS staff assigned to the Joint Program Office to DHS Headquarters. The DHS CIO told us that the decision was an internal business decision and was reached for economic and organizational efficiency reasons. This official stated that the relocated staff were still assigned to the Joint Program Office, but just were working from a different location. The DHS Wireless Management Office Director expressed the opinion that a joint program office, as it currently exists, probably will not be needed. Instead, he suggested that the relevant agencies create joint teams at the project level, either physically or virtually. In our view, these actions are consistent with DHS's preferred approach of implementing unique solutions in specific locations rather than furthering the development of a joint, nationwide project with DOJ and Treasury.

We also discussed the DHS's participation in the IWN project with the DOJ Deputy CIO for Information Sharing, who told us that the DOJ had been the only major player actively participating in the project for a considerable period of time. He stated that prior to the creation of DHS, Treasury had been a major participant, but its involvement in the project has since been minimized as a result of the reorganization that resulted in its loss of most of its law enforcement components. The DOJ Deputy CIO stated that after allowing the DHS time to organize itself after its creation, DOJ was hoping that the DHS would assume its responsibilities outlined in the current MOU and fully share responsibility for the project with DOJ. However, the DOJ CIO stated that DHS has never participated at the level DOJ expected.

The DOJ Deputy CIO for Information Sharing told us that, nevertheless, DOJ is pursuing a single, integrated solution for IWN. He stated that if DOJ cannot build IWN with the DHS, at least it can develop an integrated network for DOJ. The Deputy CIO also told us that if the DHS uses the IWN contracts only as procurement vehicles, at least there would be some commonality in equipment, services, and vendors between the departments' individual solutions.

The IWN partnership currently appears to be fractured in its approach and disjointed in its goals to develop a secure, wireless, nationwide communication network. We believe that, as result, the system that results from this partnership likely will not be the seamless, interoperable system that was originally envisioned and therefore the communication systems may not be adequate in the event of another terrorist attack or national disaster.

## **Lack of Effective Governing Structure**

We also found that the IWN Executive Board does not have an effective governing structure.

### *Decision by Consensus*

The June 2004 MOU assigns the governance of the IWN project to the IWN Executive Board. The IWN Executive Board is composed of the CIOs from DOJ, DHS, and Treasury. The IWN Executive Board has the authority to review and approve all key business and policy issues related to the implementation and management of the IWN program, including budgets, system deployment priorities, and program management issues such as acquisition strategy, overall concepts of operation, and security policies. The IWN Executive Board is also responsible for overseeing and evaluating the program management activities of the Joint Program Office. The MOU requires that decisions by the IWN Executive Board be made by consensus.

However, the MOU does not provide a process to move forward in the absence of consensus. As the DOJ Deputy CIO for Information Sharing told us, "if DOJ and DHS do not agree, IWN does not go forward." This is of particular concern because, according to the DOJ Deputy CIO, repeated turnover of key DHS personnel has resulted in time consuming efforts on DOJ's part to re-examine previous decisions with new DHS officials to again reach consensus.

Since the formation of the current IWN partnership in June 2004, DHS has had three Wireless Management Office Directors, and as of October 3, 2006, the position was vacant. We were told that during this same period DHS has had two CIOs and one acting CIO. Furthermore, language in the DHS's FY 2007 appropriations law established the Office of Emergency Communications and transferred IWN responsibilities to that office. Up to this point, IWN administration has been the DHS CIO's responsibility, and we are concerned that DOJ will again be faced with the need to revisit previous decisions with new DHS personnel.

### *Lack of DOJ Component Representation*

DOJ radio program managers and senior managers from four DOJ components – the ATF, DEA, FBI, and USMS – expressed concern that although their IWN-related issues are considered by the DOJ CIO, the components are not able to influence IWN Executive Board decisions.

Two of the senior managers told us that their questions and concerns about the IWN project have gone unanswered by the IWN Executive Board. DOJ radio program managers from all four components expressed concern regarding the lack of incorporation of component concerns in decisions related to IWN. For example, all four radio program managers told us that the components' preferred plan was to implement IWN in the Southeastern United States after the Seattle/Blaine Pilot Project was completed. However, in November 2004 the Joint Program Office began requirements analysis for the Southwest Border area and subsequently issued a request for design proposals for the Southwest Border area instead of the Southeastern area. Three of the four DOJ radio program managers attributed this change in the implementation plan to "an attempt to meet" DHS requirements.

In our interviews, the radio program managers and senior managers from DOJ components expressed many concerns with the current IWN project, which we summarize in the following tables.

**DOJ RADIO PROGRAM MANAGERS' IWN-RELATED CONCERNS**

<b>CONCERN</b>	<b>ATF</b>	<b>DEA</b>	<b>FBI</b>	<b>USMS</b>
IWN partnership	X	X	X	X
Disparate component funding	X	X	X	X
IWN program delays	X	X	X	X
Changing requirements		X	X	X
Changing implementation plans	X	X	X	X
Duplication of effort	X	X	X	X
Time consuming acquisition process	X	X	X	X
Loss of focus on tactical communications	X	X	X	X
Deviation from system design concept	X	X	X	X
Security of commercial solution	X	X	X	X
Adequacy of legacy communication systems	X	X	X	X
Dangerous "work arounds"		X	X	X

Source: OIG Interviews with DOJ radio program managers

**DOJ SENIOR MANAGERS' IWN-RELATED CONCERNS**

<b>CONCERN</b>	<b>ATF</b>	<b>DEA</b>	<b>FBI</b>	<b>USMS</b>
IWN partnership	X	X	X	X
Disparate component funding		X	X	X
IWN program delays	X	X	X	X
Availability of IWN funding	X	X	X	
Acquisition process increasing IWN costs	X	X	X	
Loss of focus on tactical communications		X	X	X
Security of commercial solution		X	X	
Adequacy of legacy communication systems		X	X	X
Dangerous "work arounds"		X	X	

Source: OIG interviews with DOJ senior managers

Senior managers from the ATF, DEA, FBI, and USMS all expressed concern about IWN program delays. Three of the four senior managers shared the same concerns that were expressed by the radio program managers regarding the nature of the IWN partnership, the loss of focus on tactical communications, and the adequacy of legacy communications systems. Senior managers from the ATF, DEA, and FBI also expressed concern regarding the availability of sufficient funding to complete the IWN project.

The DOJ Deputy CIO for Information Sharing told us that the component representatives regularly telephone, e-mail, or meet with the DOJ CIO to discuss their IWN-related concerns. DOJ component representatives also described this process as their method for raising IWN-related concerns to the IWN Executive Board. However, as demonstrated by the consistency and critical nature of the concerns summarized in the preceding tables, the concerns of the components have not been addressed by the IWN Executive Board.

In our judgment, the ultimate beneficiaries of IWN do not have an effective method to contribute to the design and execution of the program. Further, due to their inability to participate in the development and implementation of the IWN, DOJ components are losing confidence in the program.

### **Consequences of IWN Project Failure**

Failure to upgrade DOJ components' antiquated communications systems with or without IWN would represent an unnecessary risk to the safety of DOJ law enforcement officers and agents. Further, failure of the IWN project will represent a significant missed opportunity to achieve needed communications interoperability between federal law enforcement agencies, and cost and spectrum efficiencies. In addition, because the DOJ plans to address its narrowband requirements with IWN, failure of the joint program will require the DOJ to seek alternative solutions such as a department-wide communications network or a network developed by DOJ and Treasury.

#### *Unacceptable Risk to Safety of Department of Justice Law Enforcement Officers and Agents*

It is critically important that law enforcement officers and agents have a reliable, safe, and efficient way to communicate. Law enforcement agents must be able to maintain flexibility and mobility, and at times operate covertly, yet still remain in contact with other personnel essential to the

operation. Wireless communications systems are a critical part of most law enforcement operations, and usually provide the sole means of communications connectivity for the overall operation.

DOJ has been relying on IWN to address a myriad of problems with its current wireless communications systems. As discussed above, at present the DOJ has multiple stove-piped land mobile radio systems with infrastructure dating back 15 to 20 years. The performance of the systems has degraded in terms of coverage, reliability, and usability. The systems provide limited federal-to-federal and federal-to-state/local interoperability, do not use radio spectrum efficiently, and require extensive operations and maintenance funds.

