WRITTEN TESTIMONY OF

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CURRENT AND FUTURE PUBLIC SAFETY COMMUNICATIONS

Thank you, Mr. Chairman, and distinguished members of the Committee for the opportunity to appear before you today.

My name is Harlin McEwen and I have been actively involved in public safety for almost 50 years. My career has been in law enforcement and I also have been a volunteer firefighter. I am the retired Police Chief of the City of Ithaca, New York, and am also retired as a Deputy Assistant Director of the Federal Bureau of Investigation in Washington, DC. I serve as Chairman of the Communications and Technology Committee of the International Association of Chiefs of Police (IACP), a position I have held for more than 28 years. I also serve as the Communications Advisor for the Major Cities Chiefs Association (MCC), the National Sheriffs' Association (NSA), and the Major County Sheriffs' Association. I am the Vice Chairman of the National Public Safety Telecommunications Council (NPSTC) and am a Life Member of the Association of Public-Safety Communications Officials-International (APCO). Today I speak on behalf of all of these organizations.

When I first became a law enforcement officer in 1957 police vehicles had tube type 6 volt analog mobile radios that dimmed the headlights when we pushed the microphone button. In those days there were no hand held radios. In my career I have witnessed many changes and advances in law enforcement and public safety communications. However, the advances for public safety have consistently lagged behind the advances of commercial services, primarily because of lack of funding and spectrum.

As you are aware, citizens rely upon their local and state police agencies, sheriffs' offices, fire departments, emergency medical services, and other emergency services like highway and public works and utilities to come to their assistance wherever and whenever needed. They respond whether it is a crime in progress, a civil disturbance, a building fire, a forest fire, an automobile accident, a health emergency, a natural disaster, or, as we learned on 9/11, a terrorist attack. Today, citizens assume that those first responders will get the

call and will have the communications tools they need to address emergencies quickly and efficiently. Unfortunately that is not always true.

I want to applaud the efforts of this Committee and the Congress in voting to clear the television broadcasters from the long promised 700 MHz spectrum. This will help us improve public safety radio communications, both operability and interoperability. The major cities and metropolitan areas of this country are still in desperate need of additional land mobile voice channels and are anxiously waiting for this spectrum to become available. Your efforts to designate $1 billion derived from the auction of radio spectrum for public safety communications are also very much appreciated by the public safety community and will be very helpful. The introduction of S.385 by Senators Inouye, Stevens, Kerry, Smith, and Snowe is also helpful in giving direction to NTIA with respect to the $1 billion grant program and we appreciate these efforts to have this funding program implemented in a timely fashion.

I am pleased to have the chance to discuss with this Committee an exciting new opportunity for Congress to take steps that will pave the way to reducing the dependence on local and federal tax revenues to maintain modern public safety communications systems. That is a proposal for a 700 MHz nationwide public safety broadband network. This proposed network can become a reality only if Congress authorizes creation of a public/private partnership, controlled by the public safety community, to hold a nationwide license for 30 MHz of spectrum in the upper 700 MHz band and further authorize us to deploy this network pursuant to a public sector-private sector partnership model.

I have studied the issue of public safety telecommunications for decades. I have been actively engaged in the efforts of the Federal Communications Commission, other Federal agencies, state and local government entities and individual departments to identify law enforcement communications requirements and provide our first responders with the necessary tools to meet those needs. Substantial time and significant taxpayer dollars have been devoted to those efforts, yet in 2007 the public safety community still is far behind commercial users in terms of wireless functionality. Our public safety users who should have the best, most advanced, and most robust capabilities too often must rely on systems that are inadequate for their needs today, much less the expanded responsibilities with which they will continue to be charged in the future. Without a fundamental change in the way we approach emergency responder communications, specifically without allocation of the additional 30 MHz of spectrum and adoption of the approach embodied in the Public Safety Broadband Trust (PSBT) proposal, I see no reason to ever expect substantial improvement.

The wireless voice systems public safety personnel use today are among the most important tools they have to do their job in a safe and efficient manner. However, these systems have in many cases been underfunded, poorly maintained and generally not refreshed. As we look to the long term future, we need to look at new and better ways to improve public safety communications.

The need for more efficient public safety data systems is growing and this has become the focus of much of our attention as we look to ways for public safety to take advantage of Third Generation (3G) and Fourth Generation (4G) technologies.

The implementation of a nationwide public safety broadband network can also be the beginning of the end to the problem of public safety interoperability. We have been asking

for funding support for years to help us upgrade and replace mission critical land mobile voice systems that are built by different manufacturers, are of different vintages, are generally incompatible and in many cases not compatible with the P25 standards, the only recognized national digital standards for land mobile public safety communications interoperability.

It is critical to understand that this is a one time only opportunity to solve many of the public safety communications requirements of today and the future. We recognize this is not an easy decision for the Congress. You must choose between solving the public safety communications problem and making sure our citizens have good public services, or allowing the spectrum required by public safety to be auctioned to commercial companies who want to expand their services and increase their profits. It seems simple to us that by your approval of this important step for public safety you will be doing the right thing for America. It will begin to take the burden off the taxpayers who must build and maintain increasingly expensive public safety communications systems.

