Amber Alert Program Technology

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Summary

Amber Alerts (also referred to as AMBER plans) were created to disseminate information about child abductions in a timely manner. Research has found that most abducted children murdered by their kidnappers are killed within three hours of the abduction. Prompt response to child abductions is therefore deemed critical by many. Amber Alert plans are voluntary partnerships including law enforcement agencies, highway departments, and companies that support emergency alerts. Technologies used for alerts include the Emergency Alert System (EAS), highway message boards, telephone alert systems, the Internet, text messaging, and e-mail. All 50 states have statewide Amber Alert programs.

Because kidnappers can cross state lines with their victims, the Department of Justice will often be involved in responding to an abduction. For this and other reasons, there is increased federal involvement in and support of Amber Alert plans. The National Center for Missing Adults is another example of an alert program that receives support from the U.S. Department of Justice.

Amber Alert and related technologies are in place for other at-risk programs as well. For example, a number of states have created Silver Alert programs to assist in locating missing adults with cognitive impairments.

Government, non-profit, and volunteer programs use alert technologies as tools to meet their larger goals. Participants choose among the tools available to them. From the perspective of technology policy, more thought might be given by the various program managers, and policy-makers in general, as to how to ensure that the development paths of these technologies mesh. Ideally program alerts should be interoperable – able to exchange information seamlessly across different systems. Planning for state and national emergency alert systems might provide gateways that would ensure access for alerts from all certified programs. Among the new systems being developed, with federal support, that could provide such gateways are the Commercial Mobile Alert System, for cell phone alerts, and new networks using Internet protocols to support 911 call center and other non-commercial communications needs.

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How Amber Alerts Work

Amber Alerts[1] (also referred to as AMBER[2]) use technology to disseminate information about child abductions in a timely manner. Typically an Amber Alert is triggered for children under 18 who are believed by law enforcement officers to have been abducted (except in cases of parental abduction). Research has found that most abducted children murdered by their kidnappers are killed within three hours of the abduction. Prompt response to child abductions is therefore deemed critical by many. Law enforcement officers are encouraged to send out an alert if circumstances indicate that the child is in harm's way, if they have sufficient descriptive information about the child and/or the abductor for an alert, and if they believe that the immediate broadcast of an alert will help. When there is information about a vehicle used in an abduction, this information will usually be transmitted to highway message boards, if that technology is in place. While each plan sets its own parameters, most follow guidelines set by the National Center for Missing and Exploited Children (NCMEC).

A typical Amber Alert would include an Emergency Alert System (EAS) broadcast, alerts on highway message boards, and notifications to public service partners such as police, highway patrols and the field crews of public utilities. A number of counties and cities have Amber Alert programs that notify local residents using e-mail or telephone alert systems to aid in the recovery of abducted children. Alerts can also be sent by text messages to cell phones and other wireless devices. AT&T Mobility, Sprint Nextel, Verizon Wireless and T-Mobile are among the wireless service providers that participate in the Amber Alert network; subscribers can sign up for free text messages.[3] These systems have the advantage of targeting selected audiences by function or geographical location but may not be received in a timely manner; telephone alert systems, for example, can be blocked by call-screening technologies.

Amber Alert technology and alerting techniques are also used for other missing person notifications. A number of local or faith-based organizations maintain services to assist in locating missing adults. Some states participate in a consortium that operates an Amber Alert Web Portal using Internet technology.[4] Information about an Amber Alert is sent to a web portal and reconfigured for different types of broadcasting, including cell phones, pagers, e-mail, highway signs, TV news websites, and emergency communications centers. The technology allows police officers to transmit details and photos through encrypted computer systems in patrol cars. Information, therefore, is disseminated both more quickly and more widely, maximizing the opportunity to find a missing child in the critical first three hours. The alert system is managed from a dedicated web portal that can be accessed by statewide or local systems. The software recognizes the reported locations of abductions and sends emergency messages to targeted areas.

[1] Named after Amber Hagerman, kidnapped and murdered in 1996. Websites with additional information include http://codeamber.org/ and the site of the National Center for Missing and Exploited Children, http://www.ncmec.org.

[2] For "America's Missing: Broadcast Emergency Response."

[3] For more information, see http://www.wirelessfoundation.org and https://www.wirelessamberalerts.org/index.jsp.

