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**PNO-ISC/SER/006**

## **High Level Service Description For Targeted Transit**

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# **PNO SERVICE DESCRIPTION NUMBER 006**

## **High Level Service Description For Targeted Transit**

NETWORK INTEROPERABILITY CONSULTATIVE COMMITTEE  
Office of Telecommunications  
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## **0.2 Normative Information**

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### 0.3 Contents

0	PREFACE .....	1
0.1	Title .....	1
0.2	Normative Information .....	2
0.3	Contents .....	3
0.4	History .....	3
0.5	Issue Control .....	3
0.6	References .....	3
0.7	Definition of Terms .....	3
0.8	Scope of Service .....	4
2	GENERAL PRINCIPLES.....	5
2.1	Originating Network Functions.....	5
2.2	Tandem Network Functions .....	5
2.3	Terminating or Receiving Network.....	5
3	KEY FEATURES AND AVAILABILITY .....	5
3.1	Operator Types.....	5
3.2	Routings.....	5
4	TECHNICAL IMPLEMENTATION .....	5
4.1	Call Processing Time and Number Length.....	5
4.2	Databuild .....	6
4.3	Prefix Codes .....	6
4.4	Technical Testing.....	6
4.5	Network Performance .....	6
4.6	Resilience.....	6
5	SERVICE PROVISION .....	6
5.1	Service Establishment Process .....	6
5.2	Inter-Network Operability .....	6
5.3	Billing .....	6

### 0.4 History

Revision	Date of Issue	Updated By	Description
Issue 1	May 2000	S Sporton	Initial Issue

### 0.5 Issue Control

PAGE	ISSUE	DATE
All	Issue 2	May 2000

### 0.6 References

- [1] ITU-T Recommendation E.164 The international public telecommunication numbering plan.

### 0.7 Definition of Terms

SEE PAGE 2 FOR THE NORMATIVE INFORMATION

**Indirect Access Service** The service which allows a telephone subscriber to access a carrier of choice on a call by call basis by dialling a short code designated for a particular operator followed by the appropriate national or international codes.

**Originating Operator** With relation to Targeted Transit, the Operator from whose network the Targeted Transit call originates. The Originating Operator is the Operator which adds the Targeted Transit prefix to a call prior to routing the call to a Tandem Operator.

**POC** Point of Connection

**POI** Point of Interconnect

**Receiving or Terminating Operator** With relation to Targeted Transit, the Operator to whom the Targeted Transit call is routed. The Receiving or Terminating Operator is the Operator who removes the Targeted Transit prefix from the digit string then terminates or passes the call on to another Operator. The receiving or Terminating Operator will request Targeted Transit service from the Transit Operator and obtains the appropriate prefix for service implementation.

**Transit Operator** The Operator to whose network the prefixed targeted Transit call from the Originating Operator is routed. The Transit Operator uses the Targeted Transit prefix to route the call to the appropriate POI of the Receiving or Terminating Operator.

## **0.8 Scope of Service**

This document reflects the general implementation of the Targeted Transit service. The service description will be updated to reflect any changes to the service.

## 1 Introduction

This document is intended to serve as a definition of the planned implementation of a Targeted Transit service. It also presents broad technical guidelines for Operators to follow when implementing the service.

So as to facilitate immediate deployment, a key consideration was that this implementation of Targeted Transit should use existing switch technology and capabilities as well as not require any enhancements and/or modifications to signalling protocols currently in use in the U.K.

This service is essentially an agreement between two operators and the recommended implementation described herein employs techniques and practices currently employed in the provision of other services, e.g. Number Portability.

The focus of this document is on defining the service and highlighting technical issues which could arise during implementation.

## 2 General Principles

The Targeted Transit service provides a method to enable an Operator to prefix the dialled digits associated with a call with four digits, prior to sending the call to a transit Operator. These four prefix digits will be used, within the transit Operator's network, to route calls across the transit Operator's network to a nominated Point of Connection (POC) with the originating, or another, Operator's network in another part of the UK. The call will therefore transit across the transit Operator's network from one POC with the Operator's network to another POC with the same, or another, Operator's network.

