

EXHIBIT 9

INTERNATIONAL
STANDARD

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7498-1

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**Information technology — Open Systems
Interconnection — Basic Reference Model:
The Basic Model**

*Technologies de l'information — Modèle de référence de base pour
l'interconnexion de systèmes ouverts (OSI): Le modèle de base*



Reference number
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5.8.9.3.3 The reset function may require that information be included in the (N)-protocol-control-information of the (N)-protocol-data-unit.

5.8.9.3.4 The reset function does not apply in connectionless-mode transmission.

5.9 Routing

A routing function within the (N)-layer enables communication to be relayed by a chain of (N)-entities. The fact that communication is being routed by intermediate (N)-entities is known by neither the lower layers nor the higher layers. An (N)-entity which participates in a routing function may have a routing table.

5.10 Quality Of Service (QOS)

5.10.1 Introduction

5.10.1.1 Quality Of Service (QOS) is the collective name given to a set of parameters associated with (N)-data transmission among (N)-service-access-points.

5.10.1.2 There are two categories of quality of service parameters. The first category applies to both connection-mode and connectionless-mode. The second category applies only to the connection-mode service. The lists of parameters given are only examples. Individual parameters are defined for each layer.

5.10.2 Connection/Connectionless parameters

5.10.2.1 These parameters apply for the provision of either the (N)-connection-mode service or the (N)-connectionless-mode service.

5.10.2.2 Single transmission related parameters

5.10.2.2.1 For the (N)-connection-mode service, the parameters are negotiated during establishment of the (N)-connection. For the connectionless-mode service, the parameters are defined entirely by the behavior of a single (N)-data-transmission and are the same as those defined for the (N)-connection-mode service. Possible parameters are:

- a) expected transmission delay;
- b) probability of corruption;
- c) probability of loss or duplication;
- d) probability of wrong delivery;
- e) cost;
- f) protection from unauthorized access; and
- g) priority.

5.10.2.3 Multiple transmission related parameters

5.10.2.3.1 The parameters apply for multiple (N)-data-transmissions between pairs of (N)-service-access-points. Possible parameters are:

- a) expected throughput; and
- b) probability of out of sequence delivery.

5.10.3 Connection-mode parameters

5.10.3.1 These parameters apply only to the (N)-connection-mode service and are negotiated by (N)-protocol during the establishment of the (N)-connection.

5.10.3.2 Possible parameters are:

- a) connection establishment delay;
- b) connection establishment failure probability;
- c) connection release delay;
- d) connection release failure probability;
- e) connection resilience.

6 Introduction to the specific OSI layers

6.1 Specific layers

6.1.1 The general structure of the OSI architecture described in clause 5 provides architectural concepts from which the Reference Model of Open Systems Interconnection has been derived, making specific choices for the layers and their contents.

6.1.2 The Reference Model contains seven layers:

- a) the Application Layer (layer 7);
- b) the Presentation Layer (layer 6);
- c) the Session Layer (layer 5);
- d) the Transport Layer (layer 4);
- e) the Network Layer (layer 3);
- f) the Data Link Layer (layer 2); and
- g) the Physical Layer (layer 1).

