

**TESTIMONY OF DR. WILLIAM CHECK  
SENIOR VICE PRESIDENT OF SCIENCE AND TECHNOLOGY  
AND CHIEF TECHNOLOGY OFFICER  
NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION**

**on**

**THE EFFECTIVENESS OF OUR NATION'S PUBLIC ALERT SYSTEM**

**before the**

**SUBCOMMITTEE ON ECONOMIC DEVELOPMENT, PUBLIC BUILDINGS AND  
EMERGENCY MANAGEMENT**

**HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE**

**December 13, 2011**

**TESTIMONY OF DR. WILLIAM CHECK**

**SENIOR VICE PRESIDENT OF SCIENCE AND TECHNOLOGY  
NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION**

Good morning, Chairman Denham, Ranking Member Norton, and Members of the Subcommittee. My name is William Check and I am the Senior Vice President of Science and Technology and Chief Technology Officer at the National Cable & Telecommunications Association. Thank you for inviting me today to testify on the cable industry's role in our Nation's public alert system.

NCTA is the principal trade association representing the cable television industry in the United States. Its members include cable operators serving more than 90% of the nation's over 67 million cable television customers, and more than 200 cable programming networks, as well as suppliers of equipment and services to the cable industry. The cable industry is the nation's largest broadband provider of high-speed Internet access after investing more than \$145 billion since 1996 to build out a two-way interactive network with fiber optic technology. Cable companies also provide state-of-the-art digital telephone service to millions of American consumers. I have worked in the field of telecommunications for over 30 years, including in the broadcast, satellite and cable industries.

Cable operators have been active participants in providing emergency alerts to their customers since the first cable systems were implemented, and we continue to be actively involved with FEMA, the FCC and other participants in further improving the Nation's emergency alert system (EAS). The cable industry recognizes the importance of a national public warning system that responds to the public's need for timely information during crisis situations.

On November 9, 2011, cable operators were among the participants in the first ever nationwide test of the emergency alert system. I am pleased to provide you today with some of our preliminary assessments of that test, as well as our thoughts on legislation that would assist in the further development of the Integrated Public Alert and Warning System (IPAWS).

### **Cable Industry Participation in EAS**

The cable industry's role in providing emergency information to the public dates back to the 1960s, when some cable systems distributed to their customers warnings they received via electronic links to radio and television stations and federal, state and local agencies that participated in the "Emergency Broadcast System" (EBS). Pursuant to local franchise requirements, some cable operators began installing alerting equipment that could be activated by local government officials or law enforcement agencies to warn cable customers about emergency situations in their communities. This practice continued for several decades.

In 1994, as part of its modernization of the nation's emergency broadcast system, the FCC incorporated cable television in the newly established Emergency Alert System (EAS), which replaced the EBS. The technology in EAS provided federal, state and local officials with more sophisticated means to deliver important emergency information. For example, this allows National Weather Radio (NWR) signals to be decoded by the EAS equipment at broadcast stations and cable systems. Broadcasters, cable operators, and other EAS participants can then send NWR warning messages almost immediately to their audiences.

Under the FCC's current EAS regulations, cable operators are required to provide national EAS messages issued by the President (signaled by the Emergency Action Notification event code) and EAS messages issued by state governors. Cable operators also routinely use their EAS equipment to disseminate all types of alert information including weather, child

abduction (“AMBER”) alerts, and other state and local emergencies. In practical terms, the cable operator provides these EAS messages, which may consist of a text message or video crawl, over all channels on the cable system.

The cable industry continues to work closely with the FCC and cooperate with FEMA to implement the latest emergency alerting technologies and we support ongoing efforts to utilize advanced digital technology to promote next generation alerts over a variety of communications platforms. Cable companies are preparing to meet the FCC’s June 30, 2012 deadline to be able to receive messages delivered using the Common Alerting Protocol (“CAP”) technology and disseminate those messages to their customers.