[4] For more information, see http://www.amberalert911.com/.

Emergency Alert System (EAS)

The Emergency Alert System (EAS) is jointly administered by the Federal Communications Commission (FCC) and the Federal Emergency Management Agency (FEMA), in cooperation with the National Weather Service (NWS), an organization within the National Oceanic and Atmospheric Administration (NOAA).The EAS sends emergency messages with the cooperation of broadcast radio and television and most cable television stations. Its most common use is for weather alerts. EAS technology is also used in the Amber Alert programs administered in some states and communities. To facilitate transmittal, EAS messages are classified by types of events, which are coded. These event codes speed the recognition and retransmittal process at broadcast stations. For example, a tornado warning is TOR, evacuation immediate is EVI, a civil emergency message is CEM. When a message is received at the broadcast station, it can be relayed to the public either as a program interruption or, for television, a "crawl" at the bottom of the TV screen. In the early stages of Amber Alert program development the CEM (civil emergency) event code was used for EAS messages. In February 2002, the FCC added several new event and location codes for broadcast and cable stations to use; included was a Child Abduction Emergency (CAE) event code. Although broadcaster participation is mandatory for national alerts, the participation of broadcast and cable stations in state and local emergency announcements is voluntary.

Federal Support of Alert Programs

The PROTECT Act (P.L. 108-21) formally established the federal government's role in the Amber Alert system in 2003. Congress has encouraged federal support for other alert programs as well.[5]

The Office of Justice Programs, at the Department of Justice, includes an Amber Alert division, the National AMBER Alert Initiative.[6] The Department of Justice, the Department of Transportation, NCMEC, broadcasters, and law enforcement officers collaborate on national strategies for the Amber Alert program. One collaborative initiative was to develop standard procedures for emergency call takers responding to a report of a missing or abused child. Members of the joint committee that developed the standard included the Association of Public-Safety Communications Officials (APCO), the National Academies of Emergency Dispatch (NAED), the National Emergency Number Association (NENA), NCMEC, and the Department of Justice. The American National Standards Institute (ANSI) Board of Standards Review approved the standard in December 2007 [APCO American National Standard (ANS)1.101.1-2007].[7]

[5] Legislation and broader policy issues are discussed in CRS Report RL34050, *Missing and Exploited Children: Background, Policies, and Issues*, and CRS Report RL34616, *Missing Adults: Background, Federal Programs, and Issues for Congress*, both by Adrienne L. Fernandes.

[6] See http://www.amberalert.gov/.

[7] Joint steering committee on Call Center Best Practices in Cases of Missing and Sexually Exploited Children; see APCO News, "New Standard Addresses Handling Reports of Missing Children," January 22, 2008 at http://www.apcointl.org/new/news/missing-children-standard.php.

National Emergency Child Locator Center

The National Emergency Child Locator Center has been established within NCMEC, as required by the Homeland Security Appropriations Act, 2007 (P.L. 109-295, Title VI, Subtitle E).[8] The purpose of the center is to identify children separated from their families as the consequence of a disaster and reunite them expeditiously. NCMEC is to operate a toll-free call center, set up a website with information about displaced children, and take other steps to collect and disseminate information about the children and their families. NCMEC established a website with links to reports of missing children and missing adults in the aftermath of Hurricanes Katrina and Rita.[9]

National Center for Missing Adults

The National Center for Missing Adults (NCMA)[10] operates as the national clearinghouse for missing adults. NCMA also maintains a national database of missing adults determined to be "endangered" or otherwise at-risk. NCMA was formally established after the passage of Kristen's Act (P.L. 106-468), in 2002.[11] NCMA is a division of the Nation's Missing Children Organization, Inc. (NMCO)—a 501c (3) non-profit organization working in cooperation with the U.S. Department of Justice's Bureau of Justice Assistance, Office of Justice Programs.[12]

Kristen's Act authorized the Attorney General to make grants to public agencies or not-for-profit organizations to perform these functions:

- to assist law enforcement and families in locating missing adults;
- to maintain a national, interconnected database for the purpose of tracking missing adults who are determined by law enforcement to be endangered due to age, diminished mental capacity, or the circumstances of disappearance, when foul play is suspected or circumstances are unknown;
- to maintain statistical information of adults reported as missing;
- to provide informational resources and referrals to families of missing adults;
- to assist in public notification and victim advocacy related to missing adults; and
- to establish and maintain a national clearinghouse for missing adults.[13]

State Initiatives

All 50 states operate Amber Alert programs[14] for missing children. Many states have extended their Amber Alert programs to include missing adults or participate in other alert programs. Silver

[8] P.L. 109-295, Sec. 689b, 120 STAT1449-1450.