The vast majority of DOJ legacy systems are comprised of technology that is over 10 years old and, as shown in the table below, 31 percent of DOJ's legacy systems are over 15 years old. As a result, devices function only on wideband land mobile radio channels that are no longer compliant with NTIA policy, or only with a Digital Encryption Standard algorithm that is no longer supported by the National Institute of Standards and Technology and is recognized as "weak" security. We were also told that the current encryption standard used by the majority of DOJ's legacy systems is vulnerable to amateur hacking attempts and that communications may be intercepted by unauthorized parties, thereby jeopardizing operations. Further, most of DOJ's current devices function in an analog versus digital mode, which means they have limited functionality and diminished voice communications quality. The following table lists the DOJ components' legacy communications systems by age.

**AGE OF DOJ COMPONENT LEGACY LAND MOBILE RADIOS SYSTEMS  
As of September 2006**

<b>Component</b>	<b>Number of System Sites<sup>49</sup></b>	<b>Number of Systems 1 to 10 Years Old</b>	<b>Percent</b>	<b>Number of Systems 11 to 14 Years Old</b>	<b>Percent</b>	<b>Number of Systems 15 to 19 Years Old</b>	<b>Percent</b>	<b>Number of Systems 20 Years or Older</b>	<b>Percent</b>
Alcohol, Tobacco, Firearms, and Explosives	466	466	100%	0	0%	0	0%	0	0%
Drug Enforcement Administration	640	139	22%	250	39%	221	34%	30	5%
Federal Bureau of Investigation	3,057	792	26%	1,236	40%	1,029	34%	0	0%
<b>TOTAL</b>	<b>4,163</b>	<b>1,397</b>	<b>33%</b>	<b>1,486</b>	<b>36%</b>	<b>1,250</b>	<b>30%</b>	<b>30</b>	<b>1%</b>

Source: OIG Analysis of Component Radio System Data

Another effect of DOJ's current outdated land mobile radio systems is that most DOJ systems cannot support over-the-air re-keying of encryption codes, which means re-keying must be done manually. Also, most systems and devices are not compatible with the interoperability standard for over-the-air interface, which means that the units can function only with similar equipment. This limits (but does not eliminate) the options for interoperability among DOJ systems, as well as between DOJ systems and other law enforcement and homeland security personnel.

For example, the Department's components have been able to establish some measure of interoperability among themselves and with state and local law enforcement organizations in specific law enforcement operations by using the current antiquated systems. But the process is not seamless and requires significant planning. During the Washington, D.C., area sniper shootings in 2002, federal, state, and local law enforcement agencies needed to communicate in order to respond and relocate quickly. This required interoperability between communications systems operating in several different frequency bands, and adherence to the federal requirement that radios be programmed with encryption keys.

In order to achieve interoperability for this operation, special equipment was added to the participating law enforcement agencies' systems to receive broadcasts from the originating systems and rebroadcast the message to the other law enforcement systems. Because these

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<sup>49</sup> For the purpose of this audit, we are comparing the number of radio sites per reported system. Radio sites are typically the basic cost unit of a communications system.

broadcasts were not encrypted, all law enforcement agencies could receive the communication. The drawbacks to this method were that non-law enforcement personnel were also able to receive the broadcast and the time required to plan and install the equipment.

In some cases, existing communications equipment used by DOJ components is no longer supported by the manufacturer, which means spare parts are difficult to find and maintenance is essentially a “custom service.” This is an important issue because according to the DOJ Deputy CIO for Information Sharing, the decreasing reliability of this older equipment is a contributing factor to agents’ use of commercial devices instead of radios.

As shown in the table below, 73 percent of the Department’s 4,163 radio system sites are no longer supported by the manufacturer.

**OBSOLETE DOJ COMPONENT LEGACY  
LAND MOBILE RADIO SYSTEM SITES<sup>50</sup>  
As of September 2006**

<b>Component</b>	<b>Obsolete</b>	<b>Percent Obsolete</b>	<b>Still Supported</b>	<b>Percent Supported</b>
Alcohol, Tobacco, Firearms, and Explosives	0	0%	466	100%
Drug Enforcement Administration	454	71%	186	29%
Federal Bureau of Investigation	2,568	84%	489	16%
<b>TOTAL</b>	<b>3,022</b>	<b>73%</b>	<b>1,141</b>	<b>27%</b>

Source: OIG Analysis of Component Radio System Data

Another drawback to the current radio equipment is its size – older radios are large and obtrusive. When combined with the limited functionality and decreasing reliability, the size of current hand-held radios is such that agents are much less inclined to use them. Several DOJ officials told us that agents are sometimes using commercial cellular telephones and walkie-talkies that are vulnerable to interception in lieu of hand-held radios. In our judgment, this represents a serious risk to agents and Department law enforcement operations.

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<sup>50</sup> For the purpose of this audit, we are comparing the number of radio sites per reported system. Radio sites are typically the basic cost unit of a communications system.



### *Cost Efficiency*

When the Narrowband Communications Account was created in 1998, one of the primary concerns expressed in the appropriations language was the need to increase efficiency and savings through shared infrastructure and common procurement strategies. The 2002 IWN cost model estimated approximately \$1.19 billion in additional investment costs if the departments do not collaborate and instead developed their own tactical communications solutions.

The DOJ CIO stated that from a cost perspective, he believes the 2002 IWN cost model estimate of increased costs to build separate systems is not unreasonable. However, in May 2006 the DOJ CIO identified a risk of funding falling substantially short of what is necessary to implement IWN. The mitigation strategies subsequently identified by the DOJ include looking for lower cost alternatives, reducing reliability and security features of the proposed solutions, and providing IWN coverage to only high-priority areas.

If DOJ, DHS, and Treasury do not collaborate on a joint IWN solution, the government could miss the opportunity to save over \$1 billion through shared infrastructure, common procurement strategies, and consolidation of redundant information technology investments.

### *Narrowband Requirement*

As noted earlier, as new wireless technologies and applications have developed, the demand for spectrum-based services has increased and efficient use of the radio frequency spectrum has become critical. Therefore, under instruction from Congress in October 1993 to manage the radio frequency spectrum more efficiently, the NTIA mandated that land mobile radio systems operating at very high frequencies and ultra high frequencies convert to narrowband channel bandwidth communications systems by January 1, 2005, and January 1, 2008, respectively.

By 2004, several federal agencies were advising the NTIA that they would not be able to meet the January 1, 2005, deadline for converting their very high frequencies to narrowband operations. DOJ was one of the departments that reported it would not meet the deadline, citing the lack of suitable equipment and encryption capability as part of the reason for its non-compliance.

As shown in the following table, DOJ is one of the largest users of the very high frequency radio spectrum, with more than 14,000 frequency assignments. As of November 2005, approximately 70 percent of the radio

frequencies assigned to DOJ were used for tactical communications support, which is critical to agent safety and operational effectiveness. The following table shows federal agency rate of compliance with the narrowband mandate.

**NARROWBAND COMPLIANCE FOR AGENCIES WITH GREATER THAN 1,000 VERY HIGH  
FREQUENCY LICENSES<sup>51</sup>  
As of April 18, 2006**

Agency	Licenses	Percent Narrowband Compliant
Department of Justice	14,617	22%
Department of the Interior	9,983	80%
Department of Homeland Security	9,360	32%
Department of Agriculture	8,927	86%
Federal Aviation Administration	4,623	37%
Department of Commerce	4,263	42%
U.S. Army	2,224	76%
Department of Energy	2,216	43%
Non-Member Agencies	1,585	64%
U.S. Air Force	1,282	92%
U.S. Coast Guard	1,152	59%
Department of the Treasury	1,131	85%

Source: OIG analysis of National Telecommunications and Information Administration data

As the table shows, the DOJ had the lowest narrowband compliance rate, at 22 percent, among the dozen agencies with at least 1,000 very high frequency licenses. According to the DOJ CIO and Deputy CIO for Information Sharing, because the DOJ is relying on IWN to replace the components' noncompliant legacy radio systems, DOJ's narrowband compliance rate will not improve unless the DOJ receives additional funding for the IWN conversion.

