ATIS-0700008.v002

ATIS Standard on -

Cell Broadcast Entity (CBE)-to-Cell Broadcast Center (CBC) Interface Specification

As a leading technology and solutions development organization, the Alliance for Telecommunications Industry Solutions (ATIS) brings together the top global ICT companies to advance the industry's most pressing business priorities. ATIS' nearly 200 member companies are currently working to address the All-IP transition, 5G, network functions virtualization, big data analytics, cloud services, device solutions, emergency services, M2M, cyber security, network evolution, quality of service, billing support, operations, and much more. These priorities follow a fast-track development lifecycle — from design and innovation through standards, specifications, requirements, business use cases, software toolkits, open source solutions, and interoperability testing.

ATIS is accredited by the American National Standards Institute (ANSI). The organization is the North American Organizational Partner for the 3rd Generation Partnership Project (3GPP), a founding Partner of the oneM2M global initiative, a member of the International Telecommunication Union (ITU), as well as a member of the Inter-American Telecommunication Commission (CITEL). For more information, visit www.atis.org.

Published by

Alliance for Telecommunications Industry Solutions
1200 G Street, NW, Suite 500
Washington, DC 20005

ATIS-0700008.v002

ATIS Standard on

Cell Broadcast Entity (CBE)-to-Cell Broadcast Center (CBC) Interface Specification

Alliance for Telecommunications Industry Solutions

Approved February 2018

Abstract

This Standard defines the interface and message transfer protocol between a Cell Broadcast Entity (CBE) and a Cell Broadcast Center (CBC) to support text-based Cell Broadcast Services. This Standard supports the requirements of the FCC Report & Order 16-127 and the FCC Order on Reconsideration 17-143.

Foreword

The Alliance for Telecommunication Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The Wireless Technologies and Systems Committee (WTSC) develops and recommends standards and technical reports related to wireless and/or mobile services and systems, including service descriptions and wireless technologies. WTSC develops and recommends positions on related subjects under consideration in other North American, regional, and international standards bodies.

The mandatory requirements are designated by the word shall and recommendations by the word should. Where both a mandatory requirement and a recommendation are specified for the same criterion, the recommendation represents a goal currently identifiable as having distinct compatibility or performance advantages. The word may denotes an optional capability that could augment the standard. The standard is fully functional without the incorporation of this optional capability.

Suggestions for improvement of this document are welcome. They should be sent to the Alliance for Telecommunications Industry Solutions, WTSC 1200 G Street NW, Suite 500, Washington, DC 20005.

At the time of consensus on this document, WTSC, which was responsible for its development, had the following leadership:

D. Zelmer, WTSC Chair (AT&T)

M. Younge, WTSC Vice Chair (T-Mobile)

P. Musgrove, WTSC SN Chair (AT&T)

G. Schumacher, WTSC SN Vice Chair (Sprint)

D. Sennett, Technical Editor (AT&T)

The Systems and Networks (SN) subcommittee was responsible for the development of this document.

Table of Contents

Table of Figures

Table of Tables

ATIS Standard on –

Cell Broadcast Entity (CBE) to Cell Broadcast Center (CBC) Interface Specification

1 Scope, Purpose, & Application

1.1 Scope

The scope of this Standard is the definition of the interface and message transfer protocol between a Cell Broadcast Entity (CBE) and a Cell Broadcast Center (CBC) to support text-based Cell Broadcast services.

1.2 Purpose

The purpose of this Standard is to define a message transfer protocol on the interface between the CBE and CBC independent of the technology and application; to identify the requirements on the CBE and CBC to support the interface; and to identify requirements to support assumptions made in other specifications, such as the 3GPP specifications (e.g., [Ref 1]).

One of the main goals behind the CBE-to-CBC interface is to have a common interface from the CBE to the CBC that is independent of Cell Broadcast applications and the technologies associated with the Commercial Mobile Service Provider (CMSP) infrastructure. Any application-dependent functions are to be handled by the CBE, whereas any technology-dependent functions [e.g., Global System for Mobile communications (GSM), Universal Mobile Telecommunications System (UMTS), Long Term Evolution (LTE)] are to be handled by the CBC.

1.3 Application

This specification is applicable to a CBE interfacing to a CBC. This specification is independent of the application supported by the Cell Broadcast Service (CBS) and is intended to support any text-based application over the Cell Broadcast Service.

Depending on operator policy, a CBC may have to support the CBE-to-CBC interface protocol as defined in this specification and the previous version of the CBE-to CBC-interface protocol as specified in ATIS-0700008 [Ref 8].

2 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this ATIS Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this ATIS Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

[Ref 1] 3GPP TS 23.041, *Technical realization of Cell Broadcast Service (CBS)*.[1]

[Ref 2] IETF RFC 3629, *UTF-8, A transformation format of ISO 10646*.[2]

[Ref 3] 3GPP TS 21.905, *Vocabulary for 3GPP Specifications*.[1]

[1] This document is available from the Third Generation Partnership Project (3GPP). < http://www.3gpp.org/ >

[2] This document is available from the Internet Engineering Task Force (IETF). < http://www.ietf.org >

[Ref 4] INCITS 31-2009, *Codes for the Identification of Counties and Equivalent Areas of the United States, Puerto Rico, and the Insular Areas*.[3]

[Ref 5] WGS-84, National Geospatial Intelligence Agency, Department of Defense World Geodetic 103 System 1984, *NGA Technical 104 Report TR8350.2*.[4]

[Ref 6] IETF RFC 793, *Transmission Control Protocol*.[2]

[Ref 7] 3GPP TS 23.038, *Alphabets and language-specific information*.[1]

[Ref 8] ATIS-0700008, *Cell Broadcast Entity (CBE) to Cell Broadcast Center (CBC) Interface Specification*.[5]

[Ref 9] 3GPP TS 36.413, *Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 Application Protocol (S1AP)*.[1]

3 Definitions, Acronyms, & Abbreviations

This clause identifies definitions, acronyms, and abbreviations used in this document. Additional information may be found in 3GPP TR 21.905, *Vocabulary for 3GPP Specifications* [Ref 3].

3.1 Definitions

Cell Broadcast Area: The Cell Broadcast Area is the geographical area for the broadcast of the CBS message. Cell Broadcast Areas may be comprised of one or more cells up to the entire wireless operator network. Individual CBS messages will be assigned their own Cell Broadcast Areas.

Cell Broadcast Service (CBS): The CBS permits a number of unacknowledged general CBS messages to be broadcast to all receivers within a particular region. CBS messages are broadcast to defined geographical areas known as *Cell Broadcast Areas*.

3.2 Acronyms & Abbreviations

ATIS	Alliance for Telecommunications Industry Solutions
CB	Cell Broadcast
CBC	Cell Broadcast Center
CBE	Cell Broadcast Entity
CBEM	Cell Broadcast Entity Message
CBS	Cell Broadcast Service
CMSP	Commercial Mobile Service Provider
FIPS	Federal Information Processing Series
INCITS	International Committee for Information Technology Standards
GNIS	Geographic Names Information System
GSM	Global System for Mobile communications
LTE	Long Term Evolution
SAME	Specific Area Message Encoding

[3] This document is available from the International Committee for Information Technology Standards (INCITS) at < https://standards.incits.org/apps/group_public/project/details.php?project_id=204 >.

[4] This document is available at < http://earth-info.nga.mil/GandG/publications/tr8350.2/tr8350_2.html >.

[5] This document is available from the Alliance for Telecommunications Industry Solutions (ATIS).
< https://www.atis.org/docstore/product.aspx?id=25036 >.