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SERIES G: TRANSMISSION SYSTEMS AND MEDIA,
DIGITAL SYSTEMS AND NETWORKS

Packet over Transport aspects – Ethernet over Transport
aspects

SERIES Y: GLOBAL INFORMATION
INFRASTRUCTURE, INTERNET PROTOCOL ASPECTS
AND NEXT-GENERATION NETWORKS

Internet protocol aspects – Transport

Terms and definitions for automatically switched optical networks

Recommendation ITU-T G.8081/Y.1353

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Recommendation ITU-T G.8081/Y.1353

Terms and definitions for automatically switched optical networks

Summary

Recommendation ITU-T G.8081/Y.1353 provides terms, definitions, and abbreviations used in automatically switched optical network (ASON) Recommendations. It contains a list of the definitions and abbreviations introduced in Recommendations associated with automatically switched optical networks, and can be considered a companion document to Recommendations ITU-T G.780/Y.1351 and ITU-T G.870/Y.1352. The goal of this Recommendation is to be a single normative source for terms in this subject area.

History

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

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Recommendation ITU-T G.8081/Y.1353

Terms and definitions for automatically switched optical networks

1 Scope

This Recommendation contains a complete listing of the terms, definitions, and abbreviations introduced in the Recommendations associated with automatically switched optical networks (ASON).

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- [ITU-T G.780] Recommendation ITU-T G.780/Y.1351 (2008), *Terms and definitions for synchronous digital hierarchy (SDH) networks*.
- [ITU-T G.800] Recommendation ITU-T G.800 (2012), *Unified functional architecture of transport networks*.
- [ITU-T G.805] Recommendation ITU-T G.805 (2000), *Generic functional architecture of transport networks*.
- [ITU-T G.806] Recommendation ITU-T G.806 (2009), *Characteristics of transport equipment – Description methodology and generic functionality*.
- [ITU-T G.852.2] Recommendation ITU-T G.852.2 (1999), *Enterprise viewpoint description of transport network resource model*.
- [ITU-T G.870] Recommendation ITU-T G.870/Y.1352 (2008), *Terms and definitions for optical transport networks (OTN)*.
- [ITU-T G.7712] Recommendation ITU-T G.7712/Y.1703 (2008), *Architecture and specification of data communication network*.
- [ITU-T G.7713] Recommendation ITU-T G.7713/Y.1704 (2009), *Distributed call and connection management (DCM)*.
- [ITU-T G.7713.1] Recommendation ITU-T G.7713.1/Y.1704.1 (2003), *Distributed Call and Connection Management (DCM) based on PNNI*.
- [ITU-T G.7713.2] Recommendation ITU-T G.7713.2/Y.1704.2 (2003), *Distributed Call and Connection Management: Signalling mechanism using GMPLS RSVP-TE*.
- [ITU-T G.7713.3] Recommendation ITU-T G.7713.3/Y.1704.3 (2003), *Distributed Call and Connection Management: Signalling mechanism using GMPLS CR-LDP*.
- [ITU-T G.7714] Recommendation ITU-T G.7714/Y.1705 (2005), *Generalized automatic discovery for transport entities*.
- [ITU-T G.7714.1] Recommendation ITU-T G.7714.1/Y.1705.1 (2010), *Protocol for automatic discovery in SDH and OTN networks*.

- [ITU-T G.7715] Recommendation ITU-T G.7715/Y.1706 (2002), *Architecture and requirements for routing in the automatically switched optical networks.*
- [ITU-T G.7715.1] Recommendation ITU-T G.7715.1/Y.1706.1 (2004), *ASON routing architecture and requirements for link state protocols.*
- [ITU-T G.7715.2] Recommendation ITU-T G.7715.2/Y.1706.2 (2007), *ASON routing architecture and requirements for remote route query.*
- [ITU-T G.7716] Recommendation ITU-T G.7716/Y.1707 (2010), *Architecture of control plane operations.*
- [ITU-T G.8080] Recommendation ITU-T G.8080/Y.1304 (2012), *Architecture for the automatically switched optical network and its amendments.*
- [ITU-T M.3010] Recommendation ITU-T M.3010 (2000), *Principles for a telecommunications management network.*
- [ITU-T M.3013] Recommendation ITU-T M.3013 (2000), *Considerations for a telecommunications management network.*
- [ITU-T M.3100] Recommendation ITU-T M.3100 (2005), *Generic network information model.*
- [ITU-T X.25] Recommendation ITU-T X.25 (1996), *Interface between Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) for terminals operating in the packet mode and connected to public data networks by dedicated circuit.*
- [ITU-T X.700] Recommendation ITU-T X.700 (1992), *Management framework for Open Systems Interconnection (OSI) for CCITT applications.*
- [ITU-T Y.1311] Recommendation ITU-T Y.1311 (2002), *Network-based VPNs – Generic architecture and service requirements.*

