The Oregon POLICE CHIEF

The professional voice of Oregon law enforcement

Summer 2007

Contents

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Oregon State Police 2/2007

Chief Robert Tardiff
Newberg-Dundee Police Department 3/2007

President's Message

Welcome to this issue of our magazine. We have dedicated the majority of this magazine to the discussion of statewide interoperability. The term interoperability has been thrown around a lot over the last six years and virtually everyone agrees that radio interoperability between public safety agencies is important. But, past that point of agreement, virtually no one outside of our profession understands the complexity of implementing such a vital effort. Even trying to get agreement on the first step, which frequency band to utilize, is nearly overwhelming.

While creating a statewide interoperability communications system is daunting and complex, the urgency of the challenge compels us to move forward. We must work together as police chiefs toward this goal. As the leading voice for police chiefs in Oregon, the OACP will continue to press our legislators for the funds to complete this process. The legislators however, need to see that all law enforcement is united behind a logical statewide plan. An Oregon wireless interoperability network can become a reality, but only through hard work and compromises from all of us.

There is another form of interoperability that is every bit as important to us as radio interoperability. That is automated records information sharing. Sharing of records can be extremely valuable for investigators and managers. The automated sharing of information on known suspects can make us far more effective in clearing crimes and preventing future criminal events including potential terrorist acts.

Fortunately, a group of police agencies have formed a consortium called the Regional Automated Information Network (RAIN) which is already beginning to offer information sharing to all of their membership across disparate records management systems. RAIN is an example for what this form of information sharing could look like and may be the model for the entire state.

Please enjoy the magazine and read more about statewide interoperability.

Vernon Wells
OACP President

Interoperability Oregon Style:

A Philosophy of Cooperation & Collaboration

by Chief Jeff Johnson

Chief, Tualatin Valley Fire & Rescue

Over five years ago, when the Governor asked me to chair Oregon's State Interoperability Executive Council (SIEC), few of the citizens we serve understood the extent of the problem. Most people in the state, and across the country, believe that public safety first responders can easily communicate with each other at any time and at any place. The ubiquitous cell phone has only exaggerated that belief.

But unlike cell phones, the radios in our fire engines and patrol cars cannot roam. If one of our crews is sent to a wildfire in Southern Oregon, they need to pull over some place, check in with Incident Command, and physically pack up another radio before they can respond.

Saving lives and protecting the public during a disaster – or during any day of the year – depends on reliable communications systems that allow us to talk to each other, across jurisdictions and across disciplines. Unfortunately, that's not what we have today.

A History of Partnership

Since the SIEC was formed in 2002, it has operated as a partnership among state and local representatives. The SIEC includes 18 officials split evenly between local governments and state agencies.

Saving lives and protecting the public during a disaster, depends on reliable communications systems

The Council has rendered its decisions with a philosophy of cooperation and collaboration – an approach that will yield savings through shared infrastructure and what we call a "system of systems." It's also a philosophy that emphasizes effective communication among responders across organizational lines and across jurisdictional boundaries, whenever an emergency occurs.

The state has moved forward with the development of the Oregon Wireless Interoperability Network (OWIN) with the direct involvement of the SEIC and active participation of local government public safety representatives.

Responders at the local level care deeply about interoperability for a very simple reason: the great majority of responses to emergencies happen at the local level and the proposed statewide system offers our best hope of giving local citizens the protection they deserve.

The SIEC strongly supports and encourages regional efforts to plan, coordinate and implement interoperability solutions. In this regard, we know that the people of Oregon will benefit directly from OWIN because it represents a vast improvement in communications that enable fire fighters, police and other responders to save lives and property. Victims of accidents and crime will receive faster responses and more effective help. Just as important, improved communication and

LEGISLATIVE UPDATE

As the Oregon Police Chief magazine was going to print, the legislature approved the Oregon Wireless Interoperability Network (OWIN) request for $6.8 million to continue planning and further development of the statewide public safety radio communications system. This important step provides OWIN with added development staffing and ensures this critical project will be ready for consideration by the Oregon Legislative Assembly during the special legislative session scheduled for February of 2008.

coordination will help public safety agencies actually reduce, not simply respond to crime and accidents. It will also help ensure that we respond effectively – together – when a major disaster dramatically challenges our response capabilities.

An Investment That Benefits Everyone

The SIEC and all of the local government associations with representatives on it have endorsed the development of the statewide public safety communications system. While improved public safety communications is reason alone to make new investments in a statewide system, the investment also minimizes the need for overlapping investments by local jurisdictions.