The benefits from a nationwide public safety broadband network as set forth in the Public Safety Broadband Trust proposal are as follows:

1. Broadband data services (such as text messaging, photos, diagrams, and streaming video) not currently available in existing public safety land mobile systems.
2. A hardened public safety network with infrastructure built to withstand local natural hazards (tornadoes, hurricanes, earthquakes, floods, etc) that would include strengthened towers and back up power with fuel supplies to withstand long term outages of public power sources.
3. Nationwide roaming and interoperability for local, state, and federal public safety agencies (police, fire and EMS) and other emergency services such as transportation, health care, and utilities.
4. Access to the Public Switched Telephone Network (PSTN) similar to current commercial cellular services.
5. Push to talk, one to one and one to many radio capability that would provide a back-up to (but not replace) traditional public safety land mobile mission critical voice systems.
6. Access to satellite services to provide reliable nationwide communications where terrestrial services either do not exist or are temporarily out of service.

For those who argue that public safety already has enough radio spectrum to meet current and projected mobile requirements, I can only say that they purposely ignore the facts concerning public safety spectrum allocations and first responder communications requirements. As an example, the cellular industry, represented by CTIA, has grossly misrepresented the spectrum issue as recently exhibited in their press release critical of Senator McCain's announcement that he would be introducing legislation to establish a new nationwide, state-of-the-art public safety broadband network. The CTIA statement said "the basic facts of the matter should compel this important debate to be about providing first responders with funding, access to equipment and coordination, not more spectrum". CTIA further stated "Right now, the public service community utilizes 47 MHz of spectrum to serve its public safety users. At the same time, there are wireless carriers that use roughly the same amount of spectrum to deliver voice, data and advanced information services to many times that number of subscribers. More spectrum is clearly not the answer".

Contrary to what the CTIA says, the REAL facts on spectrum allocations are as follows:

STATE AND LOCAL PUBLIC SAFETY SPECTRUM ALLOCATIONS

Allocation	MHz
VHF Low Band (25-50 MHz)	6.3
VHF High Band (150-174 MHz)	3.6
UHF Low Band (450-470 MHz)	3.7
800 MHz Band (806-821/851-866 MHz)	3.5
800 MHz Band (821-824/866-869 MHz)	6.0
700 MHz Band (764-776/794-806 MHz)	24.0
TOTAL PUBLIC SAFETY	**47.1**

COMMERCIAL SPECTRUM ALLOCATIONS

Allocation	MHz
Cellular	50
Broadband PCS	120
AWS	90
Broadband Radio Services	190
Lower 700	48
Upper 700	30
TOTAL COMMERCIAL	**528**

But even these numbers do not tell the real story or explain why existing public safety allocations cannot be used for broadband operations. Historically, the FCC has allocated individual channels, not contiguous channel blocks, for public safety use. These channels are immediately adjacent to channels allocated for taxicab companies, truck operators and other businesses. The channels typically are no larger than 25 kHz bandwidth and more frequently 12.5 kHz, or a tiny fraction of each 25 MHz cellular system authorization. This allocation approach has permitted numerous governmental entities to secure licenses for localized, individual purposes, but precludes the public safety community as a whole from consolidating enough contiguous channels to deploy 21st century broadband technology networks. There simply is not sufficient contiguous bandwidth to support the text messaging, building diagrams, photos, streaming video and other transmissions that will be as essential to law enforcement officers during these perilous times as the weapons they carry.

While the 24 MHz public safety allocation in the upper 700 MHz band is contiguous, even that spectrum is subdivided in various categories designed for mission critical voice communications on both localized and state levels, as well as for wideband data applications. And that spectrum allocation, first promised to the public safety community in 1997, was intended to address the unmet needs and identified deficiencies in the spectrum resources available to public safety more than a decade ago. New technologies and new services have since been developed to respond to the ever escalating commercial appetite for more useful and sophisticated mobile communications tools and solutions – and appropriate new commercial spectrum allocations have been made available to commercial network operators to bring those improvements to their customers. Likewise, over the past decade, public safety's needs for access to these advanced technologies, services, tools and solutions has not stood still – although, unfortunately, the amount of appropriate spectrum allocated to meet them has.

Allow me to emphasize these points by example, as the contrast between the spectrum resources available to commercial wireless network operators and to the public safety community could not be more striking. To begin with, commercial cellular and PCS licensees have access to large blocks of contiguous spectrum. Their allocations were specifically designed to support system architectures and technologies that would accommodate vast numbers of customers. To compare the number of subscribers that can

be served on a 25 MHz cellular network with the number of police officers that can share a 12.5 kHz bandwidth channel, or even multiple channels, is as meaningful as comparing the size of watermelons to grapes. Compounding the imbalance is the absolute amount of spectrum that has been made available for commercial use in comparison to that which has been made available for public safety uses as detailed above. Just last year, the Commission made another 90 MHz of spectrum of Advanced Wireless Spectrum available for commercial operations, again in large spectrum blocks and expressly authorized for commercial mobile broadband uses.

