INTEROPERABLE COMMUNICATIONS MOVING FORWARD

By John Gustafson (6/30/09)

Through out Connecticut significant progress is being made in planning and implementing interoperable and operable communications systems. These efforts include development of SOP's, training of practitioners, and establishing long term governance for existing and planned systems.

None of these efforts would be possible with out the dedication and commitment of people from our towns, cities, regions and state agencies.

STATEWIDE PLANNING AND COORDINATION

Interoperable communications in Connecticut is governed by the State Public Safety Interoperable Communications Executive Committee (CPSICEC) which is a sub-committee of the DEMHS State wide Coordinating Council which advises and makes recommendations to the DEMHS Commissioner.

The CPSICEC is representative of all State agencies, local public safety disciplines local government and regions. It meets monthly at the ConnDot Laboratory in Rocky Hill on the third Tuesday of every month. The SEIC has several sub-committees which include, Technical, Training and Exercise and 700 MHz Planning. The group is co-chaired by Michael Varney of DOIT and Bill Hackett of DEMHS.

The CPSICECI mission is:

Provide for statewide telecommunication infrastructure and protocol that will allow timely, efficient and cost-effective communications (voice, data, video) for all public safety and public healthcare agencies (state, regional and local) to be able to serve as an alert system and provide appropriate, coordinated response to any and all emergencies.

The CPSICEC has several sub-Committees, the Technical Committee, charged with developing minimum standards for communications interoperability and insuring that communications systems and communications hardware procured meet or exceed the standards. The Technical Committee also develops and reviews designs of interoperable communications systems. The Training and Exercise Committee is charged with planning development and implementation of training programs in the use of interoperable communications systems, and the 700 MHZ Planning Committee whose charge is developing and maintaining a plan for the use of 700 MHz radio channels, reviewing and making recommendations to the CPSICEC for action on requests to FCC Region 19 700 MHz regional plan update committee.

In October of 2008 Connecticut hired two Emergency Telecommunications Managers to manage the State's Communications Interoperability initiatives. John Gustafson works for DEMHS and Steve Verbil works at DPS. John and Steve also serve as staff to the CPSICEC.

JOB WELL DONE

We would be remiss if we did not pay honor to several people who have played a significant role in bringing emergency communications and interoperability to its present level and are now leaving State service after long and honorable careers. These individuals have left a legacy of progress and cooperation which will be a challenge to duplicate. Leaving for well deserved retirements are Mr. George Pohorilak, Director of OSET, Mr. Mike Stemmler Director of CSP/CST Communications unit, DOT Radio Supervisor, Mr. George Carbonell, Mr. Robert Dibella of the DEMHS Communications Unit and Deputy Commissioner Wayne Sandford of DEMHS.

Last but certainly not least DEMHS Commissioner James "Skip" Thomas will be retiring. Skip more than any one else in the State has brought us to where we are now in interoperable communications, as the chair of the ad hoc interoperability committee established after September 11 2001, and on through his tenure as DEMHS Commissioner he has been a driving force in bringing Local, Regional and State communications stakeholders together to solve problems and plan for the future.

We wish them all health and happiness in their well earned retirement.

THE PLAN LIGHTS THE WAY

The guiding force of interoperable communications in Connecticut is the State Communications Interoperability Plan (SCIP). The Plan outlines the short and long term strategies for interoperable communications in Connecticut. First developed in 2007 through a yeoman effort on the part of Municipal, Regional and State stakeholders, the plan is annually reviewed and up dated. On June 17 the Federal Department of Homeland Security Office of Emergency Communications held a SCIP Plan review session at Rentshler Field in East Hartford, representatives from local regional and state practitioners, this all day effort was designed to identify changes which were needed in the plan, evaluate it in relation to the National Emergency Communications Plan, and discuss strategies for implementation.

Using the results of this session and feedback already maintained the State Interoperability Committee will revise the plan for approval by the DEMHS Commissioner. The SCIP Plan can be found on the DEMHS Web Page.

