Mobile MIB development proposal

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Venue:

IEEE 802.16 New Delhi meeting

Purpose:

For discussion at 802.16i New Delhi meeting

Mobile MIB development proposal

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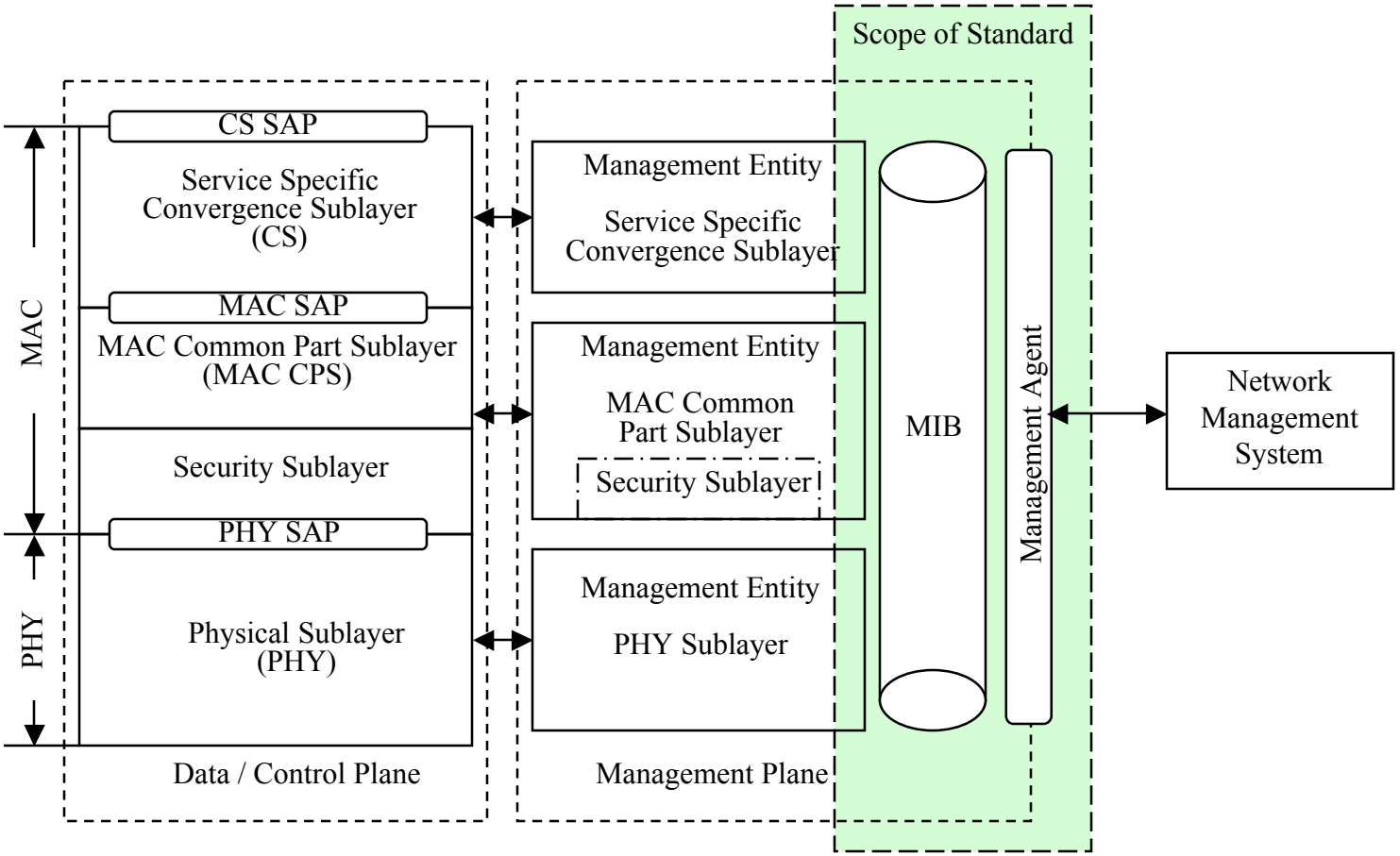
Outline

- 802.16i PAR
- 802.16i Reference model & NM Architectures
- IRP Methodology for Management Interfaces
- 802.16i TOC
- 802.16i Tasks