[9] See http://www.missingkids.com/missingkids/servlet/PageServlet?LanguageCountry=en_US&PageId=2077.

[10] See http://www.theyaremissed.org/ncma/content.php?webid=about_ncma.

[11] See http://www.theyaremissed.org/ncma/content.php?webid=kristens_law.

[12] See http://www.theyaremissed.org/ncma/content.php?webid=about_nmco.

[13] P.L. 106-268, Sec. 2 114 STAT 2027.

[14] A list of state contact is at http://www.amberalert.gov/state_contacts.htm.

Alert programs, for example, are operated for the benefit of those with Alzheimer's Disease and other cognitive impairments.[15] Silver Alerts are modeled on Amber Alerts and use many of the same technologies and information channels for disseminating information.[16] CRS has prepared an analysis of 11 states with active alert programs, evaluating program features such as legal authority, administrative responsibility, training, and interstate coordination.[17] The states are: Colorado, Delaware, Florida, Georgia, Kentucky, North Carolina, Ohio, Oklahoma, Rhode Island, Texas, and Virginia.

Technology Initiatives

The Emergency Alert System is being upgraded to digital technology and in time will be connected to a gateway that will be able to receive and direct alerts of all types, to any designated location, using any digital media. The gateway, the Integrated Public Alert and Warning System (IPAWS), is being developed through FEMA's National Continuity Program Directorate. One of the new alert technologies that will use the gateway is the Commercial Mobile Alert System (CMAS).[18] The regulations for CMAS were established by the FCC through its rule-making process. In addition to message formats and other standards, regulations require three alert categories that must be carried by participating carriers: presidential, imminent threat, and Amber Alerts.[19]

Another investment in emergency communications infrastructure that will likely benefit Amber Alerts and similar programs is for the transition to Internet protocols in 911 call centers and networks. Unlike most existing 911 systems, which use analog technology, IP-enabled networks can transmit information digitally. The networks, which operate like the Internet but do not necessarily connect to the Internet, can support any type of broadband communication and therefore can be used for a variety of communications purposes.[20]

Policy Initiatives

In compliance with requirements of the Homeland Security Appropriations Act, 2007, the Department of Homeland Security issued the National Emergency Communications Plan (NECP) in July 2008.[21] The plan focused on the communications needs of first responders at the site of disasters. The next version of the plan, due in 2010, is expected to expand the planning process to include 911 systems, alert programs, and other communications tools that are needed in

[15] Example of state Silver Alert programs are provided in *Silver Alert Initiatives in the States*, National Association of State Units on Aging, May 1, 2008 at http://www.nasua.org/pdf/Silver%20Alert%20Initiatives%20in%20the%20states.pdf.

[16] Information at http://nationalsilveralert.org/.

[17] CRS Report R40552, *Alert Systems for Missing Adults in Eleven States: Background and Issues for Congress*, by Adrienne L. Fernandes and (name redacted).

[18] IPAWS and CMAS are discussed in CRS Report RL32527, *The Emergency Alert System (EAS) and All-Hazard Warnings*, by (name redacted).

[19] FCC, *First Report and Order*, April 9, 2008, PS Docket No. 07-287 (FCC 08-99).

[20] Discussed in CRS Report RL34755, *Emergency Communications: The Future of 911*, by (name redacted).

[21] DHS, National Emergency Communications Plan, July 2008 at http://www.dhs.gov/xlibrary/assets/national_emergency_communications_plan.pdf.

responding to large-scale emergencies. The NECP is widely viewed as the capstone of coordinated planning for emergency communications between and among agencies at all levels of government. The scope of the plan, however, may not be wide enough to include the type of technology-policy decisions that would ensure that all facets of emergency communications are developed in concert. Such a step is widely considered to be essential to an effective response capacity for crises big or small, personal or global, that would endeavor to protect everyone with equal zeal and efficiency.

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