For too long Oregon has followed the decades-old practice of expecting each county, city, special district, tribal and state agency to independently finance and manage its own radio communications system. Today, we have the opportunity to leverage a large investment to the advantage of first-responder organizations at all levels of government within the state.

The OWIN proposal is not a state project but a statewide project with benefits for every public safety agency and all citizens throughout Oregon.

Chief Jeff Johnson

TOP interoperab you should know!

1 **Digital:** Digital technology, unlike analog (a continuously varying waveform), breaks your voice signal into binary codes – a series of "1"s and "0"s – and transfers it to the other end where another device takes all the numbers and reassembles them into the original signal. The beauty of digital is that it knows what it should be when it reaches the end of the transmission and allows for distortion-free conversations most of the time.

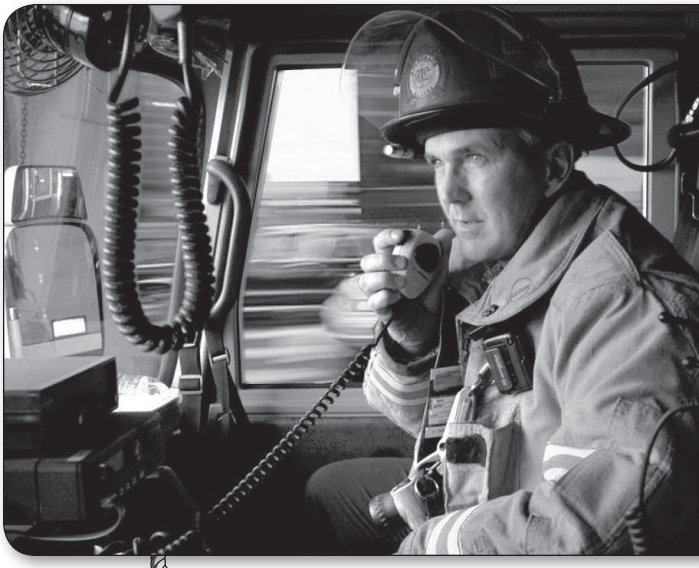
2 **Gateway Switch:** Gateway switching devices links different radio systems and automatically routes voice calls from one radio system to another in response to the linking of icons on a computer screen. Not unlike a dispatchers patch panel, the Gateway Switch device passes base band audio signals from the receiver portion of one radio to the transmitter portion of another radio system.

3 **Interoperability:** Wireless communications interoperability refers to the ability of emergency responders to share information via voice and data signals on demand, in real time, when needed, and as authorized. When communications systems are interoperable, police officers, firefighters and other emergency personnel who are responding to a wide range of emergencies (from routine to catastrophic) can talk to each other to coordinate efforts.

4 **Narrowband** (Narrow Banding Requirement): This refers to a signal that occupies only a small amount of space on the radio spectrum – the opposite of broadband or wideband. On or before January 1, 2013, the Federal Communications Commission (FCC) is requiring all public safety agencies to migrate their 25 kHz wide operating systems below 512 MHz to 12.5 kHz narrowband channels.

5 **Operability:** Communication operability is the ability to communicate effectively on one's own radio communication system. Before interoperability can be achieved, agencies must have a system that can support and maintain operability.

TEN
ility terms



6 Project 25: Project 25 (P-25) is a standard's process for assuring that interoperable digital two-way wireless communications products; allow effective, efficient and reliable intra-agency and inter-agency communications, ensure competition in system life cycle procurements (to insure multiple vendors and product choices), provide user-friendly equipment and improve radio spectrum efficiency. This standard is adopted and managed through the Telecommunications Industry Association (TIA).

7 Radio Spectrum: Radio spectrum refers to the array of channels available for communications. Spectrum is the highway over which voice, data, and image communications travel. It is electronic real estate. Radio spectrum is a finite resource that is shared by public safety, television and radio broadcasters, government users, and other communications consumers who require spectrum for everything from garage door openers to cell phones.

8 System of Systems: In its simplest form, "system of systems" means the use of technology gateways to allow the connection of otherwise incompatible public safety communications systems. This approach builds both on existing and future systems.

9 Trunked Radio Systems: A trunked radio system is a radio system used to maximize the available capacity in a two-way radio system. Trunking works by using a computer to assign users to a limited number of transmitters. This arrangement allows multiple groups of users to share a small set of actual radio frequencies without hearing each other's conversations. Trunked radio takes advantage of the probability that in any given number of user units, not everyone will need channel access at the same time.