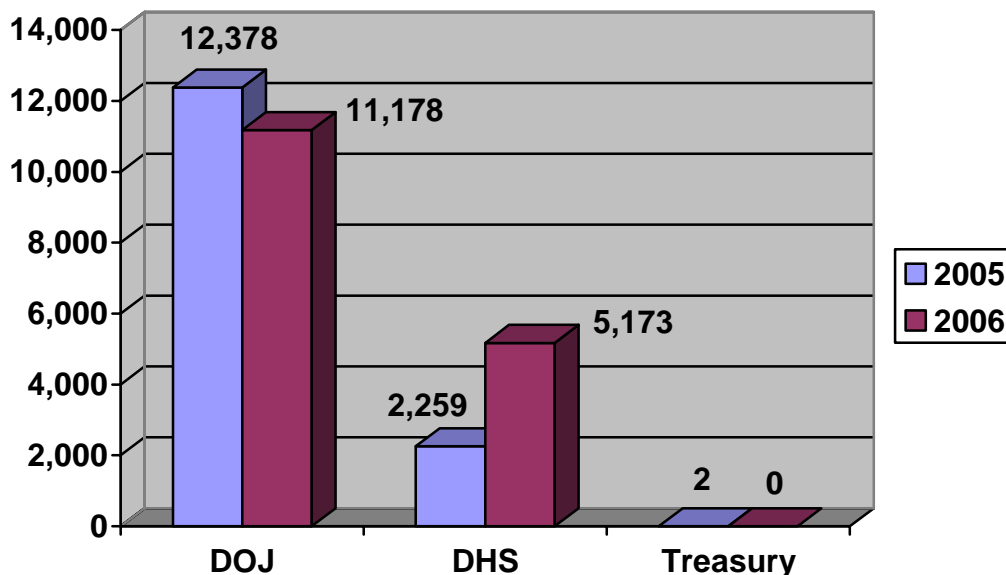
The Chief of the Spectrum Support Division of the Office of the Spectrum Management at NTIA told us that for calendar years 2005 and 2006, agencies that had not met the narrowband requirement were allowed to request waivers to continue protected wideband operations on the frequencies subject to the NTIA mandate. The Chief of the Spectrum Support Division said that during the past 2 years NTIA had received and granted tens of thousands of waiver requests.<sup>52</sup>

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<sup>51</sup> See Appendix 5 for agency licenses and rate of compliance.

<sup>52</sup> See Appendix 6 for the waivers granted in 2005 and 2006.

**WAIVERS GRANTED BY NTIA TO IWN PARTNERS  
DURING CALENDAR YEARS 2005 AND 2006**



Source: OIG analysis of National Telecommunications and Information Administration data

However, in September 2006, NTIA's Frequency Assignment Subcommittee approved a change to the NTIA Manual that eliminates the waiver provision and directs the Subcommittee to adjudicate only unresolved conflicts between agencies involving overlapping narrowband and wideband operations.

On October 11, 2006, DOJ submitted a waiver request for the 69 percent of its frequency assignments that have not been converted to narrowband. The NTIA Subcommittee rejected DOJ's waiver request. As a result, beginning January 1, 2007, DOJ will be operating on a non-interference basis on 10,129 frequency assignments. This means that DOJ law enforcement communications on those frequency assignments may be subject to interference from narrowband communications of other agencies and that DOJ will have no basis to request the interfering operation to stop. Further, if DOJ wideband operations interfere with other users' narrowband operations, DOJ could be required to cease operating on the frequency.

We discussed DOJ's ability to change frequencies in such an event with the DOJ Spectrum Manager. She said that the DOJ could not change frequencies without buying new equipment. The DOJ Spectrum Manager told us that the DOJ would continue to ask for waivers until the IWN acquisition process is completed and adequate funding and technological advances in equipment allow IWN to be implemented across the country.

The DOJ Spectrum Manager also stated that as a result of the NTIA Subcommittee's action, DOJ is elevating its request for waivers to the Department of Commerce's Acting Assistant Secretary of Commerce for Communications and Information.

The DOJ's failure to meet the NTIA narrowband mandate, coupled with NTIA's recent denial of the DOJ's request to keep operating on the non-narrowband frequencies means that DOJ law enforcement communications could be subject to interference from the narrowband operations of other agencies. Further, if DOJ's wideband operations interfere on the narrowband operations of other agencies, DOJ could be required to cease operations on those frequency assignments. Under either of these circumstances, DOJ law enforcement operations could be compromised due to the inability to communicate effectively and the potential for garbled, incomprehensible, or incomplete transmissions.

### *Interoperability*

The initial IWN design that was the basis for the Seattle/Blaine Pilot Project addressed interoperability by planning for gateways that would allow IWN users to communicate with state and local public safety communication systems. According to The National Commission on Terrorist Attacks upon the United States (9/11 Commission):

The inability to communicate was a critical element at the World Trade Center, Pentagon, and Somerset County, Pennsylvania, crash sites, where multiple agencies and multiple jurisdictions responded. The occurrence of this problem at three very different sites is strong evidence that compatible and adequate communications among public safety organizations at the local, state, and federal levels remains an important problem.<sup>53</sup>

We asked the IWN Executive Board representatives about IWN's progress toward achieving the goal of interoperability.

According to the DHS CIO, DOJ and DHS can achieve interoperability, including wireless communications interoperability, through gateways between JUTNet and OneNet, the two primary departmental networks. The DHS CIO told us that because the DHS cannot wait for IWN, it has included

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<sup>53</sup> National Commission on Terrorist Attacks Upon the United States, *Final Report of the National Commission on Terrorist Attacks Upon the United States* (2004)

the requirement for IWN interoperability in its recent Secure Border Initiative contract.<sup>54</sup>

According to the DOJ Chief Information Officer, DHS's following an independent approach would not rule out interoperability, but the resulting communication system may not be as well coordinated as a system developed through an integrated approach and may make interoperability more difficult and costly to achieve. The DOJ Deputy CIO for Information Sharing told us that the JUTNet and OneNet networks could connect major points such as agency field offices through traditional land lines. This official told us that once these networks are established, interoperability between the systems would be fairly simple, but not an inherent part of the networks.

The Treasury Chief Information Officer advised us that if DHS pursues an independent approach "interoperability will be fuzzy," and that as long as one department is free to go their own way, nothing can be done to improve interoperability. He also stated that the goal of all the departments is to increase interoperability, not only for emergency situations, but for day-to-day operations. The Treasury Chief Information Officer told the OIG that "At the end of the day, no one wants to be the department that did not work to develop interoperability. Each of the representatives has leadership responsibilities to do what is best for the government."

The level of interoperability described by the IWN Executive Board representatives does not reflect the seamless communications capability originally envisioned for the network and, in our judgment, may not be adequate in the event of another terrorist attack or natural disaster.

## **Conclusion**

Our audit found that the IWN program is facing significant challenges and a high risk that the joint narrowband communications network originally envisioned for the DOJ, DHS, and Treasury will not be realized. Despite over 6 years of development and more than \$195 million in funding for IWN, apart from one pilot system DOJ law enforcement agents have received little in the way of new, secure, compliant radio equipment through IWN. We found that the causes for the risk of failure include uncertain funding to complete the project, disparate departmental funding mechanisms, a

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<sup>54</sup> The Secure Border Initiative (SBI) is a comprehensive multi-year plan to secure America's borders. On September 18, 2006, DHS awarded a contract for information technology services, including telecommunications services, to implement SBInet along the United States northern and southern borders. SBInet is intended to detect and identify illegal entry attempts at U.S. land borders with Mexico and Canada.

fractured IWN partnership, and the lack of an effective governing structure for the project.

A failure of the IWN project would represent a significant missed opportunity to achieve needed communications interoperability among federal, state, and local law enforcement agencies. In addition, failure of the joint IWN project will require DOJ and other agencies to independently create communications networks, which we believe would result in substantially increased overall costs and less efficient use of the radio spectrum. Moreover, failure to upgrade DOJ components' antiquated communications systems with or without IWN would represent an unnecessary risk to the safety of DOJ law enforcement agents and Department law enforcement operations.

