SCTE · ISBE

STANDARDS

Network Operations Subcommittee

AMERICAN NATIONAL STANDARD

ANSI/SCTE 25-2 2017

Hybrid Fiber Coax Outside Plant Status Monitoring – Media Access Control (MAC) Layer Specification v1.0

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. 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.

140 Philips Road
Exton, PA 19341

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Introduction

This document is identical to SCTE 25-2 2008 except for informative components which may have been updated such as the title page, NOTICE text, headers and footers. No normative changes have been made to this document.

The Hybrid Fiber Coax (HFC) Outside Plant (OSP) Media Access Control (MAC) Layer Specification is part of the suite of specifications developed by the Hybrid Management Sub-Layer (HMS) subcommittee under the SCTE. The purpose of the HMS specifications is to support the design and implementation of interoperable management systems for evolving HFC cable networks. The HMS Media Access Control (MAC) Layer Specification describes the messaging and protocols implemented at the Data Link Layer (DLL), Layer 2 in the 7-layer ISO-OSI reference model, that support reliable and efficient communications between HMS-compliant transponders interfacing to managed OSP network elements (NEs) and a centralized headend element (HE).

1.1 Scope

This specification describes the MAC layer protocols that must be implemented between all *Type 2* and *Type 3* compliant OSP HMS transponders on the HFC plant and the controlling equipment in the headend to support bandwidth management and reliable communications. Any exceptions to compliance with this specification will be specifically noted in this document as necessary. Refer to **Table 1** for a full definition of the Type Classifications.

1.2 Transponder Type Classifications

Transponder type classifications referenced within the HMS suite of specifications are defined in **Table 1**.