Interoperable Communications Local Grant Application
Radio Caches Types III, IV, and V

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I. Purpose:

To provide $1.7 million from the Department of Homeland Security, Homeland Security Grant Program in local grant funding for regional and multi-discipline interoperability projects involving the purchase and maintenance of strategic radio caches.

To greatly improve the overall preparedness of the Commonwealth during major events, the State Interoperability Executive Committee (SIEC) is seeking applications for Type III, IV & V radio caches in Virginia State Homeland Security Planning Regions 3, 4 and 6, which includes the Counties of Albemarle, Alleghany, Amherst, Appomattox, Augusta, Bath, Bedford, Bland, Botetourt, Buchanan, Buckingham, Campbell, Carroll, Charlotte, Craig, Cumberland, Dickenson, Floyd, Fluvanna, Franklin, Giles, Grayson, Greene, Halifax, Henry, Highland, Lee, Lunenburg, Mecklenburg, Montgomery, Nelson, Patrick, Pittsylvania, Prince Edward, Pulaski, Roanoke, Rockbridge, Russell, Scott, Smyth, Tazewell, Washington, Wise and Wythe; as well as the Cities of Bedford, Bristol, Buena Vista, Charlottesville, Covington, Danville, Galax, Lexington, Lynchburg, Martinsville, Norton, Radford, Roanoke, Salem, South Boston, Staunton and Waynesboro.

II. Background:

The Commonwealth Interoperability Coordinator's Office (CICO) within the Governor's Office of Commonwealth Preparedness (OCP) was created to coordinate interoperability initiatives, communicate information, and facilitate discussions on communications interoperability across the Commonwealth. These responsibilities are accomplished through the annual development and implementation of the Commonwealth of Virginia Strategic Plan for Statewide Communications Interoperability (Plan). The Plan outlines the Commonwealth's fiscal year 2015 goals and annual initiatives to improve interoperable communications across Virginia and aligns with the FY 2005

State Preparedness Strategy (attached). The Commonwealth is currently in its fourth year of Plan implementation.

The State Interoperability Executive Committee (SIEC) serves as the steering body for the interoperability effort. The SIEC is comprised of Virginia's public safety associations representing first responders, emergency support functions, and state agencies. Together, the CICO and the SIEC are responsible for implementing the Plan and informing its development based on their wide range of expertise and experience.

The SIEC provides all funding recommendations for interoperability to OCP. In the past three years, the SIEC has coordinated grant recommendations that awarded a total of $9.2 million to 50 localities to support local voice and data communication projects.

This year the SIEC has been given the opportunity to make recommendations to OCP for $1.7 million in FY 2007 State Homeland Security Grant Program (HSGP) funds. **Localities may only submit one application.**

III. Focus:

During Virginia FY 2007, members of the governance structure and additional subject matter experts assembled an Initiative Action Team (IAT) to address Initiative 7 of the FY 2007 Strategic Plan that states:

"Research opportunities and facilitate policy development of strategic radio caches"

The IAT developed statewide policies and procedures for radio caches that are locally owned, regionally operated and, if large enough, used as a resource statewide during emergencies or large planned events. Applicants must:

- Demonstrate compliance with the statewide radio cache policies and procedures provided in Appendix B that includes five types of radio caches that vary in functionality and coverage (Type V representing the lowest level of functionality and Type I representing the highest level)
- Identify existing cached resources in the region
- Work with fellow awardees by developing an Initiative Action Team (IAT) to coordinate the strategic purchase of radio cache equipment
- Purchase and establish a radio cache within a region

The SIEC is currently seeking applications for Type III, IV & V radio caches only. These caches will be locally or regionally owned, regionally operated, and deployable to respond to major emergencies.

IV. Evaluation Process and Criteria:

The SIEC will work with the CICO to form a grant review team to evaluate applications based on standard evaluation criteria. Recommendations will be provided to OCP for final approval and award.

Evaluation Criteria will include, but will not be limited to:

- Grant application owner is a local or regional public safety agency
- Compliance with the focus area (State Homeland Security Planning Regions 3, 4 & 6 as noted in Appendix A)
- Location within the Commonwealth in terms of tactical deployment possibilities
- Support of the Strategic Plan for Statewide Communications Interoperability
- Focus on regional and multi-disciplinary collaboration
- Impact on regional and statewide interoperability
- Completion of application including Application Narrative, Requirements Verification Form (Provided in Section VIII), and a letter stating regional commitment to compliance with the statewide radio cache policies and procedures from all participating localities.

V. Requirements:

To be eligible for state funding for improving public safety interoperable communications applicants must adhere to the following:

1. Previous interoperability funding received by the applicant must be spent in its entirety. Additionally, applicants may not use HSGP funds to support projects that have already been budgeted for with local funding.
2. Applicants must be **National Incident Management System** (NIMS) certified and compliant. For more information please visit www.fema.gov/emergency/nims/index.shtm.
3. Applicants and their application partners must endorse Virginia's **Common Language Protocol** for day-to-day and major emergency situations. For information regarding the endorsement of the best practice, please visit www.interoperability.virginia.gov/commonlanguage.html.
4. Equipment must be on the Department of Homeland Security's Grants and Training (G&T) **Authorized Equipment List (AEL)**. For more information on the AEL, please visit the Responder Knowledge Base at www.rkb.gov.
5. Subscriber radios purchased must be programmed with **federal interoperability channels within that radio's frequency band (UTAC, VTAC and NPSPAC)**.
6. Proof of FCC licenses must be provided when appropriate.
7. Data sharing equipment must comply with the Department of Homeland Security's and Emergency Interoperability Consortium's **Extensible Markup Language (XML)**. For more information please review Appendix C: Federal Grant Guidance.
8. All new voice systems should be compatible with the ANSI/TIA/EIAA-102 Phase 1 (**Project 25 or P25**) standards. Funding requests by agencies to replace or add radio equipment to an existing non-P25 system will be considered if there is an explanation as to how their radio selection will allow for improving interoperability or eventual migration to interoperable systems.
9. Applicants must be **compliant with the federal grant guidance** provided in Appendix C.

Only one application per locality will be accepted for this funding. Submissions should be coordinated through your Chief Administrative Officer (CAO) to ensure only one application is submitted. Multiple submissions may immediately disqualify all submissions from that locality.

To verify compliance with these requirements, a Requirements Verification Form is provided in Section VIII. Please complete this form to show your adherence to the above requirements.

VI. Application Timeline and Grant Performance Period:

May 6, 2008	Applications Released
June 30, 2008	Applications Due
July 1- July 31, 2008	Evaluate Applications
August 2008	Award Funding
September 30, 2008	Progress Report Due
15 days after the end of each Quarter until December 31, 2009	Progress Report Due
December 31, 2009	Funds must be spent

Quarter Schedule:

Jan 1-March 31
April 1 – Jun 30
Jul 1 – Sept 30
Oct 1 – Dec 31

All grant funds awarded under this process are subject to a performance period of August 1, 2008 – December 31, 2009. Extensions may be granted on a case-by-case basis.

VII. Application Submission Requirements:

All submissions must be coordinated through your local Chief Administrative Officer's office to ensure that no more than one submission is received from each locality.

