



## PROCEDURAL AND FACTUAL BACKGROUND

Among other purposes, the Commission initiated this docket to examine the integration of public alert and warning into new and emerging digital media technologies.<sup>2</sup> The *Further NPRM* released in November, 2005 sought comment on specific actions the Commission should take to facilitate the development of a more effective, comprehensive digital public alert and warning system utilizing these technologies.<sup>3</sup>

In its comments and other submissions in response to the *Further NPRM*, AT&T explained that as a matter of public policy it fully supports the critical role of EAS in providing public safety information, and stated its commitment as a provider of IP video services to participating in the EAS.<sup>4</sup> AT&T also explained in its filings that implementing EAS over nascent IP video service faced a number of technical challenges, and that it was actively working to address those issues so as fully to deploy EAS capability for U-Verse TV service.<sup>5</sup>

In the *Second Report and Order*, the Commission exercised its ancillary jurisdiction under Title I of the Communications Act (47 U.S.C. § 154(i)) to require that

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<sup>2</sup> *Review of the Emergency Alert System*, First Report and Order and Further Notice of Proposed Rulemaking, 20 FCC Rcd 18,625, 18,631 (2005) (“*First Report and Order*” and “*Further NPRM*”) ¶16.

<sup>3</sup> *Id.*, ¶18.

<sup>4</sup> *See* AT&T Comments filed January 24, 2006, , at 1-2; 4-6; AT&T Reply Comments filed February 23, 2006, at 1, 6; *see also* AT&T *ex parte* letters dated June 5, July 13, August 17 and August 23, 2006 and April 6 and May 23, 2007. AT&T made this undertaking notwithstanding that Title VI of the Communications Act and the Commission’s then-current rules did not require wireline video service providers that were not cable operators to participate in the EAS. *See, e.g.*, AT&T Comments at 4.

<sup>5</sup> *See, e.g.*, AT&T Comments at 3, 5-6.

wireline video providers such as AT&T participate in EAS.<sup>6</sup> Among other obligations, participants in EAS must provide Presidential alerts on the channels that they offer to their subscribers.<sup>7</sup> The obligation to participate in EAS, and to provide Presidential alerts in accordance with the requirements of that system, will become effective 60 days from the Congress' receipt from the Commission of a report on its EAS modifications pursuant to the Congressional Review Act.<sup>8</sup>

The Commission acknowledged in the *Second Report and Order* that AT&T had shown in its filings that there were technical obstacles to implementing EAS in an IP-based system such as AT&T U-Verse TV; that AT&T was already actively working on a solution to those technical impediments; and that AT&T had requested the Commission to set no deadline earlier than mid-2008 for non-cable-operator compliance with EAS.<sup>9</sup> However, the Commission prescribed that wireline video providers provide EAS without taking into account the additional time that AT&T requires to resolve the technical issues necessary for compliance.

These technical issues, and the steps AT&T has undertaken to address them, are described in detail in the accompanying declaration of Matthew Wallace, AT&T's Executive Director-Advanced Access Technologies ("Wallace Declaration"). As shown there, AT&T's U-Verse TV service differs fundamentally from a traditional cable system. Specifically, AT&T U-Verse TV service is provided over a sophisticated, IP-

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<sup>6</sup> See *Second Report and Order*, ¶ 48.

<sup>7</sup> See *id.*, ¶ 11.

<sup>8</sup> See *id.*, ¶ 83 (as modified in erratum).