10 Wave: This is commonly seen at the stadium in Seattle during a Seahawks game. Individuals stand up, raising their arms in the air, one after another until it comes full circle throughout the stadium. (You need an oval-shaped stadium for the wave to be truly effective). A "radio wave" is the basic building block of radio communications. Like waves on a pond, a radio wave is a series of repeating peaks and valleys.

THEODORE R. KULONGOSKI
Governor

April 16, 2007

Members of the Oregon Legislative Leadership

As you know, the 2007 Legislature has an opportunity to bring major progress in emergency communications, and help make Oregonians and their families safer and more secure. I refer to the need to provide reliable, instantaneous communication among separate agencies, enabling police, firefighters and other responders from all jurisdictions to coordinate their efforts and to save lives and protect property.

In 2005, the Legislature responded to this critical need and passed HB 2101, which directed state government to propose a solution to the problems presented by the fragmented, outdated, and unreliable emergency radio communications systems now in place. That solution is the Oregon Wireless Interoperability Network (OWIN), a highly reliable and robust statewide communications network available to all emergency personnel.

The OWIN system will consist of highly reliable and effective digital radios that operate in the "narrow band" mandated by the FCC by 2013. The system includes construction of radio transmitters throughout Oregon, providing coverage to 95 percent of the state's population and 86 percent of its land area.

In accordance with HB 2101, I have proposed financing to begin work on this critical project, which will consolidate four independent state public safety communication systems and provide interoperability for all public safety professionals in Oregon.

I included the entire capital proposal of $665 million in my budget to give the Legislature the opportunity to consider the conceptual design of OWIN. I now ask the Legislature to reserve the necessary funds to support debt service on a $237-million General Fund obligation for the OWIN system, for potential release in February 2008.

A reputable independent engineering firm completed the cost analysis for the conceptual design just in time for inclusion in my budget as it went to print. The state of Oregon finalized the business case for the project in January 2007. With the design and the business case in hand, we must now take the time to examine them in detail.

I have asked Department of Administrative Services Director Lindsay Ball to ensure we fully review and analyze the costs of the OWIN proposal, and to develop options for implementing improvements to radio systems. He will consult with the Legislative Fiscal Office to ensure that the review yields the information the Legislature needs to make a sound decision in this matter.

The 2005 Legislative Assembly sensed the urgent need for immediate action to establish a public safety communication system that enables responders to protect the lives and property of Oregonians. I share the Legislature's sense of urgency, and I believe now is the time to move forward with this important project.

The projected cost of OWIN is considerable, but we must not let it blind us to an inescapable reality: Failure of state public safety communication is not an acceptable outcome. The tragedies of 9-11 in New York City and the Hurricane Katrina disaster in New Orleans provided vivid examples of what happens when responders lack a robust, unified system of communication. Needless loss of life and compounded property losses are the sad consequences of failure to establish a single, reliable digital radio system for emergency responders.

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Here in Oregon, decades of deferred maintenance and procrastination now present a daunting challenge. We simply cannot install a new radio system using our run down facilities. Though Oregon's present technology lags far behind the current "technology curve" in use elsewhere, OWIN is consistent with upgrades other states have made. Catching up within the specified time period requires a substantial investment that may appear larger than investments in other states, since other states have made such investments over longer periods.

To move OWIN forward, the Legislature need not authorize sale of General Fund debt instruments this year. We can move ahead if the Legislature sets aside only enough funding to issue that authority in February 2008, when the Legislative Assembly comes back into session. Reserving this funding will allow time for legislators to consider this investment and to provide necessary oversight for this project.

Understanding the cost components of the proposal is important:

1. The total cost figure of $665 million includes operations costs for six years; these costs do not represent construction only.
2. The Oregon Transportation Commission plants to use Highway Trust funds to meet its share of the cost for the OWIN system, reducing the impact on the General Fund.
3. Sharing local and federal infrastructure will reduce the total cost of the system. The Legislature will gain a better understanding of the value of these partnerships by the time it convenes in 2008.
4. Federal funding through grants and specific budget allotments will further offset the total estimated cost of $665 million.
5. Upcoming Request for Proposal(s) for construction and installation of radio systems will be requirements based, not limited to the technology in the conceptual design. I expect this open process to produce additional efficiencies that reduce the overall cost.
6. Policy decisions about the extent of coverage provided by the statewide network also will affect cost.

The Federal Communications Commissions has mandated major changes to public safety radio systems, and has established January 2013 as the deadline. As that deadline draws nearer, the pressure for increased federal financial participation will grow. We will continue to work with Oregon's Congressional delegation to explore all avenues for federal funding assistance. I invite the Legislature to engage with me in a coordinated effort to advocate federal financing of public safety radio systems. With concerted action on our part, I am optimistic that we can gain a significant share of available federal financing.

