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**REGULATORY GUIDE  
FOR CALLING LINE IDENTIFICATION (CLI)  
FORMAT**

**TELECOMMUNICATIONS AUTHORITY  
HONG KONG**

## **FOREWORD**

1. This Regulatory Guide stipulates the format and requirements for calling line identification (CLI) for special types of calls. This Guide should be observed by fixed network operators (including Fixed Telecommunications Network Services (“FTNS”), Fixed Carrier and Unified Carrier (with provision of fixed service authorized) Licensees) (hereinafter referred to as “FNOs”), mobile network operators (including Mobile Carrier and Unified Carrier (with provision of mobile service authorized) Licensees) (hereinafter referred to as “MNOs”), and External Telecommunications Services (“ETS”) Providers (i.e. licensees including FNOs, and Public Non-Exclusive Telecommunications Services (“PNETS”) and Services-Based Operator (“SBO”) Licensees which provide ETS).

2. In relation to the transfer and management of CLI information and provision of related customer services, the operators and providers should comply with the "Code of Practice in relation to Calling Line Identification and Other Calling Line Identification Related Services" (hereafter referred to as the "CoP for CLI") issued by the Telecommunications Authority (TA).

3. Pursuant to the CoP for CLI, the transmission of CLI in some exceptional cases where the calling party number is not available or cannot be readily identified, should meet certain requirements in order to facilitate call tracing for emergency and call management purposes.

4. For the technical standard relating to the sending of CLI information across networks, the concerned operators shall comply with the HKTA 2202 specification entitled "Network Connection Specification for Network-to-Network Connection of the Public Telecommunications Network (PTN) in Hong Kong based on ITU-T Common Channel Signalling System No. 7" issued by the TA.

5. The HKTA series Regulatory Guides, Specifications, the CoP for CLI as well as other information notes issued by the TA can be obtained by the following:-

- downloading from the OFTA's Internet Home Page. (<http://www.ofa.gov.hk>)
- hard copies are available on request to :-

Senior Telecommunications Engineer (Regulatory 11)  
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 Regulatory Guide, please contact :

Senior Telecommunications Engineer (Regulatory 11)  
Office of the Telecommunications Authority  
29/F, Wu Chung House,  
213 Queen's Road East,  
Wanchai, Hong Kong.

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## Amendment History<sup>1</sup>

Item	Issue No.	Paragraph	Description
1	Issue 3.1 3/04	Schedule A	The CLI values for Hutchison 3G HK Limited are included.
2	Issue 4 2/05	Section 2.2.1 & 3.2.1  Section 2.2.2 & 3.2.2  Section 4  Schedule B	The format of CLI is updated as new FTNS operators / Fixed Carriers have launched their services.  A new section providing some scope of flexibility to ETS providers in supporting innovative services is added.  A new section specifying the CLI information for in-bound external calls first landing on FTNS operators / Fixed Carriers is added.  A new Schedule B – List of CLI values for in-bound external calls sent via FTNS operators / Fixed Carriers is added.
3	Issue 5 2/09	Paragraph 1 of Forward and consequential amendments  Schedule A & B	Include unified carrier licensees and SBO licensees.  Update with latest information on FNOs and MNOs.

<sup>1</sup> Amendment history before issue 3 of HKTA 3101 is not available.

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## **SCHEDULES**

SCHEDULE A : List of CLI values for in-bound roamers used by MNOs in Hong Kong and 112 calls without SIM

SCHEDULE B : List of CLI Values for in-bound external calls sent via FNOS

## **1. CLI FOR MOBILE NETWORK IN-BOUND ROAMERS AND 112 CALLS WITHOUT SIM**

### **1.1 GENERAL REQUIREMENTS FOR THE HANDLING OF CLI FOR MOBILE NETWORK IN-BOUND ROAMERS AND 112 CALLS WITHOUT SIM**

- 1.1.1 These Requirements should be observed by all MNOs for transmission of CLI information of calls originated by in-bound roamers of their networks to other public telecommunications networks (PTN) in Hong Kong and 112 calls without SIM.
- 1.1.2 The CLI of mobile network in-bound roamers and 112 calls without SIM should be passed from one network to another with the calls classified as "out-of-area" and the calling party numbers will not be displayed in the terminating customer premises equipment (CPE).
- 1.1.3 In relation to the transfer and management of CLI information and provision of related customer services, MNOs should comply with the "Code of Practice in relation to Calling Line Identification and Other Calling Line Identification Related Services".
- 1.1.4 Regarding sending CLI information across networks, MNOs should comply with the HKTA 2202 specification entitled "Network Connection Specification for Network-to-Network Connection of the Public Telecommunications Network (PTN) in Hong Kong based on ITU-T Common Channel Signalling System No. 7". In particular, an operator should set the calling party number incomplete indicator to 1 (NI=1). (Refer to item 3.8 of Chapter III-3 of HKTA 2202.)