<sup>9</sup> See *id.*, ¶ 45 and nn. 150-152.

based switched data services network that utilizes two-way communication to enable the exchange of messages and services between the client and server. Due to the two way nature of the IP network, every communication between the client and server must be encrypted to ensure protection of customer information and video content. These functionalities require a complex client-server software application, which in AT&T's network is implemented by Microsoft IPTV Edition software running on PC-based servers, and by the software client on the set top box ("STB").<sup>10</sup>

At the same time, in contrast to a traditional cable system in which EAS is implemented technically by directly modifying the unencrypted video stream to add a text message which in effect becomes just a "part" of the video signal, the content encryption in an IPTV network prevents the video signal from being directly modified. Disabling the encryption, even temporarily, creates an unacceptable security risk to the network, customer information, and the content providers' property.<sup>11</sup>

To address this issue, AT&T has been working diligently with its vendors to modify U-Verse TV service to implement by no later than July 31, 2008 a comprehensive, two-phased solution to support Presidential Alerts by "force tuning" subscribers viewing a national broadcast channel to another single national broadcast channel such as CNN selected by AT&T for Presidential alerts.<sup>12</sup> The initial implementation phase, which will be completed no later than March 31, 2008, will broadcast the Presidential emergency message by force tuning all standard definition and

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<sup>10</sup> See Wallace Declaration., ¶ 3.

<sup>11</sup> *Id.*, ¶¶ 4-5.

<sup>12</sup> However, AT&T will not force tune local broadcast stations because any Presidential alert will be passed through as transmitted by the broadcast station. *Id.*, ¶.6 n. 2.

1080i high definition national channels such as HBO, ESPN, etc. (except for occasional and blackout channels) to a single national channel via a serial digital interface (“SDI”) switch operation at the U-Verse TV service super hub office (“SHO”).<sup>13</sup> The second phase of the implementation, which will be completed no later than July 31, 2008, will be performed on a DMA-by-DMA basis at the VHOs. This phase will entail force tuning at the STB to a single national channel the remaining channels and applications not addressed in the earlier phase, including 720p high definition channels, music channels, blackout channels, occasional channels, pay-per-view (“PPV”), VOD, pre-recorded content, PEG channels, the on-screen menu, the interactive guide, and game channels.<sup>14</sup>

For AT&T’s particular network architecture, deploying this capability requires three interrelated steps. Specifically, new EAS receiver equipment must be installed in each local video market where U-Verse TV service is provided. Additionally, AT&T must deploy new servers and software in the IPTV servers in each of those markets to receive, translate and transmit the encrypted EAS notifications. Finally, AT&T must deploy new client software to all STBs.<sup>15</sup>

Following the Commission’s release of the *Further NPRM* in 2006, AT&T requested its equipment and software vendors to provide an EAS receiver function, and to supply the required IPTV server and client software. The vendors delivered these

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<sup>13</sup> In the AT&T U-Verse TV service network architecture, the SHO processes and distributes national channels to video hub offices (VHOs) serving local video markets for transmission of those channels to U-Verse subscribers. The VHOs also process and transmit local broadcast channels and certain other programming (such as video on demand (“VOD”), the interactive guide, etc.) to subscribers. *See id.*, ¶ 3.

<sup>14</sup> *Id.*, ¶ 6.

<sup>15</sup> *Id.*, ¶ 7.

components to AT&T on April 15, 2007. Thereafter, AT&T commenced laboratory testing of the software, to be followed by field testing of that software and the associated installed physical equipment.<sup>16</sup>

The laboratory testing phase of AT&T's EAS deployment was completed in October, 2007. This six month interval between software delivery and the conclusion of laboratory testing could not have been shortened because the software upgrade and significant changes to AT&T's IP data network architecture could potentially affect other software deployed in that system. Additionally, the EAS-related software is part of a generally available software release from AT&T's vendor that is used to provide other feature functionalities for U-Verse TV service in addition to EAS capability. AT&T was therefore required to subject the entire system and network to regression testing to ensure that they will function appropriately for U-Verse TV subscribers.<sup>17</sup>

Field trial and deployment of the EAS functionality could only proceed once the laboratory testing process was completed. Field testing is scheduled for completion in December 2007. For full EAS deployment, AT&T must install the required equipment in every video market that it serves. Such installation requires customer service impacting upgrades of both the EAS server capability and the new client.<sup>18</sup>

This sensitive and technically complex equipment deployment and upgrade process is expected to take 3-4 weeks to complete in each of AT&T's video service markets. Moreover, the methodical approach needed to protect customer service while

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<sup>16</sup> *Id.*, ¶7.

