

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matters of)	
)	
Amendment of Part II of the Commission's)	PS Docket No. 15-94
Rules Regarding the Emergency Alert)	
System)	
)	
Wireless Emergency Alerts)	PS Docket No. 15-91

**COMMENTS OF AMERICA'S PUBLIC TELEVISION
STATIONS, THE CORPORATION FOR PUBLIC
BROADCASTING, NATIONAL PUBLIC RADIO AND THE
PUBLIC BROADCASTING SERVICE**

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EXECUTIVE SUMMARY

In accordance with its mission to serve local communities, public media is committed to improving the usefulness and reliability of the Emergency Alert System (“EAS”) and the Wireless Emergency Alerts (“WEA”) system.

The existing public media infrastructure allows highly reliable and resilient datacasting to deliver alerts with its digital programming, even during disasters or power outages. Datacasting is a cost-effective technique capable of high quality video and audio transmission without the congestion characteristic of other emergency alert systems. Further, datacasting can be broadcast to an unlimited number of authorized recipients or the content can be encrypted to target individuals and groups. Moreover, public television is hoping to advance these systems by migrating to the Advanced Television Systems Committee (ATSC) 3.0 digital standard, which brings numerous benefits including increased bandwidth and mobility.

Public television stations around the country are enacting public safety programs that may be used as a model in other communities. The Clark County School District’s system transmits blueprints and evacuation plans in the event of an active shooting. The Virginia Tidewater Consortium for Higher Education’s system increases security on college campuses. The U.S. Park Police and Massachusetts Emergency Management Agency have systems to distribute live video feeds via helicopter during large events like Fourth of July celebrations and the Boston Marathon. Using the state’s 12 public broadcast stations, the Ohio Digital EAS is a statewide system that can stream to nearly every one of Ohio’s 11.5 million residents. Groups in Houston and Chicago have tested datacasting with two way capability through band 14 integration. Minnesota’s Emergency & Community Health Outreach system reaches out to immigrants and refugees by translating alerts in multiple languages, as an extension of the

traditional system which only broadcasts in English. While these examples clearly demonstrate public television's dedication to innovation in the area of public safety communications, many other applications exist including disaster area coverage, backup operations centers, marine use, and more.

Public radio also plays an essential role in emergency communications as many people rely on battery-operated radios during power outages and car radios during evacuations. Alerts sent out over WUKY-FM are repeated on stations across Kentucky including automated stations that would not otherwise provide timely alerts. Oklahoma officials rely on KGOU-FM's statewide alert system as an additional source that does not rely on internet connectivity, for damage reports, evacuation routes, and shelter information during severe weather. With the help of local news departments, the Florida Public Radio Emergency Network distributes detailed local information around the clock and has a system that sends emergency text, audio, and video content at no cost to digital device users. WLTR-FM has a statewide system that alerts hospitals and aids in search and rescue efforts. These examples express public radio's devotion to innovation in the area of public safety communication. Moreover, the radio industry is working with AT&T, Sprint and T-Mobile to provide the public with a mobile alert system by activating the FM chips in smart phones.

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America’s Public Television Stations (“APTS”),¹ the Corporation for Public Broadcasting (“CPB”),² National Public Radio (“NPR”)³ and the Public Broadcasting Service (“PBS”)⁴ support the Commission’s goal of continuing to improve the usefulness and reliability of the Emergency Alert System (“EAS”) and the Wireless Emergency Alerts (“WEA”) system.

¹ APTS is a non-profit organization whose membership comprises the licensees of nearly all of the nation’s CPB-qualified noncommercial educational television stations. The APTS mission is to support the continued growth and development of a strong and financially sound noncommercial television service for the American public.

² CPB is a private, non-profit corporation created and authorized by the Public Broadcasting Act of 1967 to facilitate and promote a national system of public telecommunications. Pursuant to its authority, CPB has provided millions of dollars in grant monies for support and development of public broadcasting stations and programming.

³ NPR is an independent, non-profit media organization that works in partnership with some 950 independently owned local member stations, other producers and distributors of public radio programming including American Public Media (APM), Public Radio International (PRI), the Public Radio Exchange (PRX), and many stations, both large and small, rural and urban, that create and distribute content through the Public Radio Satellite System (PRSS).