Today we have an opportunity to improve public safety throughout Oregon. This vast improvement in communications will enable fire fighters, police and other responders to save lives and property. Victims of accidents and crime will receive faster responses and more effective help. Just as important, improved communication and coordination will help public safety agencies prevent crime, accidents and various natural disasters before they happen, or before they get out of control.

I believe that Oregonians deserve better protection in their communities than we can give them with the present outdated communications system. I also believe we have a responsibility to protect them as they live and play in Oregon's wild lands, and as they travel our highways and rural roads. Moreover, we must shoulder the responsibility to protect the economic value of Oregonians' property and our resource lands when wildfires or floods threaten.

I seek your leadership and assistance to advance discussions about the OWIN system and public safety communications interoperability. Thank you for your consideration of this serious matter, and I look forward to a productive collaboration on this public safety priority.

Sincerely,

Governor Ted Kulongoski

Imminent Crisis...

Strategically Addressing Our Rapidly Decaying First Responder Communications System

In late January 2007, the State of Oregon received a 68-page document from its contract engineering firm that makes the business case for a statewide public safety radio network. It is a compelling document.

While the entire document is worth reading, this will summarize the highlights of the business case developed by Federal Engineering for the Oregon Wireless Interoperability Network (OWIN).

Executive Summary

Oregon faces an imminent crisis in its ability to provide reliable communications for first responders. Today's lack of capabilities interferes with command and control operations and hinders their response to emergency calls made by the citizens of Oregon. It also endangers personnel when they cannot depend on their radios – their lifelines – in many parts of the state.

It is urgent that the state move forward with the OWIN plan, as personnel in Corrections, Forestry, State Police, Emergency Management and Transportation are struggling with separate radio communications that have limited interoperability and/or are out-of-date and at risk of immediate failure.

Aging systems that can't talk to each other

Not only are intra-agency and inter-agency communications severely lacking at the state level, but these agencies cannot effectively communicate with local, federal, or tribal law enforcement, fire, emergency medical services, and others likely to be involved in many of the same emergency events. There are rural and under-served areas of Oregon with limited or not radio coverage, making communications with emergency personnel impossible.

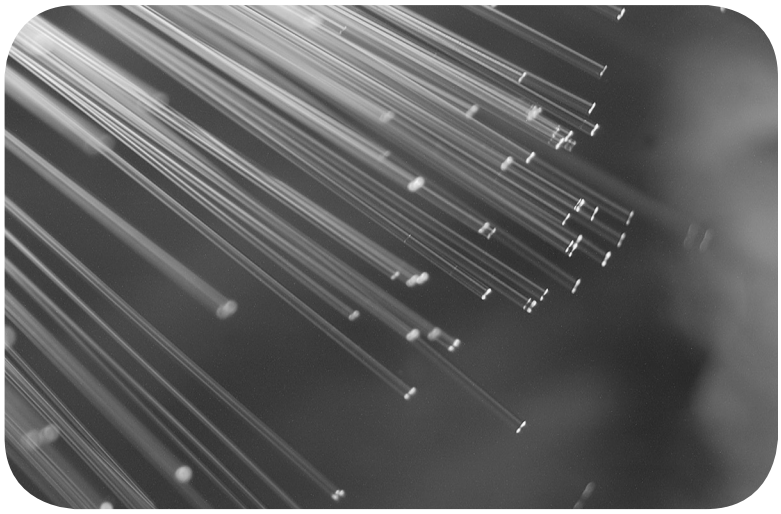
Critical infrastructure and major industries in Oregon including dams, water reservoirs, hazardous storage sites, electrical substations, communication hubs, livestock, and food supplies need to be protected by personnel with a reliable communications system. The inability of state agencies to communicate with those entrusted is unacceptable and puts all Oregonians at eminent risk.

While state and local agencies are making every effort to communicate effectively, the radio systems the state operates today provide unacceptable levels of interoperability. The radio technology is older than most of the people using it and manufacturers no longer stock or support much of the equipment deployed throughout the state. Oregon public safety agencies have resorted, in some cases, to search eBay® to purchase parts for their radio systems.

FCC Mandate: Modernize Public Safety Communications

In an effort to increase scarce radio spectrum, the Federal Communications Commission (FCC) recently mandated that all land mobile radio users that operate

radio systems below 512MHz (including public safety agencies) must convert their radio systems from "wideband" to "narrowband" technology by January 1, 2013. Narrowbanding is an effort to expand the number of available channels in an area, by packing them more densely in the same "slice" of radio spectrum.