<sup>17</sup> *Id.*, ¶¶ 7-8.

<sup>18</sup> *Id.*, ¶¶ 9.

these procedures are being carried out constrains AT&T's ability concurrently to deploy EAS capability in multiple markets. However, AT&T has hired additional personnel, and has secured contract resources to further augment those personnel, to facilitate the deployment timeline insofar as possible, consistent with maintaining customer service requirements.<sup>19</sup> AT&T's current planning estimates therefore indicate that EAS deployment will be completed for all video markets that AT&T serves by, or prior to, July 31, 2008.<sup>20</sup>

**A LIMITED WAIVER SHOULD BE GRANTED FOR DEPLOYING  
EAS CAPABILITY FOR U-VERSE TV SERVICE**

The Commission should grant AT&T a waiver of the *Second Report and Order* and its implementing regulations, allowing deployment of EAS capability for U-Verse TV service in accordance with the schedule described above. It is axiomatic that waiver of the Commission's orders and regulations is appropriate where the applicant demonstrates that special circumstances warrant a deviation from the general rule and that such deviation will serve the public interest.<sup>21</sup> AT&T's instant request for a time-limited waiver fully satisfies both of these criteria.

First, as shown above and in the Wallace Declaration, due to the technological characteristics of its IP-based network architecture, it is technically infeasible for AT&T to deploy EAS capability for U-Verse TV service in compliance with the Commission's newly-imposed obligations for wireline video carriers prior to July 31, 2008. The Commission has long recognized that such technical constraints on compliance with its

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<sup>19</sup> *Id.*, ¶ 9-10

<sup>20</sup> *Id.*, ¶ 10.

<sup>21</sup> *See WAIT Radio, Inc. v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

orders and rules are grounds for waiver of an applicant's obligations.<sup>22</sup> Moreover, in keeping with past Commission practice,<sup>23</sup> AT&T is requesting only a specifically time-limited waiver of the period in which to implement EAS capability for U-Verse TV service, and not simply an open-ended deferral of that deadline. The Commission has also noted that a waiver allowing the applicant additional time to transition to prescribed technical standards "must demonstrate 'a clear path to compliance' by . . . providing concrete evidence of its documented commitment to a date certain for that transition to be accomplished."<sup>24</sup> AT&T has clearly satisfied that obligation here. It has provided detailed information in this petition and the accompanying declaration regarding the steps it took, prior to the release of the *Second Report and Order*, to provide EAS capability for

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<sup>22</sup> See, e.g., *Implementation of the Pay Telephone Reclassification and Compensation Provisions of the Telecommunications Act of 1996*, 13 FCC Rcd 4998, 5001, 5029, 5033-34 (1998) ("Payphone Waiver Order") ¶¶ 3, 59, 69-70 (granting waivers of requirement to provide pay-phone specific digits through Flex ANI where "technically infeasible" to do so); *Policies and Rules Concerning Operator Service Access and Pay Telephone Access and Pay Telephone Compensation*, 12 FCC Rcd 14,857, 14,862-63 (1996) ("OLS Waiver Order") ¶¶ 6-8 (waivers of requirement to provide originating line screening ("OLS") where it was "not currently technically feasible . . . to offer such services"); *Midyear 1986 Access Tariff Filings*, 2 FCC Rcd 184, 185 (1987) ("WATS Waiver Order") (granting waiver to provide unrestricted WATS access lines ("WALS") from certain switches due to "inherent software limitations" within current operating systems).