The best technology is worthless if there is no plan for its use. Using funds from the Federal Interoperable Emergency Communications Grant Program IECGP, our regions have undertaken to write perhaps the most critical of all communications plans, the Tactical Interoperable Communications Plan (TICP). While the SCIP and other Plans are strategic in nature and lay out plans for future improvements and enhancements, the TICP Plan outlines how the region will conduct communications operations if the incident occurs this afternoon. This process in Connecticut has been facilitated with assistance from the Department of Homeland Security ICTAP Group from the Naval Space and Aviation Warfare Center in San Diego. To date Region 1 and Region 3 have completed and validated their plans with a tabletop exercise. Region 4 and 5

have held their TICP workshops and Plan drafts are expected later this summer. Region 2 will kick off the process in July and hold its workshop in September. Thanks to the hard work of our Regional ESF 2 Chairs, Joe Gaudett, Gregg Prevost, Keith Victor, Jeff Otto and Steve Savage, and Doug Harder and his team from ICTAP all Connecticut Regions will have functional TICP Plans by January of 2010. The next step will be the creation and maintenance of a Statewide TICP Plan.

Just as technology is worthless with out a plan for its use, plans are worthless unless procedures are developed, training conducted, and exercises held for those who will actually operate them. Using the IECGP Grant funds our regions are developing the procedures and training required to insure that the plans are exercised and modified as required.

One of the training initiatives outlined in the SCIP Plan which is critical to the effective use of technology during emergency incidents is the training and credentialing of Communications Unit Leaders (COML). In the Incident Management system the COML is responsible for establishing and implementing the communications networks required by the Incident Commander to effectively control and mitigate the incident, insuring that interoperable networks exist where needed and obtaining the communications assets required to mitigate the incident.

In October 2008 Connecticut hosted a three day Federally sponsored COML training course, in addition to participants from several New England States, 21Connecticut communications personnel successfully completed the course, congratulations to Michael Varney, Nick Varanelli, Karen Tomczyk, Christopher Marvin, Kevin McManus, Ken Maltese, Keith Victor, Thomas Walsh, Scott Wright, James Miller, John Gustafson, Gregg Prevost, Mark Matson, Paul Zito, Matthew Valleau, Charles Kelleher, Jeffrey Otto, Wayne Gronlund, Gordon Harris, Jackie Kilby-Richards, and Gregory Webster who successfully completed the program and are working on meeting the remaining requirements for credentialing. They join personnel who completed a Connecticut developed COML course offered in Region 1 in 2007.

STATEWIDE INTEROPERABLE COMMUNICATIONS SYSTEMS DEPLOY AND DEVELOP

ICALL/ITAC - The Connecticut ICALL ITAC System operated by the Department of Public Safety State Police Communications Unit (CSP/CTS) provides command and control communications to support the incident management system at local and statewide events as required or requested by the local incident commander.

Each local Police, Fire and EMS agency has been provided with a portable radio which will operate on these channels. The network operating on the FCC-allocated 800 MHZ Interoperability channels consists of 38 transmitter sites spread through out the State. In addition to the portable radios, control stations have been installed in each Public Safety Answering Point (PSAP) and CMED, giving local dispatch centers access to these communications channels. The fixed network is supplemented by 35 mobile repeaters housed in the 34 Mass Decontamination Trailers distributed to fire service agencies statewide, and in each of the CSP/CTS Telecommunications Engineers vehicles. Non-government entities may request authorization to

operate on the ICALL/ITAC system by request to the State Public Safety Interoperable Communications Executive Committee

Coordination of the network is provided through the State Police Message Center based in CSP Headquarters in Middletown.

Over the past year several changes have been made to the ICALL/ITAC System, including deployment of additional fixed repeater sites. Perhaps most important is the introduction of "Simulcast" technology to the system. This technology allows for the CSP Message Center Dispatch staff to immediately receive and communicate with an incident commander seeking use of the system. In addition, at the request of the Incident Commander, the Message Center staff can set up the ICALL network as a Statewide Simulcast channel allowing the Incident Commander to communicate directly with resources or assets responding to his incident from anywhere in the state. Plans are ongoing for future refinements and enhancements to this vital system.