Attached is the Homeland Security Grant Application for Federal Funds. For an electronic version of this application, please go to www.vaemergency.com/grants/forms/VDEM_Grant_Application.xls

The following steps must be completed to ensure a successful application:

1. Complete the Homeland Security Grant Application for Federal Funds (attached)
2. Complete the Project Narrative (Section VIII of this application)
3. Complete the Requirements Verification Form
4. Meet the Application Deadline of June 30, 2008

Five (5) printed copies of the grant request should be sent via certified mail to:

Grants Office
Virginia Department of Emergency Management
10501 Trade Court
Richmond, Virginia 23236

Grant applications must be received by COB June 30, 2008 for consideration.

VIII. Application Narrative Guidance and Forms

APPLICATION NARRATIVE GUIDANCE

Please use the following format for the narrative portion of your submission. Answer each question in its entirety.

(1) Explain how your request supports the establishment of a strategic radio cache and how you intend to use the cache regionally, and statewide. Briefly describe your tactical location and the statewide benefit to placing a radio cache in your region.

(2) Describe the proposed project.

The description of the project should include all of the following:

- Project Purpose
- Scope of Work
- Timeline and Major Milestones

Please also describe:

- The Type of cache you are purchasing (Type III, Type IV or Type V based on the guidance in Appendix B)
- How this request fits into and aids achievement of regional interoperability plans
- How the project will be managed including deployment, operations, maintenance, and training. The Commonwealth encourages creative solutions to the deployment and maintenance of these caches, and supports multi-jurisdictional ownership and multi-year maintenance contracts.
- Plans for paying on-going costs and sustaining the cache after the grant period

(3) Describe how your locality collaborated on a regional and multi-disciplinary level to develop this grant application and how collaboration will be continued.

Explain how this project will benefit all of those that collaborated on the development of the application. Include in this description:

- A listing of the localities/agencies that participated in the development of the application
- How collaboration will be continued through the implementation and operation of the project
- How the collaboration will be managed (provide an organizational structure indicating information flow and decision-making)
- A list and brief summary of existing cooperative agreements or memoranda of understanding (MOUs) among localities that will aid in this collaboration
- A plan and timeline for the development of additional cooperative agreements or MOUs needed to continue collaboration and ensure project success

REQUIREMENTS VERIFICATION FORM

This form should be filled out and submitted with your grant application and reflects the information provided in Section V of the grant application. For more information about any of the elements of this form please refer to Section V of this document. Applications submitted without this form will be disqualified. This form may be downloaded and filled out electronically from **www.interoperability.virginia.gov**.

Requirement	**Status**	**Explanation**
Previous funding	Total Amount Received in Local Grants: _____ Description of funded projects: _____ _____ _____ Were all funds expended? Yes No If No, please provide an explanation of why funds were not spent and attach correspondence with the state to this form.	
National Incident Management System (NIMS) certification and compliance	Is your agency compliant with NIMS training requirements? If yes, please list the training that is required by your agency. If no, please discuss plans to become compliant.	
Common Language Protocol Endorsement and Implementation	Has your agency/region endorsed the common language protocol that was announced through Governor's press release on October 2, 2006? If yes, please provide a copy of your endorsement letter on your agency's letterhead and briefly describe your plans for implementation. If no, please explain why you	

	have not yet endorsed the common language protocol and any future plans regarding this issue.	
Equipment on Authorized Equipment List	Is your equipment on the Authorized Equipment List (AEL)? All radio cache equipment must be on the AEL.	
Federal Interoperability Channel Programming	If you are planning on purchasing subscriber radios, will they be programmed with Federal Interoperability Channels (UTAC, VTAC or NPSPAC)? If yes, no explanation is necessary. If no, please explain.	
FCC Licensing	If applicable, please provide a copy of your FCC licenses	
Extensible Markup Language Compliance	If you are planning to purchase data sharing equipment will it be XML compliant? Is yes, no explanation is necessary. If no, please explain.	
Project 25 Compatibility	If the equipment you plan on purchasing is not Project 25 compatible please provide an explanation.	

Appendix A: Glossary and Definitions

Authorized Equipment List (AEL): A U.S. Department of Homeland Security Grants and Training (G&T) approved equipment list located within the Responder Knowledge Base.

Common Language Protocol: A protocol developed by Virginia practitioners and announced via Governor's press release on October 2, 2006 calling for a move to plain English for all transmissions with the exception of four scenarios that will remain in standard coded language for responder safety. The protocol has been approved for use within the Commonwealth by the National Incident Management System (NIMS) Integration Center. To find out more about the protocol and the standard coded language scenarios contact the CICO at (804) 692-0137.

Commonwealth Interoperability Coordinator's Office (CICO): The state designated body located within the Governor's Office of Commonwealth Preparedness (OCP) for the coordination of interoperability projects across the Commonwealth including the implementation of the Commonwealth of Virginia Strategic Plan for Statewide Interoperable Communications.

Cooperative Agreement: A legal instrument used by an agency to enter into a mutually beneficial relationship

Discipline: Refers to the public safety disciplines of law enforcement, fire and EMS and may include other emergency support functions if applicable

Extensible Markup Language (XML): A U.S. Department of Homeland Security and Emergency Interoperability Consortium coordinated simple and very flexible text format derived from SGML for data exchange. Additional guidance and information is provided in Appendix C: Federal Grant Guidance.

Governance: The process by which stakeholders are involved in the process of planning and managing a program or project.

Homeland Security Grant Program (HSGP): The U.S. Department of Homeland Security's grant program for all hazards preparedness, response and recovery. Each year, the Commonwealth of Virginia submits an application to DHS for these funds and must allocate received funding to localities (80%) and state entities (20%).

Infrastructure: The hardware and software needed to complete and maintain a radio communications system

Interoperability: Refers to the ability of emergency response agencies to talk across disciplines and jurisdictions exchanging voice and data with one another when needed and authorized using standard operational protocols.

Interoperability Channels: Radio channels designated by the Federal Communications Commission for public safety interoperability. Channels may be programmed into subscriber radios for use during mutual aid scenarios. Channels are designated based on frequency band and include UHF Tactical Channels (UTAC), VHF Tactical Channels (VTAC), and National Public Safety Planning Advisory Committee (NPSPAC) Channels.

Interoperability Continuum: A tool developed by the U.S. Department of Homeland Security's SAFECOM Program to show the complexity of the issue of interoperability.

Jurisdiction: The territory within which power or authority can be exercised

Locality: Any Virginia county or city

Local Law Enforcement Agency: A law enforcement agency charged with policing a specific locality or localities

Memorandum of Understanding: A guiding document for collaboration between and among localities, regions, the state and/or the federal government.

Milestone: An event or purchase that marks a major turning point in a project. For example, the move from the planning phase of a project to the procurement phase.

Multi-discipline: Refers to a project that considers multiple public safety disciplines

Mutual Aid Channels: Local channels that have been designated by a non-federal agency for use during mutual aid events.

National Incident Management System (NIMS): NIMS integrates existing best practices into a consistent, nationwide approach to domestic incident management that is applicable at all jurisdictional levels and across functional disciplines in an all-hazards context. The six components of NIMS include: Command & Management, Preparedness, Resource Management, Communications & Information Management, Supporting Technologies and Ongoing Management & Maintenance.

National Public Safety Planning Advisory Committee (NPSPAC): Denotes the interoperability channels available for use in mutual aid situations in the 800 MHz frequency band.

