

HKTA 2204  
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**NETWORK CONNECTION SPECIFICATION  
FOR NETWORK-TO-NETWORK  
CONNECTION OF CALL FORWARDING  
SERVICES IN THE PUBLIC  
TELECOMMUNICATIONS NETWORKS  
(PTNs) IN HONG KONG**



**TELECOMMUNICATIONS AUTHORITY  
HONG KONG**

## **FOREWORD**

1. In Hong Kong, the Public Telecommunications Networks (PTNs) run by operators of Fixed Telecommunications Network Services (FTNS) and Public Mobile Radiotelephone Services (PMRS) / Personal Communications Services (PCS) as well as holders of fixed carrier licence and mobile carrier licence (hereafter referred to as "the operators") are required to use a standardised network-to-network interface so as to allow transparent interworking of telecommunications services among the networks.
2. Pursuant to Section 32D of the Telecommunications Ordinance (Cap. 106), the Telecommunications Authority (TA) may prescribe standards and specifications of telecommunications networks, systems, installations, customer equipment and services. This specification defines the technical requirements for network-to-network connection of call forwarding (CF) services provided in the PTNs interconnected by Signalling System No. 7 (C7). This specification shall be observed by the operators using C7 for interconnection. The specification shall also be complied by equipment or platforms which are permitted by the TA to be interconnected with the PTNs using C7.
3. The TA reserves the right to revise the contents of this specification without prior notice. Amendments or re-issues of this specification may not be distributed automatically to concerned parties and it will be the responsibility of the concerned parties to ensure that their system/equipment conform to the latest requirements.
4. The TA accepts no responsibility for the satisfactory end-to-end performance of terminal equipment connected to the networks of the operators. This specification does not address performance, reliability or quality-of-service parameters.
5. The HKTA series specifications are issued by the TA. The documents as well as other information notes issued by the TA can be obtained through one of the following methods:-
  - downloading direct through the OFTA's Internet Home Page. The Home Page address is <http://www.ofta.gov.hk>;
  - making a request for hard copies to :-

Senior Telecommunications Engineer  
Standards Section  
Office of the Telecommunications Authority  
29/F Wu Chung House  
213 Queen's Road East  
Wanchai  
Hong Kong

Fax : +852 2838 5004  
Email : [standards@ofta.gov.hk](mailto:standards@ofta.gov.hk)

6. Enquiries about this specification may be directed to :

Senior Telecommunications Engineer  
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## AMENDMENT TABLE

Item	Issue No.	Paragraph	Descriptions
1.	Issue 2	Foreword	Editorial amendments.
2.	Issue 2	Appendix I	Additional notes are added for item 2.4.2 for redirection information parameter.

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1. INTRODUCTION
2. TECHNICAL REQUIREMENTS
3. REFERENCE DOCUMENTS

Appendix I Compliance with ITU-T Recommendation Q.732.2

## 1. INTRODUCTION

### 1.1 SCOPE

This specification defines the technical requirements for network-to-network connection of call forwarding (CF) services provided in the public telecommunications networks (PTNs) using Signalling System No. 7 (C7) for network interconnection in Hong Kong.

### 1.2 DEFINITIONS

<b>Call Forwarding (CF) Services</b>	CF services are network services which may be implemented by operators of PTNs that allow a served user to have the network send all or some of terminating calls addressed to the number of the served user (forwarding number) to another number (forwarded-to number) on an unconditional basis or depending on the condition of the served user. CF services that may be provided by operators of PTNs include the following types of services as defined by the ITU-T Recommendations: <ul style="list-style-type: none"><li>- Call Forwarding Busy (CFB)</li><li>- Call Forwarding No Reply (CFNR)</li><li>- Call Forwarding Unconditional (CFU)</li><li>- Call Deflection</li></ul>
<b>CF Network</b>	The network which provides the CF services to the served user.
<b>Terminating Network</b>	The network to which a call is re-directed due to activation of CF services by a served user in the CF network. The terminating network may or may not be the same as the CF Network.
<b>Terminating Platform</b>	The platform of a service provider to which a call is re-directed due to activation of CF services by a served user in the CF network.
<b>CF calls</b>	Calls redirected from the served user in the CF Network to the Terminating Network / Platform.

