



INTERNATIONAL TELECOMMUNICATION UNION

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**X.123**

(10/96)

SERIES X: DATA NETWORKS AND OPEN SYSTEM  
COMMUNICATION

Public data networks – Network aspects

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**Mapping between escape codes and TOA/NPI  
for E.164/X.121 numbering plan interworking  
during the transition period**

ITU-T Recommendation X.123

(Previously "CCITT Recommendation")

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

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### 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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## **SUMMARY**

This Recommendation describes the mapping between the escape code address format and the TOA/NPI address format that is necessary during the transition period when some interfaces will be using TOA/NPI while other interfaces will still be using escape codes.



**MAPPING BETWEEN ESCAPE CODES AND TOA/NPI FOR E.164/X.121  
NUMBERING PLAN INTERWORKING DURING THE TRANSITION PERIOD**

(Geneva, 1996)

## **1 Introduction**

This Recommendation describes the mapping between escape codes and TOA/NPI that is necessary during the transition period when some interfaces will be using TOA/NPI while other interfaces will still be using escape codes.

Recommendation E.164 provides for escape code 0 to be used to indicate that the digits following the escape code are digits according to the X.121 numbering plan. This is seen as a temporary arrangement to facilitate interworking prior to the full implementation of Numbering Plan Identifier (NPI) based signalling protocols within packet mode terminals identified by an E.164 number. Recommendation E.165.1 (1996) provides for the continued use of Escape code "0" within the E.164 numbering plan until 2359 hrs (UTC) 31 December 2000 to enable interworking to occur during the transition period to implementation of the NPI mechanism..

Recommendation X.121 provides for escape codes 9 and 0 to be used to indicate that the digits following the escape code are digits according to the E.164 numbering plan. Escape code 0 also indicates that a digital interface on the destination network (ISDN or integrated ISDN/PSTN) is requested. Escape code 9 also indicates that an analogue interface on the destination network (PSTN or integrated ISDN/PSTN) is requested.

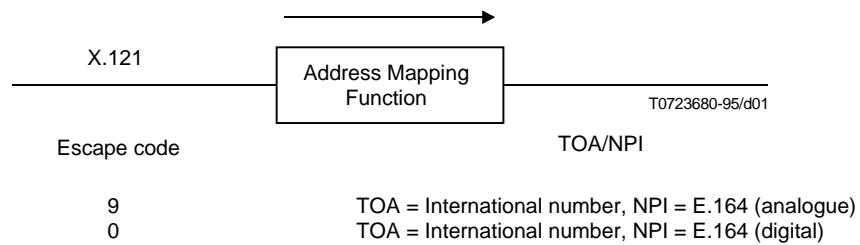
The long-term requirement is for the use of TOA/NPI in place of the present use of escape codes.

## **2 References**

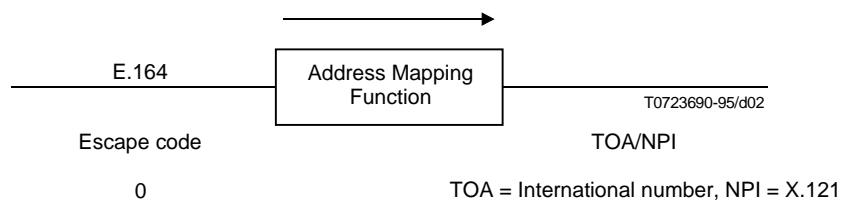
This Recommendation is related to and is compatible with the following Recommendations.

- [1] CCITT Recommendation E.164 (1991), *Numbering plan for the ISDN era*.
- [2] CCITT Recommendation E.165 (1988), *Timetable for coordinated implementation of the full capability of the numbering plan for the ISDN era (Recommendation E.164)*.
- [3] ITU-T Recommendation E.165.1 (1996), *Use of Escape code "0" within the E.164 numbering plan during the transition period to implementation of NPI mechanism*.
- [4] ITU-T Recommendation E.166/X.122 (1996), *Numbering plan interworking for the E.164 and X.121 numbering plans*.
- [5] ITU-T Recommendation X.121 (1996), *International Numbering plan for public data networks*.
- [6] ITU-T Recommendation X.25 (1996), *Interface between Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) for terminals operating in packet mode and connected to public data networks by a dedicated circuit*.
- [7] ITU-T Recommendation X.75 (1996), *Packet-switched signalling system between public networks providing data transmission services*.

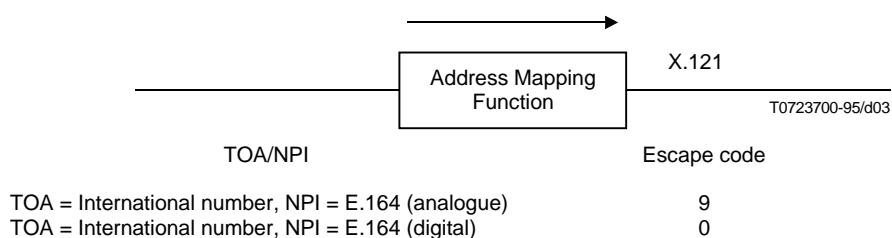
**3 Mapping from protocols using escape codes where X.121 is the default numbering plan to protocols using TOA/NPI**



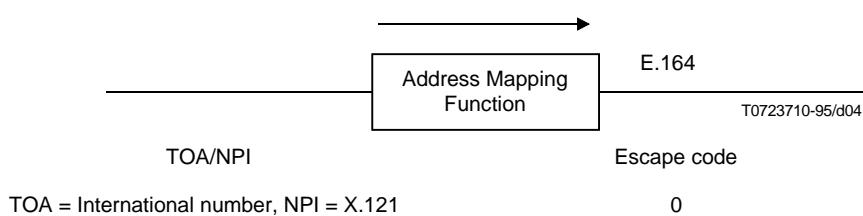
**4 Mapping from protocols using escape codes where E.164 is the default numbering plan to protocols using TOA/NPI**



**5 Mapping from protocols using TOA/NPI to protocols using escape codes where X.121 is the default numbering plan**



**6 Mapping from protocols using TOA/NPI to protocols using escape codes where E.164 is the default numbering plan**



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