



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

X.181

**PUBLIC DATA NETWORKS
ADMINISTRATIVE ARRANGEMENTS**

**ADMINISTRATIVE ARRANGEMENTS FOR THE
PROVISION OF INTERNATIONAL PERMANENT
VIRTUAL CIRCUITS (PVCs)**

ITU-T Recommendation X.181

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation X.181 was published in Fascicle VIII.3 of the *Blue Book*. This file is an extract from the *Blue Book*. While the presentation and layout of the text might be slightly different from the *Blue Book* version, the contents of the file are identical to the *Blue Book* version and copyright conditions remain unchanged (see below).

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

© ITU 1988, 1993

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the ITU.

Recommendation X.181

**ADMINISTRATIVE ARRANGEMENTS FOR THE PROVISION OF
INTERNATIONAL PERMANENT VIRTUAL CIRCUITS (PVCs)**

(Malaga-Torremolinos, 1984; amended at Melbourne, 1988)

The CCITT,

considering

- (a) that the permanent virtual circuit service is listed in Recommendation X.2;
- (b) that the permanent virtual circuit service may not be available for all international connections and may not be available for the maritime mobile services (as noted in Recommendation X.2);
- (c) that the international application of the permanent virtual circuit service depends on bilateral agreement (as noted in Recommendation X.2);
- (d) that Recommendation X.25 defines the DTE/DCE interface characteristics and Recommendation X.75 defines the procedures for international circuits between two STEs;
- (e) that there is a need to standardize administrative procedures for the exchange of information characterizing the international permanent virtual circuit among Administrations concerned, in order to establish the international permanent virtual circuit,

unanimously recommends the following

1 One of the two subscribers to be connected by the international PVC (hereafter called the "responsible subscriber") shall clearly be allocated the responsibility for all organizational matters relating to an international PVC. The responsible subscriber shall be nominated by the subscribers to be connected by the international PVC (see Note 1).

2 The Administration of country housing this "responsible subscriber" (hereafter called the "source Administration") shall act as the controlling and coordinating Administration for that international PVC and shall carry out the discussions with the responsible subscriber about any changes to the international PVC.

3 The source Administration will normally gather information required for charging and accounting for the international PVC (see Note 2).

4 The exchange of information for the provision of international PVCs will be as follows:

4.1 Source Administration and destination Administration (the Administration housing the non-responsible subscriber) will need to exchange information for the provision of the international PVC. This information should include:

- a) international numbers of both subscriber DTEs,
- b) throughput class (both directions),
- c) name of the international PVC (see Note 3),
- d) proposal on routing,
- e) quality of service parameters (see Note 4),
- f) service inauguration date and lifetime of the international PVC.

4.2 If transit networks must be involved, the route should be agreed on among Administrations involved. For the efficiency of negotiation among Administrations, the source Administration may initiate the negotiation with its adjacent Administration after which negotiation between subsequent Administrations follows, until the destination Administration has been reached. The information described in § 4.1 should be conveyed to each transit Administration, and the route should be determined satisfying the requested throughput classes and quality of service (see Note 4).

4.3 Between adjacent Administrations, information to be exchanged should include the following items in addition to the information described in § 4.1:

- a) the identity of STE X/Y interface,
- b) logical channel group number and logical channel number,
- c) window size (both directions),
- d) packet size (both directions).

5 The following procedures should apply for the interchange of information between Administrations and subscribers of an international PVC. Where a subscriber has subscribed to more than one international PVC, the procedures in this Recommendation must be applied separately for each international PVC.

5.1 A subscriber applying for the provision of an international PVC shall apply to his own Administration using standard application procedures. He should supply full details of the responsible subscriber.

5.2 The Administration should, in case the request did not come from the responsible subscriber, pass details in a standard format to the source Administration as indicated in Annex A.

5.3 The source Administration will then verify with the responsible subscriber whether the application can be permitted.

5.4 The source Administration will then negotiate with the destination Administration and possibly transit Administrations whether the application can be permitted, taking into account § 4.

5.5 If the conditions in §§ 5.3 and 5.4 are accepted, the source Administration will agree with the subscriber on the logical channel group number and logical channel number to which the international PVC will be connected. The destination Administration will do so with the other subscriber.

5.6 The source Administration will inform both subscribers involved when the international PVC is established.

5.7 If, during the lifetime of the international PVC, rerouting of the international PVC is necessary, the responsible subscriber will be informed by the source Administration of any changes of either charging or quality of service of the international PVC (see Note 5).

Note 1 - It is assumed that the responsible subscriber is one of the two subscribers to be connected by the international PVC.

Note 2 - Other arrangements are possible on a bilateral basis.

Note 3 - A name of an international PVC should be unique among the Administrations involved, (e.g., the specification of the international number, the logical channel group number and the logical channel number to which the international PVC is connected for both subscribers).

Note 4 - The parameters concerning quality of service are for further study.

Note 5 - The impact of a possible inclusion of an automatic (re)establishment procedure is for further study.

ANNEX A

(to Recommendation X.181)

The format and information to be passed to the source Administration following an application from a subscriber for the provision of an international PVC is as follows:

1 Application for the establishment of an international permanent virtual circuit (PVC) via several public networks has been received from:

Firm
Address
Country
International number
Date of application

2 The applicant as indicated in 1) above requests to be connected via an international PVC with:

Firm
Address
Country
International number

3 The responsible subscriber's international data number:

4 The following is requested:

- throughput class,
- service inauguration date,
- requested lifetime of the international PVC.