

# ISO/IEC 4396-9:2023-12 (E)

## Telecommunications and information exchange between systems - Recursive inter-network architecture - Part 9 : Error and flow control protocol

---

<b>Contents</b>		<b>Page</b>
<b>Foreword</b> .....		<b>v</b>
<b>Introduction</b> .....		<b>vi</b>
<b>1 Scope</b> .....		<b>1</b>
<b>2 Normative references</b> .....		<b>1</b>
<b>3 Terms and definitions</b> .....		<b>1</b>
<b>4 Overview of the EFCP</b> .....		<b>2</b>
<b>5 Role of EFCP within the IPC process</b> .....		<b>3</b>
5.1 General.....		3
5.2 Description of the Data Transfer Protocol (DTP) Task.....		3
5.3 DTP user service API definition.....		5
5.3.1 Read API or read immediate invoked.....		5
5.3.2 Read/Read immediate action.....		5
5.3.3 Write action.....		5
5.4 Description of the DTCP task.....		5
5.4.1 General.....		5
5.4.2 Retransmission control.....		6
5.4.3 Flow control.....		6
<b>6 Common elements of the DTP and DTCP tasks</b> .....		<b>7</b>
6.1 Abstract and encoding rules.....		7
6.2 DIF-wide data.....		7
6.2.1 General.....		7
6.2.2 Constants.....		7
6.2.3 Data structures.....		8
6.3 Data Transfer Application Entity (DTAE) constants.....		8
6.4 PDU format.....		8
<b>7 Detailed description of the DTP task</b> .....		<b>9</b>
7.1 General.....		9
7.2 DTP State Vector — DTP-SV.....		9
7.3 Data transfer PDU.....		11
7.4 Common procedures.....		11
7.5 API events.....		11
7.5.1 General.....		11
7.5.2 Event — SDU delivered from (N)-port-id.....		11
7.5.3 Event — PDU delivered from RMT.....		13
7.5.4 Event — Receiver inactivity timer timeout.....		16
7.5.5 Event — Sender inactivity timer timeout.....		16
7.5.6 Event — A-Timer timeout.....		16
<b>8 Detailed description of the DTCP task</b> .....		<b>17</b>
8.1 General.....		17
8.2 Types of control PDUs.....		17
<b>9 Detailed description of the DTCP task</b> .....		<b>17</b>
9.1 General.....		17
9.2 Types of control PDUs.....		17
9.3 DTCP state vector.....		18
9.4 Syntax of PDUs.....		20
9.4.1 General.....		20
9.4.2 Ack/Flow control PDUs.....		20

9.4.3	Selective Ack PDU .....	21
9.4.4	Control Ack PDU .....	22
9.4.5	Rendezvous PDU .....	22
9.5	Detailed specification of common functions .....	23
9.6	Event processing .....	23
9.6.1	Event — SVUUpdate(PDU.SequenceNumber) occurred .....	23
9.6.2	Event — Ack/Nack flow control PDUs arrived .....	24
9.6.3	Event — Selective Ack .....	25
9.6.4	Event — Rendezvous PDU .....	25
9.6.5	Event — Retransmission Timer .....	26
9.6.6	Event — Sending Rate Timer timeout .....	27
9.6.7	Event — Rendezvous Timer .....	27
9.6.8	Event — Rate-based Flow Control's buffer state change .....	27
<b>Annex A (informative) List of DTP and DTCP policies .....</b>		<b>29</b>
<b>Bibliography .....</b>		<b>31</b>