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**STANDARDISATION GUIDE  
FOR IMPLEMENTATION OF  
MANDATORY NETWORK-TO-NETWORK  
CONNECTION SPECIFICATIONS**



**TELECOMMUNICATIONS AUTHORITY  
HONG KONG**

## **FOREWORD**

1. This Standardisation Guide sets out the guidelines for implementation of mandatory network-to-network connection specifications issued by the Telecommunications Authority (TA).

2. It is a licensing condition that operators of public telecommunications networks (PTNs) shall interconnect their networks and services with other public telecommunications networks and services. The technical requirements for network-to-network interconnection are given in a series of HKTA 22xx specifications published by the TA.

3. In implementing mandatory network-to-network connection specifications, this Guide should be followed by PTN operators including operators of Fixed Telecommunication Network Services (FTNS) and Public Mobile Radiotelephone Service (PMRS) / Personal Communications Service (PCS) as well as holders of fixed carrier licence and mobile carrier licence in Hong Kong. The Guide is intended to facilitate co-ordination among the operators so as to enable network interconnection to be done promptly and efficiently, to minimise any disputes among the concerned operators and to ensure proper interworking of new / revised and existing services.

4. In case of doubt about the interpretation of this Guide, the decision of the TA shall be final.

5. The HKTA series specifications as well as other information notes issued by the TA can be obtained through one of the following methods:-

- download direct through the OFTA's Internet Home Page. The Home Page address is <http://www.ofta.gov.hk>;
- hard copies will be available upon request to :-  
Senior Telecommunications Engineer (Standards)  
Office of the Telecommunications Authority  
29/F, Wu Chung House,  
213 Queen's Road East,  
Wanchai, Hong Kong.

6. If further information is required regarding this Standardisation Guide, please contact :

Senior Telecommunications Engineer (Standards)  
Office of the Telecommunications Authority  
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213 Queen's Road East,  
Wanchai, Hong Kong.

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## **AMENDMENT TABLE**

Item	Issue No.	Paragraph	Descriptions
1.	Issue 2	Foreword	Include editorial changes
2.	Issue 2	Body	Merge clauses 2 and 3 for alignment with the re-classified standards according to HKTA 3202
3.	Issue 2	Reference	Update the title of HKTA 3202

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1. INTRODUCTION
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## 1. INTRODUCTION

- 1.1 This Standardisation Guide sets out the guidelines for implementation of mandatory network-to-network connection specifications as defined in the HKTA 22xx series specifications issued by the Telecommunications Authority (TA). The guidelines should be followed by operators of the public telecommunications networks (PTNs), including operators of Fixed Telecommunication Network Services (FTNS) and Public Mobile Radiotelephone Service (PMRS) / Personal Communications Service (PCS) as well as holders of fixed carrier licence and mobile carrier licence (hereafter referred to as "the operators") in Hong Kong, to ensure interconnection of their networks to be carried out in an effective manner.
- 1.2 The HKTA 22xx series network-to-network connection specifications issued by the TA are classified under the category of Technical Standard I, which defines mandatory requirements to be met by the operators if the telecommunications network, system, installation customer equipment or service as set out in the concerned specification is to be provided.
- 1.3 The list of network-to-network connection specifications is given in Standardisation Guide HKTA 3202 "Classification of Standards related to Public Telecommunications Services" issued by the TA.
- 1.4 This Guide is concerned with network interconnection at a Point-of-Interconnection<sup>1</sup> (POI) which is a notional point in the middle of the link connecting two networks as shown in Figure 1. On a physical level, network interconnection takes place between one or more network gateways which can be toll exchanges, tandem exchanges, local exchanges or dedicated interconnection gateways. The selection and implementation of network gateways for interconnection between two networks are subject to mutual agreement between the two operators. Any network gateways so chosen shall follow the mandatory network-to-network connection specifications issued by the TA.

