



***Society of Cable  
Telecommunications  
Engineers***

---

**ENGINEERING COMMITTEE**  
**Data Standards Subcommittee**

---

**SCTE STANDARD**

**ANSI/SCTE 165-16 2016**

**IPCablecom 1.5 Part 16: Management Event  
Mechanism**

## NOTICE

The Society of Cable Telecommunications Engineers (SCTE) Standards and Operational Practices (hereafter called “documents”) are intended to serve the public interest by providing specifications, test methods and procedures that promote uniformity of product, interchangeability, best practices and ultimately the long term reliability of broadband communications facilities. These documents shall not in any way preclude any member or non-member of SCTE from manufacturing or selling products not conforming to such documents, nor shall the existence of such standards preclude their voluntary use by those other than SCTE members.

SCTE assumes no obligations or liability whatsoever to any party who may adopt the documents. Such adopting party assumes all risks associated with adoption of these documents, and accepts full responsibility for any damage and/or claims arising from the adoption of such documents.

Attention is called to the possibility that implementation of this document may require the use of subject matter covered by patent rights. By publication of this document, no position is taken with respect to the existence or validity of any patent rights in connection therewith. If a patent holder has filed a statement of willingness to grant a license under these rights on reasonable and nondiscriminatory terms and conditions to applicants desiring to obtain such a license, then details may be obtained from the standards developer. SCTE shall not be responsible for identifying patents for which a license may be required or for conducting inquiries into the legal validity or scope of those patents that are brought to its attention.

Patent holders who believe that they hold patents which are essential to the implementation of this document have been requested to provide information about those patents and any related licensing terms and conditions. Any such declarations made before or after publication of this document are available on the SCTE web site at <http://www.scte.org>.

All Rights Reserved

© Society of Cable Telecommunications Engineers, Inc. 2016  
140 Philips Road  
Exton, PA 19341

Note: DOCSIS® and PacketCable™ are registered trademarks of Cable Television Laboratories, Inc., and are used in this document with permission.

## Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	PURPOSE.....	1
1.2	SCOPE.....	1
1.3	ORGANIZATION OF DOCUMENT .....	1
<b>2</b>	<b>REFERENCES .....</b>	<b>1</b>
2.1	NORMATIVE REFERENCES .....	2
2.2	INFORMATIVE REFERENCES.....	2
2.3	REFERENCE ACQUISITION.....	2
<b>3</b>	<b>TERMS AND DEFINITIONS .....</b>	<b>3</b>
<b>4</b>	<b>ABBREVIATIONS AND ACRONYMS.....</b>	<b>4</b>
<b>5</b>	<b>BACKGROUND.....</b>	<b>5</b>
<b>6</b>	<b>IPCABLECOM MANAGEMENT EVENT MECHANISM FUNCTIONAL REQUIREMENTS .....</b>	<b>6</b>
<b>7</b>	<b>MANAGEMENT EVENT REPORTING MECHANISM.....</b>	<b>7</b>
7.1	EVENT NOTIFICATION CATEGORIES .....	7
7.1.1	<i>Event ID Assignments .....</i>	<i>7</i>
7.2	IPCABLECOM MANAGEMENT EVENT FORMAT .....	7
7.3	IPCABLECOM MANAGEMENT EVENT ACCESS METHOD .....	9
7.4	MANAGEMENT EVENT ID.....	9
7.5	MANAGEMENT EVENT SEVERITIES.....	9
7.5.1	<i>Changing Default Event Severities .....</i>	<i>10</i>
7.6	NOTIFICATION MECHANISM .....	10
7.7	LOCAL LOG OF EVENTS .....	11
7.8	SYSLOG .....	11
7.8.1	<i>Syslog Message Format.....</i>	<i>12</i>
7.8.2	<i>PRI Part of a Syslog Packet.....</i>	<i>12</i>
7.8.3	<i>MSG Part of a Syslog Packet.....</i>	<i>12</i>
7.9	EVENT THROTTLING.....	13
7.10	SEVERITY AND PRIORITY DEFINITION .....	14
<b>8</b>	<b>PACKETCABLE MANAGEMENT EVENT DATA TEMPLATE.....</b>	<b>15</b>
<b>APPENDIX A</b>	<b>PACKETCABLE-DEFINED PROVISIONING EVENTS .....</b>	<b>16</b>
<b>APPENDIX B</b>	<b>IPCABLECOM-DEFINED POWERING EVENTS .....</b>	<b>20</b>
<b>APPENDIX C</b>	<b>PACKETCABLE-DEFINED DIAGNOSTIC EVENTS .....</b>	<b>22</b>

## Tables

TABLE 1 - EXAMPLE IPCABLECOM DEFINED EVENT.....	13
TABLE 2 - EXAMPLE VENDOR-SPECIFIC EVENT .....	13
TABLE 3 - EXAMPLE MANAGEMENT EVENT DATA.....	15
TABLE 4 - PROVISIONING EVENTS .....	16
TABLE 5 - POWERING EVENTS .....	20

This page intentionally left blank.

# 1 INTRODUCTION

## 1.1 Purpose

This standard defines the Management Event Mechanism that IPCablecom elements can use to report asynchronous events that indicate malfunction situations and notification about important non-fault situation.

Events are defined in this standard as conditions requiring the reporting of information to management systems and/or local log.

A goal of IPCablecom is to maintain consistency with the DOCSIS® event reporting mechanism [6].

## 1.2 Scope

This standard is one of two documents that together define a framework for reporting Management Events in the IPCablecom architecture.

This document defines the general event reporting mechanism and framework. The mechanism consists of a set of protocols and interfaces that can be used by individual elements and components in the IPCablecom architecture. This document defines how the SNMPv3 transport protocol, SYSLOG, local log, and the IPCablecom Management Event MIB are used to carry management event information to an event management system.

This management event mechanism is further defined and supported by the Management Event Mechanism MIB as specified in [1], and [13] if the latter is implemented by the MTA. Consequently, each reference to the Management Event MIB in this document will correspond to the MIB as defined either in [1], or alternatively, in [1] and [13].

## 1.3 Organization of Document

This document is structured as follows:

- Section 5 – Background information including a description of possible back office Network Management System (NMS) configurations and a brief description of supported IPCablecom reporting mechanisms.
- Section 6 – Management Event Mechanism Functional Requirements.
- Section 7 – Detailed description of the Management Event Mechanism including definition of the event format, event access method, event IDs, event severities, event descriptions, notification mechanism, local log of events, event throttling, and definition of severities and priorities.
- Section 8 – Example template for the management data.
- Appendix A – IPCablecom-defined provisioning events.
- Appendix B – IPCablecom-defined powering events.
- Appendix C – PacketCable-defined Diagnostic Events

The legal/regulatory classification of IP-based voice communications provided over cable networks and otherwise, and the legal/regulatory obligations, if any, borne by providers of such voice communications, are not yet fully defined by appropriate legal and regulatory authorities. Nothing in this specification is addressed to, or intended to affect, those issues. In particular, while this document uses standard terms such as "call," "call signaling," "telephony," etc., it will be evident from this document that while an IPCablecom network performs activities analogous to these PSTN functions, the manner by which it does so differs considerably from the manner in which they are performed in the PSTN by telecommunications carriers. These differences may be significant for legal/regulatory purposes.

# 2 REFERENCES

The following documents contain provisions which, through reference in this text, constitute provisions of this standard. At the time of Subcommittee approval, the editions indicated were valid. All documents are subject to revision, and while parties to agreement based on this standard are encouraged to investigate the possibility of