⁴ PBS, with its 350 member stations, offers all Americans the opportunity to explore new ideas and new worlds through television and online content. Each month, PBS reaches more than 103 million people through television and over 33 million people online, inviting them to experience the worlds of science, history, nature, and public affairs; to hear diverse viewpoints; and to take front row seats to world-class drama and performances.

In furtherance of this shared goal, Public media and its member stations have undertaken significant work to contribute to public safety and alert and warning across the country.

Public media is uniquely qualified to support the Emergency Alert System due to its interconnected nationwide reach, community involvement, and mission-based service to the public. Public media exists to serve its local communities. While this typically means news, educational content and initiatives, it must be noted that many public stations use their existing infrastructure to assist in public safety communications to protect the public.

Public television and radio stations are working with public safety entities locally in their communities and across their states to leverage the capabilities of broadcasting to distribute essential information during emergencies. One example is the PBS Warning, Alert, and Response Network (“WARN”), which provides a diverse and reliable backup to the primary WEA system, with a fully redundant system design that leverages public television’s nationwide coverage to send every WEA message over every public television transmitter, covering virtually all of the United States and its territories.

Many public stations assist in connecting public safety entities together and in connecting these officials with the public. Public stations also play an important role in educating individuals in communities before and after emergency alert testing and in convening community entities that can contribute to the relevance of the testing.

Most recently, the APTS membership adopted a resolution that pledged in principle to devote one Mbps of digital capacity by public television stations for participation in the FirstNet public safety network. The Department of Homeland Security (DHS) Science and Technology Directorate produced a short video about exploring spectrum options for public safety use that

highlights the capabilities of public television stations and public television's commitment to providing the bandwidth for public safety and alerting uses.⁵

In the Notice of Proposed Rulemaking, the Commission asks for comment on EAS alerting in an emerging video technology landscape in which broadcast television is enhancing its IP-based offerings, including comment on the effectiveness of EAS alerts and warnings.⁶ As public television stations migrate to the Advanced Television Systems Committee (ATSC) 3.0 digital standard, the critical work that stations are doing now will be enhanced through increased bandwidth, mobility, and various other benefits of the new standard.

Public Television and Datacasting

Public television operates a nationwide network of high-power broadcast television stations that cover 97 percent of the U.S. population, including the territories. PTV can use datacasting to leverage this existing broadcast infrastructure to deliver encrypted and targetable IP data along with its digital television programming. The combination allows for a nationwide wireless IP delivery network that is natively multicast, just like the TV signals it occupies.

Datacasting has the potential to provide significant benefit to first responders and law enforcement and in alerting the public. Potential benefits include the following:

- Because datacasting uses existing broadcast television infrastructure, it is highly reliable and resilient.
- Datacasting is not subject to congestion during emergencies.
- Datacasting can be used to multicast data to a large number of users for the same cost as the transmission of data to a single user.
- Datacasting leverages a system designed primarily for the transmission of high quality video and audio streams. Thus, it has the innate ability to address the public safety community's desire for high quality audio and video data transport.

⁵ See www.youtube.com/watch?v=NeJ81_RtBhY.

⁶ *In the Matters of Amendment of Part 11 of the Commission's Rules Regarding the Emergency Alert System and Wireless Emergency Alerts*, PS Docket No. 15-94, 15-91, FCC 16-5 (rel. Jan. 29, 2016).

- Datacasting is relatively inexpensive to implement and operate. The bulk of the network operating costs are already covered under a different service model. Incorporating datacasting into a comprehensive communications plan leverages this sunk cost, making datacasting very cost effective.

Equally important to these valuable benefits, public television has a consistency of mission with public safety. Both have a primary goal to serve their local communities. Both are motivated to provide service to the public.

Broadcast Datacasting Technology Overview

Broadcast television operates on six MHz channels. The current ATSC digital television standard enables each channel to deliver just under 20Mbps (19.392658 Mbps) of MPEG transport packets. This capacity is expected to increase to more than 30 Mbps with the new ATSC 3.0 standard that is currently being considered by the Commission. The new standard will improve bit density, mobility, and bandwidth efficiency, along with many other enhancements. It will also support reception on handheld devices directly over-the-air anywhere that the TV signal can be received.

Datacasting today works by encapsulating IP data into the digital television MPEG transport stream. The FCC-approved A/90 data broadcast standard allows for ancillary data transmissions. Unlike traditional TV content, all datacast content is encrypted with AES-256 encryption and can be targeted to individuals or groups of users. Like traditional TV content, the TV broadcasts also allow unlimited reception by authorized recipients without requiring any additional bandwidth as the number of points of reception increases.