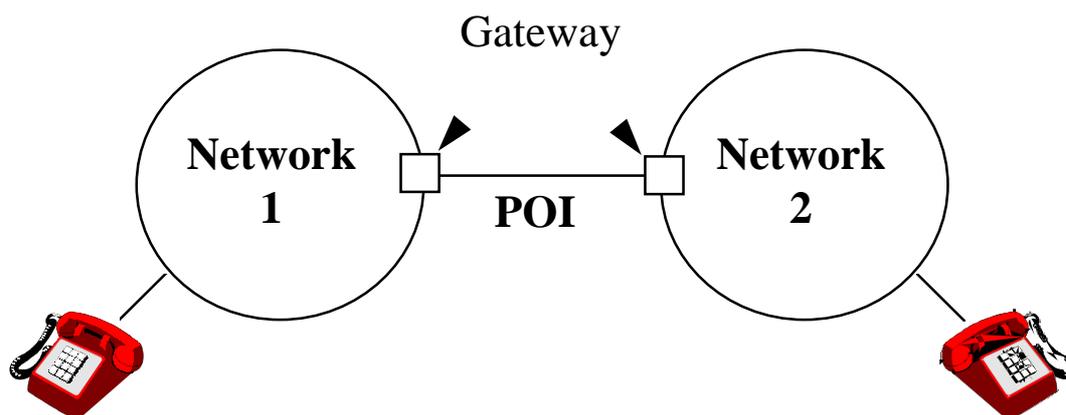


Figure 1 - Point of Interconnection (POI) and Gateway between two networks

<sup>1</sup> See Reference [2] and [3] for details of Point of Interconnection.  
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## **2. GUIDELINES FOR IMPLEMENTING MANDATORY NETWORK-TO-NETWORK CONNECTION SPECIFICATION**

- 2.1 In association with the adoption of a mandatory specification for network-to-network connection of PTNs by the TA, the following procedures should be observed :
- a) the TA, in consultation with the operators, will identify the needs and essential interworking requirements for supporting the interoperability of the new / revised service(s) and existing services between different networks;
  - b) in consultation with the TA, the operators should work together to develop a set of procedures to be followed for the testing and implementation of the changes concerned in the network-to-network protocols for supporting the interoperability of the new / revised service(s) and existing services between networks; and
  - c) in consultation with the operators, the TA will set a date of compliance if required for the concerned changes to be effective.
- 2.2 The network-to-network connection specification is deemed to be effective and should be followed by the operators in launching the concerned new / revised service(s) for interconnection with other networks.
- 2.3 If a date of compliance has been set by the TA for implementation of the network-to-network connection specification, the operators providing the concerned service(s) should implement the concerned changes by the date of compliance for interconnection with other networks, unless approved otherwise by the TA.
- 2.4 In the absence of a common date of compliance set by the TA for implementation of the network-to-network connection specification, an operator that has launched the concerned service(s) and has received notification from other operator(s) requesting interconnection according to the specification should notify the TA and state its date of compliance with the specification for interconnection with other networks.
- 2.5 In the implementation of the network-to-network connection specification, an operator may use the best approach suitable for its network (Network X) subject to the following guidelines:
- a) after the date of compliance, upon notification from other operator(s) requesting interconnection with Network X, the operator of Network X should facilitate interconnection at one or more network gateways as agreed with the requesting operator(s), promptly and efficiently according to the specification and in such manner as considered reasonably necessary by the requesting operator(s);
  - b) if there are any deviations from the specification or limitations on implementing the specification at the network gateways of Network X, the operator should seek prior approval from the TA who may grant exemption, inform the concerned parties and take any necessary actions subject to consultation with the industry;

- c) any implementation approach taken by the operator of Network X should cause no problem in interworking of service(s) supported by the specification with any other networks; and
- d) should there be disputes which cannot be mutually settled among the operators because of different implementation approaches, the case may be referred to the TA for resolution.

### **3. REFERENCE**

- [1] Standardisation Guide HKTA 3202 "Classification of Standards related to Public Telecommunications Services" issued by the Telecommunications Authority
- [2] Interconnection and Related Competition Issues Statement No. 6 (Revised) "Interconnection Configurations and Basic Underlying Principles" issued by the Telecommunications Authority on 18 March 2002
- [3] Interconnection and Related Competition Issues Statement No. 8 (Revised) "Point of Interconnection" issued by the Telecommunications Authority on 18 March 2002