3 Definitions

3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

3.1.1 Terms defined in [ITU-T G.780]

- data communications channel (DCC)
- embedded control channel (ECC)
- layer
- network node interface (NNI)
- protection

3.1.2 Terms defined in [ITU-T G.805]

- access group (AG)
- access point (AP)
- administrative domain
- client-server relationship
- connection termination point (CTP)

NOTE – [ITU-T G.805] uses the acronym TCP for this term.

- layer network

- link
- link connection
- management domain
- network connection
- partitioning
- port
- subnetwork connection
- trail
- trail termination
- transport
- transport network
- unidirectional access point
- unidirectional connection
- unidirectional connection point
- unidirectional port
- unidirectional trail

3.1.3 Terms defined in [ITU-T G.806]

- client/server layer
- continuity supervision
- management information (MI)
- management point (MP)

3.1.4 Terms defined in [ITU-T G.870]

- entity
- local craft terminal
- management communications
- optical channel (OCh)
- optical channel data unit (ODUk)
- optical channel transport unit (OTUk)
- OTN network element (O.NE)
- optical overhead signal (OOS)
- optical supervisory channel (OSC)
- optical transport network (OTN)
- optical transport network node interface (ONNI)
- restoration
- resource
- transport entity

3.1.5 Terms defined in [ITU-T G.7712]

- data communication network (DCN)
- dual interfaces
- signalling communication network (SCN)



3.1.6 Terms defined in [ITU-T M.3010]

- data communication function (DCF)
- mediation device (MD)
- network element (NE)
- network element function (NEF)
- operations system (OS)
- operations system function (OSF)
- Q interface
- q reference points
- reference point (RP)

3.1.7 Terms defined in [ITU-T M.3013]

- message communication function (MCF)
- workstation function (WSF)

3.1.8 Terms defined in [ITU-T M.3100]

- management interface
- managed entity

3.1.9 Term defined in [ITU-T X.25]

- closed user group

3.1.10 Term defined in [ITU-T X.700]

- managed object (MO)

3.1.11 Term defined in [ITU-T Y.1311]

- virtual private network (VPN)

3.2 Terms defined in this Recommendation

This Recommendation defines the following terms:

3.2.1 access group container (AGC): An AGC is a single layer entity that contains access groups, link resource managers (LRMs), and termination and adaptation performers (TAPs). It is similar to subnetworks defined by [ITU-T G.805] except that it is not recursively defined, may or may not be a matrix (it does not have to be specified), and has no defined subnetwork connections. See [ITU-T G.8080].

3.2.2 address: An address is a string of symbols that is valid regardless of the location of the source but changes if the destination moves. An address is used for the purpose of routing. Source and destination addresses must be globally unique.

3.2.3 agent: Within this Recommendation, the term agent is used to describe the entity that represents certain attributes and behaviour of a resource. The agent allows interaction between various resources and management and control functions. More than one agent may represent a resource.

3.2.4 allocated (resource) label range: An allocated (resource) label range is the set of labels that can be used by the adaptation function of a particular link to carry user traffic. It is a subset of the potential resource label range. The allocated labels are entities that can be referenced in the transport plane name space. Each allocated label is associated with one or multiple subnetwork point (SNP) IDs that exist in the control plane name space (1:n relationship). Termination and adaptation performers (TAPs) hold this binding information.

3.2.5 assigned SNPs: The assigned subnetwork points (SNPs) are those SNPs out of the set of potential SNPs that have been assigned to a particular connection. This means that the associated label corresponds to a configured label.