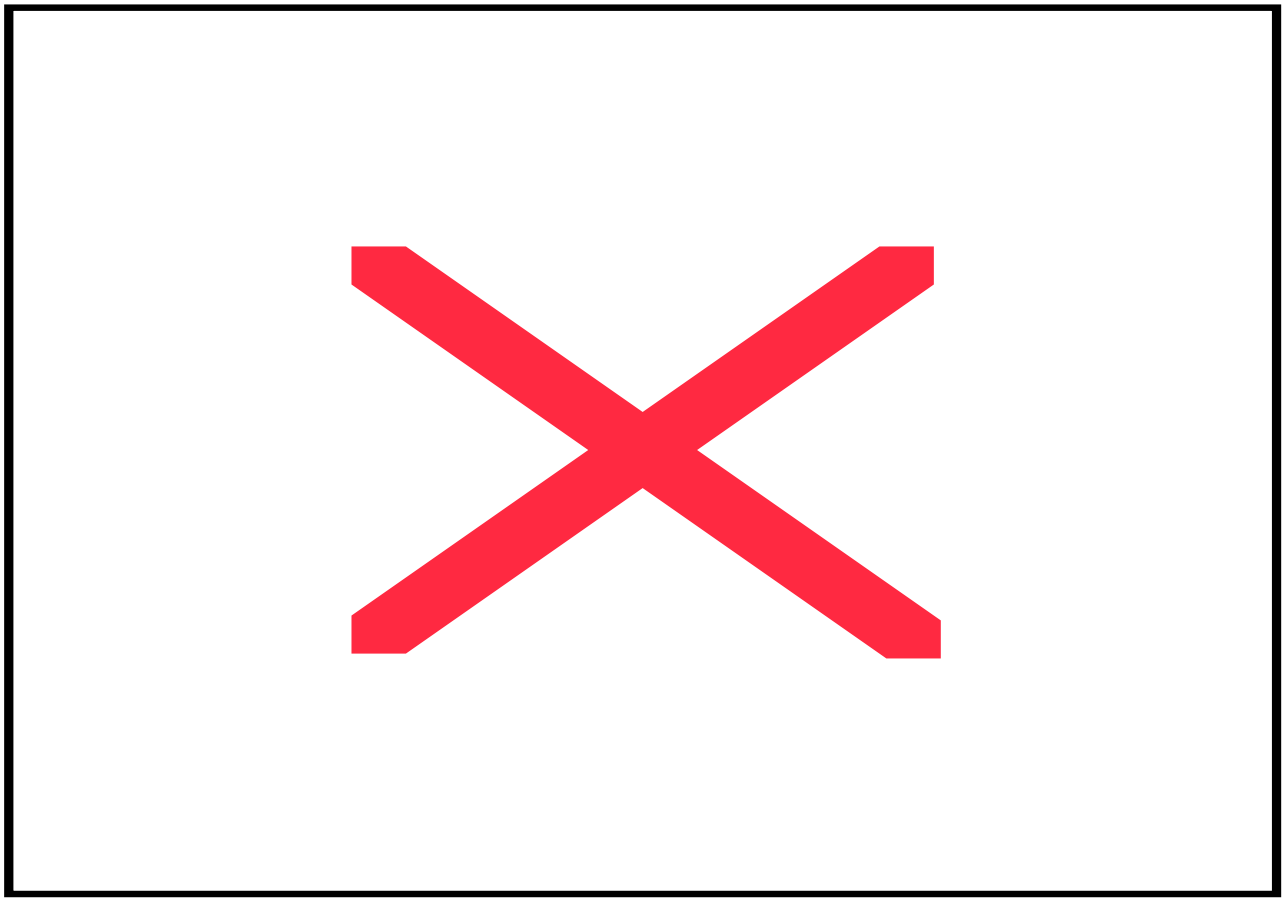
802.16i PAR

- **SCOPE:** This document provides updates to IEEE Std 802.16's MIB for the MAC, PHY and associated management procedures in order to accommodate recent extensions to the standard. The project will use protocol-neutral methodologies for network management to develop resource models and related solution sets for the management of devices in a multi-vendor 802.16 network.
- **PURPOSE:** The purpose of this project is to provide a definition of managed objects to enable the standards-based management of 802.16 devices.
- **REASON:** The reason for this project is to facilitate cross-vendor interoperability at the network level for the management of 802.16 devices and networks. This will provide network operators with the ability to manage multivendor networks including 802.16 devices. This project extends upon the work of IEEE 802.16f in adding MIB support for new features and functions added in IEEE 802.16e and other projects.

