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OF ITU

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(10/96)

SERIES X: DATA NETWORKS AND OPEN SYSTEM
COMMUNICATION

Public data networks – Services and facilities

Facsimile Packet Assembly/Disassembly facility (FPAD) in a public data network

ITU-T Recommendation X.5

(Previously «CCITT Recommendation»)

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DATA NETWORKS AND OPEN SYSTEM COMMUNICATION

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For further details, please refer to ITU-T List of Recommendations.

FOREWORD

The ITU-T (Telecommunication Standardization Sector) is a permanent organ of the International Telecommunication Union (ITU). The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1 (Helsinki, March 1-12, 1993).

ITU-T Recommendation X.5 was revised by ITU-T Study Group 7 (1993-1996) and was approved under the WTSC Resolution No. 1 procedure on the 5th of October 1996.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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Recommendation X.5**FACSIMILE PACKET ASSEMBLY/DISASSEMBLY FACILITY (FPAD)
IN A PUBLIC DATA NETWORK***(revised in 1992)***Preface**

The establishment in various countries of public data networks providing packet switched data transmission services creates a need to produce standards to facilitate G3 facsimile equipment access from the public telephone network.

The ITU-T,

considering

- (a) that Recommendations X.1 and X.2 define the user classes of service and user facilities in public data networks, Recommendation X.96 defines call progress signals, Recommendation X.39 defines the procedures between a Facsimile Packet Assembly/Disassembly facility (FPAD) and a packet mode DTE or another FPAD, Recommendation X.38 defines the G3 facsimile equipment/DCE interface for a facsimile equipment accessing the FPAD;
- (b) that the logical control links for packet switched data transmission services are defined in Recommendation X.92, and that in particular Recommendation X.92 allows for incorporation of a PAD;
- (c) that G3 facsimile or associated equipments will send and receive network control information and user information in the form of dual-tone multi-frequency codes defined in Recommendation Q.23 or signals defined in Recommendations T.4 and T.30;
- (d) that DTEs operating in the packet mode will send and receive network control information and user information in the form of packets in accordance with Recommendation X.25;
- (e) that the packet mode DTE shall not be obliged to use the control procedures for FPAD functions, but that some packet mode DTEs may wish to control specific functions of the FPAD,

unanimously declares

- (1) that the functions performed by, and operational characteristics of, the FPAD for the G3 facsimile equipment are described below in clause 2;
- (2) that the operation of FPAD for the G3 facsimile equipment should depend on the possible values of internal variables known as FPAD parameters which are described in clause 3;
- (3) that the FPAD parameters for the G3 facsimile equipment and their possible values are listed below in clause 4.

1 Introduction

An FPAD is a facility which offers a G3 facsimile equipment the opportunity to use a public data network to convey facsimile control and image data to another G3 facsimile equipment or to an application DTE. The FPAD also allows an application DTE to establish a connection and to send control and image data to a G3 facsimile equipment.

It is an underlying principle of the FPAD environment that to the degree possible, the performance and quality of the service of the two G3 facsimile equipments as available today utilizing the general switched telephone network are not negatively affected.

NOTE – The term G3 facsimile equipment used here is slightly different from the T-Series Recommendations. In this Recommendation it is taken to be a G3 facsimile equipment which conforms to Recommendation T.4/T.30, along with the necessary ancillary control device as described in 2.1.1/X.38.

1.1 Scope

Support for the following cases is provided in the FPAD Series of Recommendations:

- a) *A G3 facsimile equipment to a G3 facsimile equipment* – A G3 facsimile equipment establishes a call to a G3 facsimile equipment, dialling in one or two stages the number of the called G3 facsimile equipment:
 - the calling G3 facsimile equipment transmits document(s) to the called G3 facsimile equipment;
 - the called G3 facsimile equipment transmits document(s) to the calling G3 facsimile equipment.
- b) *A G3 facsimile equipment to an application DTE* – A G3 facsimile equipment establishes a call to an application DTE, dialling in one or two stages the number of the called application DTE:
 - the calling G3 facsimile equipment transmits document(s) to the called application DTE;
 - the called application DTE transmits document(s) to the calling G3 facsimile equipment.
- c) *An application DTE calling to a G3 facsimile equipment* – An application DTE establishes a call to a G3 facsimile equipment:
 - the calling application equipment transmits document(s) to the called G3 facsimile;
 - the called G3 facsimile equipment transmits document(s) to the calling application DTE.

NOTE – Additional cases are for further study.

1.2 Physical configurations

1.2.1 G3 facsimile equipment/FPAD

Two models are defined for the connection of a G3 facsimile equipment and an FPAD. These two models are illustrated in Figure 1.