In fact, it is the success of the cellular/PCS model that has convinced us that public safety must have a 30 MHz spectrum block on which to deploy an advanced technology broadband network. That model has persuaded us that the public safety community must join together in the Public Safety Broadband Trust, rather than seeking individual licenses for individually designed and deployed systems, if we are to achieve our objective: seamless nationwide roaming capability on a 21st century broadband 700 MHz network that is built and operated to satisfy increasing and demanding public safety requirements.

I stated previously that a nationwide broadband network solution needed to address both spectrum and funding, and to address them both at the same time and in the same context. The latter is just as critical as the former and requires an innovative approach given the extraordinary costs associated with building and operating a truly nationwide broadband network. Unlike purely commercial systems that have the luxury of limiting coverage to areas of denser population and transportation corridors, public safety users must have communications capability wherever there are people or property to protect. This mandate has the important consumer benefit of ensuring that a broadband network designed to meet public safety needs will be available in suburban and rural communities that remain outside the areas of commercial broadband deployment. However, I have substantial experience in the traditional funding sources for public safety communications and see no realistic possibility that the necessary monies will be made available even to build, much less maintain, operate and routinely upgrade a network of this scope if dedicated to purely public safety requirements.

The only solution that we consider viable is a public sector-private sector partnership as proposed in the Public Safety Broadband Trust. Under this approach, the PSBT would acquire a 30 MHz license at 700 MHz and would enter into leases of spectrum usage rights with commercial operators who would build a nationwide public safety network that (1) would be paid for by commercial operators using excess capacity, not by the public safety community or the taxpayer; (2) would be licensed and controlled by public safety representatives to ensure public safety priority access; and (3) would be refreshed with the latest technical improvements, funded by the commercial participants.

We do not support what some would call a “hosted” public safety network. While the term may have somewhat different meanings to different people, at its core it puts mission critical, emergency response communications in a position of dependence with respect to the host commercial provider. Moreover, it undermines or even negates the essential nationwide character of the network. With all due respect to commercial operators that might now express support for hosted systems, there is nothing in the over 20-year history of commercial wireless systems that would validate their reliability or availability for mission

critical public safety needs. That is not an arrangement that the public safety community could endorse.

In regard to the 9th Notice of Proposed Rulemaking (NPRM) recently issued by the Federal Communications Commission, we have many concerns about the concepts set forth in that proposal. The 9th NPRM suggests that a nationwide broadband network could be built using the 12 MHz of spectrum currently allocated for local licensing of public safety wideband systems. This would take away from local licensing control the spectrum long promised for use by local agencies. In addition we believe the proposal is seriously flawed by failing to acknowledge the need for enough spectrum to attract investors to participate in a public/private partnership where private funds would be invested to build a nationwide network.

By contrast, the partnership outlined in the Public Safety Broadband Trust creates a symbiotic and balanced relationship, but one in which public safety always remains in control. It represents a win-win opportunity if sufficient spectrum is allocated to accommodate both public safety and commercial usage. Public safety cannot fund this network on its own, but also must be confident that the network is built to hardened public safety requirements with priority access that is adequate to respond to emergencies. Commercial operators will lease the spectrum and build the network to public safety specifications, but only if there is sufficient excess capacity to permit meaningful commercial service on a regular basis. The technical data supports the conclusion that a minimum of 30 MHz is needed to serve these complementary requirements.

The many public safety organizations and agencies that have supported the PSBT approach recognize that it will require removing some of the 700 MHz spectrum that currently is scheduled to be auctioned. The PSBT proposal includes a plan to make the federal budget whole. The PSBT would raise $5 billion to pay the U.S. Treasury for the spectrum, using the revenues from the commercial users and the assistance of federal loan guarantees similar to those that have been made available to industries such as airlines, pipelines and automobile manufacturers. This financing arrangement would ensure that other federal public safety spending priorities, including the $1 billion for other public safety interoperable communications needs, would not be affected.

Let me add that I and other supporters of the PSBT also endorse the commendable work being done by local and regional organizations such as the Capitol Area Region Broadband Project with respect to broadband. To the extent their efforts bring about public safety communications improvements, it is important work that deserves support. But we must remain mindful that the results will be, at best, a patchwork of improved, but incompatible, non-interoperable networks at a daunting per unit cost. They are doing what they can in light of the regulatory and financial environment in which they must operate, but this nation can and must do better.

I have dedicated most of my professional career to the advancement of public safety communications. From that perspective, I believe this Congress has an extraordinary time sensitive opportunity. Approval of the PSBT and the public sector-private sector partnership will catapult public safety to its rightful place in the forefront of communications capability while at the same time delivering broadband service to communities that continue to be bypassed by the commercial telecommunications revolution. I hope you will share my belief that this is an opportunity that must be seized for the benefit of the entire American public.