Technical Assistance Catalog

Department of Homeland Security
Office of Emergency Communications

January 2012

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Director's Foreword

Chris Essid, Director, OEC

Events this past year remind us about the importance of interoperable emergency communications at all levels of government. First responders from the West Coast to the East, from the Dakotas to the Gulf of Mexico have been challenged with floods, fires, earthquakes and other disasters.

The Office of Emergency Communications (OEC) Interoperable Communications Technical Assistance Program (ICTAP) continues to play a major role in the progress we collectively have made in interoperable emergency communications. Since OEC's creation in 2007, the technical assistance (TA) program has completed more than 660 engagements. Among this number, OEC has supported Communications Unit Leader workshops in 51 of 56 States and territories; Communications Unit Technician workshops in 26; field operations guides for 22; COML Exercises in 13; and numerous engagements to support tactical interoperable communications plans and operational exercises. Acronyms created by OEC/ICTAP like "TICP" and "FOG" are now used in trade publications and news media.

But there is still work to do.

Advances in technology — especially the increased use of broadband, high speed internet as a tool for public safety communications — present both opportunities and challenges for the Nation's public safety community. Throughout 2011, OEC has been supporting public safety with new service offerings about broadband, dispatch operations, and integrating volunteer amateur radio operations into the incident command structure for emergency communications.

This year's TA Catalog features several new and updated offerings to help our stakeholders address these challenges. Among them are workshops for dispatch operations, mobile communications vehicles operations, and radio re-programming for narrowbanding. In 2012, OEC will work with local stakeholders to help them understand and analyze National Emergency Communications Plan (NECP) Goal 2 data in order to focus OEC resources. We are also exploring new technology to maximize our resources and expand TA access. This includes virtual workshops and making resources available online using the www.publicsafetytools.info website. Stakeholders can easily access tools such as the Narrowband License Status Tool and the CASM application, among others.

As always, we welcome your comments and suggestions. Please send them to OEC@hq.dhs.gov.

Sincerely,

Chris Essid
Director
Office of Emergency Communications

Technical Assistance (TA) Catalog
Office of Emergency Communications
TA-OEC-CATALOG-003-R0

January 2012

The U.S. Department of Homeland Security (DHS) Office of Emergency Communications, Interoperable Communications Technical Assistance Program (OEC/ICTAP) supports and promotes the capabilities of emergency responders and government officials to continue to communicate in the event of natural disasters, acts of terrorism, or other man-made disasters, and works to ensure, accelerate, and attain operable and interoperable emergency communications nationwide.

OEC/ICTAP's mission is to enhance interoperable communications among State/territory, local, and tribal emergency responders, and public safety officials. OEC/ICTAP provides support for planning, operations, technical issues, and policy decisions that need to be considered when developing interoperable communications initiatives. The goal of the program is to improve the capabilities of public safety agencies across multiple disciplines and jurisdictions to communicate effectively as they work to manage disasters, emergency incidents, and planned events.

Since 2007, OEC/ICTAP has fielded subject matter experts (SME) with the skills, practitioner experience, and technical knowledge to address stakeholders' technical needs. OEC/ICTAP staff bring practitioner and operations-based skills and technical expertise to bear on a wide range of interoperable communications challenges.

OEC TA also relates to the NECP [1], the Nation's first strategic plan to improve emergency response communications. OEC/ICTAP offerings have and will continue to support NECP goals directly. During 2011 stakeholders nationwide have been collecting data about performance and capabilities at the county-level in response to NECP Goal 2.

SWICs and stakeholders are encouraged to use their NECP Goal 2 data to inform their decisions about TA requests for 2012.

[1] The NECP is available at: http://www.dhs.gov/xlibrary/assets/national_emergency_communications_plan.pdf

Availability of OEC/ICTAP Services:

OEC/ICTAP services are supported by Federal funding and are provided at no cost to the requesting agencies or organizations. Unfortunately, funds are limited, and OEC, in collaboration with requestors, will prioritize which requests can be accepted and which may have to be deferred.

Each State/territory may request up to five TA offerings. OEC will work to ensure each State/territory receives some level of OEC/ICTAP support. One request should support an Urban Area Security Initiative (UASI) metropolitan area or, if the State/territory has no UASI, a metropolitan area in the State. The services that may be requested through OEC/ICTAP are described in this Catalog and are categorized as follows:

1. **Governance**
2. **Standard Operating Procedures (SOP) and Communications Support**
3. **Communications Unit Training and Support**
4. **Communications Operations Support**
5. **Communications Systems Engineering Support**
6. **Tactical Communications Enhancement Support**
7. **Regional Communications Enhancement Support**
8. **Special Offerings**
9. **Communication Assets Survey and Mapping (CASM) Support**

A short description highlights the specific service within the offering. A listing of deliverables is also included. Descriptions are not intended to be all inclusive. Unless otherwise noted, the content and presentation of offerings can be tailored to a stakeholder's specific requirements.

New, revised, and/or webinar-enabled offerings in this year's Catalog are labeled beside the offering's title. They include:

- GOV-PLAN: Follow-up Statewide Planning Workshop
- SOP-DSPTCH: Public Safety Communications Center (PSCC) Planning and Operations
- TRG-COML: All-Hazards Communications Unit Leader (COML) Course
- TRG-COMT: All-Hazards Communications Unit Technician (COMT) Course
- TRG-INT: Principles of Interoperability and the National Interoperability Field Operations Guide (NIFOG)
- OP-BKUPCOM: Planning for Backup Communications Options
- OP-MCVS: Mobile Communications Vehicle Support
- ENG-BRBND: Broadband Systems Support
- ENG-NB: VHF/UHF Narrowbanding
- TIC-COM: Communications Plan

To Request OEC/ICTAP Services:

TA service offerings can be combined or tailored to suit the needs of the requesting organization. For example, one or more of the Catalog offerings may be combined to help a stakeholder accomplish a single project or initiative. Similarly, a requesting organization may request only part of the services described under a single offering if all elements are not needed to address the requestor's requirements.

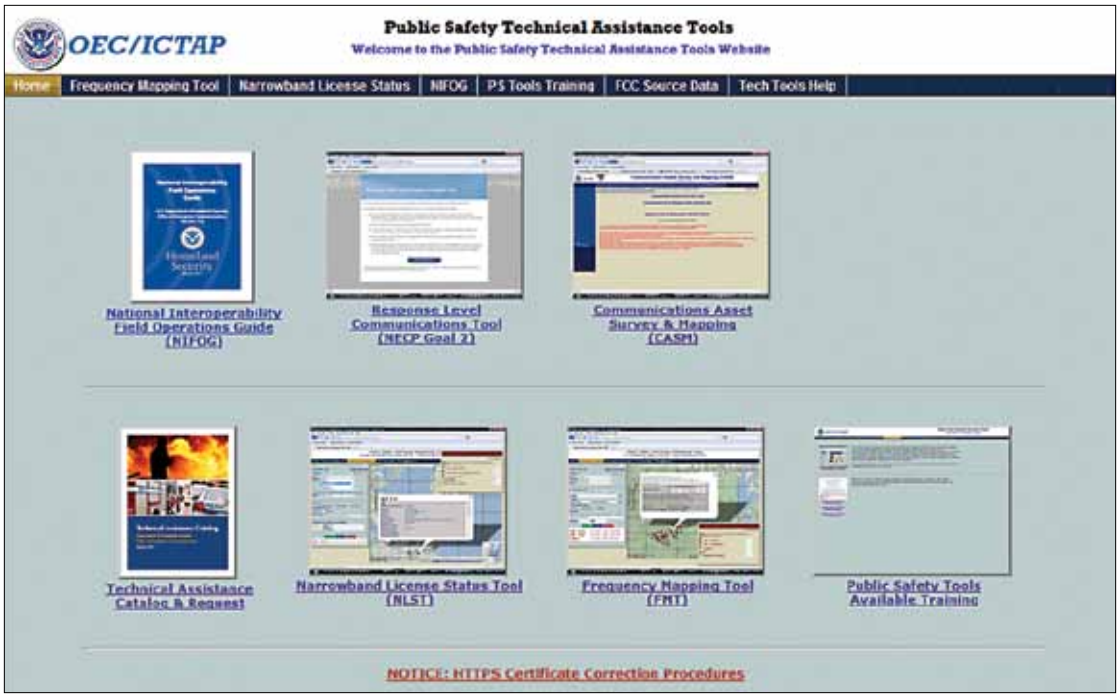
If you do not find an offering that matches your specific requirements, discuss them with your State/territory's SWIC and OEC Regional Coordinator (see Appendix C). Tribal nation requestors should contact the OEC Regional Coordinator for the State(s) in which their nation is located. Questions may also be directed to OEC@dhs.gov.

SWICs may submit up to four separate TA requests plus a fifth request for a UASI or other large metropolitan area within their State/territory by December 15, 2011. Requestors at the local and urban levels should submit requests to their SWICs. The TA Request Form can be accessed at www.safecomprogram.gov. OEC anticipates starting delivery of TA services in early January 2012.

Again, in 2012 OEC will offer Statewide Communications Interoperability Plan (SCIP) update workshops on a regularly scheduled basis outside the TA request process. SWICs will be contacted in early 2012 to schedule them.

OEC/ICTAP Public Safety Tools Home Page: http://www.publicsafetytools.info

The Public Safety Technical Assistance Tool site is a dynamic interactive site where OEC stakeholders can access tools and current products focused on technical assistance. The figure below displays the home page, Welcome to Public Safety Technical Assistance Tools Website:



This Page Revised 11-30-2011

Top row, left to right:
NIFOG — the icon of National Interoperability Field Operations Guide permits viewing of one section at a time, by means of the table of contents, or the entire document as a single web page. It also provides a link to another site from which PDF versions of the NIFOG may be downloaded and provides information about ordering copies of the NIFOG online. The NIFOG is used in TRG-INT, Principles of Interoperability and the NIFOG, described on p. 22.

RLCT — the Response Level Communications Tool facilitates SWIC and county-level reporting of capabilities and performance data in response to NECP Goal 2. This tool is available to authorized users for their jurisdictions' own internal use to record and track capabilities and performance data.

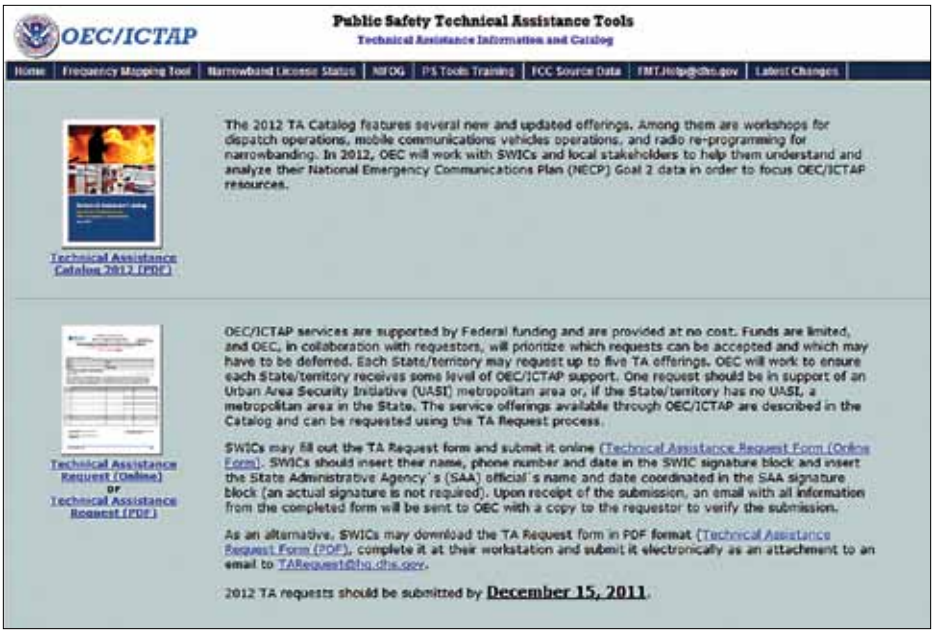
CASM — the Communication Assets Survey and Mapping Tool is a secure, web-based application for authorized users to track communications assets. It is currently used by more than 40,000 agencies nationwide. Release 1.5 contains interactive mapping features. CASM is described in detail on p. 71.

Bottom row, left to right:
Technical Assistance Catalog and Request — this icon takes the viewer to the 2012 TA Catalog and Request Form page. See the next figure below.

NLST — the Narrowband License Status Tool searches the subset of FCC licenses subject to narrowbanding requirements. The tool and it reports are used as part of ENG-NB, VHF/UHF Narrowbanding (p. 49).

FMT — the Frequency Mapping Tool (FMT) regularly downloads and stores FMT all FCC data for the public safety frequency and the industrial/business frequency pools. This tool supports offerings such as ENG-DT, RF Coverage Drive Test Measurements (p. 46).

Public Safety Tools Available Training — this icon takes the viewer to the last page of the site; see the figure on the next page.



This Page Revised 11-30-2011

Technical Assistance Information and Catalog:

Top row:
Technical Assistance Catalog — clicking this icon displays a PDF copy of the 2012 TA Catalog which may be printed.

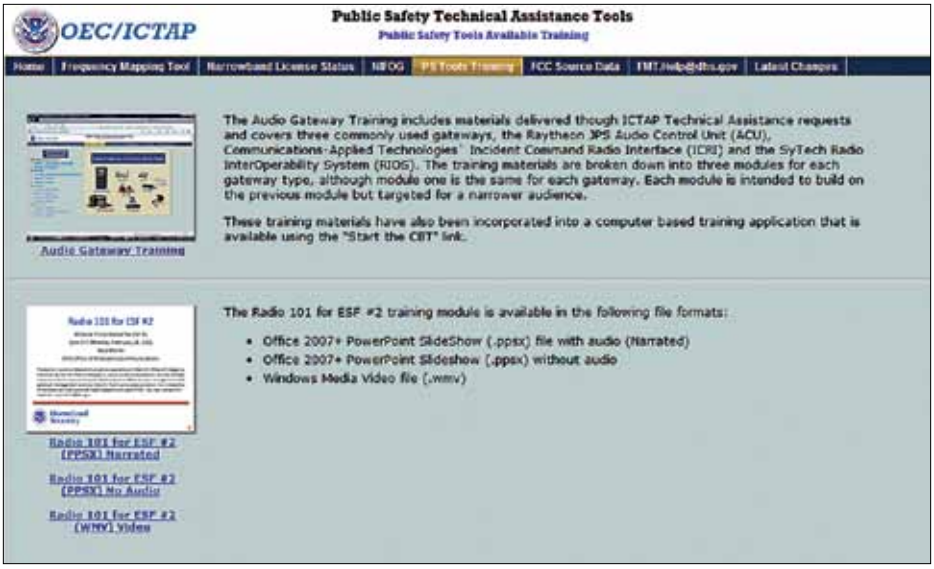
Bottom row:
Technical Assistance Request (Online) — this icon provides an interactive version of the OEC TA Request Form. It can be completed and submitted online from this site, and a receipt with all submitted information is returned to the user's email box.

Technical Assistance (PDF) — this a fillable and printable version of the TA Request form. It can be downloaded to the user's workstation and saved as a completed PDF file.

PSTools Training:

Top row:
Audio Gateway Training — this icon links to currently available materials on audio gateways. It complements ENG-AG: Audio Gateway Information and Training; see p. 41.

Bottom row:
Radio 101 for ESF # 2 — this icon provides training on interoperable emergency commucnaitons within the Emergency Support Function # 2 environment; it is available in three formats.



