



1200 G Street, NW
Suite 500
Washington, DC 20005

P: 202-628-6380
F: 202-393-5453
W: www.atis.org

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August 18, 2008

VIA ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

**Re: Alliance for Telecommunications Industry Solutions (ATIS)
Ex Parte Filing
CS Docket No. 97-80**

Dear Ms. Dortch:

The Alliance for Telecommunications Industry Solutions (“ATIS”), on behalf of its IPTV Interoperability Forum (IIF), is writing to update the Federal Communications Commission (“Commission”) on the progress ATIS has made towards developing industry-wide standards for Internet Protocol TV, or IPTV.

ATIS is a global standards development and technical planning organization that is committed to providing leadership for, and the rapid development and promotion of, worldwide technical and operations standards for information, entertainment and communications technologies using a pragmatic, flexible and open approach. Industry professionals from all segments of the communications industry actively participate in ATIS’ 22 open industry committees and forums.

The ATIS IIF, which was established in 2005, is recognized globally as the leading developer of requirements, standards and specifications for IPTV. More than 40 ATIS-member companies actively participate in the IIF’s IPTV standardization efforts, including Alcatel-Lucent, AT&T, BT, Cisco, Intel, Microsoft, Motorola, Nokia Siemens Networks, Nortel, Qwest, Sun Microsystems, and Verizon, among others.

Since its establishment, the ATIS IIF has measurably advanced the development of IPTV specifications and standards. Coordination and development of IPTV standards is a complicated and technical process, which requires input and consideration from all facets of the communications and entertainment industry. Five (5) committees within the ATIS IIF manage the development of IPTV specifications; they are committed to bi-weekly meetings to address the specific issues assigned to them. Through the work of these committees – Architecture, IPTV Security Solutions, Testing and Interoperability, Metadata and Transaction

Standards that Drive the Business of Communications

Delivery, and Quality of Service Metrics – the ATIS IIF has produced key requirements and framework documents that serve as the foundation for IPTV standards. The following list chronicles IIF's progress and highlights the key activities and deliverables to date.

KEY DELIVERABLES

APRIL 2006 Produced the industry's first set of IPTV architecture requirements that define, in broad terms, the scope of IPTV services and the high level requirements that will guide the development of architecture specifications over time. *IPTV Architecture Requirements* (ATIS-0800002).

AUGUST 2006 Defined the three phases in which IPTV architecture standards will be developed by ATIS. *IPTV Architecture Roadmap* (ATIS-0800003).

NOVEMBER 2006 Established a framework that provides the basis for definitions of Quality of Service (QoS)/Quality of Experience (QoE) related to different segments of the network, different service instances or invocations, network architectures/technologies utilized, and modes of service. *Framework for QoS Metrics and Measurements Supporting IPTV Services* (ATIS-0800004).

DECEMBER 2006 Reported on the factors that may cause packet loss in IPTV transmissions and addressed solutions to mitigate packet drop. *IPTV Packet Loss Issue Report* (ATIS-0800005).

JANUARY 2007 Specified a default scrambling/descrambling algorithm for MPEG-2 Transport Stream and scrambling algorithm signaling, the use of which provides network operators with a maximum choice of IPTV receiving device platforms. *IIF Default Scrambling Algorithm (IDSA) – IPTV Interoperability Specification* (ATIS-0800006).

MARCH 2007 Developed the *IPTV High Level Architecture* to enable end-to-end systems' implementation and interoperability for the supporting network design. The standard takes into consideration the architecture scaling from local to regional and national service offerings and identifies components that will interface with each other to deliver IPTV. *IPTV High Level Architecture* (ATIS-0800007).

APRIL 2007 Defined the requirements for interoperability of systems and components in the IPTV DRM/security environment. *IPTV DRM Interoperability Requirements* (ATIS-0800001).

AUGUST 2007 Defined a base set of Quality of Service metrics for Linear/Broadcast IPTV service. *QoS Metrics for Linear Broadcast IPTV* (ATIS-0800008).

SEPTEMBER 2007 Created *High Level OSS/BSS Functional Requirements and Reference Architecture for IPTV*, which offers support to IPTV service providers by defining the requirements for the interoperability of systems and components in the IPTV operating support

system (OSS) environment and describing a high-level reference architecture of OSS functionality for IPTV service management. *High Level OSS/BSS Functional Requirements and Reference Architecture for IPTV* (ATIS-0300092).

JANUARY 2008 Defined a base set of Quality of Service metrics for regulatory services, including Emergency Alert Systems, Closed Captioning and Content Advisories, and V-Chip Technology. *Quality of Service Metrics and Measurements for Public Services* (ATIS-0800011).

MAY 2008 Issued a Trial-Use Standard describing technique to generate an estimate of video quality by using the Estimated Peak Signal-to-Noise Ratio (EPSNR) algorithm. *EPSNR Trial-Use Standard* (ATIS-0800021 [trial-use]).

JUNE 2008 Issued two technical and operations standards for IPTV to IPTV to provision, configure, and monitor devices in the consumer domain and to help ensure integrity and authenticity of content within an interoperable environment. *Remote Management of Devices in the Consumer Domain for IPTV Services* (ATIS-0800009); *Secure Download and Messaging Interoperability Specification* (ATIS-0800014).

JULY 2008 Issued two new metadata standards to enable the transport of critical information to customers: electronic program guide information and emergency alerts. *IPTV Electronic Program Guide (EPG) Metadata Specification* (ATIS-0800020); *IPTV Emergency Alert System (EAS) Metadata Specification* (ATIS-0800012).

