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Power systems management and associated information exchange – Data and communications security – Part 7: Network and system management (NSM) data object models

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IEC 62351-7, which is a technical specification, has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
57/1003/DTS	57/1062/RVC

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

A list of all parts of the IEC 62351 series, under the general title: *Power systems management and associated information exchange – Data and communications security*, can be found on the IEC website.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be be

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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POWER SYSTEMS MANAGEMENT AND ASSOCIATED INFORMATION EXCHANGE – DATA AND COMMUNICATIONS SECURITY –

Part 7: Network and system management (NSM) data object models

1 Scope

Power systems operations are increasingly reliant on information infrastructures, including communication networks, intelligent electronic devices (IEDs), and self-defining communication protocols. Therefore, management of the information infrastructure has become crucial to providing the necessary high levels of security and reliability in power system operations. Using the concepts developed in the IETF simple network management protocol (SNMP) standards for network management, IEC/TS 62351-7 defines network and system management (NSM) data object models that are specific to power system operations. These NSM data objects will be used to monitor the health of networks and systems, to detect possible security intrusions, and to manage the performance and reliability of the information infrastructure.

The NSM data objects use the naming conventions developed for IEC 61850, expanded to address NSM issues. These data objects, and the data types of which they are comprised, are defined as abstract models of data objects. The actual bits-and-bytes formats of the data objects will depend upon the mapping of these abstract NSM data objects to specific protocols, such as IEC 61850, IEC 60870-5, IEC 60870-6, IEC 61968/IEC 61970 (CIM), web services, SNMP or any other appropriate protocol. Those mappings will need to be standardized in separate documents.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC/TS 62351-2, *Power systems management and associated information exchange – Data and communications security – Part 2: Glossary of terms*