3.2.6 automatic encapsulating data communication function (AE-DCF): An AE-DCF automatically encapsulates packets when necessary so that they may be routed by NEs that would otherwise be unable to forward them. An AE-DCF also features a matching de-encapsulation function to restore the packet back to its original form once it has traversed incompatible NEs.

3.2.7 automatic switched transport network (ASTN): An ASTN is a transport network where configuration connection management is implemented by means of a control plane.

3.2.8 automatically switched optical network (ASON): An automatically switched transport network (ASTN) that is applied to connection oriented circuit or packet transport networks, as defined in [ITU-T G.800].

3.2.9 call: A call is an association between two or more users and one or more domains that support an instance of a service through one or more domains. Within domains, the association is supported by network entities that contain call state. Between a user and a network call control entity and between network call control entities, there are call segments. The call consists of a set of concatenated call segments.

3.2.10 call admission control: Call admission control is a policy function invoked by an originating role in a network and may involve cooperation with the terminating role in the network. See [ITU-T G.8080].

3.2.10.1 originating call admission function: The originating call admission function is responsible for checking that a valid called user name and parameters has been provided. See [ITU-T G.8080].

3.2.10.2 terminating call admission function: The terminating call admission function is responsible for checking that the called party is entitled to accept the call, based on the calling party and called party service contracts. See [ITU-T G.8080].

3.2.11 call control: Call control is a signalling association between one or more user applications and the network to control the set-up, release, modification and maintenance of sets of connections. See [ITU-T G.8080].

3.2.12 call controller: Calls are controlled by means of call controllers. There are two types of call controller components.

3.2.12.1 calling/called party call controller: The calling/called party call controller is associated with an end of a call and may be co-located with end systems or located remotely and acts as a proxy on behalf of end systems. This controller acts in one or both of two roles, one to support the calling party and the other to support the called party. See [ITU-T G.8080].

3.2.12.2 network call controller (NCC): A network call controller provides three roles, one for support of the calling party, another to support the called party and a third to support calls across domain boundaries. See [ITU-T G.8080].

3.2.12.3 signalling controller: A signalling controller contains the functions of connection control and/or call control.

3.2.13 call segment: A call segment is an association between two call control entities (as per Rec. ITU-T Q.2982, which is equivalent to [ITU-T G.8080] call controllers). Each call segment has zero or more associated connections. Call segments between network call control entities have zero or more supporting calls.

3.2.14 commissioning: The act of specifying parameters necessary to create a control plane instance. These parameters are fundamental to the continued operation of the control plane instance and cannot be changed without significant impact to the control plane instance. Therefore, commissioning is only done during the initialization phase of the control plane lifecycle. Note that commissioning is focused on the commissioning on the control plane component and not the data/transport plane resource.

3.2.15 component: A component is an abstract representation of a functional entity. In this Recommendation, components do not represent instances of implementation code. They are used to construct scenarios to explain the operation of the architecture.

3.2.16 configured (resource) label: A configured (resource) label is a label that has been configured in the transport plane in support of a connection. For each configured label, a forwarding table entry exists on the receiving end of the link such that packets can be forwarded based on the label value of the received packet.

3.2.17 connection: A connection is a concatenation of link connections and subnetwork connections (as described in [ITU-T G.805]) that allows the transport of user information between the ingress and egress points of a subnetwork.

3.2.18 connection admission control: Connection admission control is essentially a process that determines if there are sufficient resources to admit a connection (or re-negotiates resources during a call). See [ITU-T G.8080].

3.2.19 connection controller (CC): A CC is a component in the ASON control plane. The connection controller is responsible for coordination among the link resource manager, the routing controller and both peer and subordinate connection controllers for the purpose of the management and supervision of connection set-ups, releases and the modification of connection parameters for existing connections. See [ITU-T G.8080].

3.2.20 connection controller interface (CCI): A CCI is an interface between a subnetwork in the transport plane and the control plane. See [ITU-T G.8080].

3.2.21 connection point (CP): For the purposes of this Recommendation, a connection point represents the north input port of an adaptation function. (Note that in [ITU-T G.805] the CP refers to the binding between two points.)

3.2.22 connection termination point (CTP): A connection termination point represents the signal state at the CP. Also see [ITU-T M.3100].