DOJ has been relying on IWN to address a myriad of problems with its current wireless communications systems, which consist of multiple stove-piped land mobile radio systems with infrastructure dating back 15 to 20 years. Over the years, the performance of these systems has degraded in terms of coverage, reliability, and usability. Of the Department's 4,163 radio system sites 3,022 are no longer supported by the manufacturer, which means spare parts are difficult to find and maintenance is essentially a "custom service." In addition, much of the Department's current radio equipment is large and obtrusive. We were told that the size of current hand-held radios, combined with their limited functionality and decreasing reliability, has lead some DOJ agents to use commercial cellular telephones and walkie-talkies that are vulnerable to interception in lieu of hand-held radios.

Just to replace DOJ's antiquated legacy wireless communications equipment would cost DOJ approximately \$900 million. However, the DOJ will require more than twice that amount to fund its share of IWN. Consequently, for the DOJ, DHS, and Treasury to complete IWN as planned, a major infusion of funding will be required over the next several years.

Our audit found that the fractured nature of the current IWN partnership and the disjointed approach of the two primary partners to achieve the IWN goals seriously threaten the success of the IWN program. In order to salvage the intended multi-agency project, we believe IWN requires a partnership among the agencies involved with a commitment to common goals and methods to achieve those goals. DOJ, DHS, and Treasury need to commit to a joint IWN solution rather than addressing individual communications issues in their respective departments. The three departments also must develop a cohesive management approach to direct IWN development and deployment.

The current ineffective governing structure of the IWN program has led to significant delays in the program. Valuable time has been spent reaching decisions between agencies that are revisited due to turnover of key personnel. Due to the complexity, expense, and critical nature of this program, a coordinated and effective governing structure is imperative for IWN to succeed.

## **Recommendations**

We recommend that:

1. DOJ reach an agreement with the DHS and Treasury Deputy Secretaries that reflects each agency's commitment to the IWN project. This agreement should explicitly state the shared goals, responsibilities, and resource contributions and funding requirements of the sponsoring departments.
2. If the departments are unable to reach agreement on a unified approach, we recommend that the DOJ notify Congress and the Office of Management and Budget that the IWN project is not viable as a joint project with DHS, and that the three Departments are pursuing their own IWN strategy to meet their wireless communications requirements.
3. In addition, if DOJ is unable to reach agreement on a unified approach with DHS and Treasury, the DOJ should develop and implement a departmental plan to upgrade its legacy wireless communications systems.
4. Require the Assistant Attorney General for Administration to ensure that an agreement is reached that allows DOJ to continue its wideband operations on very high and ultra high frequencies without interference.

## STATEMENT ON COMPLIANCE WITH LAWS AND REGULATIONS

We conducted our audit of the Integrated Wireless Network in accordance with *Government Auditing Standards*. In connection with the audit, and as required by the standards, we reviewed management processes and records to obtain reasonable assurance about the organization's compliance with laws and regulations that, if not complied with, in our judgment, could have a material effect on IWN.

We audited IWN at the headquarters offices of DOJ, the Joint Program Office, and visited an FBI field office and a FEMA regional office. We performed fieldwork between January and October 2006. We also interviewed the DHS and Treasury CIOs and the Director of the DHS Wireless Management Office. Our audit included an analysis of the strategic and program level management of IWN and a determination of the level of departmental compliance with a federal mandate.

Our audit included examining evidence concerning laws and regulations. The specific laws and regulations we reviewed included the Telecommunications Authorization Act of 1992 and the NTIA Narrowband Mandate of 1993.

While performing our audit, we determined that DOJ is not in compliance with the NTIA Narrowband Mandate of 1993. DOJ is aware of this non-compliance issue and its consequences as discussed beginning on page 33 of this report.

With respect to areas that were not tested, nothing came to our attention that caused us to believe that DOJ was not in compliance with the laws and regulations cited above.



## STATEMENT ON INTERNAL CONTROLS

In planning and performing the audit of IWN, the OIG considered the internal controls of the Office of DOJ Chief Information Officer, the Joint Program Office, and the Wireless Management Office for the purpose of determining our auditing procedures. The OIG did not make the evaluation for the purpose of providing assurance on the internal control structure of the Office of the Chief Information Officer, the Joint Program Office, or the Wireless Management Office as a whole; however, there are certain matters considered reportable conditions under generally accepted government auditing standards.

Reportable conditions involve matters coming to the attention of the OIG relating to significant deficiencies in the design or operations of the internal control structure. If present, these conditions could adversely affect the ability of the DOJ Chief Information Officer as the DOJ representative on the IWN Executive Board to develop, implement, and manage the operation of a joint wireless communication system, the ability of the Joint Program Office to implement IWN within established cost and time parameters, and the ability of the Wireless Management Office to oversee and direct the development of wireless communications. We identified the following reportable conditions with respect to the IWN project. These issues are discussed in detail in the body of the report.

- The Joint Program Office did not have an effective method to monitor and report the cost of Joint Program Office projects. As a result, critical information necessary to reach informed decisions is not available to IWN decision-makers.
- There is not adequate documentation of actions and decisions taken by the IWN Executive Board, the Joint Program Office, or the Wireless Communications Board. As a result, there is not an objective basis for evaluating the performance of these organizations. In addition, the inadequate documentation of proceedings related to the IWN program proceedings has fostered doubts regarding program decisions that relate directly to agent and officer safety.

## OBJECTIVES, SCOPE, AND METHODOLOGY

### Audit Objectives

The objectives of the audit were to:

- assess the implementation of the IWN project, and
- assess whether DOJ legacy communication systems comply with the National Telecommunications and Information Administration's requirements.

### Scope and Methodology

We performed our audit in accordance with *Government Auditing Standards* and included such tests as were considered necessary to accomplish our audit objective. It should be noted that the Department of Justice, Office of the Inspector General is a participant in the IWN project, but as noted in the introduction to this report the DOJ OIG comprises only 0.19 percent of the universe of potential IWN users. Therefore, the OIG's limited participation in IWN had no effect on our general audit scope, methodology, or results, and no OIG transactions related to IWN were included in our audit.

Our audit concentrated on, but was not limited to FYs 2000 through 2006. We conducted fieldwork at the Joint Program Office and the DOJ Wireless Management Office in Fairfax, Virginia, DOJ, JMD, Procurement Services Staff in Washington, D.C., the headquarters offices of the ATF and DEA, and the facilities of Seattle/Blaine Pilot Project site in the Seattle, Washington area. We interviewed the Chief Information Officers of DOJ, DHS, and Treasury and the Directors of the DOJ and DHS Wireless Management Offices. We also interviewed the DOJ Deputy Chief Information Officer Information Sharing, Deputy Directors of the ATF, FBI, and USMS, and an Assistant Administrator of the DEA. In addition, we interviewed the DOJ Spectrum Manager, the DOJ IWN Program Manager, and the DOJ Wireless Management Office Administration Officer. At the Seattle/Blaine Pilot Project, we conducted interviews with the FBI Special Agent in Charge, the FBI Telecommunications Manager, the Chief Deputy U.S. Marshal and FBI agents and deputy U.S. Marshals.

We examined pertinent documents, including the memorandum of understanding between DOJ, DHS, and Treasury; the Fiscal Year 2005

Program Plan; the IWN Strategic Plan for 2003-2008; the Program Weekly Status Reviews; the IWN Executive Status Reports; and the weekly Memorandum for IWN Seattle/Blaine Service Area. We examined DOJ's FY 2006 Performance Budget for Narrowband Communications and other documents such as monthly reports of Obligation Analysis by Sub-Object Class.

We interviewed the Chief of the Spectrum Support Division of the Office of Spectrum Management at the Department of Commerce's National Telecommunications and Information Administration (NTIA). We examined the Telecommunications Authorization Act of 1992 and the NTIA Narrowband Mandate of 1993. We obtained documents from the NTIA that discussed the process for requesting waivers and the proposed rule of the Frequency Assignment Subcommittee to prohibit waivers for wideband operations that interfere with narrowband operations. We also reviewed NTIA reports of frequency assignments and waivers for noncompliant frequencies.

