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Work Group: **Distributed Network Management Environment**

TITLE: **CMISE Base Network Management Platform Requirements**

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ABSTRACT: This contribution identifies a set of ITU-T and Network Management Forum (NMF) OMNIpoint specifications and recommends that SIF adopt these for use in SONET EML and NML systems and in all situations where a CMISE interface is used.

1. Introduction

Network providers wish to quickly and inexpensively acquire network management software to support SONET technology. To this end, platform or system software is needed for hosting SONET applications that will provide a rich set of common services to application developers, allowing them to focus on functions specific to their products. This contribution defines a base set of platform requirements for a CMISE environment.

Network providers are moving toward a TMN environment as a way to improve interoperability and openness of NE-to-OS and OS-to-OS communications. Therefore, support of CMISE communications has been determined to be a basic requirement of SONET network management systems. SIF has also determined that existing industry standards should be adopted for SIF use whenever possible. There are International Standardized Profiles (ISPs) already defined by standards organizations for CMISE communications. The Network Management Forum (NMF) has organized these ISPs into OMNIpoint Component Sets, adding NMF specifications for Managed Object Naming and Shared Management Knowledge. Recent updates to ITU-T Q.812 supplement the NMF specifications.[1]Note   This contribution recommends that SIF adopt the following ITU-T and NMF specifications for use in all SONET EML and NML systems and in all situations where a CMISE interface is used:

? NMF OMNIpoint Component Set for TMN Basic Management Platform,

? NMF OMNIpoint Component Set for CMIP Communications (supplemented by ITU-T Q.812), and

? ITU-T Q.811 protocol profiles for CLNS1 (LAN) and CLNS2 (X.25) communications stacks.

The above specifications reference mature ISO ISPs which are listed in the next section.

2. Specifications

It is recommended that the following specifications be adopted by SIF as minimal requirements for all SONET EML and NML systems and in all situations where a CMISE interface is used:

NMF OMNIpoint CMIP Communications Component Set (supplemented by Q.812), which specifies -

? ISP 11183-1: 1992, Specification of ACSE, Presentation and Session Protocols for use by ROSE and CMISE, and

? ISP 11183-2: 1992, AOM12 - Enhanced Management Communications.

NMF OMNIpoint TMN Basic Management Platform Component Set, which specifies -

? ISP 12060-1:1994, AOM211 - General Management Capabilities,

? ISP 12060-4: 1994, AOM221, General Event Report Management,

? ISP 12060-5: 1994, AOM231 - General Log Control,

? NMF 021, Managed Object Naming, Issue 2, 10/95, and

? NMF 015, Shared Management Knowledge, Issue 1, 10/92 + Errata, Issue 1, 10/95, or draft X.750/DIS 10164-16, Management Knowledge Management Function.

ITU-T Q.811 CLNS1 (LAN) and CLNS2 (X.25) Protocol Profiles, which are based on and update -

? ISP 10608-1 and ISP 10608-2:1992, Connection-mode Transport Service over Connectionless-mode Network Service - Part 2: TA51 Profile including Subnetwork-dependent Requirements for CSMA/CD LANs, and

? ISP 10608-1 and ISP 10608-5:1992, Connection-mode Transport Service over Connectionless-mode Network Service - Part 5: TA1111/TA1121 Profile including Subnetwork-dependent Requirements for X.25 Packet Switched Data Networks using Virtual Calls.

3. Conformance

Product conformance to the above ISPs can be verified with commercial test tools and services. NMF Managed Object Naming and Shared Management Knowledge documents provide requirements for products to be considered conformant.

4. References

ITU-T Q.811: *Lower Layer Protocol Profiles for the Q3 and X Interface*, 1996 Revision

ITU-T Q.812: *Upper Layer Protocol Profiles for the Q3 and X Interface*, 1996 Revision

NMF CS301: *CMIP Communications Component Set*, Issue 1.0, October 1995

NMF CS302: *TMN Basic Management Platform Component Set*, October 1995:

> NMF TR115, *An OMNIpoint TMN Design Guide: Using ISPs to Implement the Management Communications Aspects of Q3 and X Interfaces*, Issue 1.0, October 1995

> NMF 021, *Managed Object Naming*, Issue 2.0, October 1995

> NMF 015, *Shared Management Knowledge*, Issue 1.0, October 1992 + Errata, Issue 1.0, October 1995

ISO IEC CD 10164-16.2: *Information Technology - Open Systems Interconnection - Systems Management: Management Knowledge Management Function*, June 20, 1994