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Governance

A formal governance structure is critical to the success of interoperability planning. Governance involves a common structure for solving interoperability issues through improvement of policies, processes, and procedures of any major project by enhancing communication, coordination, and cooperation; establishing guidelines and principles; and reducing any internal jurisdictional conflicts. Governance involves decision-making groups responsible for ongoing planning and implementation of interoperable communications initiatives. OEC/ICTAP provides assistance with reviewing and evaluating existing governance structures, and providing recommendations for establishing new governance bodies or structures.

Governance Support services include:

- GOV-ASMT: Assessment of Existing Governance Structures
- GOV-DOC: Development of Governance Documentation
- GOV-GSM: Development of Governance Structure Models
- GOV-PLAN: Follow-up Statewide Planning Workshop

Follow-up SCIP Implementation Workshops will be scheduled in 2012 directly with SWICs through the OEC Multi-Jurisdictional Communications Services Division.

GOV-ASMT: Assessment of Existing Governance Structures

Description

This offering provides a comprehensive assessment of the organizations, structures, and other decision-making bodies in place that are tied to interoperable communications in the requesting jurisdiction. OEC/ICTAP provides a report with recommendations about the current governance environment or structure intended to improve or enhance the oversight of interoperable communications activities in the jurisdiction. This offering typically involves a two day workshop with a follow-up webinar to review the report with the requestor.

This assessment includes an identification of the governance bodies, their composition, organizational structure, roles, and responsibilities, the scope of authority, the authority by which the governance bodies were established, how they interrelate to other governance groups in the same jurisdiction or geographic area, and a description of associated documents connected to the group such as Memoranda of Understanding (MOUs), charters, agreements, by-laws, etc.

Areas of overlap, duplication, or potential for confusion over authority, roles, and responsibilities are identified, along with suggested actions to resolve such issues.

Deliverables

- Workshop and presentation materials
- Final assessment report

GOV-DOC: Development of Governance Documentation

Description

This service offering provides a review of existing/proposed governance documents and/or assistance with developing new governance documents in order to provide constructive feedback and identify opportunities for enhancement that could lead to more effective communications interoperability planning, activities, and operations. This offering also provides a review of current processes for developing, revising, and storing governance documents, and recommendations for improvements.

There is a wide variety of documents that are associated with governance. These include formal statutory, legislative, or executive orders establishing governance structure and bodies. Other examples include by-laws, charters, Memoranda of Understanding (MOUs), mutual aid agreements (MAA), and various other types of agreements. Participants are provided with templates and samples for developing formal charters, MOUs, MAAs, frequency/radio system sharing agreements, or other agreements for governance groups. OEC/ICTAP subject matter experts (SME) will also discuss lessons learned and methods and models used for communications interoperability governance used by communities across the country.

Templates and samples for all document models include definitions of the purpose, authority, scope, operating principles, membership, decision-making processes, and expected outcomes. Recommendations are provided for the structuring of the various types of documents, questions, and issues to address when generating content for each of the document sections. OEC/ICTAP data specialists can help the requester populate governance document templates upon request.

Deliverables

- Workshop and presentation materials
- Document models and templates
- Populated document drafts
- Report on governance document and processes

GOV-GSM: Development of Governance Structure Models

Webinar

Description

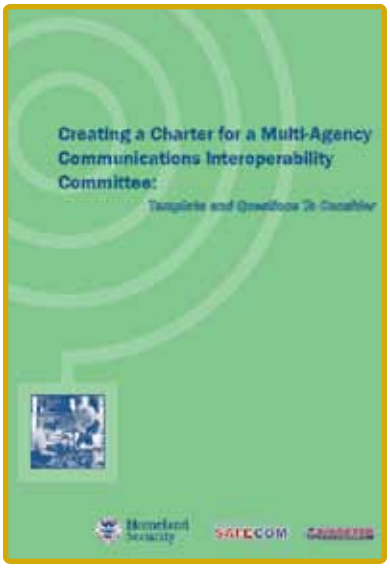
This offering provides models for the development of structures, strategies, and decision-making systems, and support to committees, and/or working groups responsible for the ongoing planning and implementation of interoperable communications initiatives. This workshop is typically a one and a half to two day engagement that brings together mid and senior level public safety managers whose responsibilities involve interoperable emergency communications.

This OEC/ICTAP workshop addresses the characteristics of successful governance models, organizational structures, and models for effective charters, and/or bylaws; provides examples of governance roles and responsibilities; and discusses performance measures. Workshop attendees discuss and develop recommendations for governance structures covering a specific geographical area and applicable jurisdictions.

Workshop participants discuss processes for identifying and including all relevant stakeholders. OEC/ICTAP workshop facilitators provide definitions and examples of roles, responsibilities, and relationships of effective governance groups. Recommendations are provided for the development of a strategic action plan by which goals and objectives are achieved, potential challenges are identified, and a mechanism is developed to regularly evaluate progress and effectiveness of planning efforts.

Deliverables

- On-site workshop and presentation materials
- Document models and templates



OEC/ICTAP continues to support requestors' needs for workshops on governance structure models, SOPs, as well as on technology issues. Pictured above are Lisa Meyerson (Arizona SWIC); Nikki Cassingham (Oklahoma SWIC); Mike Simpson (Texas SWIC); and Darryl Anderson (Ohio SWIC).

GOV-PLAN: Follow-up Statewide Planning Workshop

Revised

Description

This service offering is an in-depth workshop for requestors who desire further assistance in developing plans for specific initiatives and challenges identified in SCIPs, beyond the scope of workshops OEC offers on a rotating basis. Depending on the requestor's focus, this workshop lasts one to two days. The planning for initiatives beyond those of an annual SCIP workshop includes development of industry-standard project plan(s) for various initiatives, establishment of milestones and work breakdown activities. Some examples include planning for narrowbanding, broadband, and multi-regional exercises.

While this workshop focuses on initiatives and challenges in an individual State/territory's SCIP, it also complements and provides a planning foundation for an interstate Strategic Communications Migration Plan (SCMP) (see p. 63).

Prior to the workshop, OEC will contact the Statewide Interoperability Coordinator (SWIC)/SCIP point of contact (POC) to discuss the specific initiatives, challenges and priorities on which OEC/ICTAP SMEs should focus. This will enable OEC/ICTAP to provide an interdisciplinary team of SMEs during the workshop, for example, with experience as needed in RF engineering, planning, and operations to collaborate on site with the requestor's team.

At a minimum, workshop attendees should represent the Statewide Interoperability Governing Body (SIGB) or Statewide Interoperability Executive Committee (SIEC) and other communications, planning, and operations personnel from multiple area agencies and jurisdictions across all public safety/service disciplines, including tribal, non-governmental organizations, and volunteer entities. Suggested participants would include, but are not limited to:

- SWIC and SCIP POC
- SIGB or SIEC members
- Law enforcement, fire, and emergency medical services (EMS) communication specialists, incident management staff and practitioners
- Agency planners and funding coordinators (for example, State Administrative Agency [SAA])
- Communications coordinators and supervisors
- Communications Unit Leaders (COML), radio operators, technical specialists
- Public safety communications center (PSCC) managers

Deliverables

- Workshop and presentation materials
- Additional deliverables (depending on focus)

Standard Operating Procedures (SOP) and Communications Support

Standard Operating Procedures (SOPs) are formal written guidelines or instructions that usually contain both operational and technical components. In many cases, SOPs are designed to facilitate cross-discipline and cross-jurisdiction operations on a day-to-day or emergency basis. Clearly defined interoperable communications SOPs facilitate an orderly and efficient response to multi-agency incidents and events as routine as daily calls for service and as catastrophic as large scale disasters. In addition to SOPs, various State/territory, urban area, regional, and/or tribal planning documents include specific communications components. Planning documents where communications play a role include, but are not limited to:

- Emergency Operations Plans (EOP)
- EOP Communications Annexes/Annex K (Annex K is the primary document for publishing communications system guidance)
- Emergency Support Function (ESF) #2
- Continuity of Government (COG) and Continuity of Operations (COOP) Plans
- Capabilities assessment planning
- Statewide Communication Interoperability Plan (SCIP)
- Tactical Interoperable Communications Plan (TICP)
- Public Safety Communications Center (PSCC) plans

OEC/ICTAP services for SOPs and communications plans include:

- SOP-ASMT: Assessment of Standard Operating Procedures/Communications Plan
- SOP-DEV: Development of Standard Operating Procedures/Communications Plans
- SOP-DSPTCH: Public Safety Communications Center Planning and Operations

SOP-ASMT: Assessment of Standard Operating Procedures (SOP)/ Communications Plans

Description

This service offering provides an independent third-party assessment of existing or proposed SOPs or Communications Plans. OEC/ICTAP provides an interdisciplinary team of SMEs who ensure evaluation of the procedure/plan and provide comprehensive inputs. OEC/ICTAP presents the results of the SOP/ Communications Plan Assessment through a detailed report which documents strengths, concerns, and areas for improvement. The assessment report also includes recommendations designed to resolve identified gaps, improve the applicability and functionality of the procedure/plan, and enhance regional interoperable communications response capabilities.

Topics in this assessment may include key elements such as:

- Operational applicability
- Scope and authority
- Content and format
- Participating agencies
- Compliance with NIMS
- Compatibility with other State/territory, tribal, regional, and/or local procedures/plans
- SOP approval mechanisms
- Responsibility and process for maintenance and update
- Training requirements
- Dissemination process, etc.

State/territory, tribal, regional, and urban area public safety entities may request SOP/Communications Plan Assessment Reports in various forms, based on their needs. The content and depth of the deliverables are determined by user needs and will be tailored to the requirements of each individual request.

Deliverables

- Assessment report and presentation

Natural disasters across the Nation during 2011 demonstrated the continuing need for up-to-date SOPs to implement and maintain effective interoperable emergency communications.

SOP-DEV: Development of Standard Operating Procedures (SOP)/ Communications Plans

Description

This service offering provides an experienced facilitator, data specialist, and public safety SMEs to conduct an SOP or Communications Plan Development Workshop. OEC/ICTAP workshop personnel provide instruction and guidance about the development of both the operational and technical facets of interoperable communications SOPs or plans. They partner directly with the requesting State/territory, tribal, regional, and/or urban area working groups to define and document the scope, tone, and content of the required SOPs or Plans. OEC/ICTAP presents participants with examples, models, and templates used for creating various types of SOPs. Other topics discussed during the workshop include:

- Authority
- Agencies/jurisdictions covered by the communications SOP/Plan
- Content and format
- Compliance with NIMS
- SOP/Plan approval process
- SOP/Plan dissemination, training requirements
- Frequency of usage
- Ongoing maintenance and update process
- Any other elements unique to the target jurisdiction(s)

States/territories, tribes, regions, regional entities, and urban area public safety entities may develop various types of plans and procedures during the workshop based on their individual needs. OEC/ICTAP also works with participants to minimize conflict with other existing SOPs/Plans at the Federal, State/ territory, tribal, regional, and/or local levels. The final deliverable is tailored to meet the requirements of each individual request.

Deliverables

- Document models and templates
- Populated SOPs and/or plans

SOP-DSPTCH: Public Safety Communications Center (PSCC) Planning and Operations

Webinar

Description

According to the National Emergency Number Association there are a several thousand PSCCs in the US. Most are faced with enormous demands keeping personnel trained, keeping pace with changing technology and maintaining continuity of operations plans (COOP) in the event of a major disaster or event.

This workshop helps PSCC supervisory personnel plan for continuity of operations in the event of evacuations, relocations or loss of capabilities. It can be tailored to support other aspects of PSCC operations, including the migration to new technologies. Depending on requestors' needs, this workshop can complement ENG-NG9-1-1 (see p. 50).

This one and a half day workshop provides participants a seminar-style venue for discussing current PSCC operations. OEC/ICTAP SMEs provide real world examples of plans for different COOP all-hazards scenarios. In addition, they share best practices from around the Nation that can help participants identify and mitigate the risk to PSCC continuity of operations. The workshop includes breakout sessions in which participants define specific challenges to continuity of their centers' operations and then brainstorm approaches to meeting them.

The workshop then moves on to developing the outline for a COOP and appropriate annexes that document the operating environment, the potential challenges to operations, and specific planning for various relocation or evacuation scenarios. This offering may also be requested for other SOPs related to PSCC planning and operations.

Deliverables

- Soft copy of populated draft COOP Plan
- Follow-up review of COOP
- Other draft SOPs as applicable

OEC/ICTAP has revised and updated this service offering for 2012 to include information and planning operating procedures beyond continuity of operations plans.

Communications Unit Training and Support

The Communications Unit Training provided by OEC/ICTAP offers a path from high-level awareness, non-technical awareness to professional levels. These graduated levels begin with orientation and progress through awareness, operational, supervision, management, and executive applications. These service offerings are presented in the framework of the National Incident Management System (NIMS) Incident Command System (ICS).

States/territories, tribal, regional, and urban area requestors are welcome to invite Federal partners at the field level to participate if room is available. Communications Unit Training and Support services include:

- TRG-COML: All-Hazards Communications Unit Leader (COML) Course
- TRG-COMT: All-Hazards Communications Technician (COMT) Course
- TRG-ICS: Communications Unit Integration into NIMS ICS Workshop
- TRG-INT: Principles of Interoperability and the National Interoperability Field Operations Guide (NIFOG)
- TRG-INTRADIO: Introduction to Interoperable Radio Operations

TRG-COML: All-Hazards Communications Unit Leader (COML) Course

Revised

Description

This service offering is a four day course, designed for all State/territory, tribal, regional, and local emergency response professionals and for support personnel with a communications background. It is designed to familiarize these professionals with the role and responsibilities of a COML under the NIMS ICS and to provide hands-on exercises that reinforce the lecture materials. OEC offers this course jointly with FEMA/EMI, as "E-969, NIMS ICS All Hazards Communications Unit Leader."

Under the NIMS ICS structure, a COML is the focal point within the Communications Unit. This course provides DHS-approved and NIMS-compliant instruction to ensure that every State/territory has trained personnel capable of coordinating on-scene emergency communications during a multi-jurisdictional response or planned event. All OEC instructors are approved by DHS and have had extensive experience both as emergency responders and as COMLs.

The course is presented with facilitated lecture and hands-on exercises. It involves extensive interactive discussion and exercises. OEC/ICTAP instructors work through the discussions and exercises to explain in detail the processes used to achieve communication operability, interoperability, and how to incorporate any additional communications solutions.

INCIDENT RADIO COMMUNICATIONS PLAN	Incident Name: Severe Weather	Date/Time Prepared: 4-27-2011/12:20 Hours	Operational Period Date/Time: 4-27-2011 0800 - 1600

Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq	N or W	RX Tone/NAC	TX Freq	N or W	Tx Tone/NAC	Mode A, D or M	Remarks
1	Command	Disaster 1	CPD	TVRCS Trunked						A	Tiftonia Command Post
2	Command	Disaster 2	HCSO	TVRCS Trunked						A	HCSO Disaster Ops
3	Logistics	Disaster 5	EOC	TVRCS Trunked						A	Damage Reports to EOC
4	Tactical	CPD Adam	Sector 1 Patrol	TVRCS Trunked						A	Adam Sector Patrol
5	Tactical	CPD Baker	Sector 2 Patrol	TVRCS Trunked						A	Baker Sector Patrol
8	Tactical	CPD Charlie	Sector 3 Patrol	TVRCS Trunked						A	Charlie Sector Patrol
9	Tactical	HCSO East	County East	TVRCS Trunked						A	HCSO and COPD Patrol
10	Tactical	HCSO West	County West	TVRCS Trunked						A	HCSO and SMPD Patrol
11	Tactical	Red Bank	Red Bank	TVRCS Trunked						A	Red Bank PD Patrol
12	Tactical	East Ridge PD	East Ridge	TVRCS Trunked						A	East Ridge PD Patrol
13	Tactical	EMS Main	EMS	TVRCS Trunked						A	HCEMS
14	Tactical	County Fire	County-wide	TVRCS Trunked						A	County-wide Fire/Rescue
15	Tactical	Chattanooga Fire	CFD	TVRCS Trunked						A	Chattanooga Fire Main
16	Tactical	Fireground 1	CFD	TVRCS Trunked						A	Chattanooga Fire Special
17	Tactical	EMS Tac 1	EMS	TVRCS Trunked						A	Reserved

Prepared By (Communications Unit): Jeff Carney, Carney_J@HC911.org, (423)883-6421

Incident Location: County-wide; County Hamilton; State TN; Latitude 3502.57 N; Longitude 8517.25 W

The convention calls for frequency lists to show four digits after the decimal place, followed by either an "N" or a "W", depending on whether the frequency is narrow or wide band. Mode refers to either "A" or "D" indicating analog or digital (e.g. Project 25) or "M" indicating mixed mode. All channels are shown as if programmed in a control station, mobile or portable radio. Repeater and base stations must be programmed with the Rx and Tx reversed.