6.1.3 These layers are illustrated in Figure 11.

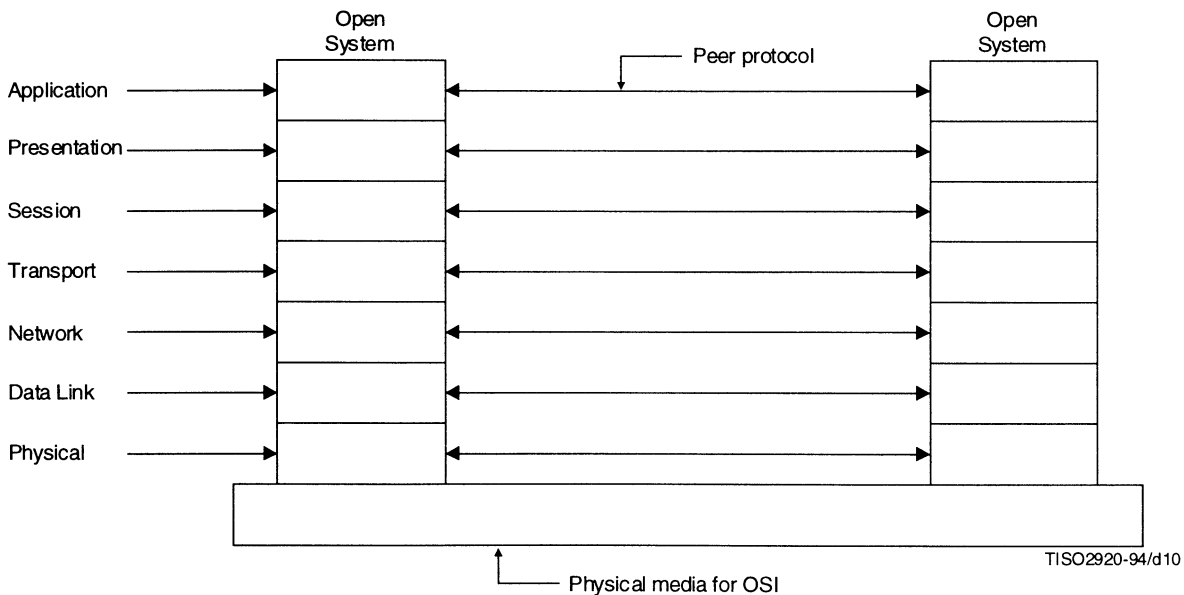


Figure 11 – Seven layer reference model and peer protocols

6.1.4 The highest is the Application Layer and it consists of the application-entities that cooperate in the OSI Environment. The lower layers provide the services through which the application-entities cooperate.

6.1.5 Layers 1 to 6, together with the physical media for OSI provide a step-by-step enhancement of communication services. The boundary between two layers identifies a stage in this enhancement of services at which an OSI service standard is defined while the functioning of the layers is governed by OSI protocol standards.

6.1.6 Not all open systems provide the initial source or final destination of data. When the physical media for OSI do not link all open systems directly, some open systems act only as relay open systems, passing data to other open systems. The functions and protocols which support the forwarding of data are then provided in the lower layers. This is illustrated in Figure 12.

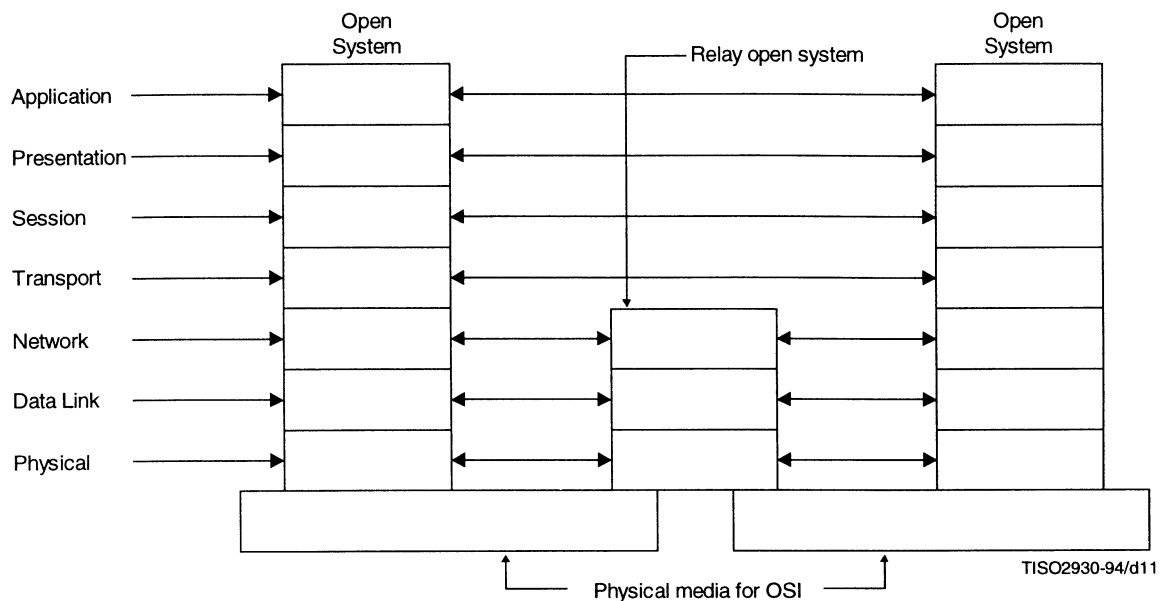


Figure 12 – Communication involving relay open systems

6.2 The principles used to determine the seven layers in the Reference Model

6.2.1 The following principles have been used to determine the seven layers in the Reference Model and are felt to be useful for guiding further decisions in the development of OSI standards:

NOTE – It may be difficult to prove that any particular layering selected is the best possible solution. However, there are general principles which can be applied to the question of where a boundary should be placed and how many boundaries should be placed.

- a) Do not create so many layers as to make the system engineering task of describing and integrating the layers more difficult than necessary.
- b) Create a boundary at a point where the description of services can be small and the number of interactions across the boundary are minimized.
- c) Create separate layers to handle functions that are manifestly different in the process performed or the technology involved.
- d) Collect similar functions into the same layer.
- e) Select boundaries at a point which past experience has demonstrated to be successful.
- f) Create a layer of easily localized functions so that the layer could be totally redesigned and its protocols changed in a major way to take advantage of new advances in architectural, hardware or software technology without changing the services expected from and provided to the adjacent layers.
- g) Create a boundary where it may be useful at some point in time to have the corresponding interface standardized.