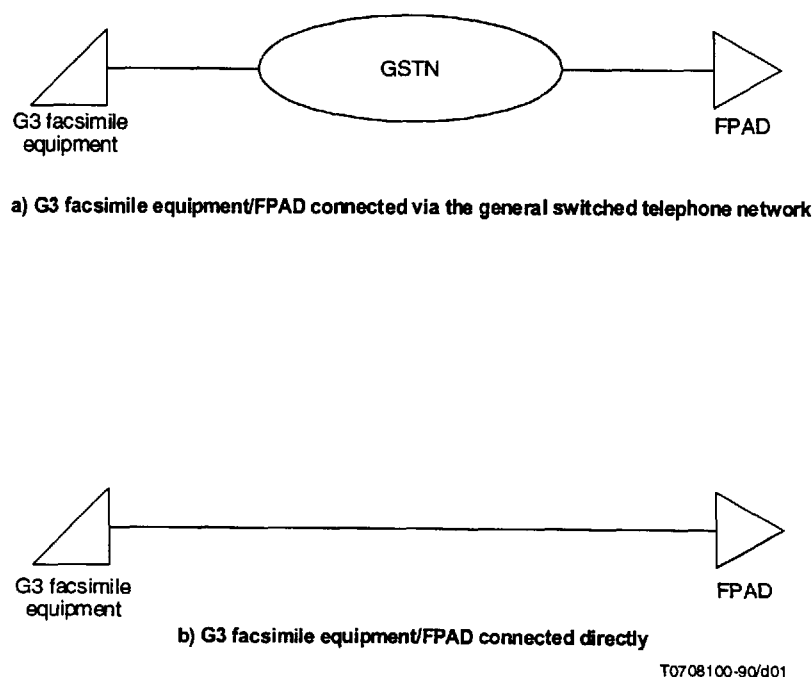
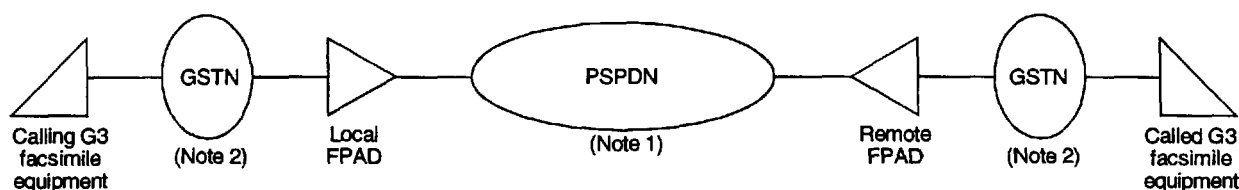


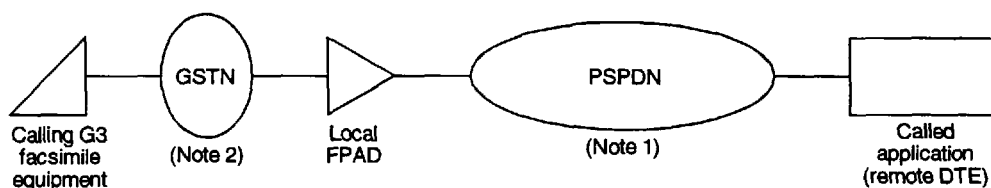
FIGURE 1/X.5

1.2.2 Operating environments

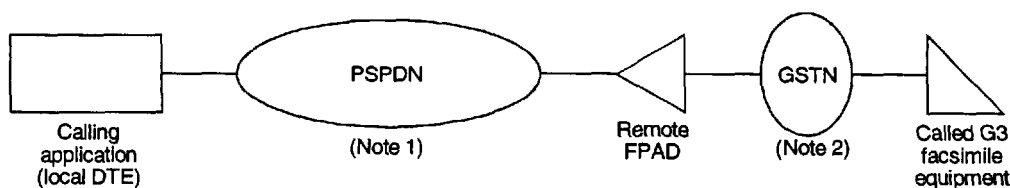
Three scenarios are defined in which two G3 facsimile equipments or a G3 facsimile equipment and an application DTE may operate. These scenarios are illustrated in Figure 2.



a) G3 facsimile equipment to G3 facsimile equipment



b) G3 facsimile equipment to application DTE



c) Application DTE to G3 facsimile equipment

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NOTES

- 1 The FPAD and the PSPDN are shown as separate elements. This is for clarity only and should not imply that the FPAD is not, or could not be, an integral part of the PSPDN.
- 2 The G3 facsimile equipment and the FPAD are shown connected by the general switched telephone network. In each case, the G3 facsimile equipment and FPAD may be directly connected.
- 3 In this figure and throughout the FPAD Series of Recommendations, "local FPAD" or "local DTE" is the FPAD or DTE associated with the "calling" G3 facsimile equipment or application DTE. Similarly, "remote FPAD" or "remote DTE" is associated with the "called" G3 facsimile equipment or application DTE.
- 4 The scenarios in this figure do not preclude the use of a single FPAD as a local or remote FPAD on a call-by-call basis.

FIGURE 2/X.5