AUGUST 2008 Issued two new security standards to specify the interoperability of systems and components in the IPTV DRM/security environment with respect to Certificate Trust Management Hierarchy and specify the default ATIS IIF certificate format, the IPTV Security Solution/Certificate (ISS/C). *Certificate Management Trust Hierarchy Interoperability Specification* (ATIS-0800015); *Standard PKI Certificate Format Interoperability Specification* (ATIS-0800016).

AUGUST 2008 *Network Attachment and Initialization of Devices and Client Discovery of IPTV Services* (ATIS-0800017). This specification defines a consistent and standard sequence that an IPTV Terminal Function (ITF) executes to attach the device to the network and the service provider and ready the device for the actual utilization of the selected services.

As illustrated by the foregoing, definitive progress is being made towards a unified IPTV standard, with standards required for a standardized offering of linear TV scheduled for completion this fall. Numerous additional standards and specifications are envisioned, which will add additional functionality for a standardized offering of Video on Demand, Pay per View, and interactive IPTV. The following list provides a tentative roadmap of near-term activities and deliverables:

CURRENT ACTIVITIES

3Q2008 *IPTV Linear TV Service.* This specification addresses the components that are essential to the acquisition, processing and delivery of the Linear/Broadcast content, as well as those which provide the ability to operate the service.

3Q2008 *Media Protocols Specification.* This document defines the media protocols, including reliability protocols, for the IPTV service.

3Q2008 *DRM Interoperability Requirements for the Distribution of Content in the Subscriber's Authorized Service Domain.* This requirements document primarily addresses the IPTV Digital Rights Management (DRM) interoperability requirements for the distributing of content in the subscriber's authorized service domain (e.g. in the home), and will identify related work and gaps (as appropriate) in industry work.

3Q2008 *DRM Interoperability Application Level Interfaces Interoperability Specification-Server-Side APIs.* This document is a DRM Interoperability Specification/Standard that addresses all the requirements associated with server-side interoperability application programming interfaces (APIs).

3Q2008 *DRM Interoperability Application Level Interfaces Interoperability Specification-Client-Side APIs.* This DRM interoperability specification/standard addresses all the requirements associated with client-side interoperability APIs.

3Q2008 *IPTV Consumer Domain Device Configuration Metadata.* This specification establishes requirements for metadata associated with configuration of consumer domain (specifically the delivery network gateway (DNG) and ITF) devices, for example, during network attachment, initialization, configuration and remote management.

3Q2008 *QoS Metrics for Video on Demand (VOD).* This document will establish basic Quality of Service (QoS) metrics for video on demand (VOD). The work will establish interpretations of the meanings of these metrics, and measurement points and applicable measurements will be identified.

3Q2008 *Fault Codes for IPTV.* This document will establish a categorized listing of fault modes for IPTV functions and components.

3Q2008 *Test Plan for Evaluation of Quality Models for IPTV Services.* This issue shall deliver a document that describes subjective and objective test plans appropriate for the formal evaluation of objective video quality prediction algorithms.

4Q2008 *Interoperability Testing for Network Attachment and Initialization.* The document describes trial use cases, test cases, and test scripts for IP Multimedia Subsystem (IMS) and non-IMS based implementations of: (1) network attachment and Initialization of devices and client discovery of IPTV services; and (2) IPTV consumer domain device configuration metadata.

4Q2008 *Security Robustness Rules Interoperability Specification.* This document defines a standard to achieve and maintain a secure environment and provide robustness rules for the handling, storing, and transmitting of sensitive materials.

4Q2008 *Multicast Network Service Specification.* The specification describes the simplest multicast service that the network provider can provide for use as a basis for a linear/ broadcast TV service. The report will describe the consumer attachment, the security, and manageability and reliability aspects.

4Q2008 *IPTV Consumer Metadata Requirements.* This document establishes basic consumer (subscriber and user) profile and preferences metadata requirements for an IPTV Consumer Metadata Specification/Standard.

1Q2009 *Content Acquisition Latency Technical Report.* This technical report examines the question of the latency of acquiring a content stream and the methods of reducing said latency.

1Q2009 *Managing the IIF Trust Hierarchy Interoperability Specification.* This standard addresses the revocation of certificates, additions of new Certificate Authorities, and Trust Hierarchy rules establishment.

1Q2009 *IPTV QoE Requirements.* This document will provide a comprehensive survey of the various activities of other standards bodies in Quality of Experience (QoE) as well as a detailed perspective that describes the overall needs around QoE particularly for all ATIS IIF-defined IPTV services.

2Q2009 *Technical Report on IPTV Advertising.* This technical report explores the range of potential IPTV advertising services and lists high level requirements for IPTV-related advertising.

The ATIS IIF expects that the delivery of final, fully-featured and comprehensive IPTV standards and specifications will require at least another 18 to 24 months of work, and additional time afterwards will be required for consumer electronics companies to design and manufacturer products that conform to those standards and specifications.

The ATIS IIF is committed to developing a unified IPTV standard and, thereby, ultimately enabling the interoperability of IPTV equipment among IPTV system operators and the ability of consumers to enjoy the full potential offered by the IPTV experience.

Letter to Marlene Dortch
August 18, 2008
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If there are any questions regarding this matter, or you would like additional information about the work of the ATIS IIF, please do not hesitate to contact the undersigned.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Thomas Goode".

Thomas Goode
General Counsel

Cc: Dan O'Callaghan (Verizon), IIF Chair
Richard Brand (Nortel), IIF Co-Chair
Maria Estefania, ATIS Vice President of Standards Development