Operability: Refers to the ability of an emergency responder to communicate within a system.

Project 25: A standards-based approach for migrating to multi-jurisdictional and multi-disciplinary interoperability. For more information please read Appendix C: Federal Grant Guidance.

Radio Cache: A cache of radios and other communications equipment that are consistently maintained for use during planned mutual aid and emergency events.

Regional: Refers to a formalized relationship among 3 or more localities working together towards a common goal

Responder Knowledge Base (RKB): A web-based information service for the emergency responder community funded by the Department of Homeland Security. RKB operates as a public service, with no cost to users and no cost to information contributors such as product manufacturers. Thousands of jurisdictions and departments, as well as virtually all State Administrative Agencies, now use the RKB on a regular basis to obtain grant guidance and unbiased product information.

Scope of Work: A detailed outline of the tasks and activities that will be completed to accomplish a desired outcome. The scope of work should also include a general approach for how each task or activity will be accomplished.

Statewide Agencies Radio System (STARS): Facilitates the communications of 21 participating state agencies by upgrading the existing Virginia State Police land mobile and microwave radio networks. STARS will create an integrated, seamless, statewide, wireless voice and data communications system designed to meet the needs of participating agencies.

State Homeland Security Planning Region 3: Includes the Counties of Albemarle, Amherst, Appomattox, Augusta, Buckingham, Campbell, Charlotte, Cumberland, Fluvanna, Greene, Halifax, Lunenburg, Mecklenburg, Nelson, and Prince Edward; as well as the Cities of Charlottesville, South Boston, Staunton, and Waynesboro.

State Homeland Security Planning Region 4: Includes the Counties of Bland, Buchanan, Carroll, Dickenson, Giles, Grayson, Lee, Pulaski, Russell, Scott, Smyth, Tazewell, Washington, Wise, and Wythe; as well as the Cities of Bristol, Galax, and Norton.

State Homeland Security Planning Region 6: Includes the Counties of Alleghany, Bath, Bedford, Botetourt, Craig, Floyd, Franklin, Henry, Highland, Montgomery, Patrick, Pittsylvania, Roanoke, and Rockbridge as well as the Cities of Bedford, Buena Vista, Covington, Danville, Lexington, Lynchburg, Martinsville, Radford, Roanoke and Salem.

State Homeland Security Program (SHSP): One of the programs of the Homeland Security Grant Program, SHSP funds may be used by any public safety agency.

State Interoperability Executive Committee (SIEC): Formally established through Executive Order 30, the SIEC provides recommendations to the Governor's office through the Commonwealth Interoperability Coordinator's Office. The SIEC consists of 14 representatives form local and state public safety associations and government.

Strategic Plan for Statewide Communications Interoperability: The Strategic Plan is the guiding document for the improvement of communications interoperability and compliance for the Commonwealth of Virginia. Virginia Code 9.1-1200 requires the annual update and implementation of the Plan.

Voice over Internet Protocol (VoIP): A technology that allows you to make voice calls using a broadband Internet connection instead of a regular (or analog) phone line

Appendix B: Radio Cache Compliance Documentation

Definition of Common Terminology

- ***Incident Commander: (Type I-V)***
  - On the ground leading/commanding person who may request the radio cache for an emergency incident
- ***Cache Contact: (Type I-V)***
  - Persons responsible for processing initial emergency request for radio cache deployment: might not be true to every situation. Might be another available number to call rather than Dispatch. Smaller localities might just have a POC.
  - Liaisons between Incident Commander and Radio Cache Manager and/or Cache Decision Leader
- ***Radio Cache Manager: (Type I-III)***
  - Person from hosting locality responsible for maintaining the radio caches operational capacity
  - Person from hosting locality responsible for the physical deployment and set up of cache at requested destination
- ***Cache Decision Maker: (Type I-III)***
  - Person from hosting locality responsible for deciding if an emergency or planned activity request within the region or from the state is granted
    - *Note: In some situations the radio cache manager and decision maker may be the same person*
- ***Deployable Trained Personnel: (Type I-III)***
  - Team from hosting locality that accompanies the cache through deployment, set-up, distribution, use and collection
  - Works closely with Radio Cache Manager

Minimum Capabilities & MOU Requirement Guidelines Based on Radio Cache Type

	Type I	Type II	Type III	Type IV	Type V
Number of Radios	501+ radios	301-500 radios	101-300 radios	101-200 radios	25-100 radios
Radio Interoperability Standard	• P25 compatibility • Statewide-deployable cache equipment must be compatible with other statewide-deployable caches	• P25 compatibility • Statewide-deployable cache equipment must be compatible with other statewide-deployable caches	• P25 compatibility • Statewide-deployable cache equipment must be compatible with other statewide-deployable caches	• P25 compatibility unless exception is granted	• P25 compatibility unless exception is granted
Additional Equipment	• 2 rechargeable and one high shelf life disposable batteries per portable radio • 1 speaker mic • 1 carrying case or clip per radio • Appropriate	• 2 rechargeable and one high shelf life disposable batteries per portable radio • 1 speaker mic • 1 carrying case or clip per radio • Appropriate	• 2 rechargeable (all) and one high shelf life disposable (deployable radios only) batteries per portable radio • 1 speaker mic • 1 carrying case or	• 2 rechargeable (all) and one high shelf life disposable (deployable radios only) batteries per portable radio • 1 speaker mic • 1 carrying case or	• 2 batteries per portable radio • 1 speaker mic • 1 carrying case or clip per radio • Appropriate chargers • Extra Batteries

	charging capacity for 100% of fleet within 24 hours - At least one audio interconnect (portable gateway) - Consider: Satellite communications (phone, etc)	charging capacity for 100% of fleet within 24 hours - At least one audio interconnect (portable gateway) - Consider: Satellite communications (phone, etc)	clip per radio - Appropriate charging capacity for 100% of fleet within 24 hours - At least one audio interconnect (portable gateway)	clip per radio - Appropriate charging capacity for 100% of fleet within 24 hours	charged with 10 year shelf life
System Requirements.	- Trunking capable based on baseline study - Blend of frequencies - at least 100 radios per band - Radio programming capability on-site - Repeaters - Power (generator)	- Trunking capable based on baseline study - Blend of frequencies - at least 75 radios per band - Radio programming capability on-site - Repeaters - Power (generator)	- Trunking capable based on baseline study - Blend of frequencies (need to have all four bands to go with gateway device)	- Trunking capable unless exception is granted based on baseline study	- Trunking capable unless exception is granted based on baseline study
700/800 MHz	- Spectrum use defined by operating region o 800 MHz should be able to do both 700 and 800 MHz o Must have the spectrum available to support cache - Minimum 500 talk groups (upper tier radio) – system type specific - ITAC, VTAC, UTAC, in all radios - Encryption capable (no cost?)	- Spectrum use defined by operating region o 800 MHz should be able to do both 700 and 800 MHz o Must have spectrum available to support cache - Minimum 500 talk groups (upper tier radio) – system type specific - ITAC, VTAC, UTAC, in all radios - Encryption capable (no cost?)	- Spectrum use defined by operating region o 800 MHz should be able to do both 700 and 800 MHz o Must have spectrum available to support cache - Minimum 500 talk groups (upper tier radio) – system type specific - ITAC, VTAC, UTAC, in all radios - Encryption capable (no cost?)	- Spectrum use defined by operating region o 800 MHz should be able to do both 700 and 800 MHz o Must have spectrum available to support cache - Minimum 500 talk groups (upper tier radio) – system type specific - ITAC, VTAC, UTAC, in all radios - Encryption capable (no cost?)	- Spectrum use defined by operating region o 800 MHz should be able to do both 700 and 800 MHz o Must have spectrum available to support cache - Minimum 500 talk groups (upper tier radio) – system type specific - ITAC, VTAC, UTAC, in all radios - Encryption capable (no cost?)
UHF, VHF, Low Band	- State	- State	- State	- State	- State