### **1.2 FORMAT OF CLI OF MOBILE NETWORK IN-BOUND ROAMERS AND 112 CALLS WITHOUT SIM**

- 1.2.1 The following format for CLI for mobile network in-bound roamers and 112 calls without SIM shall be used by a MNO:

XXXXYYYY

where XXXX is a 4-digit prefix of numbering blocks allocated to a mobile network and defined in "The Numbering Plan for Telecommunications Services in Hong Kong" issued by the TA ; and

YYYY is a 4-digit suffix chosen by individual MNOs and agreed by the TA.

- 1.2.2 In setting the CLI for mobile network in-bound roamers and 112 calls without SIM according to the above format, the following guidelines shall be observed:
- a) The suffix value should follow a simple pattern to facilitate easy recognition of an in-bound roamer;
  - b) The CLI values should not be assigned as directory numbers (DNs) to customers; and

- c) MNOs should obtain approval from the TA for any changes of the CLI values. The TA will maintain a list of the values and keep the concerned parties informed.

### **1.3 LIST OF CLI VALUES FOR MOBILE NETWORK IN-BOUND ROAMERS AND 112 CALLS WITHOUT SIM**

- 1.3.1 The list of CLI values used for in-bound roamers and 112 calls without SIM by the MNOs in Hong Kong is given in Schedule A of this Guide.
- 1.3.2 Request for revising the CLI values shall be submitted by the MNOs to the TA at the following address:

Head, Regulatory 1  
Office of the Telecommunications Authority,  
29/F., Wu Chung House,  
213 Queen's Road East, Wanchai,  
Hong Kong.

- 1.3.3 Upon approval of the revision to the CLI values of mobile network in-bound roamers and 112 calls without SIM, the TA would update the Schedule A.

## **2. CLI SENT VIA EXTERNAL TELECOMMUNICATIONS SERVICES (ETS) PLATFORMS**

### **2.1 GENERAL REQUIREMENTS FOR THE HANDLING OF CLI BY ETS PLATFORMS**

- 2.1.1 These Requirements should be observed by all ETS providers for transmission of CLI information of calls sent via their platforms to the public telecommunications networks (PTN) in Hong Kong.
- 2.1.2 In relation to the transfer and management of CLI information and provision of related customer services, ETS providers should comply with the latest "Code of Practice in relation to Calling Line Identification and Other Calling Line Identification Related Services".
- 2.1.3 Regarding sending CLI information across networks using common channel signalling, ETS providers should comply with the HKTA 2202 specification entitled "Network Connection Specification for Network-to-Network Connection of the Public Telecommunications Network (PTN) In Hong Kong based on ITU-T Common Channel Signalling System No. 7". In particular, a provider should set the calling party number incomplete indicator to 1 (NI=1) (refer to item 3.8 of Chapter III-3 of HKTA2202). The normal setting of the national/international call indicator should be "1".

### **2.2 FORMAT OF CLI OF CALLS SENT VIA ETS PLATFORMS**

2.2.1 An ETS provider should send CLI according to the following format for all calls sent via its service platform:

The first 4 digits should be

15XX or  
16XX,

which are the same as the Service Access Code of the ETS provider, and the last 4 digits should be

ZY00,

such that when it is an outgoing call <sup>2</sup>

Y = 0, and Z = 2, 3, 4, 6, 7, 8, 9 or 0

(Z = 2 indicates that the call is received through interconnection with HKBN PSTN  
3 through CM Tel PSTN  
4 through HKC PSTN  
6 through HKT PSTN  
7 through WT&T PSTN  
8 through HGC PSTN  
9 through NWT PSTN  
0 if it is from a leased circuit or an international private leased circuit)

and, when it is an incoming call <sup>3</sup>

Y = 1 or 2, and Z = 2, 3, 4, 6, 7, 8, 9 or 0

(Y = 1 indicates that it is a call subject to Local Access Charge (LAC)  
2 indicates that it is a call not subject to LAC)