<sup>23</sup> See *Payphone Waiver Order*, 13 FCC Rcd at 5001, 5034 (¶¶ 3, 69) (granting "limited waiver" of obligation to permit deployment of that capability "as soon as technically feasible"); *OLS Waiver Order*, 12 FCC Rcd at 14,862-63 (¶ 7) (finding "temporary waivers" justified "to afford these [waiver applicants] additional time to make the necessary arrangements" to implement OLS); see also *Investigation of Access and Divestiture Related Tariffs*, CC Docket No. 83-1145, Mimeo No. 2964 (Com. Car. Bur. rel. March 16, 1984) (granting waivers "for a limited period" to allow applicants to resolve technical and administrative problems affecting ability to offer "meet point" access billing).

<sup>24</sup> *Chariton Valley Communication Corp., Inc.*, 20 FCC Rcd 7526, 7529 (2005) ¶6, quoting *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, 18 FCC Rcd 20,987 at ¶2 (2003).



U-Verse TV service despite the fact it was not obligated to do so under then-current Commission rules.<sup>25</sup>

Specifically, AT&T has already evaluated the necessary modifications to its IP network to provide EAS, procured the necessary hardware and software, and has already completed laboratory testing of that software. *See* p. 6 *supra* and Wallace Declaration, ¶¶ 5-6. AT&T has also provided a concrete schedule for completion of field testing and deployment in all of AT&T's video markets by specific dates. *See* pp. 6-7 *supra* and Wallace Declaration ¶¶ 5-8. The time-limited waiver AT&T requests will permit completion of these activities at the earliest feasible date consistent with sound engineering practices and preservation of service continuity to existing AT&T U-Verse TV service subscribers. *See id.*

Second, granting AT&T's time-limited waiver is clearly in the public interest. As a threshold matter, it is clearly beneficial to make the critical emergency information public safety capabilities of EAS available to U-Verse TV subscribers, which can only be accomplished through the deployment schedule AT&T has described in its petition. Moreover, U-Verse TV offers substantially more bandwidth than is currently available to AT&T's subscribers using DSL service, and this increased bandwidth will allow AT&T to offer those customers a suite of IP-based services including not only IP video service, but also high-speed Internet access and, in the future, voice over Internet protocol ("VoIP").<sup>26</sup> Particularly because IP video is still a nascent technology, it would be

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<sup>25</sup> Compare *CAI Data Systems, Inc.*, 18 FCC Rcd 22,332 (2003) (denying licensee extension of prescribed construction deadline for failure to take prompt steps to achieve compliance, noting "technical or regulatory uncertainty is no excuse" for not attempting to meet deadline).

<sup>26</sup> *See* AT&T Comments, p. 3.

contrary to sound public policy to impose undue burdens upon AT&T to deploy EAS capability through this new offering in a timeframe that it can not meet. The time-limited waiver AT&T requests will achieve the Commission's objectives for expanding the EAS to new digital technologies in a reasonable manner and without unnecessary delay.

### CONCLUSION

For the reasons stated above, AT&T requests that the Commission grant AT&T a limited waiver to not later than July 31, 2008, to the extent that it may be necessary, of the effective date for implementation of EAS capability pursuant to the *Second Report and Order* in this proceeding.

Respectfully submitted,

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SBC's ADSL footprint, and General Manager of Central Office Engineering for Houston and Southeast Texas. I hold a Bachelor's degree in Computer Engineering from the University of Kansas and a Master of Science in Information Networking from Carnegie Mellon University.

3. AT&T's U-Verse TV service is provided over a sophisticated, IP-based data network that provides two-way communication to enable the exchange of messages and services between a client and server. The AT&T U-Verse TV service network architecture consists of a super hub office ("SHO") and multiple video hub offices ("VHOs") serving local video markets. The SHO processes and distributes national channels to the VHOs for transmission of those channels to U-Verse subscribers. The VHOs also process and transmit local broadcast channels and certain other programming (such as video on demand ("VOD"), the interactive guide, etc.) to subscribers.

4. These functionalities require a complex client-server software application, which in AT&T's network is implemented by Microsoft IPTV Edition software running on PC-based servers, and by the software client on the set top box ("STB"). Further, because of the two way nature of the IP network, every communication message between the client and server is encrypted to ensure protection of customer information and video content.