3.2.23 control plane: The control plane performs the call control and connection control functions. Through signalling, the control plane sets up and releases connections, and may restore a connection in case of a failure. The control plane also performs other functions in support of call and connection control, such as routing information dissemination.

3.2.24 control plane configured protection: Control plane configured protection refers to the configuration and use of transport plane protection capabilities. Configuration of protection is done by the control plane as opposed to the management plane. Control plane components associated with a protected connection are responsible for use of the protected connection. In the event of a failure, the control plane protection action does not involve rerouting or additional connection set-up.

3.2.25 CR-LDP peers: Constraint-based routing label distribution protocol (CR-LDP) peers is two protocol controllers implementing CR-LDP that have established communication with each other.

3.2.26 CR-LDP session: The control communication instance between two CR-LDP peers.

3.2.27 Directory Service: The Directory Service component is responsible for identifier resolution and coordination among peer Directory Service components. The role of this component is to provide mappings between identifier spaces for other components. See [ITU-T G.8080].

3.2.28 discovery agent (DA): The "federation" of discovery agents operates in the transport plane name space, and provides for separation between that space and the control plane names. The federation has knowledge of connection points (CPs) and termination connection points (TCPs) in the network, while a local DA has knowledge of only those points assigned to it. See [ITU-T G.8080].

3.2.29 domain: A domain represents a collection of entities that are grouped for a particular purpose. See [ITU-T G.8080].

3.2.29.1 control domain: A control domain is a type of transport domain where the criterion for membership is the scope of a control plane component that is responsible for the transport resources within the transport domain.

3.2.29.2 routing domain: A routing domain is a type of control domain where the criterion for membership is a common routing capability. It may contain zero or more rerouting domains.

3.2.29.3 rerouting domain: A rerouting domain is a type of routing control domain whose control components at the edge of the domain coordinate rerouting operations for all calls/connections that traverse the rerouting domain.

3.2.29.4 transport domain: A transport domain is a set of transport resources that are grouped as a result of some criteria. This grouping is established by operator policies. An example is the ITU-T G.805 administrative domain.

3.2.30 downstream on demand: A downstream on demand is a label advertisement procedure by which the upstream node is responsible for requesting the label mapping.

3.2.31 E-NNI: An E-NNI is a bidirectional interface between control plane entities belonging to different domains.

3.2.32 federation: Federation is a community of domains that cooperates for the purposes of connection management, and is illustrated using the cooperation between connection controllers. See [ITU-T G.8080].

3.2.33 hard rerouting: A failure recovery function in a rerouting domain that attempts to create another connection to the destination at the edge of the rerouting domain. This is performed in response to the failure of an existing connection, and the rerouted connection replaces the connection that contained the failure.

3.2.34 hard rerouting service: A hard rerouting service offers a failure recovery mechanism for calls and is always in response to a failure event. See [ITU-T G.8080].

3.2.35 Hello: Hello is a message sent by a signalling protocol controller to advertise its presence to other signalling protocol controllers.

3.2.36 hierarchical routing: Hierarchical routing is one of the three basic forms of algorithm for dynamic path control. A node contains a routing controller, connection controllers and link resource managers for a single level in a routing area hierarchy. The decomposition of routing areas follows the decomposition of a layer network into a hierarchy of subnetworks (in line with the concepts described in [ITU-T G.805]). Connection controllers are related to one another in a hierarchical manner. Each routing area has its own dynamic connection control that has knowledge of the topology of its routing area but has no knowledge of the topology of routing areas above or below itself in the hierarchy or other routing areas at the same level in the hierarchy. See [ITU-T G.8080].

3.2.36.1 routing adjacency (RA_{adj}): The Radj is a logical association between two routing controllers.

3.2.36.2 source routing: Source routing is one of the three basic forms of algorithm for dynamic path control. Its connection control process is implemented by a federation of distributed connection and routing controllers. The significant difference is that connection controllers invoke a

different sequence of path computation functions between routing levels for hierarchical versus source routing. In order to reduce the amount of network topology each controller needs to share, only that portion of the topology that applies to its own routing area is made available. See [ITU-T G.8080].