CS-PERN - One of the critical day to day interoperability issues faced by the Law Enforcement community is the ability for individual police units to communicate with each other across municipal and department jurisdictions. To alleviate this, the Connecticut Police Chiefs Association, Department of Public Safety, and Department of Emergency Management and Homeland Security partnered to develop the Connecticut Statewide Police Emergency Radio Network. (CS-PERN)

As conceptualized and designed, CS-PERN is a single statewide 800 MHz simulcast channel provided on the CSP radio network infrastructure, installed in all police units which allows direct two way radio contact between law enforcement vehicles. It is on 24 hours per day and does not require dispatcher intervention to set up or use. In addition, the ICALL/ITAC control stations in each PSAP have been reprogrammed to include the CS-PERN Channel in addition to the ICALL/ITAC Channels.

Local Law Enforcement agencies using 800 MHz were immediately able to take advantage of this system by simply reprogramming their existing equipment. Departments using other frequency bands would be required to install a low cost 800 MHz in their vehicles to take advantage of the system.

Early this year DEMHS Commissioner James Thomas recognized that the current financial crisis has slowed if not stopped the implementation of this vital system. To this end, using some available Federal Grant monies, DEMHS has arranged to provide CS-PERN radios to local Law Enforcement agencies at no cost and provide for installation into their vehicles.

This month, notice will be made to the Law Enforcement community on how to apply for these radios, up to the limit of available funding.

STOCS - Fire, Law Enforcement, EMS, Local, State and Federal Government Agencies in Connecticut operate two-way radio systems using a variety of frequency bands which makes on-scene tactical communications difficult if not impossible. In an effort to address this

communications gap, DEMHS has developed and deployed the State Tactical on Scene Channel System (STOCS). The STOCS System is designed to utilize existing portable radio equipment, which these departments/agencies use daily, to communicate at an incident regardless of their frequency band.

The STOCS System allows individuals and groups of responders to communicate when working at the scene of an incident, using their existing portable radio equipment. The System consists of three (3) VHF frequencies, three (3) UHF frequencies and five (5) 800Mhz frequencies combined into five (5) interoperability channel groups as follows:

DEMHS holds the statewide FCC License for all frequencies used in the STOCS System. Its intended users include: Local, State, and Federal Fire, Law Enforcement, Emergency Medical Service, Health Departments, Public Works Departments and Emergency Management. Non-government entities may request authorization to operate on STOCS by request to the CPSICEC State Public Safety Interoperable Communications Executive Committee.

The heart of the system is the STOCS Cross Band Repeater unit (CBR). Using dedicated frequencies in the VHF-Hi, UHF, and 800 MHz band, this device connects all three bands together in a seamless network. The system is designed for tactical use so the STOCS Box range is limited to approximately two miles.

Multiple Cross Band Repeaters (CBRs) on the same STOCS Channel, can be used at a single incident or multiple incidents in a single region To allow for full system capability Departments/Agencies will have to program all five STOCS Channels into their existing Portable Radios. Incident Commanders may utilize up to three STOCS units at a single incident. STOCS units have been successfully deployed at several incidents and exercises.

Phase 1 and 2 deployment of STOCS CBR units is almost complete: 78 units have been deployed or are allocated awaiting deployment. There are a number of units which have not yet been allocated. Municipalities or services that may wish to be assigned a STOCS CBR unit should send an e-mail to DEMHS Emergency Telecommunications Manager John Gustafson at John.G.Gustafson@ct.gov.

NEW INTEROPERABLE PROJECTS AND INITIATIVES MOVE FORWARD

Based on the goals and objectives of Connecticut SCIP Plan, the U.S. Department of Homeland Security, in conjunction with the U.S. Department of Commerce, issued a Public Safety Interoperable Communications (PSIC) Grant in the amount of almost $13,000,000. 00 to Connecticut to accomplish the goals outlined in our plan.

The grant has three major investments. The first, known as PSIC Investment Justification 1, is the procurement and installation of an APCO P25 Phase 2 message switch which will replace the switch currently in use in the DPS Statewide Trunked Radio System. In addition to supporting the existing CSP radio system, this device will be shared with local and regional radio systems to provide for interoperability, support and enhancement of the local and regional systems.