ICS 205 Excel 3/2007

A complete and comprehensive ICS Form 205, Communications Plan, is a key document in the COML's planning for interoperable communications.

Prerequisites for attendance are:

- A public safety communications background with experience in field operations and public safety communications technologies
- Supervisory and personnel management skills
- Knowledge of local communications and communications systems and technologies, frequencies and spectrum, local topography, system site locations including knowledge of local, regional, and state communication plans, and contacts
- Completion of the following courses: IS-100; IS-200; IS-300; IS-700, and IS-800

Each workshop is limited to 30 attendees. The duration and content of this service offering are outlined on p. 20.

Deliverables

- Workshop and presentation materials
- Student workbook and informational CD

OEC has delivered COML workshops to 51 States/territories and COMT workshops to 25 since the introduction of these two TA service offerings. Pictured above are COMLs supporting response operations in the field.

TRG-COMT: All-Hazards Communications Unit Technician (COMT) Course

Revised

Description

This workshop delivers introductory and refresher training for the ICS COMT position. It introduces public safety professionals, and support staff to various communications concepts and technologies. This includes state-of-the-art interoperable communications solutions, LMR communications, satellite, telephone, data and computer technologies used in incident response and planned events. It is designed for State/territory, tribal, urban, local emergency response professionals and support personnel in all disciplines who have a communications background. This five day workshop is taught by OEC/ICTAP instructors who have both practitioner and Communications Unit experience.

The workshop utilizes facilitated lectures, student exercises, and hands-on lab work. The workshop includes interactive discussions among attendees. OEC/ICTAP instructors work through the discussions, exercises, and hands-on work to explain processes used for successful establishment and operation of the technical communications resources supporting an incident or planned event.

Prior to the on-site work shop, OEC/ICTAP staff work with the requesting site to incorporate communications technologies in use by the participants' agencies. This workshop is limited to 15 attendees. The schedule and content of this service offering are outlined on p. 20.

Prerequisites for attendance include:

- A public safety background with experience in field operations
- Awareness of fundamental public safety communications technology awareness
- Basic knowledge of local communications and communications system, frequencies and spectrum, technologies, local topography, system site locations including knowledge of local, regional, and state communication plans, and contacts
- Completion of IS-100, IS-200, IS-700, IS-800
- IS-300 is recommended but not required
- A written recommendation from the student's supervisor attesting that the student possesses the knowledge listed above

Deliverables

- Student workbook and informational CD

TRG-COML COURSE DURATION AND CONTENT

Day 1	Day 2	Day 3	Day 4
• Introduction • Communication Unit • Interoperable Communications • Frequency Regulations and Usage	• Incident Communication Systems • Incident Communication Plans • Incident Communication Centers	• Frequency Regulations and Usage • Coordination • Demobilization • Resource Awareness • Final Exercise	• Review • Final Exercise

TRG-COMT COURSE DURATION AND CONTENT

Day 1	Day 2	Day 3	Day 4	Day 5
• Introduction • The COMT • Interoperable Communications • Radio Technology	• Incident Communications Systems • Gateway Technology • Telephone Technology	• Computer Technology • Satellite Technology	• Safety Awareness • Mobilization • Resource Awareness • Demobilization	• Review • Final Exercise

TRG-ICS: Communications Unit Integration into the National Incident Management System (NIMS)/Incident Command System (ICS) Workshop

Description

This service offering provides a training workshop focused on addressing communications-specific needs during an operational period and on the requirements for the communications unit planning process for subsequent operational periods. This one day workshop is designed to give an overview of the ICS for emergency response and support personnel tasked with implementing the NIMS ICS principles, organization, and functions. OEC/ICTAP provides a certified and experienced NIMS ICS instructor to teach the workshop.

The workshop emphasizes establishing an organization that allows for interoperable communications among all levels of the organization. Students progress through a simulated incident and engage in the command and general staff meeting (strategy meeting), tactics and plans meetings, develop an Incident Action Plan (IAP), and hand out the IAP while conducting an operational briefing. Students assume command, general staff, and unit leader positions, and produce documentation required for each position. Students develop an understanding for command, plans, operations, logistics, and administrative cycles for each primary management function.

Deliverables

- Workshop and presentation materials
- Document models and templates

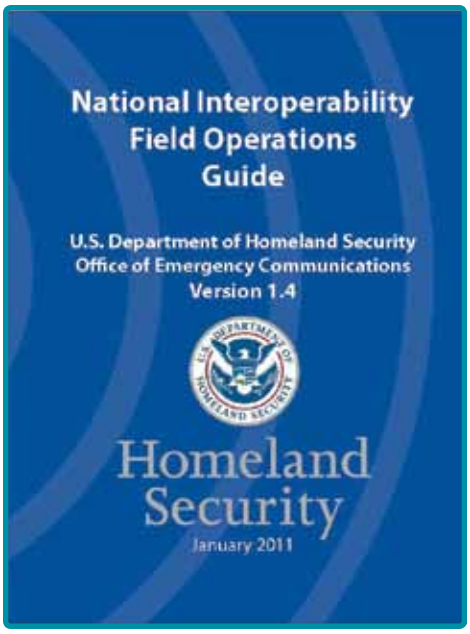
TRG-ICS focuses on how the Communications Unit and the COML, in particular, support the Incident Command Structure.

TRG-INT: Principles of Interoperability and the National Interoperability Field Operations Guide (NIFOG)

Webinar

Description

This service offering provides a one day workshop to familiarize participants with the basics of mobile radio technology rules affecting public safety for terrestrial, aviation, and maritime channels and explains how the NIFOG relates to interoperability, whether from a national, statewide, or regional perspective. It discusses the content and use of the NIFOG for response-level interoperable communications under different scenarios. It discusses national interoperability channels and offers assistance in how to incorporate those into planning for interoperable emergency communications at local levels. It complements OEC/ICTAP offerings for Field Operations Guides (FOG) (see p. 58) and Tactical Interoperable Communications Plans (TICP) (see p. 61).



Non-Federal VHF National Interoperability Channels				
VHF High Band				
Description	Channel Name	Mobile Receive Freq.	Mobile Transmit Freq.	CTCSS Tone
Calling	VCALL10	155.7525	155.7525	CSQ / 156.7 (5A) ±
Tactical	VTAC11 *	151.1375	151.1375	CSQ / 156.7 (5A) ±
Tactical	VTAC12 *	154.4525	154.4525	CSQ / 156.7 (5A) ±
Tactical	VTAC13	158.7375	158.7375	CSQ / 156.7 (5A) ±
Tactical	VTAC14	159.4725	159.4725	CSQ /156.7 (5A) ±
Tac Rpt	VTAC33 * •	159.4725	151.1375	CSQ / 136.5 (4Z)
Tac Rpt	VTAC34 * •	158.7375	154.4525	CSQ / 136.5 (4Z)
Tac Rpt	VTAC35 •	159.4725	158.7375	CSQ / 136.5 (4Z)
Tac Rpt	VTAC36 * •	151.1375	159.4725	CSQ / 136.5 (4Z)
Tac Rpt	VTAC37 * •	154.4525	158.7375	CSQ / 136.5 (4Z)
Tac Rpt	VTAC38 •	158.7375	159.4725	CSQ / 136.5 (4Z)

*VTAC11-12, VTAC33-34, and VTAC36-37 may not be used in Puerto Rico or the USVI.
±Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without re-programming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.
• VTAC33-38 recommended for deployable tactical repeater use only (FCC Station Class FB2T).
• VTAC36-38 are preferred; VTAC33-35 should be used only when necessary due to interference.
Only narrowband emissions are authorized.

OEC/ICTAP technical staff can support requestors with information and instruction about the use of the National mutual aid channels.

First published by OEC in 2007, the NIFOG has become the authoritative guide about nationwide mutual aid/interoperability channels. The NIFOG contains:

- Regulations and guidelines for national interoperability
- Tables of nationwide interoperability channels
- Mutual aid and other common public safety references
- Tables of commonly used frequencies
- Dialing instructions for Government Emergency Telecommunications Service (GETS) and satellite phones

The NIFOG provides information about interoperable communications across different operational venues. In an evolving emergency, for example, it can be critical that radio specialists understand how to effect interoperability among users on disparate land, maritime, and aeronautical radio systems. The NIFOG also provides context for practitioners to understand the regulatory and operating constraints on interoperability channels. For example, it explains why non-Federal public safety personnel may not operate on Federal interoperability channels simply by invitation of a Federal first responder.

Deliverables

- Briefing slides
- Reference documents
- Hard and soft copies of the NIFOG

TRG-INTRADIO: Introduction to Interoperable Radio Operations

Description

This service offering is for professional and volunteer individuals who work in public safety but not directly in emergency communications. Individuals who will benefit from this workshop are those who may need a deeper understanding and some practical knowledge of interoperable radio communications. For example, fire fighters, law enforcement support personnel and volunteer auxiliary communications enthusiasts, among others, will benefit from a better understanding about public safety interoperable and emergency communications.

Key topics include:

- Understanding of radio spectrum and how it is used in public safety
- Operational limitations of public safety voice and data communications
- Practical considerations about interoperable emergency communications
- Technical methods for establishing and maintaining interoperable communications during an incident or planned event
- Introduction to and hands-on familiarization with various vendors' subscriber and base station units
- NIMS ICS operational principles
- Emergency communications lessons learned from real-world incidents

This is a one-day workshop. The first half deals with general topics and basic skills. The second half is devoted to hands-on activities. This may include, in coordination with the host agency and attendees' needs, a tour of a Public Safety Communications Center (PSCC) or an Emergency Operations Center (EOC) to gain a better understanding of the interrelationship between dispatch functions or base station operations and everyday interoperable communications. Attendees who are volunteers must be sponsored by a public safety agency.

Deliverables

- Workshop and presentation materials
- Applicable subscriber and radio console "cheat sheets"

Communications Operations Support

Exercises are an important tool to train for and practice mitigation, prevention, response, and recovery capabilities. Often, however, a key Target Capability such as communications is either omitted from or only notionally included in exercises. To best approximate a real operational environment, exercises should thoroughly incorporate and evaluate available communications procedures, tools, and personnel into each multi-agency, multi-discipline, multi-jurisdictional training/testing opportunity. OEC/ICTAP SMEs provide States/territories, tribes, regions, and urban areas expertise in:

- Designing, conducting, and evaluating communications-focused public safety/service discussion-based and functional exercises
- Evaluating communications capabilities at full scale exercises
- Preparing Injects for communications-specific exercises
- Pre-planning for interoperable, emergency communications for special events
- Assessing on-site operational procedures relating to communications

States/territories, tribes, regions, and urban areas should incorporate interoperable communications into exercises in order to:

- Promote an increased awareness of regional communications interoperability capabilities
- Identify areas for measurable improvement in interoperable communications elements (that is, governance, standard operating procedures, technology, training and exercises, and usage)
- Achieve a shared understanding of existing communications interoperability strengths and gaps experienced by regional communication specialists, first responders, and public safety officials
- Build stronger relationships among regional public safety professionals, officials, and first responders that transcend agencies, jurisdictions, and disciplines

OEC/ICTAP exercise support complies with Homeland Security Exercise and Evaluation Program (HSEEP) standards as the basis for developing exercise content. TA within Communications Operations Support is categorized into the following services. States/territories, tribes, regions, and urban areas may request service offerings individually or in any combination. Communications Operations Support services include:

- OP-ASMT: Operational Communications Assessments
- OP-BKUPCOM: Planning for Backup Communications Options
- OP-COMLEX: All-Hazards Communications Unit Leader (COML) Exercise
- OP-EXTTX: Communications-Focused Executive Tabletop Exercise (EX-TTX)
- OP-FE: Communications-Focused Functional Exercise (FE)
- OP-FSE: Communications-Focused Full Scale Exercise (FSE)
- OP-GOALS: Response-Level Communications Workshop
- OP-MCVS: Mobile Communications Vehicle Support
- OP-SPEV: Special Event/Pre-Event Planning Support
- OP-TEPW : Training and Exercise Plan (T&EP) Workshop
- OP-TTX: Communications-focused Tabletop Exercise (TTX)

Comprehensive after action reports about real-world public events and incidents provide public safety managers the means to assess primary and backup LMR systems under different circumstances and conditions.

OP-ASMT: Operational Communications Assessments

Description

In this service offering, OEC/ICTAP SMEs conduct specific assessments of communications capabilities, assets, or procedures.

All operable and interoperable communications must be efficient and intuitive in order to be effective tools for public safety responders and communications specialists. Operational communications assessments, therefore, ensure that proposed or in-place technologies, plans, and procedures enhance and support operations. OEC/ICTAP SMEs can assess emerging tools in the requesting State/territory, tribal, regional, or urban area agencies' specific environment to measure the likelihood of a responder's or dispatcher's success in using those tools in an event or incident.

These assessments are tailored directly to the requestor's individual needs and can include items such as:

- Field assessments through "ride-alongs" with responders
- Dispatch center and Public Safety Answering Point (PSAP) assessments
- Specific mobile equipment (for example, gateway devices, mobile communications vehicles, etc.) deployment assessments
- Tactical/emergency applications of routine interoperable communications solutions (for example, shared channels for multi-agency vehicle pursuits, etc.)
- Tactical assessments of interoperable assets for specialty response teams

OEC/ICTAP presents the results of each assessment through an Operational Assessment Report. The final deliverables are tailored to meet the requirements of each individual request.

Deliverable

- Operational assessment report

OP-BKUPCOM: Planning for Backup Communications Options

New

Description

Public safety communications systems are critical infrastructure, heavily relied on during day-to-day Public safety communications systems are critical infrastructure, relied on during day-to-day operations and with increased demand on them during large scale incidents or events. The potential for partial or complete failures or insufficient coverage or capacity during large scale events needs to be addressed through a thorough pre-planning process.

This workshop offers guidance to assist with planning for various aspects of implementing backup communications solutions, including:

- Guidance and resource information to aid in hardening existing systems to reduce chances for failure
  - Site facilities
  - Emergency power options
  - Site security
  - Redundancy and/or connectivity
- Assessments of communications infrastructure in the region or state to identify potential backup options, or additional coverage and capacity
- Assessments of Strategic Technology Reserve (STR) resources in the region or state which could be deployed or pre-staged to provide backup options, or additional coverage and capacity
- Review of backup options to determine potential for sufficient capacity or coverage when activated
- Documenting backup options using ICS forms, SOPs, etc.
- Format for briefing on backup options during incident action planning meetings
- Developing planning criteria for specific scenarios incorporating amateur radio resources into backup and support options

Following the advance collection of the necessary data on infrastructure and available resources, OEC/ICTAP will provide an on-site workshop. This workshop may be tailored as needed to meet the unique needs and environment of the requesting jurisdictions and agencies. The workshop may include breakout sessions, during which participants define specific challenges to continuity of communications within their area of operation and then brainstorm approaches to addressing them. OEC/ICTAP staff will provide real world examples of plans and approaches to different aspects of backup communications solutions.

