

# ISO 8648:1988-02 (E)

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

---

<b>Contents</b>		<b>Page</b>
<b>0</b>	<b>Introduction.....</b>	<b>1</b>
<b>1</b>	<b>Scope and field of application .....</b>	<b>1</b>
<b>2</b>	<b>References .....</b>	<b>2</b>
<b>3</b>	<b>Definitions .....</b>	<b>2</b>
<b>3.1</b>	<b>Reference model definitions .....</b>	<b>2</b>
<b>3.2</b>	<b>Service Conventions definitions.....</b>	<b>2</b>
<b>3.3</b>	<b>Network Layer architecture definitions.....</b>	<b>2</b>
<b>4</b>	<b>Abbreviations.....</b>	<b>3</b>
<b>5</b>	<b>Network Layer concepts and terminology.....</b>	<b>3</b>
<b>5.1</b>	<b>Real world objects and abstract elements .....</b>	<b>3</b>
<b>5.2</b>	<b>End systems and intermediate systems .....</b>	<b>3</b>
<b>5.2.1</b>	<b>End system considerations.....</b>	<b>3</b>
<b>5.2.2</b>	<b>Intermediate system considerations .....</b>	<b>3</b>
<b>5.3</b>	<b>Real subnetworks and subnetworks .....</b>	<b>3</b>
<b>5.4</b>	<b>Relay systems and interworking units.....</b>	<b>5</b>
<b>5.5</b>	<b>Data transmission Service and subnetwork Service.....</b>	<b>5</b>
<b>5</b>	<b>0 Service types .....</b>	<b>5</b>
<b>6</b>	<b>Organization of the Network Layer.....</b>	<b>5</b>
<b>6.1</b>	<b>Factors which influence the Internal Organization of the Network Layer .....</b>	<b>10</b>
<b>6.2</b>	<b>Description of the possible roles for a Network Layer protocol .....</b>	<b>10</b>
<b>6.3</b>	<b>Subnetwork access protocols .....</b>	<b>11</b>
<b>6.4</b>	<b>Subnetwork independent convergence protocols.....</b>	<b>11</b>
<b>6.5</b>	<b>Subnetwork dependent convergence protocols.....</b>	<b>11</b>
<b>6.5.1</b>	<b>Relationship of SNDCP to SNICP .....</b>	<b>11</b>
<b>6.5.2</b>	<b>Relationship of SNDCP to the OSI Network Service.....</b>	<b>11</b>
<b>6.6</b>	<b>Relaying and routeing.....</b>	<b>11</b>
<b>6.7</b>	<b>Single Network Layer protocol fulfilling all protocol roles .....</b>	<b>12</b>
<b>7</b>	<b>Application of the Network Layer Internal Organization .....</b>	<b>12</b>
<b>7.1</b>	<b>Interconnection of subnetworks supporting all elements of the OSI Network Service.....</b>	<b>12</b>
<b>7.2</b>	<b>Hop-by-hop harmonization.....</b>	<b>12</b>
<b>7.3</b>	<b>Use of an internetworking protocol approach .....</b>	<b>12</b>
<b>7</b>	<b>4 Combinations of approaches for interconnecting subnetworks .....</b>	<b>13</b>
<b>8</b>	<b>Interconnection scenarios.....</b>	<b>13</b>
<b>8.1</b>	<b>Single data-link/single subnetwork interconnection.....</b>	<b>13</b>
<b>8.2</b>	<b>Interconnections involving subnetworks which Support all elements of the Network Service.....</b>	<b>14</b>
<b>8.3</b>	<b>Interconnections involving multiple protocol combinations.....</b>	<b>14</b>