	Interoperability Channels • National Interoperability Channels	Interoperability Channels • National Interoperability Channels	Interoperability Channels • National Interoperability Channels	Interoperability Channels • National Interoperability Channels	Interoperability Channels • National Interoperability Channels
Designated personnel (Cache owner determines level of effort of personnel. I.e. FTE vs. additional responsibility of existing staff)	▪ Radio cache manager ▪ Appropriate decision maker ▪ Deployable trained personnel	▪ Radio cache manager ▪ Appropriate decision maker ▪ Deployable trained personnel	▪ Radio cache manager ▪ Appropriate decision maker ▪ Deployable trained personnel	▪ Designated contact personnel	▪ Host location general support
Deployable Personnel	At least 4 designated and trained personnel are available for deployment (one team member is COML). Personnel can be multi-jurisdictional/multi-agency.	At least 4 designated and trained personnel are available for deployment (one team member is COML). Personnel can be multi-jurisdictional/multi-agency.	At least 2 designated and trained personnel are available for deployment (one team member is COML). Personnel can be multi-jurisdictional/multi-agency.	N/A	N/A
Deployment ratio	100% deployable within region; 100% deployable outside of region (with spectrum/frequency considerations)	100% deployable within region; 100% deployable outside of region (with spectrum/frequency considerations)	100% deployable within region; 50% deployable outside of region (with spectrum/frequency considerations)	100% deployable within region; 25% deployable outside of region (with spectrum/frequency considerations)	100% deployable within region; 0% deployable outside of region
Transportation Requirements	• En-route within 2 hours • Trailer or dedicated vehicle • Tower with a trailer (elevated antennae system)	• En-route within 2 hours • Trailer or dedicated vehicle	• En-route within 2 hours • Trailer or dedicated vehicle	En-route within 2 hours	En-route within 2 hours
Inventory Management	Yes-automated preferred	Yes-automated preferred	Yes-automated preferred	Yes	Yes
Training and Exercises	Yes	Yes	Yes	Yes	Yes
Additional requirements	Self sustaining team (people, power, food, water, shelter, etc) – 72 hours	Self sustaining team (people, power, food, water, shelter, etc) – 48 hours	N/A	N/A	N/A
Regional MOU	Same as Type V plus	Same as Type V plus	Same as Type V plus	Same as Type V plus	MOU between hosting

Requirements	MOU will also: ▪ Commit region to 100% cache availability for state-wide deployment ▪ Identify on call radio cache manager, appropriate decision maker, and deployable trained personnel.	MOU will also: ▪ Commit region to 100% cache availability for state-wide deployment ▪ Identify on call radio cache manager, appropriate decision maker, and deployable trained personnel.	MOU will also: ▪ Commit region to 50% cache availability for state-wide deployment ▪ Identify deployable equipment ▪ Identify on call radio cache manager, appropriate decision maker, and deployable trained personnel.	MOU will also: ▪ Commit region to 25% cache availability for state-wide deployment ▪ Identify deployable equipment	locality and participating region. MOU will: 1) Identify host locality 2) Identify host organization 3) Identify and provide 24/7 contact information for cache location 4) Identify regions' operational protocols and procedures 5) Identify all first responder organizations within the region that will be provided a detailed and up to date cache inventory, regional deployment form and cache contact list.
Region to State MOU Requirements	Same as Type IV plus MOU will also: ▪ Agree to Virginia EOC deployment form for cache ▪ Identify radio cache manager, appropriate decision maker, and deployable trained personnel	Same as Type IV plus MOU will also: ▪ Agree to Virginia EOC deployment form for cache ▪ Identify radio cache manager, appropriate decision maker, and deployable trained personnel	Same as Type IV plus MOU will also: ▪ Identify 50% of cache that is statewide deployable ▪ Agree to Virginia EOC deployment form for statewide-deployable equipment ▪ Identify radio cache manager,	MOU will: ▪ Identify 25% of cache that is statewide-deployable ▪ Agree to Virginia EOC deployment form statewide-deployable equipment ▪ Owner commits to providing the Virginia EOC a detailed cache	▪ No MOU required ▪ Owner commits to providing the Virginia EOC a detailed cache inventory and cache contact list and maintaining an updated inventory list *(Note: While this type is not intended for state wide deployment, it is*

			appropriate decision maker, and deployable trained personnel *(Note: While 50% of this type is not intended for state wide deployment, it is helpful for the Virginia EOC to maintain a central list of all radio cache resources)*	inventory and cache contact list and maintaining an updated inventory list *(Note: While75% of this type is not intended for state wide deployment, it is helpful for the Virginia EOC to maintain a central list of all radio cache resources)*	*helpful for the Virginia EOC to maintain a central list of all radio cache resources)*

Commonwealth Radio Cache
Policies, Procedures and Operational Protocols by Type

The following statewide policies, procedures and operational protocols are developed as a minimum requirement for each of the 5 Types of radio caches purchased with state interoperable communications grant funding. Radio cache host agencies shall understand and comply with the responsibility of radio cache ownership. Additionally, the host agency shall agree to adhere to and enforce these policies, procedures, and operational protocols.

Minimum Policies, Procedures and Operational Protocols Guidance/Requirements for Types I-V

Prior to Radio Cache Purchase	• Develop a strategy for procuring radio cache or enhancements to existing cache • Leverage interoperability baseline information (estimated completion date June 30, 2007) • Develop regional emergency and scheduled event deployment forms and procedures for internal use • Develop Inventory Control Strategy • Establish dedicated personnel as appropriate based on Type • Develop/update MOUs with relevant jurisdictions • Adopt and agree to enforce statewide policies, procedures, and operational protocols • Agree to standardize compatibility of all statewide-deployable caches by coordinating with peer radio cache managers throughout the Commonwealth