Deliverables

- Capabilities assessment templates
- Incident Action Planning sample documents
- Examples of backup options and documentation from other public safety agencies
- Guidance and reference information on continuity of operations planning

OP-COMLEX: All-Hazards Communications Unit Leader (COML) Exercise

Description

In this service offering an OEC/ICTAP COML instructor will collaborate with public safety personnel from State/territory, region, or urban area to design, facilitate, and evaluate a Communications Unit Leader (COML) exercise. This offering is a follow on to TRG-COML. It leverages that offering and helps accelerate the credentialing to COML status. Public safety professionals who have completed a COML course must complete a series of competency tasks outlined in the COML Task Book to become a qualified COML. In this offering tasks are designed to simulate those COMLs will encounter during an incident or planned event. This exercise affords an opportunity for COML trainees to complete their Task Book to become a qualified COML. At the end of the exercise a local qualified COML will be able to sign off elements of the Task Book for participants who have demonstrated their proficiency. If the requestor does not have a qualified COML, OEC/ICTAP will include a nationally qualified COML to sign off the Task Books. The OP-COMLEX complies with HSEEP guidelines and is aligned with Emergency Support Function #2 (Communications) and the DHS Target Capabilities List (TCL). The goal of the exercise is for each COML participant to attain status as a qualified COML.

The OEC/ICTAP COML instructor partners with the area's Exercise Planning Team (EPT) to ensure that the exercise meets the goals and objectives of the requestor. In advance of the COMLEX, OEC/ICTAP provides the requesting site a logistics checklist that covers facilities and equipment needed for the exercise.

The EPT includes a team lead and exercise controllers. Team leads are qualified COMLs and, in many cases, are also certified as COML trainers. The team lead is also certified to execute COML exercises, experienced in conducting operations-based exercises, and has experience in public safety communications. Controllers are qualified COMLs trained to assess participants' performance on each COML task. Depending on the number of COML trainees, OEC/ICTAP may request the local agency provide additional controllers. This joint EPT will design the COML exercise in two to three one-day planning sessions. One full day is required to execute the COML exercise itself. At the completion of the exercise, the joint EPT will collaborate to determine which participants successfully completed the various COML tasks, and it will make recommendations to help participants improve their task performance in the future. A final task performance summary will be delivered to the site with the results of the participants' performance. The OEC/ICTAP COML instructor will work with the EPT to determine how credentialing will occur on a case by case basis.

Deliverables

- Planning conference inputs
- Exercise plan
- Logistics checklist

- Controller/evaluator handbook
- Master Scenario Events List (MSEL)
- Exercise Evaluation Guide (EEG)
- Final task performance summary with follow-on recommendations

OEC-trained COMLs responded to numerous natural disasters throughout 2011.

OP-EXTTX: Communications-Focused Executive Tabletop Exercise (EX-TTX)

Description

In this service offering, OEC/ICTAP SMEs collaborate with public safety executives and elected/appointed officials in a State/territory, tribe, region, or urban area to design, facilitate, and evaluate a communications-focused executive tabletop exercise (EX-TTX) tailored to their unique needs.

Large-scale incidents can result in significant long-term physical, economic, social, political, psychological, and environmental impacts on a region. To ensure effective response to, and recovery from, such an incident, senior public safety executives need an understanding of communications tools and training in order to coordinate a multi-agency response.

The EX-TTX will comply with the Homeland Security Exercise & Evaluation Program (HSEEP) guidelines and is aligned with Emergency Support Function (ESF) # 2 (Communications) and the DHS Target Capabilities List (TCL). The EX-TTX is usually one day in duration and focuses on ways to utilize interoperable communications policies, procedures, and technologies to:

- Maintain command and control during incidents
- Enhance situational awareness
- Properly function within the incident management process
- Provide policy inputs to the incident commander or unified command team
- Craft and deliver a cohesive incident message to the public

OEC/ICTAP provides the requesting State/territory, tribe, region or urban area with an Exercise Design Team (EDT) that includes a facilitator, data specialist, and evaluators. The facilitator is trained and certified to execute EX-TTXs, is experienced in conducting discussion-based exercises, and possesses experience in public safety executive-level communications. Evaluators are public safety SMEs trained to identify successes and gaps during the exercise. In advanced of the EX-TTX, OEC/ICTAP provides the requesting site a checklist that covers required facilities, equipment, logistics, and other related issues.

OEC/ICTAP briefs the results of the EX-TTX through an initial QuickLook presentation and provides a detailed After Action Report (AAR) /Improvement Plan (IP) which documents best practices, gaps, and recommendations to resolve those gaps. This AAR/IP helps measure progress toward resolving interoperable communications gaps through a Corrective Action Program (CAP). Finally, OEC/ICTAP provides the site an executive tabletop exercise manual with detailed guidance about conducting future EX-TTXs.

Deliverables

- Initial and final planning conference briefings
- AAR/IP
- After action conference presentation
- Executive tabletop exercise manual
- Situation Manuals (SITMANs)
- Logistics checklist
- Exercise presentations and briefings
- QuickLook presentation

OP-FE: Communications-Focused Functional Exercise (FE)

Description

This service offering provides an OEC/ICTAP Exercise Design Team (EDT) who collaborates with public safety and public service professionals from a State/territory, tribe, region or urban area to design, facilitate, and evaluate a communications-focused Functional Exercise (FE). This exercise will comply with HSEEP guidelines and is aligned with ESF #2 (Communications) and the DHS TCL.

Exercise participants demonstrate their ability to use regional communications assets in a large-scale incident scenario, but the movement of personnel and equipment is simulated. An FE is an excellent follow-on exercise to a TTX and a training lead-in to a Full Scale Exercise (FSE). It is typically a one day, on site event with three one day planning sessions.

OEC/ICTAP provides an EDT of public safety communications SMEs trained to identify successes and gaps revealed during the exercise. OEC/ICTAP may request that the site provide additional controllers or evaluators, and OEC/ICTAP provides controller/evaluator training for all personnel involved. The OEC/ICTAP EDT partners with the local Exercise Planning Team (EPT) to ensure the exercise is designed to meet the needs of the requestor.

OEC/ICTAP compiles the results of the FE through an initial QuickLook presentation followed by a detailed written AAR/IP. The AAR/IP documents exercise best practices, gaps, and recommendations to resolve those gaps. If the FE follows an OEC/ICTAP Tabletop Exercise (TTX), the AAR/IP will also assess progress made on gaps identified during the TTX. This AAR/IP then allows the State/territory, tribal, regional, or urban area agency to further promote and measure progress toward resolving identified interoperable communications gaps through a Corrective Action Program (CAP). Finally, the requesting site receives a detailed Functional Exercise Manual that provides specific guidance on how to conduct future communications-focused FEs.

Deliverables

- Initial, mid-term, and final planning conference briefings
- Exercise Evaluation Guidelines (EEGs)
- Functional exercise manual
- Controller/evaluator handbook
- AAR/IP
- Controller/evaluator training briefings
- After action conference presentation
- Master Scenario Events List (MSEL)
- QuickLook presentation
- Logistics package
- Exercise presentations and briefings
- Exercise plan (EXPLAN)

OP-FSE: Communications-Focused Full-Scale Exercise (FSE)

Description

This service offering helps a requestor plan and execute a Full Scale Exercise (FSE) to evaluate interoperable and emergency communications capabilities within a specific geographic area. Although communication is one of several capabilities included in an exercise scenario, interoperable communications are frequently not an evaluation focus, and gaps in this area may be neglected in exercise reports. FSEs are often large multi-agency, multi-discipline, multi-jurisdictional exercises designed to test many facets of emergency response and recovery operations. OEC/ICTAP SMEs will assist the local EPT during planning and development of an FSE to integrate interoperable communications components into the exercise itself.

OEC/ICTAP does not independently design or facilitate stand-alone communications-focused FSEs. However, OEC/ ICTAP SMEs can help ensure the local EPT considers all components of interoperable communications during the exercise and provide detailed inputs. This assistance can include tasks such as developing or enhancing exercise injects to trigger communications events, incorporating applicable communications performance measures, identifying communications assets for exercise play, documenting known communications challenges that could impact exercise play, and contributing to EEG. OEC/ICTAP can also provide evaluators during the FSE who focus specifically on assessing communications.

OEC/ICTAP presents the results of the FSE by providing its evaluation results to the local EPT for incorporation into the exercise AAR. If the FSE follows an OEC/ICTAP TTX, EX-TTX, or FE, the AAR inputs will also attempt to document progress made on gaps identified during those exercises.

Deliverables

- Initial, mid-term, and final planning conference inputs
- Communications exercise evaluation guides
- Inputs to AAR/IP
- After action conference presentation inputs

OP-MCVS: Mobile Communications Vehicle Support

New

Description

Mobile communications vehicles (MCVs) and mobile command centers employ a wide range of communication resources. They range from smaller vehicles such as SUVs or trailers with basic LMR equipment to larger mobile communications centers with extensive voice and data systems and applications including satellite, video surveillance, weather monitoring, dispatching and conferencing. Their names may vary from Mobile Communications Vehicle, Mobile Communications Center, to Mobile Command Center. MCVs are employed during a variety of situations such as emergency response incidents, small or large scale planned events, as well as for training or exercises.

This workshop is designed to improve the utilization, management and operation of MCVs. OEC/ICTAP staff provide guidance on developing concept of operations (CONOPS) plans for the management and operation of mobile communication resources which align with the applicable policies and procedures. In addition, OEC/ICTAP staff can review the policies and procedures for operation of MCVs, documentation and categorization of capabilities, SOPs for equipment operation, and training plans to keep Technical Specialists and Communications Unit Technicians proficient in MCV communications operations. The following options regarding capabilities assessments and specialized training are available:

- Inventory communications equipment and provide vehicle typing where appropriate
- Provide guidance on entering asset inventory into CASM or some other local database
- Provide operational and technical assessment of MCVs' communication resources and capabilities
- Provide guidance in the development of CONOPS for utilizing vehicle's communications capabilities in support of emergency incidents, planned events, training/exercises
- Assist with development of an SOP for deployment of the vehicle and use of its communication support systems
    - Train personnel such as Technical Specialists (THSP) or Incident Communications Technicians on MVCs' communications equipment, systems and resources
    - Train on vehicle deployment, setup, operation, troubleshooting, demobilization

This workshop focuses on mobile communications vehicles and their properties. It complements several other offering including OP-COMLEX, OP-FE and OP-FSE. Detailed SOP and CONOPS information developed under this service offering can also be incorporated into TICPs where available. The duration is dependent on the scope of the request.

Deliverables:

- Inventory and assessment report of technical capabilities
- Draft CONOPS, SOPs, Operator's Guides
- Documentation, diagrams/photos of MCV, its contents and equipment capabilities
- Setup or operational guidance instruction

OP-MCVS is a new offering to help requestors maximize the utilization and return on investment in various kinds of mobile communications vehicles.

OP-SPEV: Special Event/Pre-Event Planning Support

Description

In this service offering OEC/ICTAP SMEs collaborate with public safety professionals in a State/territory, tribal, regional, or urban area agency during the planning and execution phases of planned special events.

Planned special events such as national/international sporting events, civic festivals, large conventions, or political summits can involve dozens of public safety agencies from multiple disciplines and jurisdictions, and present significant challenges to establishing and maintaining appropriate interoperable communications. Large-scale planned events, therefore, require substantial operational planning and preparation to coordinate all public safety participants, to ensure that the event proceeds smoothly, and to prepare to respond to one or more related incidents.

OEC/ICTAP SMEs provide the right mix of skills (for example, operations, engineering, or policies and procedures) to ensure the team's ability to advise on all components of interoperable and emergency communications prior to or during the event. Through this service offering, OEC/ICTAP SMEs can work directly with the local event planners to provide inputs to event/incident action plans, assist with developing communications plans, identify pre-event training opportunities, and/or advise on methods to overcome identified communications challenges.

Deliverables

- Planning conference inputs
- Event/incident action plan communications-focused inputs
- Communications plan inputs
- Other assessments, on request

Planning for interoperable communications — even for planned events — often takes months of preparation for coordination, identifying necessary equipment and scheduling trained personnel.

OP-TEPW: Training and Exercise Plan (T&EP) Workshop

Description

A communications-focused Training and Exercise Plan (T&EP) workshop provides a requestor an opportunity to translate State/territory, local, regional, tribal goals and priorities into specific training and exercise objectives. The T&EP complies with HSEEP guidelines and complements an area's overall training and exercise plan, if already developed. A communications-focused T&EP helps to:

- Coordinate and integrate all communications-related training and exercise activities throughout the region across Federal, State, and local agencies
- Minimize duplication of effort
- Ensure resources are not over-extended
- Maximize the effectiveness of training and exercise funding allocations, and
- Present opportunities for various jurisdictions and agencies to fulfill multiple grant requirements for interoperable communications with a single exercise or training course

When completed, the T&EP prioritizes the communications training and exercise needs for the area and then aligns them with key Federal and State guidance documents such as the NECP, HSPD-8, the DHS TCL, and SCIP. This helps requestors better define the alignment between their priorities and National or State priorities in order to streamline funding and support requests. The T&EP also focuses on aligning a requestor's training and exercise priorities with outcomes noted in previous AARs and IPs, helping the area to maintain a CAP, and leveraging results of past exercises.

OEC/ICTAP provides a facilitator, data specialist, and telecommunications SMEs who coordinate and execute a two-day workshop which develops the T&EP based on an assessment of regional training and exercise needs. The first day of the workshop is designed as a data gathering session focused on:

- Reviewing communications progress and accomplishments to date
- Consolidating known communications gaps
- Reviewing public safety/service communications training and exercise needs in light of regional or State homeland security strategy
- Identifying needs not associated with known training and/or exercise offerings
- Documenting future training and exercise offerings/opportunities

During the second day, an OEC/ICTAP data specialist will populate the template with the information from the first half of the workshop. The second day focuses on incorporating that information into a regional plan and working with stakeholders to populate information into the T&EP template. During this interactive session OEC/ICTAP facilitators may provide, as appropriate, examples from other regions nationwide to help participants apply best practices and lessons learned to situations similar to their own.

The workshop attendees should mirror the responders and support personnel needed for a major incident or planned event in the region. The most successful T&EPs are based on strong, diverse representation from stakeholders from all disciplines, jurisdictions, and agencies across a region. The requesting site's attendees should include communications and operational personnel from multiple agencies and jurisdictions across all public safety/service disciplines, including non-governmental organizations, volunteers, and tribal entities in the area.

Deliverables

- Workshop and presentation materials
- Document models and templates
- Populated T&EP draft

OP-TTX: Communications-Focused Tabletop Exercise (TTX)

Description

In this service offering OEC/ICTAP SMEs collaborate with public safety and public service professionals from a State/territory, tribe, region or urban area to design, facilitate, and evaluate a communications-focused tabletop exercise (TTX). This exercise will comply with the HSEEP guidelines and is aligned with ESF #2 (Communications) and the DHS TCL.

A TTX is discussion-based, usually one day in duration with two one-day planning briefings. It is designed to evaluate communications plans, policies and procedures, and to assess communications systems needed to prevent, respond to, and recover from an emergency incident scenario. OEC/ICTAP tailors the scenario to the requesting area's needs.