We assessed the progress of the 3-phase acquisition plan to contract with one or more non-government vendors to build IWN across the country. We reviewed the proposals of the four vendors selected to compete in Phase 2 and interviewed component members who served on the management and technical evaluation teams. We also interviewed the Assistant Director of DOJ's Procurement Services Staff.

**ACRONYMS**

ATF	Bureau of Alcohol, Tobacco, Firearms, and Explosives
CIO	Chief Information Officer
DEA	Drug Enforcement Administration
DHS	Department of Homeland Security
DOJ	Department of Justice
FBI	Federal Bureau of Investigation
FY	Fiscal Year
IWN	Integrated Wireless Network
JMD	Justice Management Division
MOU	Memorandum of Understanding
NTIA	National Telecommunications Information Administration
OIG	Office of the Inspector General
OTAR	Over-the-air-re-keying
USMS	U. S. Marshals Service

## DESCRIPTION OF IWN SOUTHWESTERN BORDER AREA

Excerpt from Integrated Wireless Network Contract Task Orders

### C.1.10.2 Coverage

The First Service Area is divided into six areas (A-F) bounded as follows:

#### Area A:

- North: 10 miles north of and following the centerline of I-8 in Arizona; and then 10 miles north of and following the centerline of I-10 east of its intersection with I-8
- South: Southwestern Arizona border with Mexico, and Southeastern California border with Mexico
- East: Area B; and south of Area B, the eastern boundary is 10 miles west of and following the centerline of I-19
- West: 15 miles radius surrounding the location defined by latitude N32.677450, longitude W114.620157 (Yuma), extending into California but not Mexico

#### Area B:

- 25 mile radius surrounding the location defined by latitude N32.195816, longitude W110.891717 (City of Tucson)

#### Area C:

- North: 10 miles north of and following the centerline of I-10 in Arizona
- South: Southeastern Arizona border with Mexico
- East: Arizona-New Mexico state line
- West: Area A and Area B

#### Area D:

- North: 10 miles north of and following the centerline of I-10 in New Mexico
- South: Southwestern New Mexico border with Mexico
- East: Area E
- West: Arizona-New Mexico state line

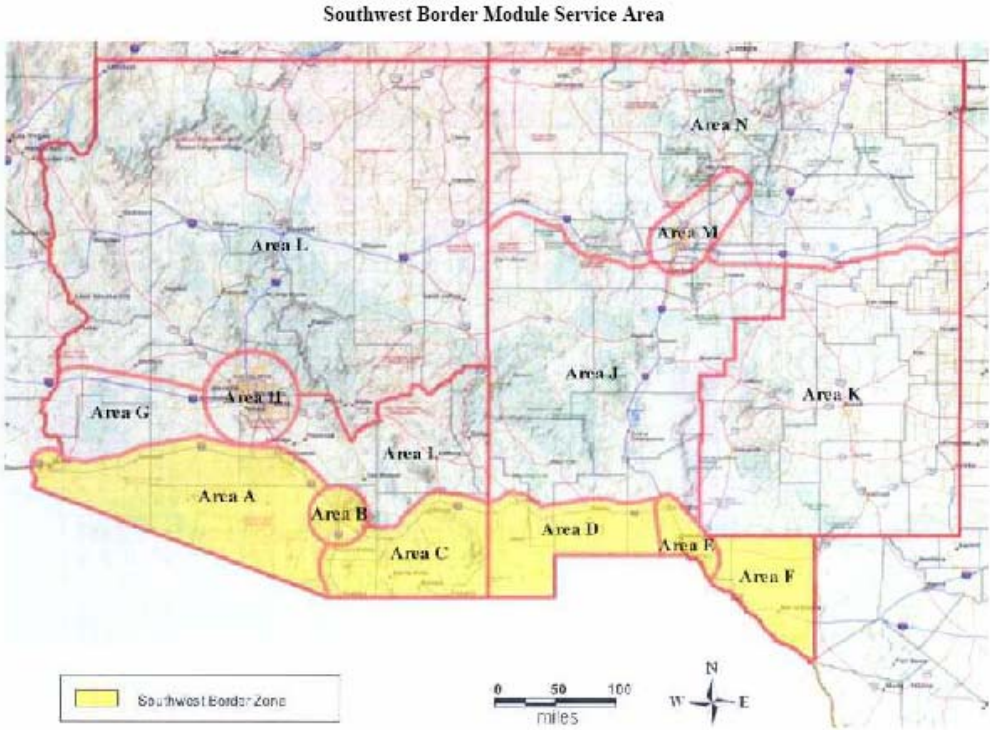
#### Area E:

- North: 30 mile radius surrounding the location defined by latitude N32.323700, longitude W106.756674 (Las Cruces, NM)
- South: Southwestern New Mexico border with Mexico, and Southwestern Texas border with Mexico
- East: 30 mile radius surrounding the location defined by latitude N32.323700, longitude W106.756674 (Las Cruces, NM); 30 mile radius surrounding the location defined by latitude N31.849250, longitude

- W106.437549 (El Paso, TX), but not extending into Mexico; and 30 miles east of the line connecting these two locations (along the line)
- West: 30 miles west of the line connecting the locations defined by latitude N32.323700, longitude W106.756674 (Las Cruces, NM) and latitude N31.849250, longitude W106.437549 (El Paso, TX)

Area F:

- North: Texas-New Mexico state line
- South: Southwestern Texas border with Mexico
- East: Eastern border of Hudspeth County
- West: Area E



**MEMORANDUM OF UNDERSTANDING  
BETWEEN  
THE DEPARTMENT OF HOMELAND SECURITY,  
THE DEPARTMENT OF JUSTICE,  
AND  
THE DEPARTMENT OF THE TREASURY  
REGARDING  
A JOINT TACTICAL WIRELESS COMMUNICATIONS SYSTEM**

1. **PARTIES.** The parties to this Agreement are the Department of Homeland Security (DHS), the Department of Justice (DOJ), and the Department of the Treasury (Treasury).
2. **AUTHORITY.** This Agreement is authorized under the provisions of the Homeland Security Act of 2002, codified in Title 6, U.S. Code.
3. **PURPOSE.** The purpose of this Agreement is to set forth terms by which DHS, DOJ, and the Treasury will establish commitments, responsibilities, and agreements necessary with which Department will develop, implement, and manage the operation of a joint wireless communications system to support federal law enforcement and homeland security operations throughout the United States, hereinafter referred to as the Integrated Wireless Network (IWN).

The specific goals of the IWN program include:

- a. To meet each Departments functional and operational requirements for tactical wireless communications;
- b. To improve communications interoperability among the law enforcement agencies of the Departments (DHS, DOJ, and the Treasury);
- c. To improve communications interoperability between the Departments and state, local, and other federal law enforcement and homeland security agencies;
- d. To achieve cost efficiencies; and
- e. To achieve efficient use of radio spectrum and compliance with the National Telecommunications and Information Administration narrowband mandate.

The governance of the IWN program shall include:

- a. The IWN program will be governed by the IWN Executive Board (IEB) that will be comprised of the Chief Information Officer of each of the Departments.
- b. The IEB will review and approve all key business and policy issues related to the implementation and management of the IWN program, including program budgets, system deployment priorities, and strategic program management issues (e.g., acquisition strategy, overall concepts of operation, security policies, among others).

- c. The IEB will oversee and evaluate the conduct of program management duties performed by the Joint Program Office and National Project Team.
- d. Decisions of the IEB will be made by consensus reached among the three Departments.

The Joint Program Office (JPO) shall perform the IWN program management functions in accordance with instructions from the IEB.

- a. The JPO shall consist of staff assigned to the Office on a full-time basis from each of the Departments. Such staff may include contractor staff.
- b. JPO responsibilities include:
  - 1. Executing all aspects of the system development life-cycle;
  - 2. Performing all IWN program administrative and project management functions;
  - 3. Consulting with the National Project Team to determine how best to meet the component/bureau IWN-related requirements; and
  - 4. Developing the program budget, policy, and concept of operations recommendations for consideration by the IWN Executive Board.