(Z = 2 indicates that the call is sent through interconnection with HKBN PSTN  
3 through CM Tel PSTN  
4 through HKC PSTN  
6 through HKT PSTN  
7 through WT&T PSTN  
8 through HGC PSTN  
9 through NWT PSTN  
0 through a leased circuit)

and, for the avoidance of doubt, when it is an outgoing part in a refile call

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<sup>2</sup> An outgoing call means a call intended for routing to a place outside HKSAR

<sup>3</sup> An incoming call means a call received from a place outside HKSAR



Y = 0 and Z = 0

In the above,

HKBN = Hong Kong Broadband Network Limited

CM Tel = CM Tel (HK) Limited

HKC = HKC Network Limited

HKT = PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited

WT&T = Wharf T&T Limited

HGC = Hutchison Global Communications Limited

NWT = New World Telecommunications Limited

2.2.2 To provide some scope of flexibility in supporting innovative services, an ETS provider may mutually agree with one or more operators to send CLI with a format other than that given in Section 2.2.1. However the ETS provider and the operator(s) concerned should ensure that the principles and objectives of the general requirements stipulated in Section 2.1 will not be compromised as a result of such a change in the CLI format.

### **3. CLI FOR ETS PROVIDERS HAVING '305' to '309' LEVELS**

#### **3.1 GENERAL REQUIREMENTS FOR THE HANDLING OF CLI BY ETS PLATFORMS**

3.1.1 These requirement should be observed by all ETS providers who have '305' to '309' levels for transmission of CLI information of calls sent via their platforms to the PTN in Hong Kong.

3.1.2 In relation to the transfer and management of CLI information and provision of related customer services, ETS providers should comply with the latest "Code of Practice in relation to Calling Line Identification and Other Calling Line Identification Related Services".

3.1.3 Regarding sending CLI information across networks using network-to-network signalling standard, ETS providers should comply with the HKTA 2202 specification entitled "Network Connection Specification for Network-to-Network Connection of the Public Telecommunications Network (PTN) In Hong Kong based on ITU-T Common Channel Signalling System No. 7". In particular, a provider should set the calling party number incomplete indicator to 1 (NI=1) (refer to item 3.8 of Chapter III-3 of HKTA 2202). The normal setting of the national/international call indicator should be "1".

#### **3.2 FORMAT OF CLI OF CALLS SENT VIA ETS PLATFORM**

3.2.1 ETS providers having '305' to '309' levels should send the CLI according to the following format for all calls sent via its service platform. If an ETS providers have both '305' to '309' traffic and 15XX/16XX traffic in the same ETS platform, they shall label the outgoing ETS traffic in accordance to Section 2.2.

30(5-9)xxx ZY where

30(5-9)xxx indicate the numbering block originally allocated to a particular FNO by OFTA for subsequent allocation to ETS providers;

when it is an outgoing call, that is, a call intended for routing to a place outside HKSAR

Y = 0, and Z = 2, 3, 4, 6, 7, 8, 9 or 0

(Z = 2 indicates that the call is received through interconnection with HKBN PSTN  
3 through CM Tel PSTN  
4 through HKC PSTN  
6 through HKT PSTN  
7 through WT&T PSTN  
8 through HGC PSTN  
9 through NWT PSTN  
0 through a leased circuit or an international private leased circuit)

and, when it is an incoming call, that is, a call received from a place outside HKSAR

Y = 1 or 2, and Z = 2, 3, 4, 6, 7, 8, 9 or 0

(Y = 1 indicates that it is a call subject to LAC  
2 indicates that it is a call not subject to LAC)

(Z = 2 indicates that the call is sent through interconnection with HKBN PSTN  
3 through CM Tel PSTN  
4 through HKC PSTN  
6 through HKT PSTN  
7 through WT&T PSTN  
8 through HGC PSTN  
9 through NWT PSTN  
0 through a leased circuit)

and for the avoidance of doubt, when it is an outgoing part in a refile call

Y = 0 and Z = 0

3.2.2 To provide some scope of flexibility in supporting innovative services, an ETS provider may mutually agree with one or more operators to send CLI with a format other than that given in Section 3.2.1. However the ETS provider and the operator(s) concerned should ensure that the principles and objectives of the general requirements stipulated in Section 3.1 will not be compromised as a result of such a change in the CLI format.