## **2. TECHNICAL REQUIREMENTS**

- 2.1 The Signalling System No. 7 (C7) interconnecting the CF Network and the Terminating Network / Platform shall comply with the HKTA 2202 Specification issued by the TA.
- 2.2 CF calls between the CF Network and the Terminating Network / Platform which are interconnected by C7 shall comply with ITU-T Recommendation Q.732.2 according to the compliance list in Appendix I of this specification, unless otherwise indicated, no later than 1<sup>st</sup> April 2003.
- 2.3 The operators should observe other relevant specifications and standardisation guides issued by the TA in their implementation of CF services.

## **3. REFERENCE DOCUMENTS**

- [1] HKTA 2202 "Network Connection Specification for Network-to-Network Connection of the Public Telecommunications Networks (PTNs) in Hong Kong based on ITU-T Signalling System No. 7" issued by the Telecommunications Authority
- [2] ITU-T Recommendation Q.732.2 - Stage 3 Description for Call Offering Supplementary Services Using Signalling System No. 7 : Call Diversion Services

- END -

**APPENDIX I**

**COMPLIANCE WITH ITU-T RECOMMENDATION Q.732.2**

## Compliance with ITU-T Recommendation Q.732.2

Item No.	Compliance						Descriptions / Notes
	A	B	C	D	E	F	
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2.3.2	O						<u>Requirements on the Originating Network Side</u>
2.3.3	O						<u>Requirements in the Network</u>
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2.4						O	<b><u>Coding Requirements</u></b>
2.4.1		O					<u>Messages</u> The Redirection Number, Redirection Number Restriction Indicator, Generic Notification Indicator and Call Diversion Information parameters may not be supported by the network(s).
2.4.2		O				O	<u>Parameters</u> - See 2.4.1 - For the redirection information parameter, coding of bits CBA (redirecting indicator) as 100 is optional.
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A : Complied with ITU-T    B : Complied with ITU-T with additional notes    C : Partially complied with ITU-T    D : Not supported    E : Optional    F : Descriptive text only

## Compliance with ITU-T Recommendation Q.732.2

Item No.	Compliance						Descriptions / Notes
	A	B	C	D	E	F	
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b)			O				<u>Setting of the Diversion Parameters</u> See Note 1 / Q.732.2
c)	O						<u>Diversion Procedures at the Diverting Exchange</u>
i)			O				<u>Call Forwarding Unconditional or Network Determined User Busy</u> See Note 1 / Q.732.2
ii)			O				<u>Call Forwarding No Reply and Call Deflection During Alerting</u> See Note 1 / Q.732.2
iii)			O				<u>Call Forwarding User Determined Busy or Call Deflection Immediate Response</u> See Note 1 / Q.732.2

**Note 1 / Q.732.2:**

1. Redirecting Number (RGN) may be omitted in case Redirection Counter (RC) equals one.
2. Directory Number (DN) rather than Network Number (NN) should be set as the RGN and Original Called Number (OCN) for a call forwarding subscriber ported across networks.
3. Legacy network may send a fixed RC of two, with OCN being equal to RGN, in which case only the RGN is valid.

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## Compliance with ITU-T Recommendation Q.732.2

Item No.	Compliance						Descriptions / Notes
	A	B	C	D	E	F	
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## Compliance with ITU-T Recommendation Q.732.2

Item No.	Compliance						Descriptions / Notes
	A	B	C	D	E	F	
2.6.4	O						<u>Connected Line Identification Restriction (COLR)</u>
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2.6.18	O						<u>Terminal Portability (TP)</u>
2.6.19	O						<u>Completion of Calls to Busy Subscriber (CCBS)</u>
2.6.20	O						<u>Malicious Call Identification (MCID)</u>

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## Compliance with ITU-T Recommendation Q.732.2

Item No.	Compliance						Descriptions / Notes
	A	B	C	D	E	F	
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<b>3.</b>		O					<b><u>CALL FORWARDING NO REPLY (CFNR)</u></b> See 2.1 to 2.10, including special provisions under clauses 2.4.1 and 2.5.2.5.1.2
<b>4.</b>		O					<b><u>CALL FORWARDING UNCONDITIONAL (CFU)</u></b> See 2.1 to 2.10, including special provisions under clauses 2.4.1 and 2.5.2.5.1.2
<b>5.</b>		O					<b><u>CALL DEFLECTION (CD)</u></b> See 2.1 to 2.10, including special provisions under clauses 2.4.1 and 2.5.2.5.1.2

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