3.2.36.3 step-by-step routing: Step-by-step routing is one of the three basic forms of algorithm for dynamic path control. In this form of routing there is further reduction of routing information in the nodes, and this places restrictions upon the way in which routing is determined across the subnetwork. A similar process of obtaining one link at a time as that of source routing is followed when connecting across the second routing area. See [ITU-T G.8080].

3.2.37 I-NNI: A bidirectional interface between control plane entities belonging to one or more domains having a trusted relationship.

3.2.38 interface: In the context of this Recommendation, interfaces represent logical relationships between automatically switched optical network (ASON) control plane entities and are defined by the information flow between these entities. Such a relationship allows distribution of these entities in support of different equipment implementations and network architectures.

3.2.39 IP routing interworking function: An IP routing interworking function allows IP topology or routes to be passed from one IP routing protocol to a different incompatible IP routing protocol. For example, an IP routing interworking function may form a gateway between an Integrated IS-IS routed DCN and an OSPF routed DCN.

3.2.40 label: This term is the same as an SNP.

3.2.41 link resource manager (LRM): A LRM is an architecture component. Two LRM components are used – the LRMA and LRMZ. The LRM components are responsible for the management of a subnetwork point pool (SNPP) link, including the allocation and un-allocation of subnetwork point (SNP) link connections, providing topology and status information. An SNPP link is managed by a pair of LRMA and LRMZ components, each one managing an end of the link. See [ITU-T G.8080].

3.2.42 local CP-ID: A local CP-ID is a CP-ID that has local significance to the discovery agent transmitting the discovery messages.

3.2.43 local TCP-ID: A local TCP-ID is a TCP-ID that has local significance to the discovery agent transmitting the discovery messages.

3.2.44 management plane: The management plane performs management functions for the transport plane, the control plane and the system as a whole. It also provides coordination between all the planes. The following management functional areas identified in [ITU-T M.3010] are performed in the management plane: performance management; fault management; configuration management; accounting management and security management.

3.2.45 multi-homed: A user is considered to be multi-homed when there are two or more subnetwork point pool (SNPP) links connecting the access group container to the network.

3.2.46 name: A name, or identifier, is a location-independent string with respect to both a source and a destination. If a string is the name of a destination, it remains unchanged if the destination moves. It is valid regardless of the source attempting communication with the destination.

3.2.47 network-layer interworking function: A network-layer interworking function provides interoperability between nodes that support incompatible network-layer protocols.

3.2.48 node: In the context of this Recommendation, the term "node" is used to signify a subnetwork or a routing area.

3.2.49 ordered control mode: A node that initiates the transmission of a label mapping only when the label mapping from the downstream node is received.

3.2.50 permanent connection (PC): A PC is a connection type that is provisioned by manual action or via the management system.

3.2.51 policy: A policy is the set of rules applied to interfaces at the system boundary, which filter messages into an allowed set.

3.2.52 port controller: Port controller is a class of component that implements the set of rules applied to a system.

3.2.53 potential (resource) label range: A potential (resource) label range is the range of resource labels in the transport plane name space that an adaptation function supports to distinguish different information flows.

3.2.54 potential SNPs: Potential subnetwork points (SNPs) are those SNPs that are associated with a (resource) label.

3.2.55 protocol controller (PC): A PC is a component, which provides the function of mapping the parameters of the abstract interfaces of the control components into messages that are carried by a protocol to support interconnection via an interface. Protocol controllers are a sub-class of policy ports. See [ITU-T G.8080].

3.2.56 provisioning: The act of specifying the parameters necessary when assigning/deassigning network resources to/from the control plane or to invoke/remove services provided by a control plane instance. These parameters are specific to a resource or service request, causing changes to these parameters to only impact a specific resource or service request. Therefore, provisioning is allowed in the initialization and operations phases of the control plane lifecycle.

3.2.57 proxy call: A call in which the calling/called party call controller which is not coincident with the user interacts with the network call controller by means of a call protocol. See [ITU-T G.8080].

3.2.58 remote route query: A remote route query is an operation where a routing controller communicates with another routing controller, which does not have the same set of layer resources, in order to compute a routing path in a collaborative manner.

3.2.59 restoration: Restoration is the action of replacing a connection in a call by rerouting the connection.