#### **EAS National Test**

On November 9, 2011, cable companies fully participated in the first ever nation-wide test of the EAS. The test consisted of FEMA initiating a Presidential-level “Emergency Action Notification” (EAN) message. The government’s objective was to test the reliability and effectiveness of EAS, including identifying gaps in the current alert system. Prior to the test, NCTA took several important measures to ensure that consumers were aware of the national test. Among other things, we briefed our member cable operators and programming networks about the test, its impact on their operations and the importance of consumer education about the test. We led cable industry chief technology officers and engineers in discussions and consultations on the test, to ensure full technical support for the test in the field. We also provided operators with the text of a message that they could include in consumer bills notifying customers of the test, links to FEMA and the FCC’s online resources, including consumer information about the test, and public service announcements providing consumer education about the test.

The cable operators themselves undertook significant outreach efforts, utilizing a variety of tools to promote and publicize the test to their customers. Their activities included running public service announcements; including an announcement on customer bills; advising news outlets in their markets about the test; publishing a blog post prior to the test; and using social media outlets such as corporate accounts on Facebook, Twitter, and LinkedIn to publicize the test to customers.

Our programming network members also participated in these outreach efforts, airing additional public service information, in the form of a text crawl or a PSA, immediately before and/or immediately after the November 9 test. At least 110 national cable networks, and 24 regional cable networks, reported their plans to run the public service announcements or the on-air “crawl,” giving viewers a “heads-up” that the test would occur shortly.

We are still in the process of gathering and analyzing the results from our member companies, who expect to provide data to the FCC of their results on December 27. We are pleased to report that preliminary data shows that most cable operators were successfully able to receive the transmitted Emergency Action Notification (EAN) signal and to disseminate the EAN message to their customers. Some operators did experience various issues within their service areas, although most of the major problems we identified originated “upstream” from cable systems and were therefore out of the operators’ control. For instance, some cable providers did not receive the emergency message from broadcast stations that they are required to monitor. When cable systems did receive the emergency message, the message audio was often low or distorted.

We also found that the 30-second time period used for the alert may not have been sufficient to accurately conduct the test, because it can take longer than that for the emergency

message to be transmitted throughout the entire EAS infrastructure: from FEMA to the Primary Entry Point (“PEP”) stations to the local primary stations and, in turn, to all EAS participants, including cable systems. If the time to get the emergency message to cable systems was greater than the 30- second EAS message itself, then the EAS audio message would have completed prior to the event code being received. In those cases, there was simply not enough time to transmit the message to viewers before the test concluded. Finally, we also noticed that in some cases the EAS equipment in the cable headend, or so-called “encoder/decoder,” itself contained outdated software or was configured incorrectly.

Cable operators continue to gather more information on the test findings and, as noted above, this information will be reported to the FCC on December 27. Longer term, we look forward to continuing to work with the FCC, FEMA and others in an effort to resolve the issues we identify so that cable system operators can continue to effectively transmit emergency alerts to consumers.

#### **IPAWS Legislation**

NCTA appreciates efforts to further modernize our Nation’s emergency alert system, and we support the goals of H.R. 2904 and H.R. 3563. We are pleased to note that the proposed legislation includes provisions that will help accelerate the delivery of emergency alerts through IPAWS. For instance, the bills would establish a training program to instruct federal, state, local and tribal government officials in system use. This training will be helpful in ensuring that officials who initiate alerts are fully aware of the emergency alert system’s capabilities. H.R. 2904 also contemplates the creation of an advisory committee that would advise government officials on the implementation of IPAWS. NCTA believes it is appropriate for federal officials to rely on the extensive expertise that private industry has developed in this area and we are

pleased that the proposed legislation specifically contemplates that a representative of the cable industry would be among the representatives chosen to provide FEMA with its expertise.

We respectfully suggest, however, that legislation should take into consideration the considerable work that has already occurred in this area and any costs or possible delays associated with changes to the plans that are currently being implemented. In particular, the cable industry has devoted significant resources toward complying with the upcoming deadline that requires systems to be able to receive emergency messages in CAP protocol. Any common alerting and warning protocols, standards, technology and operating procedures that FEMA would be required to adopt pursuant to new legislation should recognize and incorporate the work that has already been done and should be consistent with existing regulatory directives which have driven our efforts over the past several years.