By the first grant reporting period	• Show progress towards the region's radio cache strategy • Inventory radios and develop an authorized cache list • Send authorized cache list and cache point of contact to regional and Virginia EOCs
Maintenance	• Fully maintain and ensure the cache is ready for deployment at all times • Exercise rechargeable batteries at least twice a year • Label authorized cache equipment appropriately • Consider and coordinate maintenance costs (replacement or upgrading) for cache equipment within the host jurisdiction or region
Operational	**Rules of Use:** All agencies shall conform to the following **rules of use** for their cache radios: • **National Incident Management System**: Use of an Incident Command System compliant with the National Incident Management System is required for use of any regional interoperability resource. • **Plain/Common language**: All Communications shall be in plain or common language. Radio codes, acronyms and abbreviations are to be avoided as they may cause confusion between agencies. Additionally, it should be understood that plain words such as "help", "assistance", "repeat" and "back-up" may have different operational meanings to different agencies. The word "Help" should be used alone unless in the context of a life-threatening situation. Requests for assistance or backup should clarify the reason for the request. • **Unit Identification**: Agency name or identifier shall precede unit identifier.
Statewide Deployment	Requests may be made for emergency incidents, training & exercises **Deployment within regions may be conducted following the regional policies and procedures developed by the cache owner(s). When in use within the region the radio cache manager or point of contact must inform the Virginia EOC of its status for Types I-III.** **Interoperable Communications Request: Emergency (Outside of Region)** • Responsible party within the locality must request statewide-deployable resources from the Virginia EOC providing the following information: o SALTT – Size, Amount, Location, Type and Time (deployment and duration) o User's agency o On-scene agencies requiring interoperability o Reason for request/type of event o User/requestor and/or servicing dispatch contact phone number • It is the requesting agency's responsibility to maintain appropriate internal procedures to ensure that

	requests are only passed to the Virginia EOC if the request originated from, or was approved by, a person with the authority to accept fiscal responsibility for radio cache deployment costs • The request for deployment of a radio cache indicates acceptance of fiscal responsibility for the cost of any damaged or lost equipment **Interoperable Communications Request**: **Scheduled Events and Training (Outside Region)** • Application for deployment of the radio cache for scheduled events should be initiated no later than 30 days and no more than 120 days prior to the event o Some events will require last minute requests, i.e. funerals, protests, etc. • The request shall be made using the proper request form directly to and be granted by the cache decision maker (Type I-III) or appropriate personnel (Type IV-V) for the host radio cache • The request shall be granted by the priority of the request and by date the request was received • The requesting jurisdiction may be responsible for pick-up and return of cache equipment • Inventory and inspection will occur upon return of the radios and any lost or damaged radios will be billed to the jurisdiction returning the radios • Any radios loaned for scheduled events will be subject to recall for a higher priority emergency incident • The host agency receiving a request for radio cache deployment will notify the other regional radio cache host agencies of the deployment, if applicable • Once a radio cache has been committed or deployed for a special event, contact shall be made to provide information regarding the number of radios deployed, the host locality name, the receiving localities name, and the name and date of the event to: o Communications o Firefighter, HazMat, Urban Search and Rescue o Information and Planning o Law Enforcement • A request for tactical repeaters and interconnect devices will involve a planning meeting with the cache manager or COML to review the events communications plan and will require the deployment of Cache personnel to maintain the equipment during the event • The radio cache manager is responsible for telling the Virginia EOC about the status of their cache when in use **Radio Cache Deactivation** • The Incident Commander in conjunction with the Emergency Manager determines when the radio cache is no longer required • The Incident Commander is responsible for coordinating the return of cache • At the end of the incident, the Incident Commander or a designee is responsible for inventorying all radios returned to the cache

	○ Before leaving the incident scene, the Incident Commander will determine if any radios have not been returned to the radio cache and note the user and/or agency to which the radio was distributed ○ If the missing radios can not be recovered at the incident scene, information will be provided to the appropriate point of contact for resolution • The radios will be returned to the host radio cache site within 72 hours after the incident is over **Problem reporting and Resolution** • Agencies using radio caches may report any problems with the specific radio cache to the radio cache manager (Type I-III) or appropriate personnel (Type IV-V) from which the cache was obtained • The cache manager (Type I-III) or appropriate personnel (Type IV-V) from which the cache was obtained will be responsible for ensuring effective resolution to problems that exist
Training & Exercises	• Cache resources within a jurisdiction shall be used for training and exercise activities at a minimum of twice per year • A training report shall be provided annually to the Commonwealth Interoperability Coordinator's Office • Equipment shall be maintained in a consistent operational condition and users shall be familiar with its function
Inventory Control	• A complete inventory of the caches personnel and equipment shall be conducted on an annual basis and sent to regional and Virginia EOCs • Each radio cache must be maintained in a condition available for immediate deployment within 2 hours of a request • It is the responsibility of the host jurisdiction(s) to maintain control over their equipment • Replacement or upgrading of cache equipment shall be coordinated by the host jurisdiction(s)
Governance	• MOUs shall be developed between host locality, region, and the state • Existing Mutual Aid MOUs will be acknowledged • All radio cache managers for Type III and above will participate on the State Interoperability Advisory Group and fulfill the responsibilities of membership of the group • Conflict resolution: The State Interoperability Executive Committee will make final recommendations to resolve conflicts

All VHF radio caches are required to have the following channels programmed:

Frequency	**Frequency**	**CTCSS**	**CTCSS**	**Description**
Mobile RX	Mobile TX	Mobile RX	Mobile TX	
154.265	154.265	None	None	1FIR7
154.295	154.295	None	None	1FIR11

155.340	155.340	None	None	1EMS14
155.205	155.205	None	None	
155.7525	155.7525	156.7	156.7	1CAL18
151.1375	151.1375	156.7	156.7	!TAC5
154.4525	154.4525	156.7	156.7	1TAC13
158.7375	158.7375	156.7	156.7	1TAC22
159.4725	159.4725	156.7	156.7	1TAC23

All UHF radio caches are required to have the following channels programmed:

Frequency	**Frequency**	**CTCSS**	**CTCSS**	**Description**
Mobile RX	Mobile TX	Mobile RX	Mobile TX	
453.800 453.800	453.800 453.800	173.8 173.8	156.7 173.8	TECAP
453.2125	453.2125	156.7	156.7	4CAL27D
453.4625	453.4625	156.7	156.7	4TAC28D
453.7125	453.7125	156.7	156.7	4TAC29D
453.8625	453.8625	156.7	156.7	4TAC30D

All 800 MHz radio caches are required to have the following channels programmed:

Frequency	**Frequency**	**CTCSS**	**CTCSS**	**Description**
Mobile RX	Mobile TX	Mobile RX	Mobile TX	
821.0125	866.0125	156.7	156.7	8CAL90 NSPAC National Calling Channel
821.5125	866.5125	156.7	156.7	8TAC91 NSPAC National Tactical Channel 1
822.0125	867.0125	156.7	156.7	8TAC92 NSPAC National Tactical Channel 2
822.5125	868.0125	156.7	156.7	8TAC93 NSPAC National Tactical Channel 3
823.0125	866.5125	156.7	156.7	8TAC94 NSPAC National Tactical Channel 4
866.5125	867.0125	156.7	156.7	8TAC91D NSPAC National Tactical Channel 1 direct
867.0125	867.0125	156.7	156.7	8TAC92D NSPAC National Tactical Channel 2 direct
867.5125	867.5125	156.7	156.7	8TAC93D NSPAC National Tactical

				Channel 3 direct
868.0125	868.0125	156.7	156.7	8TAC94D NSPAC National Tactical Channel 4 direct

All 700 MHz radio caches are required to have the following channels programmed:

Frequency	**Frequency**	**CTCSS**	**CTCSS**	**Description**
Mobile RX	Mobile TX	Mobile RX	Mobile TX	
39 & 40	764.24375	$061F	$061F	7CAL59D (calling)
63 & 64	764.39375	$061F	$061F	7EMS60D (EMS)
119 & 120	764.74375	$061F	$061F	7TAC63D (public safety)
143 & 144	764.89375	$061F	$061F	7FIR64D (fire)
199 & 200	765.24375	$061F	$061F	7TAC67D (public safety)
223 & 224	765.39375	$061F	$061F	7LAW68D (police)
319 & 320	765.99375	$061F	$061F	7TAC73D (public service
681 & 682	768.25625	$061F	$061F	7CAL75D (calling)
697 & 698	768.35625	$061F	$061F	7EMS77D (EMS)
761 & 762	768.75625	$061F	$061F	7TAC79D (public safety)
777 & 778	768.85625	$061F	$061F	7FIR81D (fire)
841 & 842	769.25625	$061F	$061F	7TAC83D (public safety)
857 & 858	769.35625	$061F	$061F	7LAW85D (police)
937 & 938	769.85625	$061F	$061F	7TAC89D (public service)