The TTX provides an opportunity for responders, supervisors, and communications specialists to discuss communications plans, assets, and personnel in a static environment. Players review and discuss their ability to use regional communications assets in response to a large-scale incident scenario but the movement of personnel and equipment is simulated. A TTX is an excellent means for initiating multi-agency exercise relationships or reviewing regional policies or procedures such as a TICP. It should precede both functional and full-scale exercises.

OEC/ICTAP provides the requesting State/territory, tribe, region or urban area an EDT including a facilitator, data specialist, and evaluators. This Team partners with the local EPT to ensure the TTX meets the specific needs of the requestor. The OEC/ICTAP EDT also provides a logistics checklist that covers facilities, equipment, and other related issues.

OEC/ICTAP briefs the results of the TTX through an initial QuickLook presentation followed by a detailed, written AAR/IP. This AAR documents best practices and gaps and makes recommendations to resolve gaps. The AAR/IP can be used to help measure progress in resolving interoperable communications gaps through a CAP. OEC/ICTAP provides the site an tabletop exercise manual with detailed guidance about conducting future TTXs.

Deliverables

- Initial and final planning conference briefings
- Situation Manual (SITMANs)
- QuickLook presentation
- Logistics package (invitations, checklists, etc.)
- Exercise presentations and briefings
- AAR/IP
- After action conference presentation
- Tabletop exercise manual

Communications Systems Engineering Support

For any interoperable communications solution to be accepted and used, the underlying technology must be robust, reliable, intuitive, and trusted. OEC/ICTAP offers objective third-party services to help public safety radio administrators enhance their Land Mobile Radio (LMR) and data system networks and make informed decisions about technology.

These services can help State/territory, tribal, regional, or urban area public safety agencies develop confidence in their chosen interoperability solutions, use those solutions more effectively across their respective areas, and improve the technological capacity to support day-to-day and large-scale interoperable communications needs.

Communications systems engineering offerings cover all phases of a communication system's life cycle — defining requirements, identifying solutions, implementing the system, and supporting existing systems. These services include offerings such as system analyses, Project 25 (P25) standards information sharing, system performance analysis, narrowbanding, broadband issues, hands-on equipment training, and others as requested. OEC/ICTAP's communications systems engineers bring expertise in areas such as system configuration options, RF coverage, LMR standards, microwave technologies, data interoperability, narrowbanding, broadband wireless, national spectrum requirements, etc. They also advise and participate in other service offerings such as exercise observation and analysis, communications plan development, and communications unit training.

Communications systems engineering support services include:

- ENG-AG: Audio Gateway Information and Training
- ENG-BRBND: Broadband Systems Support
- ENG-COV: RF Coverage Prediction and Propagation Testing
- ENG-DS: Data Systems Interoperability
- ENG-DT: RF Coverage Drive Test Measurements
- ENG-MIG: LMR System Migration
- ENG-MW: Microwave Design Analysis
- ENG-NB: VHF/UHF Narrowbanding
- ENG-NG9-1-1: Next Generation 911
- ENG-P25W: P25 Land Mobile Radio Workshop
- ENG-RP: Radio Programming and Training
- ENG-SHARE: Systems and Engineering — Shared Resource Analysis and Coordination
- ENG-SITEID: Systems and Engineering — Site Identification and Sharing Agreement
- ENG-SYS: LMR System Analysis

ENG-AG: Audio Gateway Information and Training

Description

This offering provides different levels of understanding on gateway (that is, audio bridge) functionality and operations. Participation in all three modules should prepare State/territory, tribal, regional, or urban area personnel for activation and deactivation of available gateways.

It consists of three modules:

Module 1 — Gateway Overview. A high-level overview targeted for anyone requiring a basic understanding of gateway functionality.

Module 2 — Advanced Gateway Operation. Targeted for personnel interested such as Communications Unit Leaders (COML), Communication Coordinators (COMC), Communications Technicians (COMT), and agency communication specialists who need a more advanced understanding of gateway operations; for example, use-specific issues such as co-site RF interference.

Module 3 — Gateway Hands-on Configuration. This module is equipment specific, targeted for gateway installers, maintenance technicians, and specialists.

The workshop's lectures, discussions, and practical exercises are focused on the gateways specific to the site and are intended to prepare personnel in the region to quickly activate and deactivate their own equipment. The total workshop is approximately six to eight hours long. Each module is intended to build on previous module(s). The training session can accommodate approximately 20 students for modules 1 and 2 but no more than ten for module 3.

Deliverables

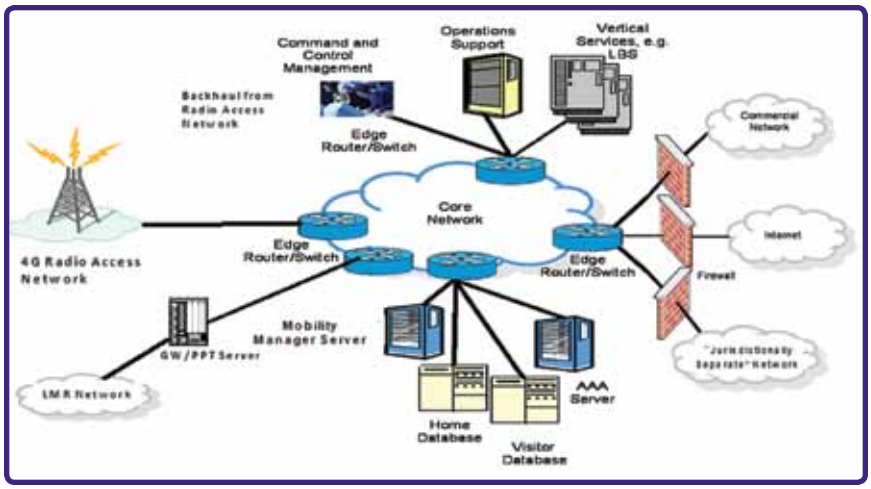
- Workshop and presentation materials
- References (CD)
- Available gateway firmware updates
- Simulation software

Audio gateway devices can simultaneously cross-connect different radio systems. ENG-AG includes instruction on the use and optimization of several different vendors' gateway devices.

ENG-BRBND: Broadband Systems Support

Revised Webinar

Description



The FCC's National Broadband Plan discusses broadband support to public safety. The figure above depicts a notional public safety broadband architecture as illustrated in the Plan. The plan is available at http://www.broadband.gov/plan.

This service offering assists State/territory, tribal, regional and urban area users to understand broadband technology and to help with early planning for its potential use in public safety operations. "Broadband" is used to describe high speed network connectivity that can accommodate streaming video, complex graphics, VoIP, and other data intensive transmissions. It provides a range of services including informational briefings, development of governance models and standard operating procedures, project planning, and engineering support. During 2012 the public safety broadband overview portion this offering can be delivered as an optional webinar.

OEC/ICTAP on-site assistance will provide an overview of the current state of broadband implementation in the public safety sector and an in-depth engineering overview of LTE technology. This includes a comparison between LTE and land mobile radio capabilities. As an informational background offering, the key topics covered in the public safety broadband overview may include:

- The promise (and current state) of broadband
- History and background of broadband policy
- Overview of current broadband legislation
- Current implementation efforts
- Stakeholder information and engagement opportunities

The key points of the engineering overview may include:

- LTE technical highlights and an overview of key elements
- Key differences between LMR and LTE

OEC/ICTAP has developed a template to identify agency or site broadband needs and objectives and to determine what further TA may be needed. In addition, other aspects of this service offering can be customized to meet a requestor's specific needs, to include focus on the following topics:

- Review technical content of vendor proposals
- Assist with preparation of the technical content of a Request for Proposals (RFP) by defining baseline requirements, or reviewing and commenting on such information
- Assist with drafting project plans
- Assist with drafting charters, inter-agency agreements, or other governance documents
- Assist with development of acceptance plans for purchased systems or review and comment on acceptance plans
- Monitor acceptance testing and reporting observations

Deliverables

- Workshop and/or webinars with associated materials
- Reports and analyses relating to requested broadband assistance

ENG-COV: RF Coverage Prediction and Propagation Testing

Description

This service provides requestors an assessment of radio frequency (RF) system coverage (for example, coverage footprints) for a State/territory, tribal, regional, or urban area. Existing Land Mobile Radio (LMR) systems may not provide adequate RF coverage for an entire operational area. Coverage gaps impact the ability of public safety professionals to communicate and may significantly hinder their response. RF coverage prediction maps, therefore, allow radio system administrators to visualize RF coverage, to baseline system performance prior to any changes or upgrades, to identify potential for co-site RF interference, and/or to determine where gaps occur in both existing and proposed radio networks.

OEC/ICTAP communications systems engineers can provide RF coverage prediction maps in various forms including traditional static images and dynamic, interactive graphical representations using Google Earth®. These maps can be used as a tool to plan for:

- Current system upgrades (for example, new tower locations, new antenna locations, and frequency band changes)
- A catastrophic infrastructure loss (for example, collapsed tower, equipment power loss, and damaged repeater)
- System migration by providing an independent assessment of proposed system coverage

State/territory, tribal, regional, or urban areas may request RF coverage prediction maps in various forms, based on their reporting needs. The content and depth of the final deliverables are determined by user needs and are tailored to the requirements of each individual request.

OEC/ICTAP RF engineers utilize a frequency mapping tool (FMT) to identify appropriate frequencies from the Federal Communications Commission (FCC) database and assess their geographical coverage. Frequencies and tower sites are selected from the FCC database and displayed using Google Maps®. A three-dimensional display is then provided by using Google Earth®. This allows for a much more useful assessment of the type of terrain so that coverage map models can be adjusted to more meaningful parameters. Deliverables can be tailored to the requestor's specific requirements.

Deliverables

- Images in Microsoft PowerPoint® presentations
- RF coverage analysis report
- Google Earth® files

RF coverage prediction and testing of propagation are critical to the successful deployment of new systems as well as to checking on the efficiency of rebanded radio systems.

ENG-DS: Data Systems Interoperability

Description

As LMR voice systems become more robust, especially as the migration to P25 standard-based equipment becomes more substantial, an increasing number of State and local emergency management agencies are turning attention to data systems interoperability as their next area of focus.

This service offering provides an assessment of current data systems capabilities, identification of future needs, identification of options to meet these needs, and assistance with the development of requirements documents. For example, user requirements may include assessments of low bandwidth mobile data terminals, high bandwidth video/graphics and data files, and medium bandwidth data transfers between Emergency Operation Centers.

Options for consideration include low data rate mobile data terminals available from various voice vendors, commercial services, stand-alone data systems, and various off-the-shelf technologies (for example, 4.9 GHz, WiFi, LTE). Issues to be addressed include migration options, own or lease, data and voice integration, and operating band. OEC/ICTAP can also provide assistance with review of the technical portion of proposals and acceptance testing of selected systems.

Interoperability assessments include the integration of existing internal disparate systems, diverse protocols, infrastructure design review of both RF and land based networks, backhaul design review, RF system access points, and system security risks. Other factors related to assessments of data systems' interoperability may include the types of applications running on the network, bandwidth requirements, system traffic/usage, and connections/interfaces with external systems.

Deliverables

- Site collaboration presentations and discussions
- Final assessment report
- Final assessment presentation

ENG-DT: RF Coverage Drive Test Measurements

Description

In this service offering, OEC/ICTAP engineers collect measurements of system strength in order to assess the true performance of a LMR system.

Existing LMR systems are typically designed or characterized by prediction models and software. This methodology alone may not provide an adequate level of prediction accuracy upon which to base important region-wide radio system decisions. However, using field strength measurements from a user's existing system provides real-world data to calibrate prediction software applications, thereby improving accuracy.

The results of RF coverage drive tests can be used to define and refine system coverage requirements, provide information for system implementation, and enhance existing system operations over the course of the radio system's life cycle. For existing systems, Drive test data can be used to supplement baseline coverage studies. For new system implementations, a Coverage Acceptance Test (CAT) is performed by the installer to determine if the installed system meets the design requirements. Drive test data from this technical assistance service can supplement the CAT. OEC/ICTAP also provides requestors a detailed explanation of the analysis methodology used.

States/territories, tribes, regions, and urban areas receive OEC/ICTAP drive test data in various forms, based on their reporting needs. The final deliverables are tailored to meet the requirements of each individual request.

Deliverables

- Measurement data (Microsoft Excel®, MapPoint®, Google Earth®)

ENG-MIG: LMR System Migration

Description

This service offering assists State/territory, tribal, regional, or urban area users in implementing a migration strategy to move from a legacy LMR system to a new P25 standards based system. There are three phases of this support. For the first phase, OEC/ICTAP communications systems engineers review and analyze current system utilization, including:

- Jurisdictional boundaries
- Essential talkgroups
- Frequencies
- Coverage boundaries
- Tower locations
- Subscriber radio capabilities
- Other related parameters

As a second phase to this effort, OEC/ ICTAP engineers review and analyze new system documentation or plans in order to better provide recommendations for a switch-over. The third phase of this service includes recommendations on a migration plan that utilizes information gathered in Phases 1 and 2. Phase 3 includes consultations and discussions with the system users, administrators, equipment providers, and installers to establish a switch-over strategy. There are many factors to be taken into account within a migration plan. Some factors to consider are:

- Utilization of a new frequency band
- Frequency availability during new system testing and transition
- Limits and durations of acceptable systems down-time
- Timeline constraints
- Radio programming logistics

Consideration also needs to be given to whether multiple subscriber radios will need to be employed during the migration period. User training is an important aspect and can include training on: talkgroup structure; coverage area; and intermediate and long-term usage procedures. If some users migrate prior to others, temporary interoperability solutions may have to be employed in order to retain communications among all users.

Deliverables

- Site collaboration presentations, documents, or discussions
- System migration report

ENG-MW: Microwave Design Analysis

Description

In this service offering, OEC/ICTAP communications systems engineers analyze microwave design documentation to determine if the proposed specifications meet the needs of the State/territory, tribal, regional, or urban area requestor.

System backbones provide reliable and robust high-speed voice and data traffic between geographically separate communications sites. Proper backbone design is critical in order to maintain the Nation's public safety LMR systems. Microwave links are a common method used to provide these backbone communications.

An OEC/ICTAP microwave design analysis provides requestors an objective third-party report that may be used to assist system managers in decision making, as an initial design to be included in a Request for Proposal (RFP), as a supplementary information source in LMR system proposals, or for general information about microwave systems.

OEC/ICTAP presents the results of the microwave design analysis through an individual assessment report or in combination with other OEC/ICTAP engineering services. The assessment report may include a microwave system design, a microwave path analysis, and recommendations on equipment selection. The final deliverables are tailored to meet the requirements of the individual request.

Deliverables

- Microwave assessment report

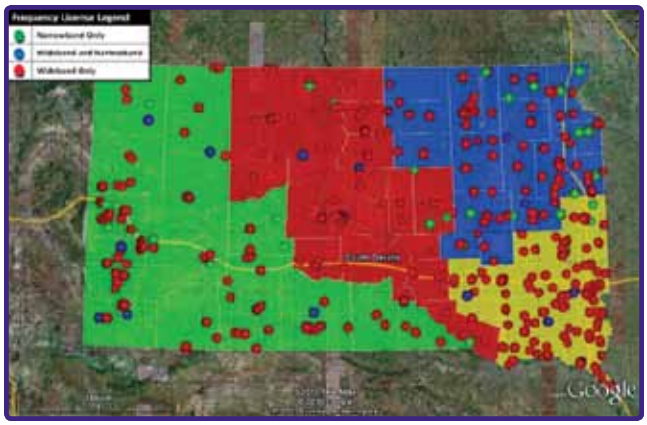
ENG-NB: VHF/UHF Narrowbanding

Revised

Description

Public safety agencies operating on frequencies in the VHF (150-174 MHz) or UHF (450-512 MHz) bands are facing the FCC mandate to convert to narrowband operation prior to January 1, 2013. There are several steps involved in meeting this mandate, including:

- Identifying impacted frequency licenses
- Inventorying of affected radio equipment
- Updating FCC licenses as necessary
- Reprogramming or replacing non-compliant equipment
- Testing to determine coverage and interoperability impacts



OEC/ICTAP offers stakeholders narrowbanding analysis services and analytic reports. Tools to help SWICs with licensing information are available at www.publicsafetytools.info.