Municipalities and regions which take advantage of this switch will eliminate the necessity of each municipality or region to procure their own device, thus eliminating duplication and saving money. To date, the City of New Britain and the Region 1 UASI are proceeding with plans to use this device when installed.

During routine and catastrophic emergency situations, communications systems are often extended beyond their normal capacity. In addition, the State's communications systems are vulnerable to routine weather events such as high winds, lighting strikes, etc. To aid in alleviating these issues, PSIC Investment Justification 2 plans to procure six quick response communications vehicles, five of which will be strategically located with in municipalities. These vehicles will increase the capability of regional or local communications systems in an emergency or planned event.

In conjunction with the rapid response communications vehicles, a Strategic Technical Reserve of radio transmitter equipment antennas, coaxial cables and mobile antenna towers will be established and stored to be deployed to assist in restoring local, regional and state communications infrastructures which may be damaged by a manmade or natural force.

Partners and end users involved will include all local and regional public safety first responder agencies, public health, emergency management, public works and transportation organizations. It is estimated that over 40,000 emergency service first responders and first response providers across the State will directly benefit from this project.

First steps have been taken. The DEMHS and DPS Emergency Telecommunications Managers have begun developing a plan to provide for common 700 MHz channels for the exclusive use of the states regional HazMat Teams, SWAT/ESU, Bomb Squads and USAR. The CPSICEC 700 MHz planning committee is developing a state plan for use of 700 MHz channels to insure that adequate spectrum is available as the proposed migration occurs over the next 10 to 15 years.

Thanks to the New York Metropolitan area Transit Security Grant and Connecticut DOT Rail, a joint project by DEMHS and DPS is establishing a new interoperable voice communications pathway which will be deployed in municipalities along the Metro North Rail Line from Greenwich to New Haven.

The system will feature a new trunked talk group on the CSP Radio System, and new radio control stations using this talk group installed in all Public Safety Answering Points and Emergency Communications Centers on the rail line, connected to the Metro North Police Communications Center in New York. When complete, all users will be joined in a common network with direct immediate radio communications for incidents on the rail line. In addition to the new control stations all holders of ICALL/ITAC Portable Radios will be issued new portable radios programmed with the Transit Talk Group. These radios will replace the existing ICALL/ITAC radios in those communities which will be reissued to fill identified needs.

REGIONAL COMMUNICATIONS SYSTEMS

Since all emergencies begin and end at the local level, regional communications systems need to be capable of supporting the affected municipalities. Under the auspices of the DEMHS Regional Planning Teams, several regions have undertaken significant communications projects using Regional Homeland Security Grant Program Fund, and Urban Area Security Grants (UASI). All of these efforts are led by dedicated local and regional communications personnel and public safety personnel.

In Region 1, in a joint effort between Region 1, Region 5 and the Fairfield County Police Chiefs Association, a county wide cross band radio system is being installed which will allow immediate communications between local law enforcement units, using existing local radio assets.

As this projects nears completion, Region 1 has committed all of its UASI funds to the development of a region-wide interoperable public safety trunked radio system to serve Fire, Law Enforcement and EMS. The long term vision of this system is a totally integrated voice communications system solving the interoperability problem by providing a common system shared by all users.

Region 2 has adopted, and DEMHS has approved, a multi-phase project to enhance several existing communications systems. Phase 1 will establish the back bone which will allow for the expansion of the New Haven UASI Cross Band Repeater system; link the two CMED's in the regions to allow for sharing of the infrastructures of both systems; and establish a voice communications system for public health departments and districts.

In Region 4, efforts are under way to procure an IP based switch which will allow all PSAP's in Region 4 to link their radio systems in to common networks to meet the needs of a specific incident.

CITIZEN VOLUNTEERS STAND READY TO COMMUNICATE

Communications is vital to the successful response and recovery from any disaster or emergency. In Connecticut we are fortunate to have a dedicated group of Amateur Radio Operators affiliated with the Amateur Radio Emergency Service, or the Amateur Radio Relay League (ARRL). Last fall this group hosted a training exercise in at the DEMHS Region 5 office in Southbury.