ATIS-0500039

Analysis of Predetermined Cell Sector Routing Outcomes Compared to Caller's Device Location

TECHNICAL REPORT

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.

ATIS-0500039, *Analysis of Predetermined Cell Sector Routing Outcomes Compared to Caller's Device Location*

Published by

Alliance for Telecommunications Industry Solutions

1200 G Street, NW, Suite 500

Washington, DC 20005

ATIS-0500039

ATIS Technical Report on

Analysis of Predetermined Cell Sector Routing Outcomes Compared to Caller's Device Location

Alliance for Telecommunications Industry Solutions

Approved July 2, 2019

Abstract

This Technical Report summarizes the research and findings associated with ESIF Issue 99. It explores specific characteristics of sub-optimally routed wireless emergency calls, such as where they occurred as well as the distribution of their distances from the boundaries of the Public Safety Answering Points (PSAPs) to which they routed. This report also includes recommendations derived from these findings for cell sector based routing and Location Based Routing (LBR) implementations.

Foreword

The Alliance for Telecommunications Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The Emergency Services Interconnection Forum (ESIF) provides a forum to facilitate the identification and resolution of technical and/or operational issues related to the interconnection of wireline, wireless, cable, satellites, Internet, and emergency services networks.

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, Emergency Services Interconnection Forum (ESIF), 1200 G Street NW, Suite 500, Washington, DC 20005.

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

R. Marshall, ESIF Chair (Comtech)

J. Green, ESIF 1st Vice-Chair (Sprint)

R. Muscat, ESIF 2nd Vice-Chair (Bexar Metro 911)

K. Springer, ESIF ESM Co-Chair (AT&T)

J. Green, ESIF ESM Co-Chair (Sprint)

The Emergency Services & Methodologies (ESM) Subcommittee was responsible for the development of this document.

Table of Contents

Table of Figures

Table of Tables