The National Project Team (NPT) shall provide input to and advise the JPO on the requirements of the individual components/bureaus participating in the IWN program.

- a. The NPT will be comprised of representatives from each component/bureau participating in the IWN program.
- b. NPT member responsibilities include:
  - 1. Providing information to the JPO required for the development, implementation, and administration of the IWN system;
  - 2. Reviewing IWN deliverables to determine if the deliverables meet component/bureau requirements; and
  - 3. Providing advice to their respective Department CIO on recommendations submitted to the IEB for decision.

4. **RESPONSIBILITIES.** The responsibilities of DHS, DOJ, and the Treasury are as described below.

DHS will:

- a. Participate in the joint governance of the IWN program.
- b. Participate in the joint program management of the system definition, implementation, and administration of the IWN program.
- c. Subject to the availability of funding, contribute resources (staff, facilities, funding, and radio spectrum) necessary to develop and implement the IWN in a timely manner.
- d. Make implementation of and migration to the IWN a priority for the Department's wireless program.



- e. Subject to the availability of funding, share in the cost of the IWN infrastructure and program administration costs.
- f. Fund the cost of Department-specific equipment, such as IWN subscriber radios, consoles, and operator workstations, including equipment installation.
- g. Collaborate annually on a joint budget submission for the IWN program.
- h. Assign staff to the JPO who have skills and experience commensurate with the tasks that the JPO is directed to perform.
- i. Assign a number of staff to the JPO equal to that assigned by DOJ.
- j. Staff assigned to the JPO shall remain employees of and shall be compensated by their "home" Departments.
- k. Provide facilities to house IWN equipment, system operations, and program management functions.
- l. To the extent practicable, strive to share the burden of facilities equally with DOJ.
- m. Provide radio spectrum needed to implement the IWN based on which radio spectrum:
  1. Best meets the needs of the IWN; and
  2. Is already allocated for like purposes (i.e., for tactical wireless communications systems supporting law enforcement/homeland security operations at or near the specific geographic location in question).

DOJ will:

- a. Participate in the joint governance of the IWN program.
- b. Participate in the joint program management of the system definition, implementation, and administration of the IWN program.
- c. Subject to the availability of funding, contribute resources (staff, facilities, funding, and radio spectrum) necessary to develop and implement the IWN in a timely manner.
- d. Make implementation of and migration to the IWN a priority for the Department's wireless program.
- e. Subject to the availability of funding, share in the cost of the IWN infrastructure and program administration costs.
- f. Fund the cost of Department-specific equipment, such as IWN subscriber radios, consoles, and operator workstations, including equipment installation.
- g. Collaborate annually on a joint budget submission for the IWN program.
- h. Assign staff to the JPO who have skills and experience commensurate with the tasks that the JPO is directed to perform.
- i. Assign a number of staff to the JPO equal to that assigned by DHS.
- j. Staff assigned to the JPO shall remain employees of and shall be compensated by their "home" Departments.
- k. Provide facilities to house IWN equipment, system operations, and program management functions.
- l. To the extent practicable, strive to share the burden of facilities equally with DHS.
- m. Provide radio spectrum needed to implement the IWN based on which radio spectrum:

1. Best meets the needs of the IWN; and
2. Is already allocated for like purposes (i.e., for tactical wireless communications system supporting law enforcement/homeland security operations at or near the specific geographic location in question).

The Treasury will:

- a. Participate in the joint governance of the IWN program.
- b. Participate in the joint program management of the system definition, implementation, and administration of the IWN program.
- c. Subject to the availability of funding, contribute resources (staff, facilities, funding, and radio spectrum) necessary to develop and implement the IWN in a timely manner.
- d. Make implementation of and migration to the IWN a priority for the Department's wireless program.
- e. Commit resources commensurate with the Treasury's level of participation in the IWN program.
- f. Subject to the availability of funding, share in the cost of the IWN infrastructure and program administration costs.
- g. Fund the cost of Department-specific equipment, such as IWN subscriber radios, consoles, and operator workstations, including equipment installation.
- h. Collaborate annually on a joint budget submission for the IWN program.
- i. Assign staff to the JPO to the extent that Treasury employees have the skills and experience required to perform JPO task assignments
- j. Staff assigned to the JPO shall remain employees of and shall be compensated by their "home" Departments.

5. POINTS OF CONTACT: The points of contact for each Department are as shown below.

DHS:

Sean Thrash  
Director, Wireless Management Office  
Department of Homeland Security  
7<sup>th</sup> & D St, SW  
Washington, DC  
202-772-9948 Office  
202-358-1480 Fax  
Sean.Thrash@dhs.gov

DOJ:

Michael Duffy  
Deputy CIO, E-Government  
Department of Justice  
950 Pennsylvania Ave, NW  
Washington, DC 20530

202-305-4568 Office  
202-514-1225 Fax  
Michael.Duffy@usdoj.gov

Treasury:

Harry Alton Lee  
Director, Enterprise Solutions  
Office of the CIO  
Department of the Treasury  
1750 Pennsylvania Avenue, N.W., # 7168  
Washington, DC 20220  
202-622-0683 Office  
202-622-3313 Fax  
202-360-6006 Mobile  
Harry.Lee@do.treas.gov

6. **OTHER PROVISIONS.** Nothing in this Agreement is intended to conflict with current law or regulation or the directives of the DHS, DOJ, or the Treasury. In a term of this agreement is inconsistent with such authority, then that term shall be invalid, but the remaining terms and conditions of this agreement shall remain in full force and effect.

Should additional more comprehensive detail be required relative to specific projects, initiatives, and/or undertakings, the Parties hereby agree that said detail will be delineated in additional Agreements subordinate to this.

7. **EFFECTIVE DATE.** The terms of this agreement will become effective as of the date of final signature, are subject to periodic review by the signatories, and will continue in full force until a subsequent MOU is signed.

8. **MODIFICATION.** The agreement may be modified upon the mutual written consent of all parties.

9. **TERMINATION.** The terms of this agreement, as modified with the consent of all parties, will remain in effect throughout the IWN Program. The agreement may be extended by mutual written agreement of the parties. Any party upon 60 days written notice to the other party may terminate this agreement.



**AGENCY VERY HIGH FREQUENCY LICENSES AND PERCENT  
COMPLIANT  
AS OF FEBRUARY 3, 2005**

The tables below show the government agencies in the very high frequency band, the number of licenses for each agency, and the level of narrowband compliance for each agency. The sponsoring departments of IWN are in boldface type.

AGENCY	LICENSES ISSUED	PERCENT NARROWBAND COMPLIANT
<b>Department of Justice</b>	<b>14,987</b>	<b>16%</b>
Department of the Interior	9,653	71%
<b>Department of Homeland Security</b>	<b>9,564</b>	<b>24%</b>
Department of Agriculture	8,967	82%
Federal Aviation Administration	4,409	32%
Department of Commerce	4,237	36%
Department of Energy	2,529	37%
U.S. Army	2,412	54%
U.S. Air Force	1,583	66%
Non-Member Agencies	1,520	60%
<b>Department of Treasury</b>	<b>1,175</b>	<b>65%</b>
Veterans Administration	1,175	73%
U.S. Coast Guard	1,144	38%
United States Postal Service	712	30%
Tennessee Valley Authority	553	87%
National Aeronautical and Space Administration	184	60%
U.S. Navy	182	30%
Federal Communications Commission	114	0%
Department of Transportation	99	12%
National Science Foundation	29	3%
General Services Administration	27	4%
Broadcasting Board of Governors	15	0%
Federal Reserve System	7	0%
Department of Education	1	0%
Total	65,278	45%

Source: National Telecommunications and Information Administration

**AGENCY VERY HIGH FREQUENCY LICENSES AND PERCENT  
COMPLIANT  
AS OF APRIL 18, 2006**

AGENCY	LICENSES ISSUED	PERCENT NARROWBAND COMPLIANT
<b>Department of Justice</b>	<b>14,617</b>	<b>22%</b>
Department of the Interior	9,983	80%
<b>Department of Homeland Security</b>	<b>9,360</b>	<b>32%</b>
Agriculture	8,927	86%
Federal Aviation Administration	4,623	37%
Commerce	4,263	42%
Army	2,224	76%
Energy	2,216	43%
Non-Member Agencies	1,585	64%
Air Force	1,282	92%
U. S. Coast Guard	1,152	59%
<b>Treasury</b>	<b>1,131</b>	<b>85%</b>
Veterans Administration	947	98%
United States Postal Service	716	33%
Tennessee Valley Authority	492	95%
National Aeronautical and Space Administration	161	80%
Navy	116	59%
Federal Communications Commission	114	0%
Department of Transportation	103	15%
National Science Foundation	22	5%
General Services Administration	21	0%
Broadcasting Board of Governors	15	0%
Education	1	100%
Federal Reserve System	1	0%
Total	64,072	53%

Source: National Telecommunications and Information Administration

## WAIVERS GRANTED BY NTIA DURING CALENDAR YEAR 2005

The following tables show the number of waivers granted to each government agency for calendar years 2005 and 2006. The sponsoring departments of IWN are in boldface type.