3.2.60 route: Route is a sequence of subnetwork point (SNP) names, subnetwork point pool (SNPP) names, routing area names, and/or transport resource identifiers that are used by the control plane to create a network connection.

3.2.61 route query requester: A route query requester is a connection controller or routing controller that sends a route query message to a routing controller requesting for one or more routing paths that satisfies a set of routing constraints.

3.2.62 route query responder: A route query responder is a routing controller that performs path computation upon reception of a route query message from a routing controller or connection controller, sending a response back at the end of computation.

3.2.63 routing: Routing is the control plane function used to select paths for the establishment of connections through one or more operator networks.

3.2.64 routing area (RA): A routing area is defined by a set of subnetworks, the SNPP links that interconnect them, and the SNPPs representing the ends of the SNPP links exiting that routing area. A routing area may contain smaller routing areas interconnected by SNPP links. The limit of subdivision results in a routing area that contains a subnetwork. See [ITU-T G.8080].

3.2.65 routing controller (RC): The RC is a component with the roles to:

- respond to requests for path (route) information needed to set up connections. This information can range from end-to-end path details to a next hop. The route can be computed by one or more cooperating RCs;
- respond to requests for topology (SNPs and their abstractions) information for network management purposes. See [ITU-T G.8080].

3.2.66 routing control domain (RCD): The RCD is a type of control domain where the criterion for membership is a common routing capability. It may contain zero or more rerouting domains.

3.2.67 routing information database (RDB): A repository for the local topology, network topology, reachability and other routing information that is updated as part of the routing information exchange and may additionally contain information that is configured.

3.2.68 routing level: A routing level is a relationship between a routing area (RA) and a containing RA or contained RAs. The containment hierarchy of routing areas creates routing levels.

3.2.69 routing performer (RP): RP is a computational viewpoint object that is associated with a routing area and provides an abstraction of the routing service for the routing area.

3.2.70 service level agreement: A service level agreement is a contract between two parties such as a service provider and a customer. It defines the services available to the customer, and the grade of service of those services as offered to the customer. It also usually describes the service guarantee and potential penalties in case of service degradation or failure.

3.2.71 shared risk group (SRG): An SRG is a group of resources that share a common risk component whose failure can cause the failure of all the resources in the group.

3.2.72 SNPP alias: A subnetwork point pool (SNPP) alias is an alternate SNPP name for the same SNPP link that is generated from another SNPP name space. If present in a routing area, it is available to the routing controller (RC) that is associated with the routing area (RA).

3.2.73 SNP identifier: A subnetwork point (SNP) identifier is used for link connection assignment and, in some cases, routing. The SNP identifier is derived from the subnetwork point pool (SNPP) identifier concatenated with a locally significant SNP index. When the identifier is routable, it is an SNPP address. When it is not routable, the identifier is an SNP name.

3.2.74 SNPP identifier: A subnetwork point pool (SNPP) identifier is an instance of an identifier for an SNPP. When the identifier is routable, it is an SNPP address. When it is not routable, the identifier is an SNPP name. The constituents of an SNPP identifier may include routing area (RA) IDs, a subnetwork id and resource context identifiers. See [ITU-T G.8080].

3.2.75 soft permanent connection (SPC): An SPC is a user-to-user connection whereby the user-to-network portion of the end-to-end connection is established by the network management system as a permanent connection (PC). The network portion of the end-to-end connection is established as a switched connection using the control plane. In the network portion of the connection, requests for establishment of the connection are initiated by the management plane and set-up by the control plane.

3.2.76 soft rerouting: Soft rerouting is a function that reroutes a connection for administrative purposes. The original connection is not taken out of service until the rerouted connection is established.

3.2.77 subnetwork: A subnetwork is a topological component used to effect routing of a specific characteristic information. For the purposes of this Recommendation, a subnetwork is bounded by subnetwork points.

3.2.78 subnetwork connection (SNC): A subnetwork connection is a dynamic relation between two (or more, in the case of broadcast connections) subnetwork points at the boundary of the same subnetwork.