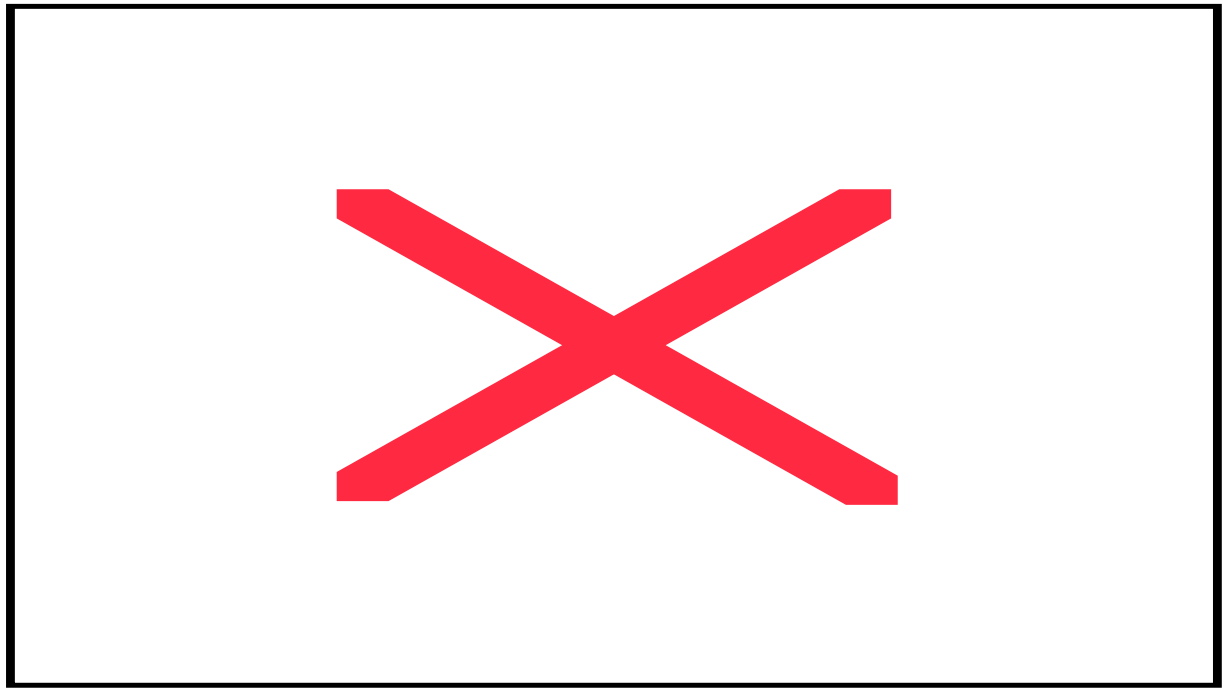
802.16i Reference Model



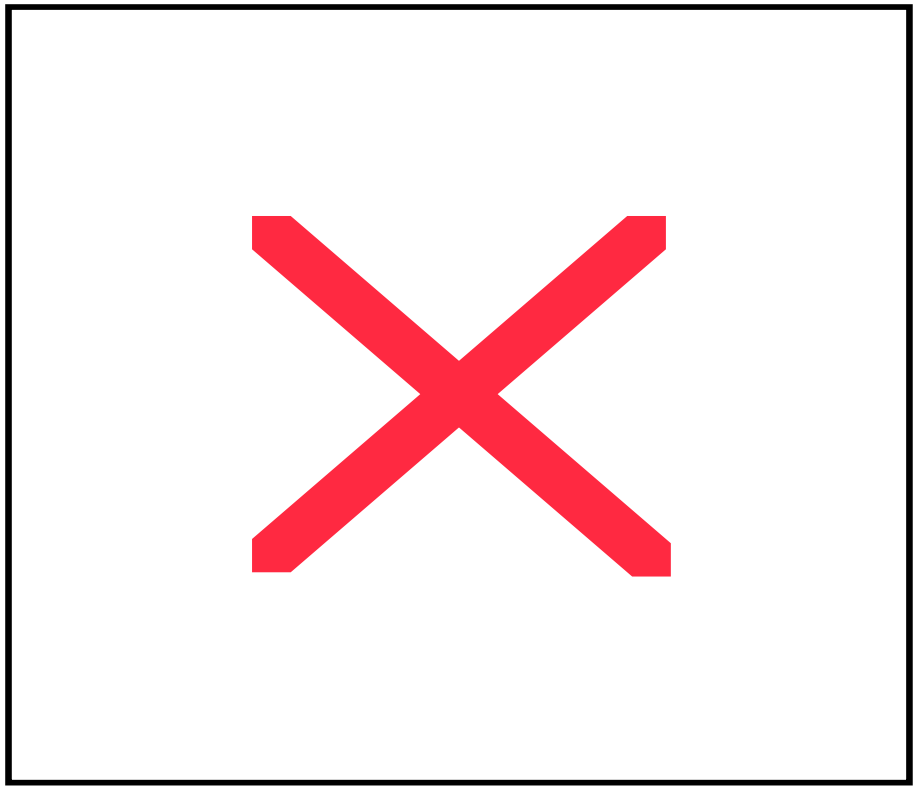
Types of Network Management Interfaces



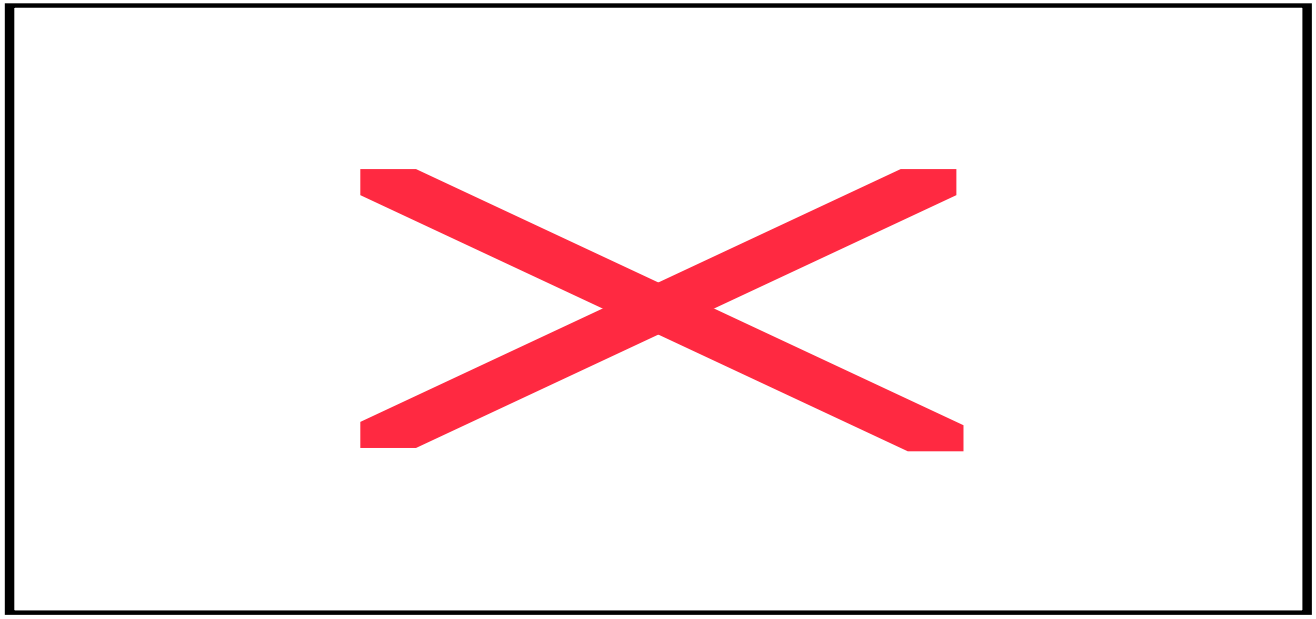
NM Architecture Model for 802.16 (1/2)



NM Architecture Model for 802.16 (2/2)



IRP Methodology



1. Interface IRPs – These typically provide the definitions for IRP operations and notifications in a network agnostic manner. These enable independent development as well as reusable across the industry
2. NRM IRPs – providing the definitions for the Network Resources to be managed (commonly named "Network Resources IRPs"). These enable technology & vendor specific NRM extensions
3. Data Definition IRPs – provide data definitions applicable to specific management aspects to be managed via reusing available Interface IRPs and application to NRM IRPs as applicable. These enable a wide applicability, phased introduction capabilities & broad industry adoption.

TOC

1. Overview

1.1 SCOPE

1.2 Purposes

1.3 Reference models

9. Configuration

13. 802.16 MIB Structure for SNMP

15. IRP Definitions for Mobile 802.16

15.1: 802.16 NRM IRP IS

15.2: 802.16 NRM IRP SNMP Solution Set