5. The IPTV network differs fundamentally from a traditional cable system, in which EAS is implemented technically by directly modifying the unencrypted video stream to add a text message which in effect becomes just a "part" of the video signal. In an IPTV network, content encryption prevents the video signal from being directly modified and disabling the encryption, even temporarily, creates an unacceptable security

risk to the network, customer information, and the content providers' property. However, as described below, AT&T's U-Verse TV service can be modified to provide EAS notifications by sending a separate, encrypted message with the EAS notification message to the client software on the STB, where the message may be decrypted for display.

6. No later than July 31, 2008, AT&T U-Verse TV will implement a comprehensive solution to support Presidential Alerts by "force tuning" subscribers viewing a national broadcast channel to another single national -broadcast channel such as CNN selected by AT&T for Presidential alerts.<sup>2</sup> The initial phase of this solution, which will be completed no later than March 31, 2008, will transmit the Presidential emergency message via a serial digital interface ("SDI") switch operation performed at the SHO to all standard definition and 1080i high definition national channels such as HBO, ESPN, etc. (except for occasional and blackout channels). The second implementation phase will occur on a DMA-by-DMA basis at the VHOs, and will be completed no later than July 31, 2008. This portion of the implementation will be performed via STB force-tuning to a single national channel selected by AT&T for Presidential alerts. The channels and applications covered by this second implementation phase include 720p high definition channels, music channels, blackout channels, occasional channels, Pay-Per-View ("PPV"), Video on Demand ("VOD"), pre-recorded content, PEG channels, the on-screen menu, the interactive guide, and game channels.

7. For AT&T's specific network architecture, deployment of this new EAS capability requires (a) installation of new EAS receiver equipment in each local video

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<sup>2</sup> However, AT&T will not force tune local broadcast stations because any Presidential alert will be passed through as transmitted by the broadcast station.

market; (b) deployment of new servers and software in the IPTV server complex in each local video market to receive, translate, and send these notifications, and (c) deployment of new client software to all STBs. Although AT&T was not originally required to participate in the EAS, it voluntarily undertook to do so and, in 2006, requested its equipment and software vendors (respectively, Trilithic, Inc. and Microsoft, Inc.) to provide an EAS receiver function and to supply the IPTV server and client software. These components were delivered to AT&T on April 15, 2007. The process of laboratory testing that software was completed in October 2007, and will be followed by field testing to be completed in December 2007.

8 The six month laboratory testing period could not have been shortened because these significant changes to the architecture and the software upgrades potentially may affect other pieces of software in the system. Further, the EAS-related software provided by Microsoft not only provides EAS functionality, but is part of a generally available software release used by Microsoft customers around the globe that includes other feature functionality. Therefore, AT&T not only had to test the upgrade process and the EAS functionality, but had to subject the entire system and network to regression testing to ensure proper customer experience.

9. Moreover, only after the lab testing was completed could AT&T begin the field trial and deployment of these capabilities. This deployment requires physical equipment installation in every video market AT&T serves, and requires two customer service impacting upgrades – one for the EAS server capability (i.e., in AT&T's IPTV network) and one for the new client (i.e., in the STB). To facilitate the deployment

timeline for EAS, AT&T has hired additional personnel, and has secured contract resources to further augment those personnel.

10. This equipment deployment and the upgrade process is expected to take between 3 and 4 weeks per video hub office (“VHO”), because the sensitive and technically complex nature of this work requires a methodical approach to protect customer service and limits the concurrency with which EAS can be deployed in multiple markets, simultaneously. Accordingly, AT&T expects to complete EAS implementation on or before July 31, 2008.

I swear under penalty of perjury that the foregoing is true and correct.

Executed at San Antonio, Texas, on November 14, 2007.

A handwritten signature in black ink, appearing to read "Matthew Wallace", written in a cursive style.

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Matthew Wallace