OEC/ICTAP analysis of affected frequencies can help stakeholders with these steps. OEC's Narrowband License Status Tool (see p. 5) downloads FCC data weekly and exports it to spreadsheets. The data in these spreadsheet reports can then be filtered and re-sorted to separate wideband and narrowband frequencies by county. These reports are then further sorted by various parameters such as FCC registration number, call sign, and frequencies.

Separate reports can be run for the public safety frequency pool (PW and YW) or for the industrial/business frequency pool (IG and YG) or one report for both pools. Coordination with entities in the industrial/business pool such as schools and utilities is often needed when public safety performs their narrowbanding. Reports can be provided for either fixed or mobile transmitters. In addition to the spreadsheet deliverable, the report for fixed transmitters is displayed graphically on a map on the screen. The NLST also can present fixed transmitter information as a Google Earth map overlay to identify transmitters still requiring attention. Mobile transmitter reports cannot be viewed on a map because they do not operate at fixed map locations. NLST reports are available through the OEC/ICTAP Public Safety Tools Home Page, https://www.publicsafetytools.info. This site allows requestors to review the status of their frequencies and update their own reports using current FCC data. This offering is generally a half day on-site overview of narrowbanding requirements and a review of FCC data with requestors.

Deliverables

- Sorted listings of impacted frequencies
- Google Map*.kmz files
- Webinar and on-site review of data
- Spot review of FCC ULS license anomalies

ENG-NG9-1-1: Next Generation 9-1-1

New

Description

This service offering supports Public Safety Communications Center (PSCC) managers and senior personnel with the challenges presented by integrating Next Generation 9-1-1 (NG9-1-1) digital communications into the workplace.

NG9-1-1 networks are replacing circuit switched 9-1-1 networks, which carry voice and very limited data. Currently PSAPs/9-1-1 centers experience technical and procedural challenges incorporating technologies like voice over IP (VoIP) 9-1-1 calls, text messages, images and video, telematics data, building plans and medical information over a common data network.

Increasingly, PSCCs need to support communications and data transfer across county, State, and international borders as well as various emergency response disciplines and agencies. NG9-1-1 is a system comprised of hardware, software, data and operational policies and procedures which continue to evolve. This offering focuses on technical issues, including:

- Standardized interfaces from call and message services
- Processing non-voice (multi-media) messages
- Integrating data useful for call routing and handling
- Delivery of calls/messages and data to appropriate PSAPs
- Supporting data and communications needs for coordinated incident response and management

Text messaging, instant messaging/chat, video, images/graphics, photos and telematics received via IP-networks all present significant technical and operational and challenges. PSCC call takers and dispatch personnel will have to move from a business process of handling incoming calls channeled through a single mode to processing and disseminating multi-media inputs received in multiple modes. Managers and senior personnel need to be familiar with the rapidly evolving technologies behind this change.

With the acquisition and deployment of NG9-1-1 platforms and services — even as standards, policies, and procedures still need to be codified — managers are faced, in turn, with training personnel to recognize and understand disparate data inputs and translate them into actionable information for first responders. This offering is designed to help managers and senior staff with issues such as:

- Technology transition, integration and deployment
- Technology assessments for call handling and processing
- Data handling, storage and retrieval issues

Deliverables:

- Presentation materials
- Related information, reference sources

ENG-P25W: P25 Land Mobile Radio Workshop

Description

This offering provides progressive levels of instruction about P25 standards and consists of five modules.

- Project 25 Overview: This overview provides a basic understanding of the P25 Land Mobile Radio (LMR) system for technical and non-technical attendees. It covers P25 features including the current status and future direction of the P25 standards development.
- Project 25 Features and Services: A more in-depth module for the LMR system decision maker, manager, administrator, and/or users, it is designed to help maximize system operability and interoperability between agencies.
- Project 25 ISSI Status: A short overview of the P25 Inter-RF Subsystems Interface (ISSI) to educate attendees on the status of this standard for LMR inter-system interoperability. The capabilities and implementation road map are covered to help LMR system administrators plan for its deployment in their systems.
- VOIP and ROIP: A short overview to help public safety communications professionals understand Voice over Internet Protocol (VOIP) and Radio over Internet Protocol (ROIP) as a possible interoperability solution.
- Introduction to Radiowave Propagation for Public Safety: This module discusses applicable radiowave propagation theory, prediction/planning, and coverage measurements. It is geared toward the system planner/designer to help evaluate a manufacturer's designs and acceptance test planning procedures. It should also help participants avoid common mistakes in proposed design improvements for fill-in and system expansion. It includes hands-on use of an RF planning tool.

Modules 1–4 are presented via webinar and last one to four hours. Module 5 is a one-day on site seminar. Modules 1–4 can accommodate 20 participants; module 5 is limited to preferably to no more than eight.

Deliverables

- Workshop and presentation materials
- Reference materials (CD)

ENG-RP: Radio Programming and Training

New

Description

As the FCC narrowbanding mandate approaches at the end of 2012, agencies must re-program radios which use frequencies in the 150-174 MHz and 421-512 MHz ranges (only two VHF public safety paging frequencies, 152.0075 and 157.450 MHz, are exempt). Agencies may need to use in-house staff to augment outside resources such as radio shops to re-program and test their radio equipment in order to meet this deadline. This offering shows an agency's in-house staff how to update radio programming files with new narrowband channels. It will help agencies use in-house personnel to re-program and test equipment in a short, compressed timeframe. OEC/ICTAP staff will work with site personnel to:

- Review existing programming files for a family of radios (for example, EF Johnson 5100 and 5300; Harris P7300, Motorola XTS 2500, XTS 5000, etc.)
- Help the site POC identify a new channel plan with narrowband channels
- Assist with adoption of the common channel naming conventions (ANSI Standard)
- Help develop new programming files and procedures to reprogram a family of radios
- Provide training with a site POC to program one candidate family of radios including cache radios
- Spot test selected equipment to help agencies verify correct re-programming
- Offer guidance in coordinating re-programming efforts with adjacent jurisdictions that may be impacted by the change
- Help participating agencies submit the changes for modification to Tactical Interoperable Communications Plans (TICPs) or other related SOPs and for any updates to CASM
- With the site POC spot review FCC ULS licenses for which NLST reports indicate anomalies such as outdated contact information, erroneous lat/long coordinates, and antenna data

This offering can be leveraged to create standardized channel names and programming templates for a region, by discipline, operating area, etc. Additionally, OEC ICTAP staff can assist with programming of regional and national interoperability channels to help sites improve interoperability. Channels programmed into the radios can be captured in a standard ICS Form 217a. OEC ICTAP staff will provide guidance and reference information, but will not perform any radio programming themselves or modify FCC license information. This work shop involves a telephone conference and webinar meeting with the requestor's POC prior to a site visit and one to two days day on site with agency's in-house staff.

Deliverables

- Radio programming files with narrowband and interoperability channels
- Radio programming procedures
- On-site assistance and training as required
- Standardized programming templates with reference guides
- Updated ICS Form 217a

ENG-SHARE: Systems and Engineering — Shared Resource Analysis and Coordination

Description

This service offering supports States/territories, tribes, regions or urban areas that want to develop formal agreements with Federal counterparts about shared communications resources. OEC/ICTAP engineers and SMEs evaluate requests for shared resources and infrastructure between Federal systems and requesting agencies at the State/territory, tribal, regional, or urban area levels to help determine the benefits to the departments/agencies. OEC staff can help gather requirements and prepare the documentation to coordinate the requirements with the partnership agencies. To support those interested in developing sharing agreements, OEC/ICTAP SMEs and engineering services can:

- Coordinate and facilitate meetings with departments and agencies to determine requirements (for example, interoperability, coverage, or subscriber units)
- Facilitate meetings and agreements with State and regional partners
- Provide Memorandum of Understanding (MOU) and agreement templates
- Conduct surveys of proposed sites to determine suitability

OEC/ICTAP engineers make recommendations about department/agency equipment purchase and installation requirements, which allow for non-vendor-specific competitive bidding. OEC/ICTAP can provide analysis of P25 talkgroups and develop talkgroups to support the current and future needs of each department or agency. Acceptance test criteria can be reviewed to ensure that proper system functions are provided. SMEs can attend the acceptance testing to help ensure that vendors meet the requestors' system requirements.

SMEs will provide the templates for the MOUs covering system/site sharing and the ownership/use of frequencies and equipment requirements.

Deliverables

- Meeting to determine requirements
- Site survey evaluations
- Equipment lists
- Equipment specification requirements
- Templates for MOUs
- Populated MOUs
- Acceptance test criteria
- Acceptance testing attendance and evaluation

ENG-SITEID: Systems and Engineering — Site Identification and Sharing Agreement

Description

This service offering is designed to help requestors determine the feasibility of potential sites to support emergency communications. If the site can support such requirements, this offering can also help agencies establish Memoranda of Understanding (MOUs)/memoranda of agreement (MOA) to share the site with current tenants. OEC/ICTAP engineers survey the site to gather initial data, validate previously gathered data, or create an updated baseline to determine the feasibility of supporting requirements. The survey may include the following activities:

- Collection and documentation of information to support network design and engineering
- Analysis of the condition of the site
- Collection of information on existing communications shelters
- Development of a list of existing communications equipment installed in the shelter
- Production of tower and shelter elevation drawings
- Analysis of tower loading capabilities
- Assessment of physical site security
- Development and documentation of approaches for physical security

OEC/ICTAP provides templates for defining each participant's responsibilities and commitments concerning the use of the site. OEC/ICTAP SMEs can provide guidance on the development of a site sharing agreement between the owning agency and other site participants. OEC staff can also advise regarding the representatives who should be parties to the sharing agreement.

Templates and samples for all agreement documents include definitions of the parties, authority, background, purpose, responsibilities, reporting and documentation, POCs, modification, termination, and approvals. OEC/ICTAP can offer recommendations on how to structure the various types of documents and can identify questions and issues that should be addressed when generating content for each of the sections within the various documents.

Deliverables

- List of communications equipment at site shelters
- Tower and shelter elevation drawings
- Tower loading analyses
- Assessment of physical site security
- Sharing agreement templates

ENG-SYS: LMR System Analysis

Description

Proper design of LMR systems is critical to ensure that the Nation's first responders have reliable and robust communications. OEC/ICTAP engineers serve as an independent third party to ensure that design documentation is objective and vendor-neutral.

OEC/ICTAP communications systems engineers analyze proposed system design documentation such as Requests for Proposals (RFPs), proposals and Acceptance Test Plans (ATPs) to determine whether proposed system purchases, changes, or upgrades meet the needs of the State/territory, urban area, region, or tribal users.

OEC/ICTAP provides the results of the LMR System Analysis in an assessment report which documents discrepancies between user requirements and existing or proposed system capabilities. This report includes engineering recommendations designed to resolve those gaps, improve technological interoperable communications functionality, and enhance regional interoperable communications capabilities. Analysis topics in this assessment may include interoperability, wide area communications capabilities, coverage, capacity, P25 features, and other issues.

In some cases, radio system planners may only need a high-level analysis of existing or proposed LMR system documentation. States/territories, tribal nations, regions, and urban areas may request just a QuickLook analysis of an LMR system migration intended to provide a faster turnaround than an in-depth Assessment Report. As such, the content and depth of the final assessment report is determined by user needs and is tailored to the requirements of each individual request.

Deliverables

- Site collaboration presentations and discussions
- Final assessment report
- Final assessment presentation

Tactical Communications Enhancement Support

Tactical Interoperable Communications Plans (TICPs) are designed to support a site (that is, a State/territory, tribe, region, county or urban area) document interoperable communications governance structures, technology assets, and usage policies, and procedures. First responders can use a TICP to clearly define the breadth and scope of interoperable assets available in the area, how those assets are shared and their use prioritized, and the steps individual agencies should follow to request, activate, use, and deactivate each asset. COMLs can use them as a ready-reference tool to support interoperable and emergency communications across a geographic area.

Completed TICPs were required for all 2005 UASI sites. States/territories, tribes, regions, counties, multi-county regions and non-UASI cities are encouraged to use them.

Tactical Communications Enhancement Support services include:

- TIC-COM: Communications Plan Analysis/Event Communications Plan Analysis
- TIC-FOG: TIC Field Operations Guide (TICFOG) Development
- TIC-PIW: TICP Implementation Workshop
- TIC-UPDT: TICP Update Workshop
- TIC-WKSP: TICP Workshop

TIC-COM: Communications Plan Analysis/Event Communications Plan Analysis

Description

This service offering identifies gaps in existing communications plans and/or Federal Annex K documents (Annex K is the primary document for publishing communications system guidance). It also helps requestors ensure that best practices and lessons learned are integrated into each planning document. It also helps ensure that communications policy is consistent across State/territory, tribal, regional, or urban area communications plans.

This offering evaluates planning documents for a National Special Security Event, disaster response, or other special public event with a high security profile. This analysis will provide recommendations for interagency communications plans that specify operable and interoperable communications processes and procedures.

OEC/ICTAP SMEs in operations, engineering, and policy help to ensure that communications planning documents are developed and implemented in the context of real-world operational considerations and mission requirements (such as response and recovery, law enforcement, and mutual aid). Multiple perspectives ensures that a comprehensive approach is consistently applied to all communications planning documents, thereby offering the requesting departments/agencies a common expectation for voice and data communications.

Deliverables

- Recommended revisions to communications plans and Annex K
- Inputs to communications plans/channel plans
- Inputs to event communications plans/channel plans
- Workshops and meetings for communications plan development

TIC-FOG: Tactical Interoperable Communications Field Operations Guide (TICFOG) Development

Description

This service offering is designed to help requestors develop Tactical Interoperable Communications Field Operations Guides (TICFOG) for those States/territories, tribes, regions or urban areas having an approved Tactical Interoperable Communications Plan (TICP). Based on the OEC National Interoperability Field Operations Guide (NIFOG), the TICFOG is a compendium of TICP reference material for use by emergency response and communications personnel responsible for establishing and maintaining interoperable communications during events or incidents. The TICFOG is designed as a pocket-sized quick reference guide that can be carried by radio operators and technicians at all times.

OEC/ICTAP will meet with requestors to determine the desired content and format for their TICFOG. If the current TICP is out of date, an update workshop (TIC-UPDT) can be scheduled to update and to verify the information in it. Once the site has completed its review, OEC will reformat and condense the operationally relevant information from the TICP to develop the TICFOG. The TICFOG may contain:

- Area maps (provided by the site)
- Agency / Communications Center POC information
- Radio cache request information
- Regional channel data
- Gateway SOPs
- Technical support contacts
- Amateur radio operator information
- Communications Unit personnel

This TIC-FOG offering can also provide general information from the NIFOG and pertinent TICP reference materials, if desired. OEC will provide the site a copy of the "draft" TICFOG for review and comment and will incorporate them prior to finalizing the TICFOG as a publication-ready work product for the requestor to print and distribute.

Deliverables

- Draft TICFOG template and instructions for site's review
- Printer-ready draft TICFOG

To date, OEC/ICTAP has supported the development of statewide field operations guides for 20 States/territories.