### 2.1 *Originating Network Functions*

For a call type, e.g. international traffic, for which a Targeted Transit service has been implemented, the originating network will add the appropriate 4 digit prefix to the dialled digit string and route the call to the appropriate egress route for the Transit Operator involved.

### 2.2 *Tandem Network Functions*

The Transit Operator will develop the required databuild for the prefixed Targeted Transit traffic. Upon receipt of a prefixed Targeted Transit call, the Transit Operator will route the call to the agreed destination POI using the Targeted Transit prefix.

### 2.3 *Terminating or Receiving Network*

When the Targeted Transit call is passed over the destination POI, the Receiving Operator's switch will record and/or decode the Targeted Transit prefix for inter-operator billing. The Targeted Transit prefix will then be deleted from the digit string and the call will be terminated or passed on (transited) to another operator, e.g. international carrier.

## 3 Key Features and Availability

### 3.1 *Operator Types*

The Targeted Transit service applies, potentially, to all Operators with a Relevant Connectable System.

### 3.2 *Routings*

Calls will be routed according to the databuild ordered and paid for by the receiving or terminating Operator. Codes acceptable for receipt onto a transit Operator's network at individual POC's will need to be defined by the requesting Operator, along with the destination POC(s) at which the calls will be handed back to the destination Operator. Normal resilience mechanisms associated with transit Operators' Indirect Access services will be provided for the Targeted Transit service.

## 4 Technical Implementation

### 4.1 *Call Processing Time and Number Length*

It is the responsibility of the operators implementing Targeted Transit to ensure during the planning process that the call processing time end stops as specified in the applicable interconnect agreements and the maximum number lengths are not exceeded. In determining the number lengths, due allowance should be made for the four digit Targeted Transit prefix, the international access code, and national number length as specified in [1].

## **4.2 Databuild**

The service will be enabled for a particular requesting Operator by building the appropriate prefix codes into the routing data on the transit Operator's transit network. This databuild will be enabled in such a way that end subscribers are not able to dial the prefixes themselves.

## **4.3 Prefix Codes**

A Targeted Transit prefix code shall be four decimal digits. The list of codes will be agreed and maintained by the Oftel NSM.

Prefix codes will be assigned by the Oftel NSM to the terminating Operator for use of the Targeted Transit service. It is proposed that these prefixes will be selected from a range whose leading digit is 7 (i.e. 7XXX) and will not, therefore, impact on either Indirect Access services (1XXX) or Number Portability services (5XXXXX).

Prefixes, by their nature, are counted as part of the maximum dialled digit length capable of being carried by any network. The transit Operator will only be concerned with the four digit prefix code, however the transmitted digit string must not exceed the prevailing relevant maximum number length. (Please refer to para. 4.1)

## **4.4 Technical Testing**

Normal interconnect testing should be completed prior to the introduction of this service.

## **4.5 Network Performance**

It should be noted that Targeted Transit calls may not have the same transmission characteristics of the equivalent "direct" calls. For example, there is likely to be an increase in delay/echo due to the introduction of additional transmission links and switches in the end to end call path.

Recommended performance standards for multi-operator calls within the U.K. are being developed by the NICC/PNO-IG. Until development and agreement of these standards have been completed, operators should ensure bilaterally that all conditions as set out in the following interconnect agreement documents are met:

- (i.) Technical and Operations Annex to Interconnect Agreement
- (ii) Transmission Specification
- (iii) Electrical Specification
- (iv) Signalling Specification

## **4.6 Resilience**

The resilience rules, applicable to the relevant transit Operator, currently in place for Indirect Access traffic will also apply to this service.

# **5 Service Provision**

## **5.1 Service Establishment Process**

Targeted Transit is requested, under prevailing contractual arrangements, by submitting a databuild request to the transit Operator. The receiving, or terminating, Operator will make this request. Transit Operators will implement the necessary databuild in accordance with their standard Data Management Amendments process.

## **5.2 Inter-Network Operability**

As with general interconnect, technical testing of switch types / software builds may be necessary where these have not previously been undertaken.

## **5.3 Billing**

The Transit Operator will bill upon the code allocated.

The Transit operator will provide a billing system which will identify the traffic entering and leaving its network by each POC by code.

**END OF PNO/SER006**