Appendix C: Federal Grant Guidance

1. INTRODUCTION

Federal Fiscal Year (FY) 2007 Appropriations make available grant funding to enhance communications interoperability across the Nation. By definition, communications interoperability refers to the ability of emergency response agencies to talk across disciplines and jurisdictions via radio communications systems, to exchange voice and data with one another on demand, in real time, when needed, and as authorized. In an effort to coordinate the way in which funding is allocated and to maximize the prospects for interoperable communications, SAFECOM, a communications program of the Office of Interoperability and Compatibility has developed some recommended grant criteria in concert with representatives of the emergency response community. What follows is an outline of recommended grant funding eligibility (including applicants and activities), application criteria, guidelines, and resources to assist the emergency response community in strengthening interoperability. Frequently asked questions regarding the document, including additional technical information on Project 25 standards and use of VoIP equipment, can be found on the SAFECOM Web site (www.safecomprogram.gov/SAFECOM/grant/default.htm).

This guidance reflects a comprehensive approach to interoperability—one that understands that the problem of interoperability is not solely technological. In reality, technology is just one of several critical elements necessary for the development of a robust interoperability solution. As Secretary Chertoff explained at the May 8, 2006 Tactical Interoperable Communications Conference, "…the biggest barrier to interoperability is not technology…[the challenge] has to do with, rather, human beings. It has to do with how do we get people to be able to use this equipment in a way that makes interoperability not just a theoretical possibility, or a technological possibility, but an actual, workable, day-to-day solution."

Achieving effective interoperability across the Nation requires dedicating resources to improving such critical elements as governance, standard operating procedures, training and exercises, and regular use of interoperable capabilities. Further, it requires strong leadership in and among organizations—leadership that promotes and engages in extensive, coordinated, multi-jurisdictional, and multi-disciplinary planning efforts for interoperability. This guidance provides Federal grant programs with recommended criteria to ensure that the limited funding available for emergency response communications is used in a way that targets all of the critical elements mentioned above. In addition, it provides the emergency response community with guidance, tools, and resources for the development of interoperability solutions.

2. ELIGIBILITY

Section 2.1 – Eligible Applicants

Federal funds that are allocated for improving emergency response communications and interoperability should only be provided to emergency response agencies or organizations at the regional, state, local, or tribal level. They include:

- Emergency Medical Services (EMS) agencies
- Fire service agencies
- Law enforcement agencies
- An organization representing the above agencies
- Any emergency response agency listed as an eligible applicant in Federal grant programs that include this guidance

In the case of LETPP funding, only law enforcement agencies are eligible.

Section 2.2 – Eligible Activities

The following are the eligible activities for which Federal funding awarded for interoperable voice and/or data communications may be used, subject to the statutory authority of the grantor agency:

- **Planning and Management** activities, including:
    - Establishing a governance structure for emergency response interoperability projects
    - Conducting a capabilities assessment
        - Operational (standard operating procedures, training, usage)
        - Technical
    - Strategic planning
        - Operational (standard operating procedures, training, usage)
        - Technical
    - Implementation and management

- **Equipment Acquisition** for the purposes of:
    - Building emergency response communications systems
    - Upgrading/enhancing emergency response communication systems and equipment
    - Replacing emergency response communication systems and equipment
    - Maintaining emergency response communication systems and equipment

- **Training and Exercising** on the following:
    - Use of equipment and systems
    - Use of standard operating procedures

For more information on eligible activities, see Section 4.