For the most part, state, local and tribal government agencies in Oregon use wideband systems now, and will have to make the mandated change. By 2008, radio manufacturers will not be allowed to make or sell wideband equipment in the United States, and the state will not be permitted to license any additional wideband channels. If licensees do not comply with the narrowbanding requirements, they will face fines, and could possibly lose their licenses to use their current frequencies.

Moving to digital technology is necessary before first responders can begin to deploy and use any advanced mobile communications applications across the public safety wireless communication system on a statewide basis. Oregon's public safety arena is already far behind in use of modern wireless technology, and it is falling farther behind the technology curve each day that the community is unable to support the advanced applications available in today's marketplace.

The proposed OWIN design incorporates a high speed wireless wide area network and extensive interoperability features. Its conceptual design includes the capability to provide enhanced service levels to all users including local, tribal, and federal government public safety personnel.

Once the upgrade is completed, public safety communications systems will finally be able to advance technically. This in turn will realize improved efficiencies and effectiveness in operations across all levels of government, as well as a safer environment for both the first responders and the citizens they protect.

The design of OWIN conforms to the new FCC requirements and follows Department of Homeland Security technology guidelines.

One investment to benefit many users

Rather than continue the decades-old practice of each local, tribal and state agency independently financing, constructing, and maintaining its own radio communications systems, the state has the opportunity to leverage a large public investment to the advantage of first responder organizations at all levels of government. Through the provision of sustainable and reliable infrastructure throughout the state, **OWIN will minimize the need for overlapping public safety investment by local jurisdictions**.

The overall effort to create, procure, and operate a consolidated statewide public safety radio system is a major undertaking. We estimate that it will take three biennia to build, test, and implement all phases of the OWIN system.

The state has no time to lose to determine its course of action.

The vision of OWIN: today vs. tomorrow

Today, there are four state agencies, operating four separate radio systems in isolation. Tomorrow, we see one integrated, interoperable statewide system that all public safety agencies in the state can share.

Today, we have four state agencies that must form multiple relationships with local government agencies in order to operate emergency communications systems as effectively as possible. There is no normalized business model for these relationships, and many of these relationships are undocumented and informal. Tomorrow, we see the OWIN program creating formal partnerships among local, tribal, and federal government, implementing best practices and cooperative operations models for mission critical, emergency communications statewide.

The implementation of OWIN is an important step toward achieving seamless interoperable communications for first responders at all levels of government.

It's worth a read

The business case discusses public safety land mobile radio versus other technologies. It talks about coverage, capacity, mobility and reliability. Emerging uses of other technologies, like cellular and Wi-Fi, are covered. The system requirements of capacity, coverage, interoperability and reliability are noted. The document explains the conceptual design of the OWIN system and its costs, benefits and concludes with a risk assessment.