AGENCY	WAIVERS GRANTED
<b>Department of Justice</b>	<b>12,378</b>
Federal Aviation Administration	2,197
Department of the Interior	2,009
<b>Department of Homeland Security</b>	<b>1,740</b>
U.S. Coast Guard	519
Department of Energy	363
United States Postal Service	346
Non-Member Agencies	249
U.S. Army	234
Federal Communications Commission	114
Veterans Administration	54
National Aeronautical and Space Administration	47
Tennessee Valley Authority	47
Department of Commerce	20
General Services Administration	16
Broadcasting Board of Governors	15
National Science Foundation	7
U.S. Air Force	5
<b>Department of Treasury</b>	<b>2</b>
Department of Agriculture	0
Department of Education	0
Federal Reserve System	0
U.S. Navy	0
Department of Transportation	0
<i>Total</i>	20,362

Source: National Telecommunications and Information Administration

**WAIVERS GRANTED BY NTIA IN  
CALENDAR YEAR 2006**

AGENCY	WAIVERS GRANTED
<b>Department of Justice</b>	<b>11,178</b>
<b>Department of Homeland Security</b>	<b>4,868</b>
Federal Aviation Administration	2,008
Department of the Interior	1,669
United States Postal Service	340
U.S. Coast Guard	305
Non-Member Agencies	159
U.S. Army	108
Department of Energy	48
Broadcasting Board of Governors	10
National Aeronautical and Space Administration	10
U.S. Air Force	1
Department of Agriculture	0
Department of Commerce	0
Department of Education	0
Federal Communications Commission	0
Federal Reserve System	0
General Services Administration	0
National Science Foundation	0
U.S. Navy	0
Tennessee Valley Authority	0
Department of Transportation	0
<b>Department of Treasury</b>	<b>0</b>
Veterans Administration	0
<i>Total</i>	20,704

Source: National Telecommunications and Information Administration






DEPARTMENT OF THE TREASURY  
WASHINGTON, D.C. 20220

MAR 1 2007

**MEMORANDUM FOR ROBERT J. KAUFMAN**  
**DALLAS REGIONAL AUDIT MANAGER**  
**DEPARTMENT OF JUSTICE**

**FROM:** Edward A. Roback   
Acting Chief Information Officer

**SUBJECT:** Progress Report on Development of the Integrated Wireless  
Network in the Department of Justice

On behalf of the Assistant Secretary for Management, we thank you for the opportunity to review the Department of Justice (DOJ) Office of the Inspector General (OIG) Draft Audit Report, "Progress Report on Development of the Integrated Wireless Network in the Department of Justice." The Department of the Treasury (Treasury) has reviewed the report and does not have any comments.

Additionally, we have reviewed the draft report for law enforcement sensitive information in response to your request. We have not identified any concerns in this regard that would impair the operations of the Treasury and its Bureaus. Treasury has also completed the Record of Sensitivity Review, attached, and is faxing it to Mr. Robert J. Kaufman at the Dallas Regional Audit Manager.

Please feel free to contact Kenneth Riccini, Associate Chief Information Officer for Telecommunications Management, with any questions you may have. He can be reached at (202) 622-2047.

Attachments

cc: Harold Damelin  
Inspector General  
Department of the Treasury

Marla Freedman  
Assistant Inspector General for Audit  
Department of the Treasury

Guy K. Zimmerman  
Assistant Inspector General for Audit  
Department of Justice

Wesley T. Foster  
Acting Assistant Secretary for Management  
Department of the Treasury

**DEPARTMENT OF HOMELAND SECURITY  
RESPONSE TO DRAFT AUDIT REPORT**

(via e-mail dated March 16, 2007)

Thank you for your report which succinctly identifies the pertinent issues with the IWN program.

The DOJIG report identifies significant DOJ affordability issues with replacing obsolete DOJ communications equipment in general; and in funding the IWN program in particular. As recommended by the DOJIG, DHS will work with DOJ and Treasury to assess the viability of IWN as a joint project, assuring appropriate interoperability and determine what should be the best way ahead for all three Departments.

I communicated the above in a phone call with the Assistant Attorney General for Administration.

Paul Schneider  
Under Secretary for Management, DHS




March 8, 2007

Washington, D.C. 20530

MEMORANDUM FOR GLENN A. FINE  
Inspector General

FROM:

Lee J. Loftus  
Assistant Attorney General  
For Administration



SUBJECT: Response to the Office of the Inspector General's (OIG) Draft Report: Progress Report on Development of the Integrated Wireless Network in the Department of Justice

This responds to the Office of the Inspector General's (OIG) Draft Report: Progress Report on Development of the Integrated Wireless Network in the Department of Justice.

**Recommendation 1:** Department of Justice (DOJ) reach an agreement with the Department of Homeland Security (DHS) and the Department of the Treasury Secretaries that reflects each agency's commitment to the Integrated Wireless Network (IWN) project. This agreement should explicitly state the shared goals, responsibilities, and resource contributions and funding requirements of the sponsoring departments.

**Response:** DOJ is currently working with DHS and Treasury to update and modify the IWN Memorandum of Understanding (MOU). This updated MOU will clearly define the responsibilities, resources, and funding requirements for each department and reflect the shared goals and commitments each agency has to the IWN program.

As part of this process, the Wireless Management Office (WMO) program management staff has re-examined the MOU and remains committed to a joint IWN program with the acquisition goals agreed to in the original IWN MOU and acquisition strategy. In an effort to reconcile differences between the departments, senior program managers from DOJ, DHS, and Treasury have been meeting over the past few months. The DOJ Chief Information Officer (CIO) intends to meet with the CIOs from DHS and Treasury in the near future to bring a resolution to these issues.

**Recommendation 2:** If the departments are unable to reach agreement on a unified approach, we recommend that the DOJ notify Congress and the Office of Management and Budget (OMB) that the IWN project is not viable as a joint project with DHS, and that the three Departments are pursuing their own IWN strategy to meet their wireless communications requirements.

**Response:** If it becomes clear that the departments are unable to reach agreement on a unified program approach, DOJ will be ready to notify OMB and Congress that IWN is not viable as a joint program with DHS. As part of our program planning and risk management, we are formulating plans that will allow DOJ to move forward with the IWN program as a single department program or as a joint program with Treasury.

Based on component inputs, we have prioritized the top five DOJ IWN service areas for IWN system implementation. The WMO is generating an acquisition strategy and program plan that will meet these requirements. The Department will refine its plans based on final decisions on the partnership between DOJ and DHS.

**Recommendation 3:** In addition, if DOJ is unable to reach agreement on a unified approach with DHS and Treasury, the DOJ should develop and implement a departmental plan to upgrade its legacy wireless communications systems.

**Response:** The WMO is working with the components to establish practical plans for upgrading component legacy systems in concert with whatever long-term plan the Department decides upon for the IWN.