In considering legislation, we ask that you keep in mind the means by which emergency alerts are delivered. As I mentioned before, cable companies currently transmit the information as they receive it. Most of the EAS equipment at a cable headend is pre-programmed by the cable operator to automatically respond to particular EAS header codes (which define the location and the nature of the emergency). Based on this architecture, cable companies do not alter the alert messages. So, for example, if a message is received in multiple languages, cable companies can and do pass along the emergency alert in multiple languages. However, there is no means by which we can translate messages received in one language to another. Legislation should make clear that the obligation to make messages accessible should rest with the message originator.

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Thank you again for the opportunity to appear before you today on this important issue. The cable industry recognizes its important role in disseminating emergency information to the public, and we stand ready to work with this Subcommittee, Congress, FEMA and the FCC to meet its responsibilities. I would be pleased to answer any questions you have.

## **William A. Check, Ph.D.**

Dr. William Check is Senior Vice President, Science and Technology of the National Cable & Telecommunications Association (NCTA). Heading NCTA's technology efforts, he provides leadership and coordination of the industry's interests in techno-policy, standards and guidelines. He is also responsible for the analysis and evaluation of the technical issues being considered by public policymakers, and supports the congressional and regulatory efforts that have technical components or implications.

Check has been in the field of telecommunications for over 30 years. Prior to NCTA, he was involved in a number of organizations, including the satellite and broadcasting industries and has led the development of packet data, video and audio communications systems. He is a past Editor of Space Systems, IEEE Transactions on Aerospace and Electronic Systems.

### **Education**

Ph.D., Electrical Engineering, The Pennsylvania State University, 1988  
M.S., Electrical Engineering, The Pennsylvania State University, 1986  
B.S., Electrical Engineering, The Pennsylvania State University, 1979  
B.A., (emphasis in Physics), Elizabethtown College, 1979

### **Professional Experience**

<b>National Cable &amp; Telecommunications Association, Washington, DC</b> <i>Senior Vice President, Science &amp; Technology and Chief Technology Officer</i>	February 1998 - Present
<b>WorldSpace Corporation, Washington, DC</b> <i>Vice President, Business Integration</i>	February 1998 – October 1998
<b>GE Spacenet, McLean, Virginia</b> <i>Director, Advanced Technology</i>	February 1990 – February 1998
<b>MultiComm Telecommunications Corp., Arlington, VA</b> <i>Vice President, Two-Way Network Division</i>	July 1989 – February 1990
<b>GTE Spacenet, McLean, Virginia</b> <i>Senior Staff Engineer/Staff Engineer</i>	August 1988 – July 1989
<b>Mutual Broadcasting System, Arlington, Virginia</b> <i>Director of Engineering</i>	June 1979 – August 1983

**COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE**  
*Truth in Testimony Disclosure*

Pursuant to clause 2(g)(5) of House Rule XI, in the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include: (1) a curriculum vitae; and (2) a disclosure of the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by an entity represented by the witness. Such statements, with appropriate redaction to protect the privacy of the witness, shall be made publicly available in electronic form not later than one day after the witness appears.

(1) Name:

WILLIAM CHECK

(2) Other than yourself, name of entity you are representing:

National Cable & Telecommunications Association

(3) Are you testifying on behalf of an entity other than a Government (federal, state, local) entity?

YES

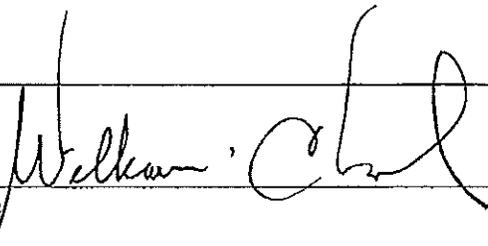
If yes, please provide the information requested below and attach your curriculum vitae.

NO

(4) Please list the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by you or by the entity you are representing:

None received.

Signature



12-6-11  
Date