

ICS 33.040.40

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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 21645.7-2010

**Technical requirements for automatically switched optical
network -- Part 7: Automatic discovery**

自动交换光网络（ASON）技术要求 第7部分：自动发现

(English Translation)

Issued on: December 1, 2010

Implemented on: April 1, 2011

Issued by: Standardization Administration of China

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Foreword

Structure GB/T 21645 "Automatic Switched Optical Network (ASON) technical requirements" standard is expected as follows.

--- Part 1. Architecture and general requirements;

--- Part 2. Terms and definitions;

--- Part 3. Data Communication Network (DCN);

--- Part 4. Signaling Technology;

--- Part 5. User - Network Interface (UNI);

--- Part 6. management plane;

--- Part 7. automatic discovery.

This part of GB/T 21645 Part 7.

This part of ITU-TG.7714.2005 "General transmitting entity automatic discovery" and G.7714.1.2006 "SDH and OTN networks Automatic discovery agreement "non-equivalent, combined with the development of the domestic situation.

The following sections of this part of the technical content and ITU-TG.7714 coordinated.

--- Chapter 4 correspond G.7714.2005 Chapter 6 - Chapter 10, and adds features and frame contents are automatically discovered;

--- Chapter 5 corresponds G.7714.2005 of Chapter 11 and Chapter 12;

--- Appendix A correspond G.7714.2005 Appendix I.

The following sections of this part of the technical content and G.7714.1.2006 harmonized.

--- Chapter 6 correspond G.7714.1.2006 Chapter 5 - Chapter 11, and 6.2 adds the OTN OTS/OMS/LAD mechanism OCh layer;

--- Appendix B, Appendix C and Appendix D, respectively G.7714.1.2006 Appendix I, II and Appendices Appendix VI.

In addition, the Section 7 and Appendix E also refer to the IETF, OIF and other relevant International Organization for Standardization and automatic link management protocol

Recommendations found.

This section of the Appendix A, Appendix B, Appendix C, Appendix D, Appendix E is an information appendix.

This part is proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This part of the jurisdiction of the China Communications Standards Association.

This section drafted by. Ministry of Information Industry Telecom Research Institute, China United Telecommunications Corporation, Huawei Technologies, ZTE shares Parts Limited, Wuhan Research Institute of Posts and Telecommunications, Shanghai Bell Alcatel, Nokia - Siemens Communications (Shanghai) Co., the company, UT Starcom (Chongqing) Communications Limited.

1 Scope

This section GB/T 21645 specifies the automatic transmission entity Switched Optical Network (ASON) generic auto-discovery function, framework, process and found messages, and synchronous digital hierarchy (SDH) and Optical Transport Network (OTN) networks and automatic discovery mechanism based on multi-protocol communication standard Record exchange (GMPLS) Link Management Protocol (LMP) and the like.

This section applies to ITU-TG.803 defined synchronous digital hierarchy (SDH) transport network and ITU-TG.872 defined Optical Transport Network (OTN).

2 Normative references

The following documents contain provisions which, through reference GB/T 21645 in this section constitute provisions of this section. For dated references, all subsequent amendments (excluding corrections) or revisions do not apply to this section, however, encourage an agreement under this section Parties to study the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 21645.1-2008 Automatic Switched Optical Network (ASON) technical requirements - Part 1. Architecture and general requirements GB/T 21645.2-2010 Automatic Switched Optical Network (ASON) technical requirements for Part 2. Terms and definitions ITU-TG.707 Synchronous Digital Hierarchy (SDH) network node interface Architecture and specification ITU-TG.7712 Data Communication Network ITU-TG.7714 common transport entity auto-discovery ITU-TG.7714.1 SDH and OTN networks Auto-Discovery Protocol ITU-TG.784 Synchronous Digital Hierarchy (SDH) management ITU-TG.803 SDH transport network based architecture General functional structure of ITU-TG.805 transport network ITU-TG.8080 Automatic Switched Optical Network Architecture ITU-TG.831 (2000) based management capabilities of SDH transmission network ITU-TG.872 Optical Transport

Network (OTN) architecture IETF RFC1570 PPPLCP Extended IETF RFC1661 Point to Point Protocol (PPP) IETF RFC1662 class HDLC frame PPP Format Internet message body. IETF RFC2045 Multipurpose Internet Mail Extensions (MIME) Part 1 IETF RFC4204 Link Management Protocol (LMP) IETF RFC4207 link management protocol test message SONET/SDH encoding IETF RFC4209 DWDM optical line system Link Management Protocol (LMP) Transfer IETF RFC4394 Link Management Protocol (LMP) Network Perspective

3.1 Terms and Definitions

Terms and definitions GB/T 21645.2 specified in applicable to GB/T 21645 in this section.

3.2 Acronyms

The following abbreviations apply to this part of the GB/T 21645 of.