Unlike most networks that can become congested when demand exceeds capacity, datacasting provides a constant bit rate, in good times and in bad. This ability to provide a constant bit rate for concurrent encrypted program streams, combined with the native multicast

nature of TV broadcasts, allows for significantly more video and data to be shared by multiple agencies without concern about bandwidth congestion.

Broadcast Infrastructure Resilience

The PBS WARN grant program assisted public television stations in hardening their infrastructure against power outages from weather and other events, with the funding of generators and ancillary equipment to those stations in need of such equipment.

With very rare exceptions, broadcast television has continued to operate during disasters, severe weather and extended power outages. For example, during Superstorm Sandy, New Jersey Public Television continued to operate on generator power for seventeen days. This maintenance of effort was possible because of the large fuel tanks and priority fuel delivery in place to support emergency alerting. Some stations have upgraded to natural gas generators giving them virtually unlimited runtime.

Public broadcasters have invested heavily in content backhaul, satellite, fiber, portable uplinks, vertical real estate, and other assets. Additionally, public television has extensive expertise and experience in moving high value content locally, regionally, and nationally. Deploying existing assets quickly to move content and solve content ingest problems is the nature of the broadcasting business and part of stations' daily operations.

Public Television Examples and Use Cases

The following are some examples of how public broadcasters are leveraging their capabilities and infrastructure to improve public safety in their communities. Many of these programs could potentially be replicated in other communities or on a national scale.

EAS/WEA Examples

Ohio ETS Statewide Project

Ohio Educational Television Stations, Inc., in partnership with the Ohio Emergency Management Agency (OEMA) and the state's Broadcast Educational Media Commission (BEMC), began an initiative to strengthen the state's emergency messaging infrastructure. They created Ohio Digital EAS (OEAS), an alternative, secure IP-based delivery system for the dissemination of emergency information to the public and first responders utilizing all 12 of Ohio's public television stations that reach virtually all 11.5-million Ohioans. The focus of the project is to provide an alternative pathway to deliver all existing EAS, IPAWS and National Weather Service emergency messages for distribution to the public. It will aggregate all emergency messaging that originates from the Federal Government or inside the state of Ohio into a single 148k data stream, originating from the state EMA headquarters in Columbus. The content will constitute a single "channel" encapsulated into a miniature TV transport stream, ready for ATSC broadcast. The stream will be delivered to 12 stations through BEMC and the existing, secure state fiber system. Using datacast technology, the "channel" will be inserted into each station's digital broadcast signal.

Minnesota Multi-Language Alerting Initiative

Minnesota Emergency & Community Health Outreach (ECHO) is a program using technology to address the emergency preparedness and response needs of its community. By leveraging text to speech technology, ECHO has created Spanish, Hmong, and Somali language warnings and alerts that extend their emergency response to include the immigrants and refugees living in their community. Known as the Minnesota Multi-Language Alerting Initiative, this 15-month project led by ECHO in partnership with Twin Cities Public Television will expand the

emergency response linguistic reach of the current Common Alerting Protocol, which only provides alerts in English.⁷

Datacasting and First Responder Examples

Clark County School District (CCSD), School Safety Program

Initiated in 2008, the Clark County School District in Las Vegas, Nevada secured funding for a system managed by Vegas PBS to improve the District's ability to deal with an active shooter incident. This system transmits building floor plans, evacuation plans, school and medical records, lists of hazardous materials, and live video feeds from schools to first responders. The IP data is delivered over the Vegas PBS digital television signal, which is powerful enough to reach first responders anywhere in the county, including distant rural areas. In May 2010, Clark County School District Police Department received the International Association of Chiefs of Police's *2010 Excellence in Technology Award*.

Virginia Tidewater University Safety Project

In 2010, working with the Virginia Tidewater Consortium for Higher Education, public television station WHRO-TV initiated a system to improve school security on college campuses. These campuses include William and Mary, Old Dominion, Regent, Hampton, Norfolk State, Tidewater Community College, Virginia Wesleyan, and Christopher Newport.

U.S. Park Police on the National Mall Project

The U.S. Park Police in Washington, DC have been working with public television station WHUT-TV for many years to distribute helicopter and other video during large crowd events in D.C. This work has been critical during the Fourth of July and other events on the Mall.

