

**ITU-T The leader on
ASON standards**

Architecture and requirements

G.8080/Y.1304, Architecture for the automatically switched optical network (ASON)

Call and connection management

G.7713/Y.1704, Distributed Call and Connection Management (DCM)

G.7713.1/Y.1704.1, Distributed Call and Connection Management (DCM) based on PNNI

G.7713.2/Y.1704.2, Distributed Call and Connection Management: Signalling mechanism using GMPLS RSVP-TE

G.7713.3/Y.1704.3, Distributed Call and Connection Management: Signalling mechanism using GMPLS CR-LDP

Discovery and link management

G.7714/Y.1705, Generalized automatic discovery for transport entities

G.7714.1/Y.1705.1, Protocol for automatic discovery in SDH and OTN networks

Routing

G.7715/Y.1706, Architecture and requirements for routing in the automatically switched optical networks

G.7715.1/Y.1706.1, ASON routing architecture and requirements for link state protocols

G.7715.2/Y.1706.2, ASON routing architecture and requirements for remote route query

Management and operation

G.7716/Y.1707, Control plane initialization, reconfiguration and recovery Architecture and requirements of link management for automatically switched transport networks

G.7718/Y.1709, Framework for ASON management

G.7718.1/Y.1709.1, Protocol-neutral management information model for the control plane view

Terminology

G.8081/Y.1353, Terms and definitions for Automatically Switched Optical Networks (ASON)

Other Related Recommendations

G.872, Architecture of optical transport networks

G.707, Network node interface for the synchronous digital hierarchy (SDH)

G.709/Y.1331, Interfaces for the Optical Transport Network (OTN)

G.959.1, Digital line systems based on the 1544 kbit/s hierarchy on symmetric pair cables

G.874, Management aspects of the optical transport network element

G.874.1, Optical transport network (OTN): Protocol-neutral management information model for the network element view

G.7041/Y.1303, Generic framing procedure (GFP)

G.7042/Y.1305, Link capacity adjustment scheme (LCAS) for virtual concatenated signals

G.65x series, Optical fibre cables

G.693, Optical interfaces for intra-office systems

G.7710/Y.1701, Common equipment management function requirements

G.7712/Y.1703, Architecture and specification of data communication network

G.800, Unified functional architecture of transport networks

G.803, Architecture of transport networks based on the synchronous digital hierarchy (SDH)

G.805, Generic functional architecture of transport networks

ASON means

Dynamic signalling-based policy driven control over OTN SDH and other connection-orientated circuit or packet networks via a distributed (or partially distributed) control plane that provides auto-discovery and dynamic connection set-up. This enables:

- Efficient support for end-to-end provisioning, re-routing and restoration.
- New transport services such as bandwidth on demand, rapid service restoration for disaster recovery, switched connections, etc.
- Support for a wide range of narrowband and broadband client signals such as:
 - PDH/SDH/SONET
 - IP
 - Ethernet
 - ATM
 - Frame Relay
 - ESCON, FICON, Fibre Channel
 - Audio/Video

Given the global scope of fibre optic transport networks based on WDM, the ASON market potential is bright.

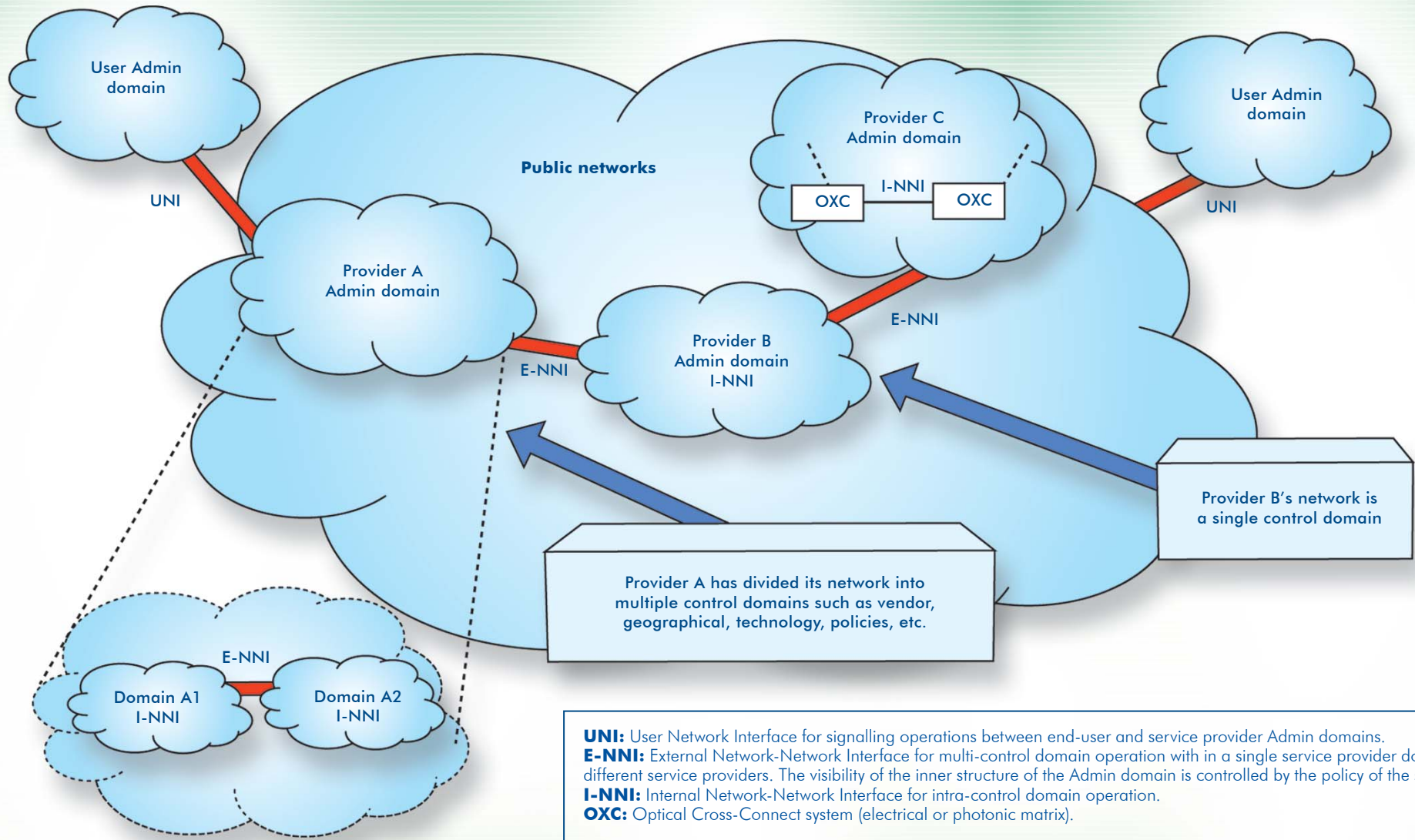
ASON
AUTOMATICALLY SWITCHED
OPTICAL NETWORK

Your new
fibre optic
network
control plane
solution

05.2008 isbpromo@itu.int

ITU-T

Global Optical Connection Control



(Figure above represents one of many possible implementation scenarios.)

ITU-T SG15 Question 3 is responsible for tracking and coordinating the development of Recommendations in the OTN area. For more detailed information, the "Optical Transport Networks and Technologies Standardization Work Plan" has been developed. See www.itu.int/ITU-T/studygroups/com15/otn