The full document is available at http://egov.oregon.gov/SIEC/

The "lightning yellow" highlights

- In 2005, as the Oregon Legislature affirmed in House Bill 2101, "The deteriorating condition of our public safety radio systems is of immediate concern because it compromises the safety and well-being of the citizens of the State of Oregon who depend upon lifesaving communications systems used by first responders."
- Significant state investment is necessary to comply with [the FCC] narrowbanding order.
- Every dollar spent maintaining the current system is unrecoverable as the system is past the end of its useful life.
- Oregon's existing public safety radio systems provide less than acceptable coverage in many areas of the state. … Oregon's existing radio systems provide limited uncoordinated interoperability.
- Currently many agencies must rely on multiple radios for routine communications.
- Oregon state agencies do not have any system to provide mobile data services.
- As many of the radio towers in the State of Oregon cannot be maintained because of the lack of safety provisions required to climb the towers, they need to be modified or replaced. This issue is a matter of unacceptable risk for both the maintenance staff as well as the liability this causes. … Over 80 percent of radio towers in the State of Oregon will need replacement.
- The majority of radio site buildings [used by the state] do not have an acceptable environment for electronic equipment. … Many of the back-up power systems are in need of replacement or significant repair.
- The potential to use cellular, fiber, Wi-Fi, Wi-Max, and other emerging technologies, while of great interest, is an enhancement to, not replacement of the fundamental Land Mobile Radio technology.
- The large majority of towers and equipment shelters that are currently used by the state are in dire need of improvement, not just to support the proposed OWIN system but to avoid catastrophic damage and loss of the current systems. The investment in these elements will be needed just to support today's radio systems.
- One of the lessons learned in Hurricane Katrina was the commercial sites constructed to the standards established for OWIN survived and were able to support public safety communications when most other commercial communications, including land lines and cell phones, were out of service for weeks or months.
- The recommended OWIN network conceptual design is a trunked, digital, Project 25 design that can support interfaces to other technologies, including local, tribal, and federal conventional and analog systems.
- The most appropriate frequency band selection for a statewide radio system in Oregon is a hybrid solution using both the VHF and 700 MHz bands. … It provides a high level of interoperability with local jurisdictions' existing public safety radio systems. … It takes advantage of the coverage characteristics of each band. … The hybrid design eliminates the significant cost of constructing enough additional transmission towers to blanket the entire state.
- The value engineering for OWIN will reduce the OWIN project cost estimate from $906 million to $665 million. This figure includes $588 million for the OWIN system capital costs and $77 million for operating costs (over a six year period).
- The OWIN team sees opportunity for the state to collaborate with federal and local governments to share infrastructure and existing system capabilities. Such infrastructure-sharing agreements could significantly lower the overall cost of the system.
- OWIN also provides local and regional hospitals the ability to utilize its state-of-the-art digital radio and microwave systems if needed to supplement their existing telecommunications and networking capabilities. … Partnerships can also be forged with the private sector telecommunications firms if there are potential cost-effective opportunities to utilize wireline technologies to supplement, or in place of the microwave backbone.
- Clearly, any project of this magnitude is a risky venture. … A significant risk factor in the OWIN project, due to its size, complexity, and cost is enabling the correct management and organization of OWIN during all phases of its development, and on an on-going basis.
- [The document discusses five categories of risks: coordination, organization and management; technical risks; spectrum and site acquisition; financial; and governance.]
- The complexities of the OWIN project promise to challenge the best executive management and project team that Oregon can offer.
- At no other time in Oregon's history has the need for upgrade, interoperable communications been as great at it is today. However, with these challenges comes opportunity. For the first time, Oregon can leverage its investment in public safety wireless communications infrastructure to benefit all state public safety agencies, and extend that infrastructure to local, tribal and federal agencies.
- Once implemented, OWIN will not just meet FCC mandates to migrate to narrowband technologies, it will provide a consolidated, robust, shared communications system that is more reliable and functional than before. Partnerships among state, local, tribal and federal agencies will be routine rather than notable exceptions. With the public safety community working together, all Oregonians can live, play and enjoy this great state, without fear than a call for help will go unanswered.

Straight Talk About the Challenges of Interoperability...

an Interview with **Mike Zanon,** Director Oregon Wireless Interoperability Network

Mike Zanon is no stranger to state government or large and complex projects. He was tapped by the state in June 2006 to direct activities to secure approval and implementation of the Oregon Wireless Interoperability Network (OWIN).

The Oregon Police Chief caught up with Mike to get his assessment of the project so far.

Oregon Police Chief: *You've been with this project less than one year. It's been five years since formation of the State Interoperability Executive Council and it feels like some things are starting to come together.*

Mike Zanon: I have to tell you, the groundwork that has been laid by the State Interoperability Executive Council, or the SIEC as it is known, is remarkable. We have a strong team of local and state officials working side by side to make serious headway on interoperability in Oregon. Under the leadership of Jeff Johnson, whose day job is Chief of Tualatin Valley Fire & Rescue, the SIEC has adopted policies that promote a system of systems approach to achieving interoperability in Oregon and to coordinate and facilitate future co-location of facilities and infrastructure. Both of these policies are strong statements about the commitment and depth of partnerships that have been developed so far. And we're getting some exciting responses from others as we get around the state.

Oregon Police Chief: *Who specifically is interested?*

Zanon: The state has developed cost-sharing agreements and partnerships with the U.S. Department of Justice Joint Projects Office, Columbia River Intertribal Fisheries Enforcement, and the Federal Partnership for Interoperable Communications. We've had recent meetings with numerous local and federal agencies and those meeting suggest partnerships are not only possible, but also probable.

Our staff – and I'll be very candid here – is only six people. That's not six people out "selling" the project; that is six people on the project. As soon as we're able to get some more folks on board, and that is one of the requests we made to the legislature, we'll have a greater ability to forge additional partnerships.