⁷ <http://blogs.cdc.gov/publichealthmatters/2014/11/multi-language-emergency-warnings-in-minnesota>.

Massachusetts Emergency Management Agency Project

The Boston Marathon bombing made clear that public safety officers' access to live helicopter video needed to be improved. Following the bombing, a datacasting system was put into place at public television station WGBH-TV and is now being used by Massachusetts Emergency Management Agency (MEMA) to provide video access and other information sharing during the Boston Marathon.

DHS Funded Projects in Houston and Chicago

Recent DHS sponsored tests, through its Science and Technology (S&T) Directorate's First Responder Group (FRG), working with the John Hopkins University Applied Physics Lab (JHU/APL), took place in Houston and Chicago. In Houston, software was installed on a Sonim band 14 phone, which was then ingested by the datacasting dashboard and from there was datacast to multiple remote recipients. While datacasting over digital television is natively one-way, public television stations have demonstrated band 14 LTE integration to create a two-way capability. This capability is currently being used by the Houston Police Department (PD) and Houston Fire Department over the band 14 system in Harris County, Texas, in collaboration with Houston Public Media.⁸

Houston PD used this capability with Houston Public Media during the Republican Presidential Debate in February 2016. Harris County also hosted an exercise to evaluate datacasting as a way to distribute video and other situational awareness data through Houston Public Media during a simulated incident.⁹ This event won the top honor at a recent Secured

⁸ JHU/APL Houston Report, www.firstresponder.gov/TechnologyDocuments/Houston%20Datacasting%20Pilot%20After%20Action%20Report.pdf.

⁹ KUHT Datacasting Video, <https://youtu.be/tsJfiJQggYQ>.

Cities conference. It was the first time judging for the top award was unanimous.¹⁰ Harris County used datacasting again for multi-agency coordination during the NCAA Men's Basketball Championship Final Four in April 2016 and will use it for the Super Bowl in January 2017.

The Chicago Police Department and Chicago Fire Department have also tested a similar concept using the WTTW public television transmitter on top of the Willis Building in downtown Chicago.¹¹

Other Applications

Several additional examples show that the benefit of partnering with public television goes above and beyond its spectrum to its broadcast assets, such as:

- **Disaster Area Coverage** – Fire and weather ravaged areas are a special challenge for public safety agencies. Television has a long history of providing service to these areas.
- **Backup Operations Centers** – Public television station facilities, including banks of telephones, large operations rooms, high speed Internet, satellite uplink and other infrastructure, have been used as backup operations centers when primary facilities are compromised.
- **Existing Connectivity to Public Safety Infrastructure** – In many areas, public television is already connected to public safety networks and serves as a relay point. Public television can leverage existing towers, fiber, satellite, and other infrastructure.
- **Marine Use** – Public television coverage over water exceeds that of cellular providers. The U.S. Coast Guard has tested out to sea off the coast of Boston and in the middle of Lake Michigan off the coast of Chicago. The potential for improving security at the Port of Long Beach and other marine applications are also being explored.

Public television stations have substantial and reliable nationwide infrastructure, proven technology, and decades of relevant experience. Public television looks forward to working with the Commission to continue improving the usefulness and reliability of

¹⁰ Secured Cities Article, <http://securitytechnologyexecutive.epubxp.com/i/618378-nov-dec-2016> (pages 16-20).

¹¹ JHU/APL Chicago Report, www.firstresponder.gov/TechnologyDocuments/Chicago%20Datacasting%20Pilot%20After%20Action%20Report.pdf.

EAS and the WEA system, and to serving as an important complement in the FirstNet system.

EAS and Public Radio

NPR operates the Public Radio Satellite System and serves as a designated Primary Entry Point (PEP) for FEMA to distribute Presidential EAS messages to the nation. Local public radio stations serve as communications lifelines during times of emergencies, especially when the power grid is down. More than 300 million people living in the United States (over 95 percent of the U.S. population) have access to a public radio signal. In Mississippi, Florida and other states, statewide emergency communications are carried by the public radio community.

FEMA routinely advises the public to make sure that radios with batteries are on hand when major storms approach. When people are instructed to evacuate, car radios become a primary instrument for receiving information about the emergency situation including evacuation routes and evacuation center locations.