15.3: 802.16 NRM IRP CORBA Solution Set

15.4: 802.16 NRM IRP XML Solution Set

15.5: Interface IRP Considerations

802.16i Tasks

- **Definitions/conclusions on Protocol-neutral 802.16 Mobile Network Resource Model IRP (IS)**
  - **Focus on enabling management of 802.16e,**
  - **using 3GPP IRP methodology**
  - **IS is defining the semantics/behavior, not the protocol syntax**
  - **reuse 802.16f as applicable, and enhance as required to support based on 802.16e**
  - **Retain the naming convention of wmanIfMib if possible (and if not in conflict with IRP naming conventions)**
  - **As feasible and applicable, 802.16f wmanIfMib tables may be used to define IRP IOC's**
- **Definitions/conclusions on Solution Sets (SS) for 802.16 Mobile Network Resource Model IRP (mapping of IS into SS)**
  - **SNMP Solution Set**
    - **Define where the wmanIfMib will reside in the MIB subtree**
      - MIB II subtree – new IANAtype?
      - IEEE subtree – iso(1) std(0) iso8802(8802)
  - **CORBA Solution Set**
  - **XML Solution Set**
  - **SS's are defining the protocol syntax, not semantics/behavior**
- **Documenting guidelines on reuse of 3GPP/3GPP2 Interface IRP's**