TIC-PIW: TICP Implementation Workshop

Description

This service offering provides a one-day TICP Implementation Workshop (TICPIW) targeted to State/territory, tribal, regional, or urban area, and/or cross-disciplinary responders, and support personnel.

Once developed and approved, the TICP should be disseminated to all stakeholder agencies. Ensuring that communications users are knowledgeable about the plan and able to implement its components immediately increases the area's ability to maintain appropriate and effective interoperable communications during an event or incident of any size or scope.

Facilitated discussions and exercises are focused on the area's TICP, and are intended to prepare emergency response and communications personnel to execute interoperable communications during events or incidents. OEC/ICTAP facilitators familiarize responders and support personnel with their TICP and how to use their TICP as a tool to develop a communications plan. The TICPIW includes hands-on exercises using local scenarios, personnel, equipment, and communication assets, and can be tailored to meet specific audience requirements, on request.

OEC/ICTAP recommends inviting locally available State/territory, tribal, regional, or urban area agency personnel at field level to attend the workshop. Suggested participants would include, but are not limited to:

- Law enforcement, fire, and emergency medical service (EMS) communications specialists
- Law enforcement, fire, and EMS incident management staff
- Communication coordinators and supervisors
- Communications Unit Leaders
- Public safety and incident communication center managers
- Radio operators
- Technical specialists
- Regional emergency managers
- Personnel identified to respond to a Type I or II Incident of National Significance

Deliverables

- Workshop and presentation materials
- TICPIW reference materials
- Incident response paperwork and templates (for example, ICS Communications forms, etc.)

TIC-UPDT: TICP Update Workshop

Description

In this service offering an OEC/ICTAP facilitator, data specialist, and communications SMEs coordinate and execute a one-day workshop to update an existing Tactical Interoperable Communications Plan (TICP) for a State/territory, tribal nation, region or urban area. This service offering is available to areas that have an existing, but out of date, TICP.

In order to document the input of all relevant stakeholders and update the TICP in the most efficient and effective manner, OEC/ICTAP provides the requesting area with a list of the information needed prior to the workshop. The requesting area also receives a copy of the plan template that the group will populate during the workshop.

The workshop attendees should include communications and operational representatives from multiple agencies and jurisdictions across all public safety/service disciplines, including tribal, non-governmental organizations, and volunteers, entities in the geographic area covered by the Plan. The working group should mirror the responders, and support personnel needed for a major incident in the area. Suggested participants would include, but are not limited to:

- Law enforcement, fire, and EMS communications specialists
- Law enforcement, fire, and EMS incident management staff
- Communication coordinators and supervisors
- Communications Unit Leaders
- Public safety and incident communication center managers
- Radio operators
- Technical specialists

During the workshop, participants will discuss and update the area's existing governance structures, technology assets, and policies/procedures related to interoperable communications during events ranging from day-to-day operations through large-scale critical incidents. In collaboration with site's attendees, OEC/ICTAP data specialists will populate the TICP template during the workshop with the information discussed and agreed to among the attendees.

OEC/ICTAP will provide examples to help requesters apply interoperable communications best practices and lessons learned from other areas with situations similar to their own. Once the TICP has been completed and approved by the site, a Tactical Interoperable Communications Field Operations Guide (TICFOG) (see TIC-FOG offering, p. 58) can also be created.

Deliverables

- Workshop and presentation materials
- Document models and templates
- Draft updated TICP
- Draft TICFOG (if requested)

TIC-WKSP: TICP Workshop

Description

In this service offering an OEC/ICTAP facilitator, data specialist, and communications SMEs conduct a two-day workshop to help requestors develop a new TICP for a State/territory, tribe, region or urban area. Developing a TICP requires the collaborative efforts and inputs of public safety organizations in the geographic area. In order to document the input of all relevant stakeholders and develop the TICP in the most efficient and effective manner, OEC/ICTAP provides the requesting area with a list of the information needed for the plan prior to the workshop. The requesting area also receives a copy of the plan template that the participants will populate during the workshop.

The requesting area's working group (that is, workshop attendees) should include communications and operational representatives from multiple agencies and jurisdictions across all public safety disciplines, including tribal, non-governmental organizations and volunteer entities in the geographic area covered by the Plan. The working group should mirror the responders and support personnel needed for a major incident in the area. Suggested participants would include, but are not limited to:

- Law enforcement, fire, and EMS communications specialists
- Law enforcement, fire, and EMS incident management staff
- Communication coordinators and supervisors
- Communications Unit Leaders
- Public safety and incident communication center managers
- Radio operators
- Technical specialists

The workshop allows participants to discuss and document the area's existing governance structures, technology assets, and policies/procedures related to interoperable communications during events ranging from day-to-day operations through large-scale critical incidents. In collaboration with site's attendees, OEC/ICTAP data specialists will populate the TICP template during the workshop with the information discussed and agreed to among the attendees. OEC/ICTAP will provide examples to help requesters apply interoperable communications best practices and lessons learned from other areas with situations similar to their own. Once the TICP has been completed and approved by the site, a Tactical Interoperable Communications Field Operations Guide (TICFOG) (see TIC-FOG offering, p. 58) can also be created.

Deliverables

- Workshop and presentation materials
- Document models and templates
- Draft populated TICP
- Draft TICFOG (if requested)

Regional Communications Enhancement Support

The Strategic Communications Migration Plan (SCMP) establishes a vision for the future state of region-wide interoperable emergency communications. Regions may be defined by requestors as intrastate or interstate. The SCMP helps an area set regional goals and priorities collaboratively to address deficiencies in the region's interoperable and emergency communications structure. It also provides a roadmap for recommendations and milestones for emergency response providers and government officials to improve their regional communications capabilities over time. This plan is designed to:

- Establish a regional vision for current and future communication assets
- Develop a stepped, multi-year plan that allow a region to progress steadily from its current state to a desired end state in a manner that makes effective and efficient use of available and predicted funding sources
- Incorporate needs and recommendations from various groups of local stakeholders regarding ways to steadily improve their regional communication capabilities during the migration process

When completed, the SCMP prioritizes the high-level communications needs for the region and then aligns those needs with key Federal and State guidance documents such as the NECP, Homeland Security Presidential Directive — 8 (HSPD-8), the DHS Target Capabilities List (TCL), and SCIP. This alignment helps a region better identify the relation between their priorities and National or States' priorities in an effort to streamline funding and requests for support.

RCES-SCMP: Regional Communications Enhancement Support — Strategic Communications Migration Plan (SCMP)

Description

In this service offering an OEC/ICTAP facilitator, data specialist, and communications SMEs coordinate and conduct a two-day workshop to develop the SCMP based on a regional needs assessment of communications assets. The first day of the workshop is a data gathering session focused on:

- Documenting existing regional communications capabilities
- Discussing gaps in regional communications and the impacts of those gaps on the public safety community's ability to execute their mission, and
- Identifying and prioritizing regional communications requirements

The second day focuses on incorporating this information into a strategic regional plan and working with regional stakeholders to incorporate their information into the SCMP template provided by OEC/ICTAP. An OEC/ICTAP data specialist will populate the SCMP template with the information discussed during the first half of the workshop. OEC/ICTAP facilitators may augment the discussion with examples to help requesters apply communication best practices and lessons learned from other areas of the Nation.

Developing a complete and usable SCMP requires the collaborative efforts and inputs of the local public safety professionals in the region. In order to document the input of all relevant stakeholders and develop the SCMP in the most efficient and effective manner, the workshop provides an opportunity for stakeholders to define their individual and regional operational needs, identify commonalities between the goals and needs of various stakeholder groups, develop regional migration goals and priorities that capitalize on those commonalities, and establish milestones to facilitate achieving each goal and priority.

The most successful SCMPs are therefore developed based on strong and diverse representation from stakeholders from all of the various disciplines, jurisdictions, and agencies across a region. The requesting regional working group (workshop attendees) should include representatives from multiple area agencies and jurisdictions across all public safety/service disciplines, including non-governmental organizations, volunteers and tribal entities. The working group should mirror the responders and support personnel needed for a major incident or planned event in the region. For an interstate workshop, only one SWIC in coordination with counterparts in the other States needs to request this as a TA service offering.

Deliverables

- Workshop and presentation materials
- Document models and templates
- Populated draft SCMP

Special Offerings

OEC/ICTAP's offerings are available to State/territory, tribal, regional or local requestors for technical assistance relating to interoperable emergency communications in other categories than those discussed in previous sections.

Special offerings for 2012 include the following:

- SPCL-AUXCOMM: Auxiliary Communications Workshop
- SPCL-COMUPLAN: COMU Planning and Policies
- SPCL-INTEROP: Introduction to Interoperability
- SPCL-PRJMGMT: Public Safety Communications Project Management
- SPCL-TRBL: Native American Public Safety Communications Needs

The TA offering for Native American Public Safety Communications Needs is intended for Federally-recognized tribal nations as named by the Bureau of Indian Affairs. States/territories which solely recognize a tribe may submit a TA request for that tribe as one of their TA requests.

SPCL-AUXCOMM: Auxiliary Communications Workshop

Revised

Description

This workshop is designed for newly assigned auxiliary emergency communicators (AuxComm) or groups who provide backup radio communications support for public safety agencies. Typically this would be amateur radio and Radio Emergency Associated Communications Teams (REACT) communicators. It is designed for auxiliary emergency communicators who work with public safety and emergency response professionals and their agencies.

The request for and conduct of this offering will be under the auspices of the SWIC.

Volunteer emergency communications operators/groups in the amateur radio service have been providing back-up communications to public safety for nearly 100 years. They are used by event planners, public safety officials and emergency managers at all levels of government. Often, amateur radio services have been used reliably when other forms of communications have failed or have been disrupted. Today nearly all the States/territories have incorporated some level of participation by amateur radio auxiliary communication operators into their SCIPs.

Pictured above are auxiliary emergency communicators in Georgia, Connecticut and Tennessee supporting public safety. SPCL-AUXCOMM helps public safety agencies integrate new emergency communications volunteers into the NIMS ICS structure.

The course focuses on auxiliary communications interoperability, emergency operation center etiquette, on-the-air etiquette, FCC rules and regulations, auxiliary communications training and planning, certification and accreditation and emergency communications deployment. It is intended to supplement and standardize an operator's basic knowledge of emergency amateur radio communications in a public safety context.

Prerequisites for attendance include:

- Completion of IS-100; IS-200, IS-700, and IS-800 prior to the workshop
- General class FCC license or above
- Past experience in auxiliary emergency communications
- A desire to learn how to work with COMLs in a NIMS/ICS environment

This is an intensive two day course with facilitated lecture and student exercises. This course builds in time for interactive discussions and exercises. It can be scheduled over a weekend to accommodate attendees' regular work schedules. The work shop includes ten modules and reference materials. Each workshop is limited to 30 attendees. Because the content is NIMS-compliant, this offering is not modified for local circumstances.

- Introduction
- The Communications Unit
- AEC Roles and Responsibilities
- Interoperable Communications
- Incident Communication
- Incident Radio Communications Plan
- Mobilization/ICS Environment/Demobilization
- Resources
- Dos and Don'ts
- Reference information
  - Communications spectrum and systems
  - SOPs
  - Acronyms
  - ICS Forms

Deliverables

- Workshop and presentation materials
- Written high-level project plan
- Outline(s) of project plan annexes
- Follow-up review and comment on requestor's work products

SPCL-COMUPLAN: COMU Planning and Policies

New

Description

All Hazards ICS Communications Unit training for the COML and COMT positions has been widely available for several years. While every State/territory now has trained COMLs and COMTs, not every State or locality necessarily has policies and procedures in place to utilize these resources most effectively. This offering is aimed at mid to senior level managers across all public safety disciplines to increase awareness and understanding of the ICS Communications Unit and its positions.

This service offering provides attendees with tools and case studies to implement State, local and regional level policies and procedures as regards certification, credentialing and deploying COMLs and COMTs in emergencies. Its focus is on planning standards, the utilization and the deployment of these personnel resources, not technical training.

Topics covered include:

- Evolution of the COML and COMT positions
- Issues with credentialing and certification
- Understanding the NIMS and its relation to emergency radio communications
- Developing credentialing and certification policies
- Developing deployment policies and plans

This offering complements OP-COMLEX (see p. 29). Attendees need not be COMLs or COMTs.

Deliverables:

- Presentation materials
- Reference materials

SPCL-INTEROP: Introduction to Interoperability

New

Description

This service offering is targeted to all levels of State/territory, tribal, local and urban area government to support public safety officials ranging from senior managers to emergency operations center personnel who are new to planning for and implementing interoperable communications. This offering focuses on the basic elements of interoperability, and to some extent operability, providing participants a baseline background and understanding of land mobile radio interoperability and it relevant components in the public safety arena.

This offering is less technical in scope than TRG-INTRADIO and does not include hands-on activities. It may be customized for specific audiences, such as county administrators, discipline-specific academy training personnel, and public safety agency management staff.

Topics covered include:

- Evolution of emergency communications
- Understanding and implementing the elements of the SAFECOM Interoperability Continuum
- Understanding the NIMS and its relation to emergency radio communications
- Studies of current interoperability planning efforts from across the country

This is typically a one day presentation with facilitated discussions throughout.

Deliverables:

- Presentation materials
- Reference materials

SPCL-PRJMGMT: Public Safety Communications Project Management New

Description

This service offering is designed in recognition of the fact that often in the public safety arena, project managers who have not had prior experience in managing such efforts may be assigned to land mobile radio (LMR) interoperability and technology projects. Public safety communications projects tend to be very expensive, of long duration and are resource-intensive. They frequently involve operational and policy areas that go well beyond the technology aspects of upgrading or implementing new radio systems. There are elements of public safety communications projects that need to be considered when using industry-standard project management practices, including, for example, the role of reliable, secure communications and the 24/7 nature of public safety work as well as the sensitive nature of public safety data over radio systems.

This work shop's topics include the following:

- Project governance
- Project scheduling
- Risk management
- Project budgets
- Project implementation

As part of this workshop, participants receive project management tools they can implement in their own communications and interoperability projects.

Deliverables:

- Presentation materials
- Reference materials
- Communications project management tools

SPCL-TRBL: Native American Public Safety Communications Needs

Description

During 2012, OEC/ICTAP will continue to provide a special focus to Native American public safety agencies in the form of extended TA offerings. These offerings will be tailored to the specific tribal public safety agency's requirements; for example, an introduction to NIMS may also benefit from COMT and COML workshops at the same time. OEC/ICTAP will provide tribal requestors with an interdisciplinary team of SMEs who can assist and support in the following areas:

- Evaluate legacy LMR systems and assess the need for upgrades, replacements
- Draft statements of work/statements of requirements for procurements relating to new radio and data communications systems
- Establish high-level objectives, milestones, and metrics for interoperable emergency communications projects
- Consult on policies and procedures for tribal emergency notifications policies and tools
- Planning the integration of broadband technologies into public safety operations in Indian Country

Deliverables

- Tailored to the request

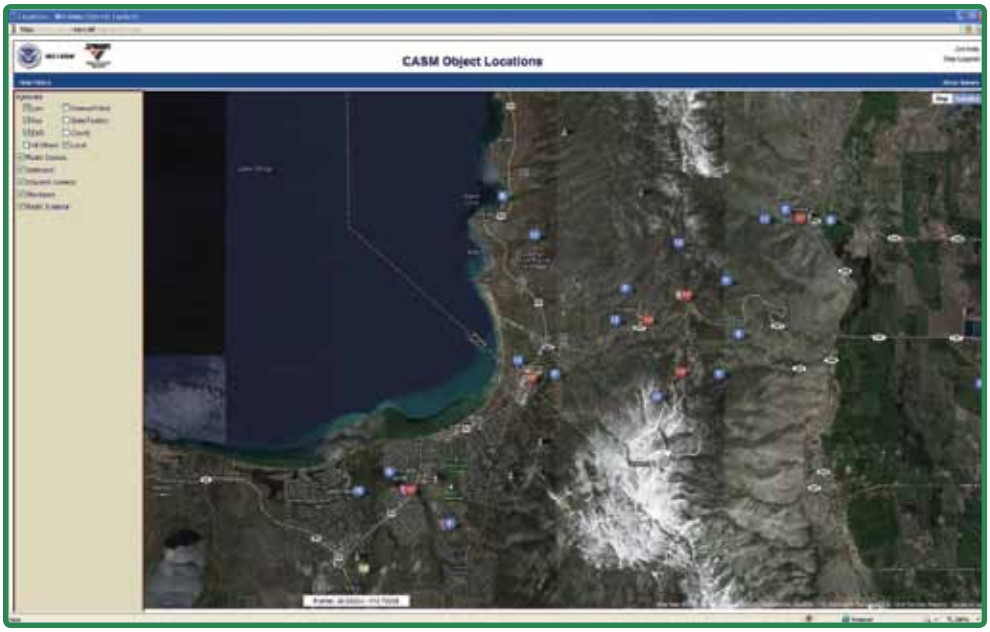
In 2010 and 2011, OEC/ICTAP responded to State-level technical assistance requests for interoperable communications support to Native American tribal nations' public safety agencies.