Congress recognizes the critical role public radio stations play during local emergency situations. Bipartisan legislation entitled, *The Emergency Information Improvement Act of 2015*, passed the U.S. House of Representatives and Senate and was signed by the President on December 18, 2015. Report language written by the Senate Homeland Security and Government Affairs Committee accompanied the bill and in part stated: *“Public radio stations can be an essential component in local communications and information dissemination during a disaster. Locally licensed stations can provide critically important public emergency communication services before and after disasters.”*

EAS and FM Chips Smartphones

Today, more than 90 percent of Americans own cellphones, and approximately 60 percent of those are smartphones, which means that every year today's radio listeners are getting their news and severe weather information on more and more devices and media channels. Because of public radio's role as a trusted media and information resource and an essential public-safety asset, consumers are urging the mobile phone industry to install and activate FM chips in all cellphones and smartphones.

Every smartphone today contains an FM chip, but unlike in Europe, most in the U.S. are not activated. There is no cost for manufacturers to activate the FM chips. AT&T, Sprint and T-Mobile have worked with the radio industry and agreed to do this with almost all of its smartphones. If **all** major carriers and manufacturers activate FM chips in their phones, users will be able to receive emergency alerts, severe weather warnings, evacuation orders or shelter-in-place instructions. FEMA routinely advises the public to have a battery operated radio on hand during local disaster situations. Smartphones with activated FM chips capable of receiving free over-the-air emergency broadcasts could serve as lifelines to people facing dangerous situations, especially if the powergrid is down or cellular service becomes overloaded or disabled.

Examples of Local Public Radio Partnerships to Provide Emergency Communications

Kentucky – Public Radio Primary EAS

WUKY is a 100,000 watt FM radio station licensed to the University of Kentucky in the city of Lexington. In the summer of 2008, WUKY was designated as the primary Emergency Alert System (EAS) station in Kentucky by the Kentucky Broadcasters Association and subsequently the Federal Communications Commission. In partnership with the state EOC,

WUKY provides severe weather notifications and Amber alerts, as well as emergency messages from the Kentucky EOC and the federal government (via National Public Radio) to other radio stations across the state.

Providing timely emergency warnings via traditional radio and now through digital data transmission has the potential to save many lives across the region. Because WUKY is the primary EAS station for Kentucky, the alerts that the station broadcasts will be repeated by other radio stations across the state, many of which are fully automated and would not otherwise be able to provide this information to listeners in a timely manner.

WUKY also formed a partnership with the University of Kentucky's Emergency Management office and LFUCG (Lexington-Fayette Urban County Government) to provide targeted emergency text message notifications via WUKY-FM's subcarrier using the AlertUS system. The targeted text messaging AlertUS system also has many potential social and financial benefits, because messages can be directed only to areas that are directly threatened by a hazard, thus avoiding the creation of a panic situation across the region.

Oklahoma – EAS and FEMA Alerts

KGOU Radio is a full service public radio station, licensed to the University of Oklahoma, serving the greater Oklahoma City metropolitan area, plus Pontotoc, Seminole and Grady counties and 6 counties in northwestern Oklahoma. KGOU plays an integral role in ensuring the safety and livelihood of the state's citizens during times of emergency. Its extensive network of transmitters and translators provides state-wide coverage that surpasses many other broadcast footprints in Oklahoma. KGOU is critical part of the nation's Emergency Alerting System (EAS) and particularly for Oklahoma residents. The EAS connects broadcast stations and

cable systems to emergency response centers and is designed to get information out quickly in a state or national emergency.

Each state has approximately one station, a Primary Entry Point (PEP) station, with a direct connection to FEMA in Washington, D.C. Oklahoma's PEP station is KRMG, a commercial station based in Tulsa. The lead distribution station for alerts in the state is KXXY, a commercial station located in Oklahoma City. KXXY's off-air monitoring equipment, however, cannot hear and therefore cannot capture the emergency alert signal from KRMG for redistribution to local listeners or other stations that monitor KXXY. As the additional method of receiving national FEMA alerts (that does not rely on internet connectivity), KXXY monitors KGOU public radio's alerting signal from the Public Radio Satellite System that is broadcast on one of KGOU's satellite station (KROU, Oklahoma City at 105.7FM). Other stations in the Oklahoma City metro area also monitor KGOU as a precaution against the failure of other systems of notification.

