ISO 8648:1988-02 (E)

Information processing systems; open systems interconnection; internal organization of the network layer

Contents

Page

0 Introduction 1

1 Scope and field of application 1

2 References 2

3 Definitions 2
3.1 Reference model definitions 2
3.2 Service Conventions definitions 2
3.3 Network Layer architecture definitions 2

4 Abbreviations 3

5 Network Layer concepts and terminology 3
5.1 Real worid objects and abstract elements 3
5.2 End systems and intermediate systems 3
5.2.1 End system considerations 3
5.2.2 Intermediate system considerations 3
5.3 Real subnetworks and subnetworks 3
5.4 Relay systems and interworking units 5
5.5 Data transmission Service and subnetwork Service 5

5 0 Service types 5

6 Organization of the Network Layer 5
6.1 Factors which influence the Internal Organization of the Network Layer 10
6.2 Description of the possibie roles for a Network Layer protocol 10
6.3 Subnetwork access protocols 11
6.4 Subnetwork independent convergence protocols 11
6.5 Subnetwork dependent convergence protocols 11
6.5.1 Relationship of SNDCP to SNICP 11
6.5.2 Relationship of SNDCP to the OSI Network Service 11
6.6 Relaying and routeing 11
6.7 Single Network Layer protocol fulfilling all protocol roles 12

7 Application of the Network Layer Internal Organization 12
7.1 Interconnection of subnetworks supporting all elements of the OSI Network Service 12
7.2 Hop-by-hop harmonization 12
7.3 Use of an internetworking protocol approach 12

7 4 Combinations of approaches for interconnecting subnetworks 13

8 Interconnection scenarios 13
8.1 Single data-link/single subnetwork interconnection 13
8.2 Interconnections involving subnetworks which Support all elements of the Network Service 14
8.3 Interconnections involving multiple protocol combinations 14