Communication Assets Survey and Mapping (CASM) Tool Support

OEC/ICTAP provides at no-cost to requestors a secure, automated tool for all State/local public safety agencies to store, retrieve, and visualize their radio communications assets and the interoperability these assets can provide to using agencies.

Currently, CASM stores data from nearly 42,000 agencies nationwide on a secure server with multiple levels of access depending on authorizations. CASM maintains data about public safety radio communications equipment owned and operated across all public safety disciplines; however, it is not a complete inventory of the nation's emergency communications equipment. CASM outputs support development of TICPs, FOGs and the ICS Form 217a, "Incident Radio Communications Plan" worksheet used by a COML. Additionally, OEC/ICTAP can create "views" of CASM data upon request to support regional planning. The accuracy and currency of all data is the responsibility of the using agency.

CASM has two components: Communication Assets Survey (CAS) and Communication Assets Mapping (CAM). CAS provides a means to enter, edit, and delete information about agencies, communication assets (such as radio systems, PSCCs, mutual aid channels/sets, gateways, and radio caches), and agency usage of the assets. CAM provides a means to display this information in a map-based interface and provides



CASM Release 1.5.0 includes enhancements and improvements in the Communication Assets Survey (CAS) component and in the Communication Assets Mapping Tool (CAM) component. Available to all CASM users in October 2011, Release 1.5.0 provides access to the CAS Google Maps and ICS-217a worksheet generation capability. CAM-Only user can now login to CAS and perform all functions except editing of objects.

CASM VERSION 1.5.0 — NEW FEATURES AVAILABLE OCTOBER 2011

Moving Agencies' Geographic Locations: This capability allows a user in CAS Google Maps to move an agency on the map from its general jurisdictional location to its actual, physical location (for example, a specific street corner) and save that new location.

Filtering for Selecting Objects: The CAS Google Map Filter allows specifying the type of agencies and assets to display, versus the old "all or nothing" approach. The default selection is to display all local-level law enforcement, fire, and EMS agencies and all radio caches and gateways to support the COML. Users may select specific agency levels as Federal, State, County, and Local.

NIMS Discipline Types: CASM now supports defining an agency in accordance with the ten NIMS disciplines. New discipline types include: emergency management, hazardous materials, law enforcement and the combined fire/EMS. Existing police, highway patrol and sheriff agencies have been re-designated as LEA. Users may also edit Agencies to more accurately specify their discipline. The Map Legend in CAS or CAM introduces the new agency icons.

Agency's Political Level: CASM now supports defining an agency at the Federal, tribal, State, County, or Local level to support filtering on the CAS Google Map, and for future filtering features. Agency levels are automatically set according to their primary jurisdiction for State, County, and Local. Users may edit agencies to more accurately specify their discipline, especially at Federal and tribal levels.

CAM-Only Privilege Login to CAS: Users with CAM-Only privileges may now access the CAS Google Maps and ICS-217a worksheet function. CAM-Only users may now login to CAS and perform all functions except editing of objects.

Completeness Review: CAS Summary pages now list additional information for agencies/assets including points of contact for all agencies/assets, agencies use of radio systems, and channel/talk group use radio systems and mutual aid channels.

Radio System Frequency Band Designators: CASM now enables selection of four additional frequency bands for Radio Systems: UHF Federal and Military (380-430 MHz), VHF 220-Band (220-222 MHz), VHF High-Band Federal (136-144 MHz), and Multiband. The Map Legend reflects new radio system icons.

NB/WB, Analog/Digital/Mixed Mode and Encryption Protocol: The Add/Edit Channel page for Radio Systems, Mutual Aid Channel/Sets, Agency Channels and Radio Cache Channels allows specification of these detailed characteristics at the channel level.

TICP Reports: Any user can generate a TICP Report directly from the CAS Reports page — it is just another report available from the list of report types.

Primary/Secondary Radio System Usage: TICP reports can be updated to reflect an agency's use of Inter/Intra-System Shared Channels as its primary or secondary radio system.

analysis tools for displaying agency-to-agency interoperability, including interoperability gaps, in various ways. Release 1.5.0 offers users enhancements in both components of the CASM tool. The CASM support offering includes:

- CASM-IMPORT: Data Import/Update
- CASM-INIT: Initialization, for a state or regional view
- CASM-INPUT: TICP/SCIP Interoperability Equipment and Usage Input
- CASM-REV: Data Review/Analysis
- CASM-STRAT: Roll-Out Strategy Webinar
- CASM-TRAIN: Training

In addition to these CASM services, help for CASM-related issues is provided via e-mail at CASM-support@spawar.navy.mil and through regularly scheduled Targeted Training webinars that are conducted monthly and announced to CASM users by email notification.

This CASM support offering is not specific to a particular service. Requestors may receive a combination of services within a single TA Request. Following acceptance of the CASM Support TA Request, OEC ICTAP staff will determine the details and scope of support with the requestor at a kick-off meeting.

The following provides a detailed description of the services offered under CASM Support.

CASM-IMPORT: Data Import/Update

Description

This service offering provides a mechanism for importing/updating data directly into the CASM database. The intent of the data import service is to expedite the task of manually entering voluminous amounts of data into CASM that may already exist in another database. The import/update will now allow any/all information for an object to be made directly into the CASM database. Data import/update instructions and templates are provided in the CASM Data Import/Update Service listed under CAS 'Help' on the CASM Website, which is accessible through http://www.publicsafetytools.info. A valid CASM user ID and password are required to access CAS 'Help'. Types of data that can be imported/updated into CASM include:

- Agencies
- Channels — those provided by a radio system, used by an agency, or programmed in a radio cache
- Talk groups — those provided by a trunked radio system, used by an agency, or programmed in a radio cache
- Towers used by a specific radio system
- Repeaters/base stations for a radio system on towers
- Dispatch centers and the agencies served
- Points of contact

Once the data is provided to OEC/ICTAP staff, it will be reviewed for duplicates to existing data already in CASM. OEC/ICTAP staff will discuss and resolve inconsistencies and/or data errors with the provider prior to the physical import.

Deliverables

- CASM database update for the State/territory/urban area

CASM-INIT: Initialization

Webinar

Description

This service offering enables a State/territory, tribal, regional, or urban area to initiate use of CASM. This offering support creating regional views for cross-border interoperability analysis by pulling existing information from the source states. OEC/ICTAP will create the User Account for the top-level CASM Administrative Manager (AM) and set up a CASM dataset in the database and a map view for the requestor. OEC/ ICTAP initiates the CASM database and map views for the requesting State/territory, tribal, region or urban area. This offering also creates the top-level AM User Account and provides the AM with a webinar and a copy of the Account Administration - Instruction Guide document when CASM is ready for use.

Deliverables

- State/territory, tribe, region or urban area setup in CASM
- CASM account for the State/territory, tribal, regional, or urban area, requestor
- Webinar for the AM
- CASM instruction guide for account administration

CASM-INPUT: TICP/SCIP Interoperability Equipment and Usage Input

Description

This service offering provides support for inputting information into CASM about interoperable radio equipment described in the State/territory's, tribe's, region's or urban area's TICP, SCIP, or FOG. The objective of this service is to synchronize the TICP/SCIP specified interoperable equipment description and usage with the State/territory's, urban area's, region's, or tribe's CASM dataset. The requestor provides OEC/ ICTAP the TICP or SCIP document, and the specified information about radio equipment is then entered into CASM as a one-time effort. Requestors will be expected to maintain the data in CASM. The TICP and SCIP POCs may be asked to resolve detailed questions.

Deliverables

- CASM account populated with TICP/SCIP/FOG data

CASM-REV: Data Review/Analysis

Description

This offering provides an OEC/ICTAP review and analysis of data entered into CASM by State/territory, tribal, regional, or urban area representatives. This review will analyze the data to identify any incomplete, inconsistent, or anomalous values. The scope may involve any or all jurisdictions including the entire State/territory, tribe, region or urban area, counties, municipalities, individual agencies or subsets of their data to be reviewed. The review will also provide suggestions about the data that might be taken to provide a more accurate picture of interoperability. These suggestions will help the requestor rectify anomalous data entries and better utilize CASM to provide a more accurate picture of interoperability in a specific geographic area.

Deliverables

- CASM review/analysis report

CASM-STRAT: Roll-Out Strategy Webinar

Webinar

Description

This service offering provides support to develop the appropriate roll-out strategy for the State/territory, tribe, region or urban area using best-practices and lessons learned from across the nation as a reference. OEC/ICTAP staff will conduct a CASM strategy webinar with an area's interoperability leadership (for example, SWIC, SIEC, SIGB, and Interoperability Committee) to assist with the following:

- Defining a roll-out strategy based on identified goals
- Reviewing existing approaches in achieving like goals
- Identifying recommended CASM use to achieve goals
- Recommending AM hierarchy
- Identifying resources to support
- Establishing a timeline

Deliverables

- CASM strategy webinar
- Data collection guide
- Documented CASM roll-out strategy

CASM-TRAIN: Training

Webinar

Description

This service offering provides training for the CASM application, either on-site at the requestor's facility or on-line via webinar. An OEC/ICTAP instructor presents the basic operations of the CAS and CAM components. The seminar includes the use of CAS to enter, edit, and delete information about agencies, communication assets (such as radio systems, dispatch centers, mutual aid channels/systems, gateways, and radio caches), and agency usage of the assets. The seminar also includes the use of CAM to display CAS-entered data on a map-based interface and use of analysis tools for displaying agency-to-agency interoperability, including interoperability gaps, in various ways.

A typical on-site training session is a four-hour presentation that provides a combination of lecture and participants' hands-on use of the CASM application. The presentation is typically provided in two two-hour long sessions via telephone conference and webinar meeting. CASM also provides monthly online training. This training, typically offered three times a month, is available to all on a first come basis, and does not require a separate TA request to participate. Each session focuses on one CASM feature or function and is an hour long. All CASM users are invited to participate.

Deliverables

- Training brief

Appendix A: OEC/ICTAP TA Request and Evaluation Forms

The OEC/ICTAP TA Request form for SWICs' use and the TA Engagement Evaluation form for stakeholders' feedback are posted with instructions for their completion on the SAFECOM website at www.safecomprogram.gov.

Any questions about the forms may be directed to OEC@dhs.gov.

Appendix B: OEC Regional Coordinators

Region	OEC Regional Coordinator
Region I Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont	*Rick Andreano* richard.andreano@dhs.gov
Region II New Jersey, New York, Puerto Rico, US Virgin Islands	*Chris Tuttle* christopher.tuttle@dhs.gov
Region III District of Columbia, Delaware, Maryland, Pennsylvania, Virginia, West Virginia	*Bob Pedersen* robert.pedersen@dhs.gov
Region IV Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee	*John MacLean* John.D.Maclean@dhs.gov
Region V Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin	*Jim Jarvis* james.jarvis@dhs.gov
Region VI Arkansas, Louisiana, New Mexico, Oklahoma, Texas	*Ken Born* Kenneth.born@dhs.gov
Region VII Iowa, Kansas, Missouri, Nebraska	*Jim Lundsted* james.lundsted@dhs.gov
Region VIII Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming	*Dan Hawkins* daniel.hawkins@dhs.gov
Region IX Arizona, California, Nevada, Hawaii, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands	*Tom Lawless* thomas.lawless@dhs.gov
Region X Alaska, Idaho, Oregon, Washington	*Bruce Richter* bruce.richter@dhs.gov

Appendix C: Glossary of Terms/Acronyms

Acronym/ Abbreviation	Definition
AAR	After action report
AM	[CASM] administrative manager
CAM	Communication Assets Mapping [component of CASM]
CAP	Corrective action program
CAS	Communication Assets Survey [component of CASM]
CASM	Communication Assets Survey and Mapping tool
COG	Continuity of government
COMC	Communications Unit Coordinator
COML	Communications Unit Leader
COMT	Communications Unit Technician
COOP	Continuity of operations plan
DHS	Department of Homeland Security
EDT	Exercise design team
EEG	Exercise evaluation guidelines
EMS	Emergency medical services
EOP	Emergency operations plan
EPT	Exercise planning team
ESF	[FEMA] Emergency Support Function
EXPLAN	Exercise plan
FCC	Federal Communications Commission
FE	Functional exercise
FEMA	Federal Emergency Management Agency
FMT	[OEC/ICTAP] Frequency Management Tool
FSE	Full scale exercise
GETS	[DHS] Government Emergency Telecommunications Service
GOV	Governance
HSEEP	[DHS] Homeland Security Exercise and Evaluation Program
HSPD-8	Homeland Security Presidential Directive — 8
ICS	[NIMS] Incident Command System
ICTAP	[DHS OEC] Interoperable Communications Technical Assistance Program
IP	Improvement plan
LMR	Land mobile radio
LTE	Long Term Evolution

Appendix C: Glossary of Terms/Acronyms (cont.)

Acronym/ Abbreviation	Definition
MAA	Mutual aid agreement
MCS	[OEC] Multi-Jurisdictional Communications Services Division
MOA	Memorandum of agreement
MOU	Memorandum of understanding
MSEL	Master scenario events list
NBP	[FCC] National Broadband Plan
NECP	National Emergency Communications Plan
NIMS	National Incident Management System
NLST	Narrowband License Status Tool
OEC	[DHS] Office of Emergency Communications
OP	Operations[al]
POC	Point of contact
PSBL	[FCC] Public Safety Broadband Licensee
PSCC	Public safety communications center
RC	[OEC] Regional Coordinator
REACT	Radio Emergency Associated Communications Team
RFP	Request for proposal
RLCT	Response Level Communications Tool
SAA	State Administrative Agency
SCIP	Statewide Communication Interoperability Plan
SCMP	Strategic Communications Migration Plan
SIEC	State Interoperability Executive Council
SIGB	State Interoperability Governance Board
SITMAN	Situation Manual
SME	Subject matter expert
SOP	Standard operating procedure
SWIC	Statewide Interoperability Coordinator
TCL	[DHS] Target Capabilities List
THSP	Technical Specialist
TIC-FOG	Tactical Interoperable Communications Field Operations Guide
TICP	Tactical Interoperable Communications Plan
TTX	Table top exercise
UASI	Urban Area Security Initiative

In 2011 OEC/ICTAP has scheduled over 130 technical assistance engagements throughout the Nation.

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