During times of emergency, KGOU broadcasts alerts from the Emergency Alert Network, and most often, from the National Weather Service, as storms develop within the station's vast coverage area, dispatches reporters to affected areas, and works cooperatively with other media in the state to provide real-time, including damage reports, evacuation routes and shelter information. KGOU is part of the state-wide EAS system. KGOU supplements their live severe weather coverage via an agreement with KOCO 5 television.

KGOU also has an agreement with the City of Norman and the city's Emergency Manager wherein the station's transmitter serving Cleveland County (KGOU) carries a private alert system on the broadcast's RDS system which is monitored on special receivers by the city schools and government offices. Alerts and emergency information are distributed by the city

government using this system to their employees, including first responders, as well as school administrators. This system is transparent to the station's regular listeners.

Florida Public Radio Emergency Network (FPREN)

Florida public radio stations have joined forces with the Florida Division of Emergency Management to form the statewide Florida Public Radio Emergency Network (FPREN).

FPREN utilizes the state's public radio outlets to assist the Florida Division of Emergency Management and related agencies in disseminating critical emergency information statewide to listeners through a seamless system of free, over the air FM radio, as well as through various digital media technologies accessible by cell phone or other battery-powered devices.

Collectively covering 99 percent of the state, the FPREN stations are locally staffed and equipped to stay on the air during times of massive power outages in order to deliver important information to local audiences before, during and after an emergency. In the event of a weather incident, the FPREN stations have the ability to provide recovery information for as long as necessary.

Mobile devices applications developed through FPREN are able to obtain local and statewide information from any of the FPREN stations at any time. The information can be delivered via smart phones, tablets, and other digital devices to users at no charge. The use of state of the art mobile technology allows for the delivery of text messages as well as audio and video content on various media platforms simultaneously, ensuring easy, seamless and widespread consumption by citizens.

The FPREN radio stations as well as the Florida Association of Broadcasters member stations work with both national and state government agencies in communicating first alerts and information via the national Emergency Alert System (EAS). The content of FPREN

programming goes well beyond the capacity of the EAS, with detailed local information delivered around the clock by local news departments.

In addition to the mobile device applications, the FPREN Storm Center, currently operated but the University of Florida's WUFT FM, will enable each public radio station to provide detailed local weather forecasts, data and storm updates 24 hours a day during server events. The format is designed specifically for radio listeners, using descriptive language appropriate to an audience with no access to television, as well as the vision impaired. In times of evacuation, this would be particularly useful to a mobile audience. Extensive weather information is also accessible through mobile devices.

South Carolina – ETV and ETV Radio

WLTR-FM (ETV Public Radio) in South Carolina is designated as the media of record by the state and is the primary vehicle for statewide information during natural disasters and other emergencies. ETV Radio serves as a backbone of the state's Emergency Alert System. WLTR-FM in Columbia is South Carolina's primary backup station with several other ETV Radio stations serving as the state's alternate relay stations. All 46 counties are served by AMBER Alert and National Weather Service alerts via ETV and ETV Radio. ETV houses and maintains all 14 South Carolina weather transmitters for the National Weather Service in our towers. ETV houses, maintains and provides the microwave interconnection for all of the 25 radio repeaters of the South Carolina Healthcare.

The South Carolina Emergency Amateur Radio Team (SCHEART) reaches most of the sixty-plus hospitals that receive funding through the Hospital Preparedness Program. ETV is a partner in the collaboration of SCHEART, which includes the University of South Carolina Center for Public Health Preparedness, the South Carolina Emergency Management Division,

South Carolina Department of Health and Environment Control, Division of Information Services, South Carolina Hospital Association, and many other partners.

ETV also houses and maintains all 12 radio repeaters of the South Carolina Wing of the Civil Air Patrol. These repeaters are used in communications to support air search and rescue and are also under agreement for use by the U.S. Air Force and Department of Homeland Security when needed.

Conclusion

Public media exists to serve local communities. From datacasting blueprints to law enforcement during a school shooting to exploring new applications in disaster areas and marine settings, public television is devoted to advancing public safety communications. With the adoption of the ATSC 3.0 digital standard, public television will receive the additional benefits of increased bandwidth and mobility. Public radio is also committed to expanding its public safety communication systems, from statewide severe weather alerts to the activation of FM chips in mobile devices. The existing public media infrastructure has the unique ability to cost-effectively deliver high quality video and audio to those who may be in danger, even during disasters or power outages. As such, public media is committed to improving the usefulness and reliability of EAS and the WEA system.

Respectfully submitted,

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