3. APPLICATION CRITERIA

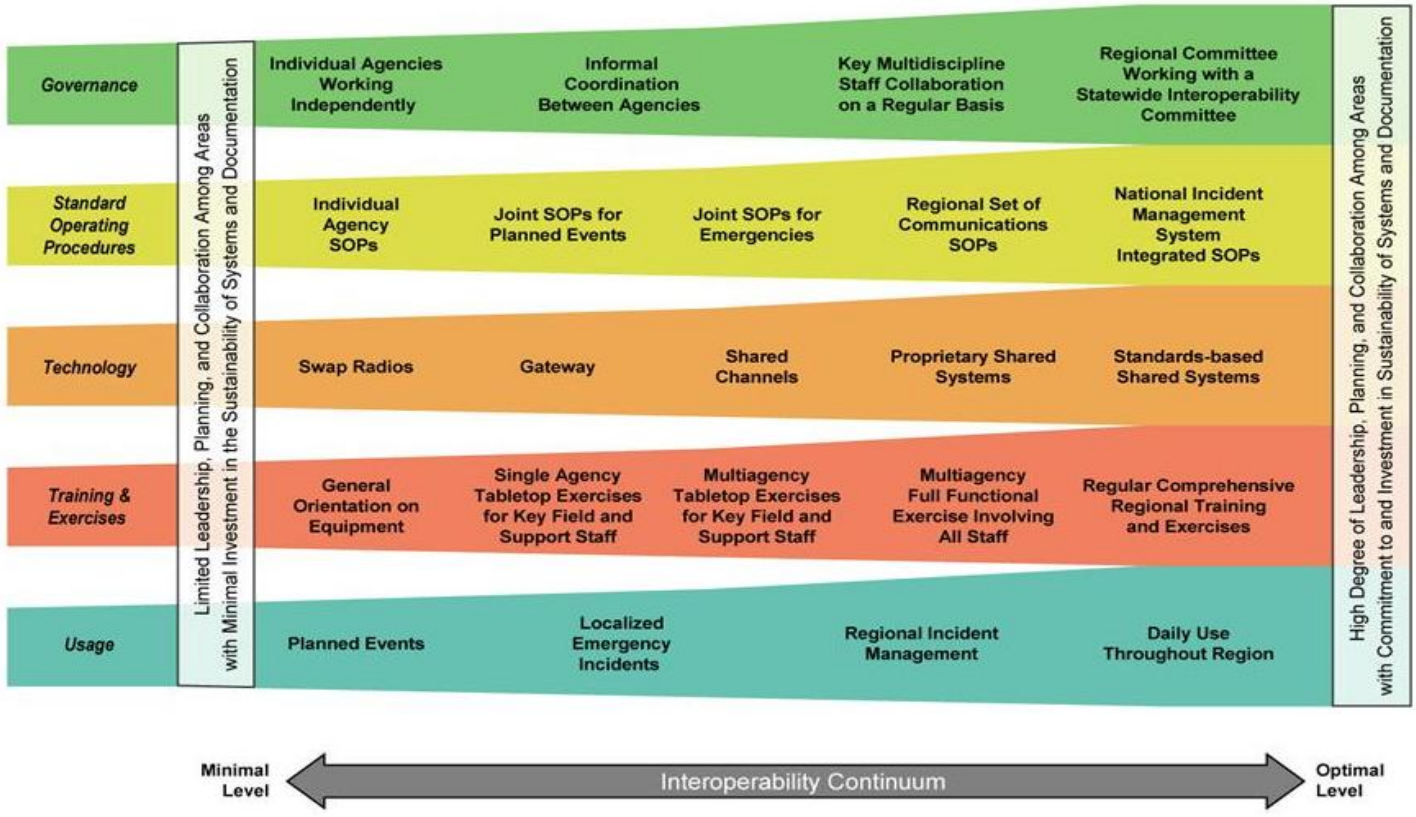
Section removed due to redundancy

4. PRINCIPLES AND GUIDELINES FOR ELIGIBLE ACTIVITIES

Section 4.1 – Planning and Management

Federal funding is provided to applicants for planning activities related to interoperability. When planning for improved interoperability, a number of critical elements must be addressed. The Interoperability Continuum (Figure 1) depicts the critical elements for successful planning and implementation of a robust interoperability solution, including governance, standard operating procedures, technology, training/exercises, and usage of equipment. Applicants should demonstrate an understanding of this framework and the way in which each element is interdependent. For example, if an applicant proposes procurement of new equipment, the proposal should include plans for procedures, training, and exercises to ensure the best use of that equipment. More detailed information on the Interoperability Continuum can be found on the SAFECOM Web site at http://www.safecomprogram.gov.

Figure 1



In addition to incorporating an understanding of these five critical elements, planning activities in general should be conducted on a regional or statewide basis and take into account both short- and long-term goals. Once planning activities are established, consistent leadership and management are needed to oversee development, implementation, and maintenance of the interoperability projects.

Eligible Planning Activities

Planning activities include establishing a governance structure, conducting capabilities assessments (for both operational and technical capabilities), strategic planning (for both operational and technical needs), and managing the implementation of a strategic plan (equipment acquisition, standard operating procedures (SOPs), and training development, etc.) After the governance structure is established, assessment, planning, and implementation should be carried out by the committee or working groups that are established as part of the structure.

Establishing a Governance Structure

Consistent leadership and management are needed to ensure that planning, equipment procurement, training, and funding are in place when developing an emergency response communications improvement or interoperability project. A common governing structure should improve the policies, processes, and procedures of any major project by enhancing communication, coordination, and cooperation, by establishing guidelines and principles, and by reducing any internal turf battles. This group should consist of local, tribal, state, and Federal entities as well as representatives from all pertinent emergency response disciplines. Frequently, when multiple agencies or jurisdictions are involved, this management structure takes the form of a governing body that makes decisions, solicits funding, and oversees the planning, implementation, and management of an interoperability initiative. When establishing a governance structure the following should be considered:

- Is the communications project consistent with similar efforts in the region?
    - Are agreements in place with other agencies or jurisdictions that illustrate cooperative management of the communications improvement or interoperability project?
- Does the project have the support of the relevant state or local governing authority and political leadership?
- What other funding sources has the applicant sought for the ongoing administrative costs of program management?
- Has a mechanism been established for future, sustained funding?

Capability Assessments

A common planning activity is the development of a capability assessment—a baseline understanding of existing resources. It is encouraged that capability assessments be developed by a discipline-neutral party to help ensure the assessment meets the needs of a multi-discipline/multi-jurisdiction response. For additional considerations on capability assessments, see sections below, Operational Considerations for Capability Assessments and Strategic Planning, and Technical Considerations for Capability Assessments and Strategic Planning.

Strategic Planning

When engaging in planning, nearby agencies or jurisdictions from other disciplines or other local, tribal, state, or Federal partners should be included. For those developing statewide strategic plans, specific criteria can be found in Section 5.

The following questions should be considered for strategic planning in general:

- Who are the stakeholders that need to be involved in the planning?

- Which decision makers should be involved?
- What type of technical and field expertise will be needed to develop the plan?
- Will outside expertise be needed to develop this plan? If so, what kind?
- What are the roles and responsibilities of all agencies that are involved? (Include a list of partnering agencies.)
- Do mutual response agreements include interoperable communications?
- What type of governing structure exists to improve the processes for executing any planned project?

In addition to taking an inclusive approach, planning should take into account both short- and long-term goals. The following questions should be considered:

- What should be done in the first phase?
- How many phases will the plan require?
- How much time is needed to accomplish the plan?
- What are the technical solutions available to address the problem in the short- and long-term?
- What funding is available to address the problem in the short- and long-term?

Operational Considerations for Capability Assessments and Strategic Planning
Operational planning activities for emergency response communications projects may include SOPs, training and exercises, and regular use for the equipment. Planning for such activities should consider the communication needs and requirements of the emergency response community, including:

- With whom the agency or jurisdiction needs to communicate
- How the agency or jurisdiction needs to communicate
- What information needs to be exchanged
- When the agency or jurisdiction needs to communicate and exchange information (i.e., daily, weekly, infrequently)
- Under what circumstances the agency needs to communicate (i.e., during frequently occurring emergencies, major crimes or incidents, large-scale disasters)
- Whether regional communications applications are considered for daily use (i.e., mutual aid and regional coordinating centers)

Technical Considerations for Capability Assessments and Strategic Planning
Technical planning activities for emergency response communications projects may include such items as needs and requirements assessments, development of the system network architecture, propagation studies, and similar technical proposals.

The following list outlines items that should be included in planning for such activities:

- All interoperability resources available—including radio caches, gateways, shared channels, shared systems (including system type, mode, band, and manufacturer), and software and systems allowing for exchange of information across disciplines and jurisdictions (such as emergency management software, and computer-aided dispatch software)

- All agencies to which the interoperability resources are available

- Scale of the system—local, regional, multi-jurisdictional, statewide, or national
- Coverage—the system footprint of all areas covered
- Capacity—channel capacity and radio capacity within the existing systems
- Identification of capabilities by site including the identification of site users
- Current interoperability capabilities with other systems
- Compatibility with the Project 25 (P25) suite of standards (see Section 4.2 for additional information)
- For data-related systems, use of National Information Exchange Model (NIEM) Extensible Markup Language (XML) standards and Organization for the Advancement of Structured Information Standards (OASIS) Emergency Data Exchange Language (EDXL) standards in systems and software (see Section 4.2 for additional information)
- Internal and external security requirements in the architecture to secure information and maintain privacy levels for voice and data, as required by law
- Whether the infrastructure is shared with any other agency or organization and is owned or leased
- Whether equipment locations/sites are shared, owned, and/or leased
- Radio frequencies used to communicate with other emergency response agencies
- Channels designated solely for communicating with other agencies
- Types of equipment that can immediately be deployed to provide short-term solutions for improved communications
- Primary radio language used by the agency when communicating with other agencies or organizations (e.g., "plain" English or code)
- Type of topography or terrain in which the agency operates
- Types of structures in which the agency needs to communicate (e.g., tunnels or high-rise buildings)

Implementation and Management Considerations

Consistent leadership and management are needed to ensure that the planning, equipment procurement, training, and funding are in place when developing an emergency response communications improvement or interoperability project. Frequently, when multiple agencies or jurisdictions are involved, such management takes the form of a governing body that makes decisions, solicits funding, and oversees the implementation of an interoperability initiative. Activities during implementation and management may include but are not limited to procurement of equipment, development of SOPs, and coordination of training and exercises. Organizations that govern such projects must be comprised of the relevant law enforcement, fire response, and emergency agencies.