## **4. CLI FOR THE FIRST LANDING IN-BOUND EXTERNAL CALLS SENT VIA FNOS**

### **4.1 GENERAL REQUIREMENTS FOR THE HANDLING OF CLI BY FNOS**

- 4.1.1 These requirements should be observed by all FNOs including external fixed services operators, for transmission of CLI information of calls sent via their networks to the PTN in Hong Kong.
- 4.1.2 In relation to the transfer and management of CLI information and provision of related customer services, operators should comply with the latest "Code of Practice in relation to Calling Line Identification and Other Calling Line Identification Related Services".
- 4.1.3 Regarding sending CLI information across networks using network-to-network signalling standard, FNOs should comply with the HKTA 2202 specification entitled "Network Connection Specification for Network-to-Network Connection of the Public Telecommunications Network (PTN) In Hong Kong based on ITU-T Common Channel Signalling System No. 7". In particular, a provider should set the calling party number incomplete indicator to 1 (NI=1) (refer to item 3.8 of Chapter III-3 of HKTA 2202). The normal setting of the national/international call indicator should be "1".

### **4.2 FORMAT OF CLI OF IN-BOUND EXTERNAL CALLS SENT VIA FNOS**

- 4.2.1 A FNO should set the CLI according to the format given in *Schedule B* for in-bound external calls sent via its network if its network is the first landing network for the calls under concern.
- 4.2.2 To provide some scope of flexibility in supporting innovative services, the FNO may mutually agree with one or more operators / carriers to send CLI with a format other than that given in Schedule B. However the FNO and the operator(s) / carrier(s) concerned should ensure that the principles and objectives of the general requirements stipulated in Section 4.1 will not be compromised as a result of such a change in the CLI format.

**List of CLI Values for In-bound Roamers used by  
MNOs in Hong Kong  
and also 112 Calls without SIM**

<b>Mobile Network</b>	<b>CLI values for In-bound Roamers (Note 1)</b>	<b>CLI values for 112 Calls without SIM (Note 1)</b>
CSL Limited - GSM 900/1800 & 3G	4880 0999	4880 0999
CSL Limited (formerly New World PCS Limited) - GSM 1800	4870 0999	4870 0999
Hutchison Telephone Company Limited - GSM 900/1800	4800 0999	4800 0999
Hutchison Telephone Company Limited - 3G	4930 0999	4930 0999
SmarTone Mobile Communications Limited - GSM 900/1800	4830 0999	4830 0999
SmarTone 3G Limited - 3G	4830 0999	4830 0999
China Mobile Hong Kong Company Limited - GSM 1800	4850 0999	4850 0999
Hong Kong Telecommunications (HKT) Limited - GSM 1800	4900 0999	4900 0999
Hong Kong Telecommunications (HKT) Limited - 3G	4960 0999	4960 0999
PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited - CDMA2000	4820 0999	4820 0999

Note 1 : Not applicable for Mobile Virtual Network Operator (MVNO) Services Licensees, a list of which can be found at <http://www.ofta.gov.hk/en/tele-lic/operator-licensees/mvno-lic.html>.

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**List of CLI Values for In-bound External Calls  
Sent via FNOs**

FNOs	CLI values for in-bound external calls set by FNO who operates the first landing network
Reach Network Hong Kong Limited	Note 1
Hong Kong Broadband Network Limited	0030 2100
CM Tel (HK) Limited	0050 3100
HKC Network Limited	0059 4100
New World Telecommunications Limited	2090 9100
Wharf T&T Limited	2070 7100
Hutchison Global Communications Limited	2080 8100
PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited	Note 2
SmarTone Communications Limited	Note 2

Note 1 : Reach cannot set a predefined CLI for its first landing in-bound external calls. For in-bound external calls routed to fixed network of PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited, PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited will insert the CLI value of 2980 99xx.

Note 2 : Currently, no in-bound external call makes its first landing on the concerned operator.

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