If a unified approach is not settled with DHS, DOJ is supportive of the development of the Justice Wireless Network (JWN). A JWN steering committee or board composed of communications program managers from each component, with support from the DOJ WMO, would be effective in promoting equal representation with the Department and would ensure that operational requirements are met. The current relationship and accomplishments of the United States Marshals Service (USMS)/ Federal Bureau of Investigation (FBI) consolidation effort could serve as a model of what all components can accomplish with mutual cooperation and support from the Department.

**Recommendation 4:** Require the Assistant Attorney General for Administration to ensure that an agreement is reached that allows DOJ to continue its wideband operations on very high frequencies without interference.

**Response:** The Department has been discussing this issue with the National Telecommunications and Information Administration (NTIA) and will continue to work with the NTIA to reach a practical plan that allows DOJ to continue its operations without risk while making due progress on meeting the narrowband mandate. The Department has scheduled a meeting for March 30, 2007, with the Commerce Assistant Secretary John Kneuer, to brief on the status of the IWN program and DOJ's plans for addressing the narrowband mandate.

The Office of the CIO offers an additional comment related to a statement made on page 38 of the report that reads:

*Despite over 6 years of development and more than \$195 million in funding for IWN apart from one pilot system DOJ law enforcement agents have received little in the way of new, secure, compliant radio equipment through the IWN.*

While the IWN program has clearly not progressed as rapidly as desired by the Department, the statement above is not an accurate reflection of what the Department has achieved. The Department believes that the OIG report should recognize the accomplishments of the program, including the following:

1. The Department has purchased and provided to the components 32,506 new digital portable and mobile radios;
2. The Department implemented 12 federal interoperability channels in 10 cities that allow DOJ agents to communicate with their counterparts in other federal, state and local agencies.
3. The IWN acquisition strategy has yielded unprecedented competition for tactical wireless communications (where little existed before). This competition has resulted in new ideas and options for DOJ to solve its communications requirements. The competition also has helped to accelerate the development of industry standards for radio systems, which should reduce unit prices for radio equipment. The Department has seen clear evidence of this during the design competition that we conducted as part of Phase 3 of the IWN acquisition process. Finally, both vendors participating in the design competition have showed the Government working prototypes of inter-system gateways. These gateways were developed with IWN in mind, but will be useful to the public safety community nation-wide.
4. The Department has gained a much better understanding of the wide array of potential security issues incumbent with the new wireless communications technologies, and has worked proactively with industry to resolve these issues.

If you have any questions concerning this subject, please contact Vance E. Hitch, Chief Information Officer, on 202-514-0507 or Michael D. Duffy, Deputy Chief Information Officer, on 202-305-4568.

## OFFICE OF THE INSPECTOR GENERAL, AUDIT DIVISION ANALYSIS AND SUMMARY OF ACTIONS NECESSARY TO CLOSE THE REPORT

We provided the draft audit report to JMD, ATF, DEA, FBI, and USMS and asked JMD to provide a consolidated DOJ response to the draft report. We also provided the draft report to Treasury and DHS and asked for their responses. Our analysis of each Department's response, if applicable, is provided below. Following our analysis of the responses, we summarize the status of each recommendation and discuss the actions necessary to close the recommendation.

### DOJ Response

JMD, which responded on behalf of the DOJ, generally concurred with our findings and agreed with our recommendations. The response expressed support for the development of the Justice Wireless Network in the event that a unified approach with DHS is determined not to be viable. JMD's response identifies a Justice Wireless Network steering committee or board, with support from the DOJ Wireless Management Office, as a vehicle to promote component representation and ensure that operational requirements are met. In our judgment, a steering committee or board with support from the DOJ Wireless Management Office could provide DOJ components with a means to contribute to the design and execution of the program and would increase their confidence in the program.

JMD's response also included comments from the Office of the Chief Information Officer regarding our conclusion on page 37 that DOJ law enforcement agents have received very little in the way of new, secure, compliant radio equipment through IWN. The response noted that, "While the IWN program has clearly not progressed as rapidly as desired by the Department, the statement is not an accurate reflection of what the Department has achieved."

The response identified several program accomplishments, including the procurement and provision of 32,506 new digital radios, implementation of interoperability channels in 10 cities, realization of benefits from the IWN acquisition strategy, and improved understanding of security issues related to new wireless communications technologies. However, as noted on page 7 of this report, most DOJ law enforcement officers cannot use all of the features of this new equipment because the system sites are old — 95 percent of the system sites do not meet advanced encryption standards

and 85 percent of the system sites do not support over-the-air re-keying. After 6 years of development, as indicated on pages 31 and 32, 67 percent of DOJ's legacy communications systems are over 10 years old and 73 percent of the Department's radio system sites are no longer supported by the manufacturer. In addition, the DOJ has the lowest rate of compliance with the narrowband mandate (page 34 of this report) and, according to the DOJ spectrum manager, will continue to seek waivers until the acquisition process is complete and IWN is implemented across the country (page 35 of this report).

### **Treasury Response**

We provided a copy of the draft report and asked Treasury for comment. The Treasury response in Appendix 7 noted that our draft report was reviewed and that Treasury did not have any comments.

### **DHS Response**

We provided a copy of the draft audit report and asked DHS for comment. The DHS response is reproduced in Appendix 8. The response noted that there are significant DOJ affordability issues with replacing obsolete DOJ communications equipment in general, and in funding the IWN program in particular. The response also indicated that DHS would work with DOJ and Treasury to assess the viability of IWN as a joint project and to determine the best way ahead for all three departments.

### **Status of Recommendations**

1. **Resolved.** JMD stated that the Wireless Management Office is committed to a joint Integrated Wireless Network program and that DOJ is currently working with DHS and Treasury to update and modify the Integrated Wireless Network Memorandum of Understanding. JMD reported that senior program managers from DOJ, DHS, and Treasury have been meeting over the past few months to reconcile differences between the Departments and that the DOJ Chief Information Officer intends to meet with the Chief Information Officers from DHS and Treasury in the near future to bring a resolution to these issues. This recommendation can be closed when DOJ, DHS, and Treasury sign a Memorandum of Understanding that clearly outlines the shared goals of the sponsoring Departments and establishes equitable responsibilities and contributions for each sponsoring Department or when DOJ notifies the Office of Management and Budget and Congress that the Integrated Wireless Network is not viable as a joint project with DHS and that the three Departments are pursuing their own



strategies to meet their wireless communications needs.

2. **Resolved.** JMD's response stated that if it becomes clear that the Departments are unable to reach agreement on a unified program approach, DOJ will be ready to notify the Office of Management and Budget and Congress that the Integrated Wireless Network is not viable as a joint program with DHS. This recommendation can be closed when DOJ, DHS, and the Treasury sign a Memorandum of Understanding that clearly outlines the shared goals of the sponsoring Departments and establishes equitable responsibilities and contributions for each sponsoring Department or when DOJ notifies the Office of Management and Budget and Congress that the Integrated Wireless Network is not viable as a joint project with DHS and that the three Departments are pursuing their own separate strategies to meet their wireless communications needs.
3. **Resolved.** JMD responded that, as part of its program planning and risk management, DOJ is formulating plans that will allow DOJ to move forward with the Integrated Wireless Network program as a single Department program or as a joint program with Treasury. Further, JMD's response stated that the Wireless Management Office is working with the components to establish practical plans for upgrading component legacy systems in concert with whatever long-term plan the Department decides upon for the Integrated Wireless Network. This recommendation can be closed when DOJ, DHS, and Treasury sign a Memorandum of Understanding that clearly outlines the shared goals of the sponsoring Departments and establishes equitable responsibilities and contributions for each sponsoring Department or when DOJ independently implements a plan to upgrade its legacy communications systems or as part of a joint program with Treasury.
4. **Resolved.** JMD stated that DOJ has been discussing with the National Telecommunications and Information Administration the need for continued protected status for DOJ's wideband communications operations. JMD's response stated that DOJ will brief the Department of Commerce Assistant Secretary for Communications and Information on the status of the Integrated Wireless Network program and DOJ's plans for addressing the narrowband mandate. This recommendation can be closed when DOJ and the NTIA reach an agreement to allow DOJ wideband communications operations to continue without interference from operations of other government agencies.