3.2.79 subnetwork point (SNP): The SNP is an abstraction that represents an actual or potential underlying connection point (CP) (or connection termination point (CTP)) or an actual or potential termination connection point (TCP) or trail termination point (TTP). Several SNPs (in different subnetwork partitions) may represent the same TCP or CP.

3.2.80 subnetwork point pool (SNPP): An SNPP is a set of subnetwork points that are grouped together for the purposes of routing. An SNP pool has a strong relationship to link ends (see [ITU-T G.852.2]).

3.2.81 subnetwork point pool link (SNPP link): An SNPP link is an association between SNPPs on different subnetworks.

3.2.82 supplementary services: Within a transport network, supplementary services are considered to be the set of services that are provided to end users over and above connection management.

3.2.83 switched connection (SC): An SC is any connection that is established, as a result of a request from the end user, between connection end-points using a signalling/control plane and involves the dynamic exchange of signalling information between signalling elements within the control plane(s).

3.2.84 termination and adaptation performer (TAP): The TAP is physically located on the equipment providing the adaptation and termination function. It provides a control plane view of the link connection, and hides any hardware and technology-specific details of the adaptation and termination control.

3.2.85 termination connection point (TCP): For the purposes of this Recommendation, a termination connection point represents the output of a trail termination function or the input to a trail termination sink function. (Note that in [ITU-T G.805] the TCP refers to the binding between two points.)

3.2.86 third party signalling: A third party signalling is a party that acts on behalf of a user and exchanges information between the user and the control plane for the purpose of connection supervision.

3.2.87 trail termination point (TTP): A trail termination point represents the signal state at a TCP. Also see [ITU-T M.3100].

3.2.88 transitional SNPP link: A subnetwork point pool (SNPP) link with an SNPP in a subnetwork in one layer, and an SNPP in a subnetwork of a different layer. It may also be an SNPP link with an SNPP in a subnetwork in one sublayer and an SNPP in a subnetwork of a different sublayer, where both sublayers are in the same layer. See [ITU-T G.8080].

3.2.89 transport capability exchange (TCE): Transport capability exchange is used for exchanging information about the capabilities of the transport entities (e.g., termination and adaptation capabilities) in order to facilitate the negotiation of an agreed set of capabilities. Preconditions of the TCE process include knowledge of the Layer Adjacency information and the local capabilities.

3.2.90 transport plane: The transport plane provides bidirectional or unidirectional transfer of user information from one location to another. It can also provide transfer of some control and network management information. The transport plane is layered; it is equivalent to the "Transport Network" defined in [ITU-T G.805].

3.2.91 transport resource identifier: Transport resource identifiers are used by control plane components to refer to transport plane resources. This name space is operator assigned and is independent of SNPP identifier spaces.

3.2.91.1 E-NNI transport resource identifier: The E-NNI SNPP link may be assigned an identifier for the network call controllers to specify E-NNIs. These identifiers must be globally unique and are assigned for the automatically switched optical network (ASON). Multiple identifiers may be assigned to the SNPP link. See [ITU-T G.8080].

3.2.91.2 UNI transport resource identifier: The UNI SNPP link may be assigned an identifier for the calling party call controller and network call controller to specify destinations. These identifiers must be globally unique, are assigned for the automatically switched optical network (ASON), and may be in a 1: n or n :1 relationship with SNPP links. See [ITU-T G.8080].

3.2.92 user-network interface for the control plane (UNI): An UNI is a bidirectional signalling interface between service requester and service provider control plane entities.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

ACC-n	A-end CC at domain n
AD	Administrative Domain
AE-DCF	Automatic Encapsulating Data Communication Function
AESA	ATM End System Address
AG	Access Group
AGC	Access Group Container
AGC-a	A-end AGC
AGC-z	Z-end AGC
ARC	Alarm Reporting Control
ASC-n	A-end Signalling Controller in domain n
ASN-n	A-end SN in domain n
ASON	Automatically Switched Optical Network
CAC	Call Admission Control
CallC	Call Controller
CC	Connection Controller
CC-a	A-end Connection Controller
CCC	Calling/Called Party Call Controller
CCC-a	A-end CCC
CCC-z	Z-end CCC
CCI	Connection Controller Interface
CC-z	Z-end Connection Controller
CoS	Class of Service
CP	Connection Point
CPS	Connection Point Status