Oregon Police Chief: *Our association is one that has stepped forward to support statewide interoperability through a resolution at our 2006 Annual Conference in April. Who else is on board this critical issue?*

Zanon: Thank you. The Oregon Association Chiefs of Police was, in fact, the first local government public safety organization to adopt a resolution to support the SIEC's efforts to advance statewide interoperability. Your colleagues at the Oregon State Sheriffs Association and the Oregon Fire Chiefs

Association also have passed resolutions in support for statewide interoperability. The Oregon Chapter of the Association of Public Safety Communications Officials and the National Emergency Number Association (also known as APCO/NENA) has committed their support to collaborate with the SIEC. And the League of Oregon Cities has endorsed efforts to establish a seamless, all-inclusive interoperable communication system for Oregon. We met with the Association of Oregon Counties, which has appointed a task force on interoperability, and we are encouraged by their level of interest. They too adopted a resolution supporting the project.

Oregon Police Chief: *What's been the reaction by legislators to the proposal?*

Zanon: Well, it should come as no surprise that there is a certain amount of "sticker shock" associated with our proposal. Six hundred and sixty five million is a VLN, a very large number. But that number does not take into account – because we cannot "book" it yet – cost sharing from the federal government or from others who want to co-locate and partner with us. That number is the estimate of the conceptual design and that is an important point – the conceptual design. As we get into the next steps, the actual Requests for Proposals, those costs will be further refined and become better known and understood. The Governor and Director of Administrative Services have put appropriate management controls in place to establish strict fiscal integrity and quality assurance.

Overall, I would say it is still early and there is more than enough time to work with legislators and to frame the policy choices. Those with whom we've talked are generally supportive of interoperability, but skeptical about the cost, and rightfully so at this stage.

Oregon Police Chief: *We've heard it said that some also might be skeptical about the technology. What is your take on that?*

Zanon: (laughs) No question that the technology complexity can be a bit intimidating and I know personally that it is a challenge to communicate simply. We're not talking about what it takes to get a cell phone or Wi-Fi signal here. We are talking about a statewide Land Mobile Radio System (LMR) that has to reach in to some of the remote regions of Oregon to support our state agency public safety professionals. No state – Oregon included – has or is proposing to construct a statewide system based on any other primary technology than LMR and that is due to reliability, dependability and cost. Oregon's technology approach is consistent and it is clearly the encouraged technology solution as evidenced by criteria to quality for federal funding. Again, through the RFP process, alternative technology proposals and private partnership proposals can and will be readily considered.

Oregon Police Chief: *So give us the Reader's Digest version of the technology OWIN plans to use.*

Zanon: So are you testing me because I said it is a challenge to communicate simply? (laughs) The conceptual design of OWIN calls for proven land mobile radio system design. We envision a statewide, redundant looped, high capacity microwave backbone network that meets the public safety reliability standard of 99.995% reliability and uptime. It would be a statewide digital radio system enabling integration with

existing data networks and adoption of new technologies. The conceptual design contemplates a hybrid frequency approach because there are not enough VHF frequencies. So we'd have 700 MHz in the I-5 corridor and into Deschutes County and VHF for the rest of the state. We'd use Project 25 standards-based radios to ensure that radios purchased from different vendors can interoperate with each other. And we would include interoperability channels at select sites throughout the state that will enable interoperable communications between local, state, federal and tribal agencies without having to carry six or ten different radios. And it's a scalable system.

> "We're not talking about what it takes to get a cell phone or Wi-Fi signal here. We are talking about a statewide Land Mobile Radio System..."

Oregon Police Chief: *What do you mean by "scalable?"*

Zanon: The system is designed to support current and project operational needs and can grow as more users are added.

Oregon Police Chief: *What would be the incentive for a local police department to get on the OWIN system?*

Zanon: Your own association identified one of them. It's the "shared use" model. We can avoid future costs for all of us if we contribute to a shared system of systems, rather than sole use of a public safety asset. I mentioned earlier that shared infrastructure has been a high priority for the SIEC. It makes little sense to have numerous agencies, at whatever level of government, independently financing, constructing and maintaining their own radio communications systems. Another incentive is the ability of a shared system to allow cross discipline and cross-organizational communications between responders at an emergency, no matter the location.

Oregon Police Chief: *You've been generous with your time. Any closing thoughts?*

Zanon: The OWIN project is an opportunity to leverage the taxpayers' investment in public safety communications. We know we face an imminent crisis in our ability to provide reliable communications for first responders. Your chiefs of police know that "flaws in communications" will rank near the top of any after-action report. What we are determined to ensure is that the OWIN system is not considered just a state communications system, but a statewide public safety communication resource for Oregon's public safety community.

DAUNTING CHALLE

Creating a Reliable Emergency Communications System in Oregon's Dynamic Geography!