Section 4.2 – Equipment Acquisition

Communications systems and equipment are expensive and technically complex. Before a procurement decision is made, an assessment must be made of the current communications system capabilities, as outlined in the previous section. In addition, funds can be directed at the improvement of existing systems, where applicable, rather than at the development of completely new systems or infrastructure using proprietary or non-proprietary equipment.

Grant funding in regards to systems and equipment may be used for:

- Building emergency response communications systems and equipment
- Upgrading or enhancing emergency response communication systems and equipment to include the procurement of interoperable solutions

- Replacing emergency response communication systems and equipment
- Maintaining emergency response communication systems and equipment

Applicants requesting funding for equipment acquisition should consider the principles and guidelines discussed in the following sections.

Priority Areas

Before making equipment acquisition decisions, applicants should ensure that they meet two basic communications needs—operability and incident-level capabilities. If applicants have not met these needs in their jurisdiction, they should make equipment acquisitions to meet them first, subject to the statutory authority of the grantor agency or the objectives of the grant program if the applicant is seeking Federal grant funding.

> ***Operability***. The first priority of Federal funding for improving emergency response communications is to provide within an organization basic, operable communications that has safety as the overriding consideration.
>
> ***Incident-Level Communications Capabilities***. Agencies are encouraged to consider plans that enable them to achieve, at a minimum, incident-level interoperability. This means ensuring the ability of incident operations section staff to adequately communicate with one another and their respective command centers within one hour of an incident. Agencies are encouraged to explore any and all inexpensive and innovate ways to ensure incident-level interoperability. While such incident management interoperability can provide an interim solution to an area's interoperability needs, such solutions should always be in support of long-term interoperability by building upon or accelerating long-term strategies and efforts.

Standards

Land Mobile Radio (LMR) Systems

When procuring equipment for communication system development and expansion, a standards-based approach should be used to begin migration to multi-jurisdictional and multi-disciplinary interoperability. Specifically, all new digital voice systems should be compliant with the Project 25 (P25) suite of standards. This recommendation is intended for government-owned or -leased digital land mobile public safety radio equipment. Its purpose is to make sure that such equipment or systems are capable of interoperating with other digital emergency response land mobile equipment or systems. It is not intended to apply to commercial services that offer other types of interoperability solutions. Further, it does not exclude any application if the application demonstrates that the system or equipment being proposed will lead to enhanced interoperability.

With input from the user community, these standards have been developed to allow for backward compatibility with existing digital and analog systems and to provide for interoperability in future systems. The FCC has chosen the P25 suite of standards for voice and low-to-moderate speed data interoperability in the new nationwide 700 MHz frequency band and the Integrated Wireless Network (IWN) of the U.S. Homeland Security, Justice, and Treasury Departments has chosen the P25 suite of standards for their new radio equipment. The U.S. Department of Defense has also endorsed P25 for new LMR (Land Mobile Radio) systems.

This guidance does not preclude funding of non-P25 equipment when there are compelling reasons for using other solutions. However, the first priority of federal funding (subject to the statutory authority of the grantor agency or the objectives of the grant program if the applicant is seeking Federal grant funding) for improving public safety communications is to provide basic, operable communications within a department with safety as the overriding consideration. Funding requests by agencies to replace or add

radio equipment to an existing non-P25 system (i.e., procurement of new portables on an existing analog system) will be considered if there is an explanation as to how their radio selection will allow for improving interoperability or eventual migration to interoperable systems. Absent these compelling reasons, SAFECOM intends that P25 equipment will be preferred for LMR systems to which the standard applies.

Beginning in FY 2007 grant applicants purchasing P25 equipment must obtain documented evidence from the manufacturer that the equipment has been tested to and passed all of the applicable, published, normative P25 compliance assessment test procedures for performance, conformance, and interoperability as defined in an explanatory addendum, which can be found at www.safecomprogram.gov/SAFECOM/grant/default.htm. This documentation shall be in the form of a Supplier's Declaration of Compliance (SDoC) prepared in accordance with ISO/IEC 17050-1. Further, the relevant compliance assessment test reports which form the basis for the SDoC shall be prepared in accordance with the NIST publication: "Procedures and General Requirements for Compliance Assessment of Project 25 Land Mobile Radio Equipment."

Data-Related Information Sharing Systems
To support homeland security, emergency responses, and justice information sharing, grant applicants should use the latest NIEM specifications and guidelines on the use of XML, as follows:

- Use NIEM 1.0 or later for information sharing in production systems. NIEM 1.0 (beta) was released in June 2006; the full production version is scheduled for October 2006.

- Until the production release of NIEM 1.0, the latest NIEM beta specifications and guidance should be used only for pilots and prototype systems.

Additional information about the required use of NIEM specifications and guidelines is available at http://www.niem.gov. If there is any question or comment about the use of NIEM specifications and guidelines, please submit it to information@niem.gov.

Further, any systems, developmental activities, or services procured with grant funding involving information relating to emergency response, including the exchange of incident management or alerts, should comply with the OASIS EDXL standards. Compliance should include the Common Alerting Protocol (CAP), version 1.1 or latest version, and the EDXL Distribution Element (DE), version 1.0 or latest version. More information on these standards can be found at www.oasis-open.org.

This guidance does not preclude funding of non-NIEM or non–OASIS EDXL-compliant systems, when there are compelling reasons for using other solutions. Absent such compelling reasons, the NIEM and OASIS EDXL standards identified above are the preferred standards.

Functional Requirements
When planning for the development of communications systems and looking to ensure both operability and interoperability, emergency responders should employ a standards-based network of networks approach. When procuring voice and data communications equipment, emergency responders should seek equipment that supports specific functional requirements, or equipment capabilities. A list of functional requirements for various components of voice and data communications systems is included in Appendix A. These requirements outline the minimum capabilities that equipment should have for effective interoperable procurement selections.

Section 4.3 – Training and Exercises

To use equipment properly and effectively in emergencies, personnel must be trained through joint exercises that allow them to practice SOPs, become familiar with the equipment, and enhance their preparedness in responding to all types of emergencies. Eligible grant applicants should include multi-disciplinary and multi-jurisdictional training in their overall emergency response communications plans.

Consider the following topics in the development of training and exercise plans:

- Participation from all levels and functions of emergency response (i.e., local, state, Federal, fire, law enforcement, emergency medical services)
- The frequency of training
- Who will conduct the training
- The site at which training will be held (on-site or specified training facility)
- Maintenance efforts to keep personnel up-to-date with changes in procedure, equipment functions, or other relevant policies
- Incorporating lessons learned from training exercises in operational procedures
- Implementing post-exercise evaluations and analyses

No matter the level of management, planning, technology, SOPs, and training that an agency adopts, interoperability solutions must be routinely in training and in daily use so that agency staff becomes and remains familiar with the equipment and procedures. Emergency response personnel in high-stress situations depend on using equipment and procedures with which they are familiar and comfortable. Unless both operable and interoperable communications solutions are used as part of routine, daily operations, as applicable, they will not be used during major incidents. As with an agency's general staff, its supervisors and command staff must likewise be familiar with the equipment and protocols required to use the various communications solutions that are available to the agency if they are going to direct its activation. The best way to bring about such familiarity is daily use of and training with the solutions and their related equipment.