Oregon has a vast and divergent geography.

Insuring reliable communications across Oregon's waterways and roadways, communities Oregon under federal ownership all pose that must be addressed in creating communications.

There are more than 98,000 square miles largest state in the nation. We have beautiful thousand miles of shoreline on the Pacific lands that are home to Oregon's renown

65,031 Miles of roads and highways in Oregon for law
58 Average number of truck-at-fault crashes each month
268,600 Average number of incidents Oregon firefighters and
3 Number of months Highway 101 was closed in 2000 from a
9,582 Number of landslide locations identified by DOGAMI in
20,000 Estimated number of public safety first responders in
559,228 Number of school-aged children who travel to and
240,000 Approximate number
200,000 Approximate number
3.4 million Number of people
100 billion Estimated dollar
6,628 Number of state and
4 million Estimated number of
2.8 million Estimated number
2,930 Tons of chemical agents
450,000 Estimated number of
160,000 Estimated number of
488 Number of traffic
28 million Acres of public and
12 million Tons of cargo
41 million Estimated number
12.4 million Annual number of
6 Number of technicians

CNGE...

mountain ranges, major
large and small, and rural
problems and challenges
a successful system of

to cover in Oregon, the ninth
mountain ranges, a splendid
coast, grand canyons with majestic wild and scenic rivers, and high desert wildlife. Here's a look at Oregon by the numbers.

enforcement officers to patrol and transportation workers to plow
involving a fatality, injury, or disabling damage that requires a vehicle be towed away
emergency medical providers respond to each year (79 per 1,000 residents)
landslide, resulting in major social and economic disruption to nearby communities
Oregon, 98 % of which are located in western portion of the state
Oregon, not including volunteers
from school each day
of homes located in areas in Oregon where risk of wildfire is high
of recreational vessels registered with the State Marine Board today
who live and work in Oregon
value at risk from wildfires in Oregon
local bridges in Oregon
vehicles registered in Oregon
of drivers licensed in Oregon
stockpiled at Umatilla Army Depot
reported criminal offenses in Oregon in 2005
accident reports filed with DMV annually
fatalities in Oregon in 2005, 177 of which were alcohol-related
private forestland in Oregon that requires protection
shipped out of the Port of Portland annually
of Oregon State Park users each year
passengers traveling through Portland International Airport
supporting the Oregon State Police statewide radio communications system today!

Oregon Wireless Interoperability Network: **A Chief's Perspective**

by Rock Rakosi, Chief Myrtle Point Police Department

Our professional association, the Oregon Association Chiefs of Police, is eagerly promoting the Oregon Wireless Interoperability Network (OWIN). As your representative on the State Interoperability Executive Council (SIEC), I want to give you this update on our activities.

In January, we joined with our colleagues in the Oregon State Sheriffs' Association and the Oregon Fire Chiefs Association in a letter to Governor Kulongoski pledging our diligent efforts to advance improved public safety communications. We are pleased that the Governor has recommended the state make a multi-year, multi-million dollar investment to continue to advance the OWIN effort.

We have endorsed the use of Land Mobile Radio (LRM) as the primary (but not exclusive) technology for the statewide wireless system. This is the primary mode of communication for first responders and public safety professionals across the nation. It's a proven technology and Oregon has compelling reasons to continue the nationwide trend. The direction on LMR will not preclude the use of other technologies at some future stage. Public safety LMR systems are designed to strict coverage, reliability and capacity standards.

We are promoting the passage of a bill (Senate Bill 136) in the Oregon legislature that would establish OWIN as an independent state agency to oversee the state's public safety interoperability network. The bill also establishes an executive committee of the SIEC to oversee the functions of the new department. A majority of the seven-member committee will be non-state agency representatives so that we have some say in how the system is maintained and operated.

Of more urgency is the financial "ask" we are making to the legislature. The state simply cannot move forward with the meager staff it has now – just seven people – for a project of this size and complexity. The "to do list" for the immediate future includes continued planning, outreach to local governments to solicit and quantify potential partnership opportunities, procurement planning, and communication site acquisition.

The investment we're asking the legislature to make is an investment that will minimize the need for overlapping investments by our local jurisdictions.

It has been my honor to represent my police chief colleagues on this important assignment. We will never know how many lives we will save by doing the right thing today, but we do know that the people of Oregon are entitled to our best effort.

Left to right: Chief Rock Rakosi, Myrtle Point Police Department, Kristi Wilde, Communications Manager for Central Lane Communications and Sheriff Russ Burger, Lane County Sheriff..