

REGULATORY GUIDE
FOR CALLING LINE IDENTIFICATION (CLI)
FORMAT

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 Carrier and Unified Carrier (with provision of fixed services authorised) Licensees) (hereinafter collectively referred to as “FNOs”), mobile network operators (including Mobile Carrier and Unified Carrier (with provision of mobile services authorised) Licensees) (hereinafter collectively referred to as “MNOs”), and External Telecommunications Services (“ETS”) Providers (i.e. licensees including FNOs 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 refer to and comply with the “Code of Practice in relation to Calling Line Identification and Other Calling Line Identification Related Services” (“CoP for CLI”) issued by the Communications Authority (“CA”).

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 operators concerned should comply with HKCA 2202 “Network Connection Specification for Network-to-Network Connection of the Public Telecommunications Network (PTNs) in Hong Kong based on ITU-T Signalling System No. 7” issued by the CA.

5. The HKCA series Regulatory Guides, Specifications, the CoP for CLI as well as other information notes issued by the CA can be obtained by the following –

- downloading from the website of the Office of the Communications Authority (“OFCA”) at <http://www.ofca.gov.hk>
- hard copies are available on request to –

Principal Regulatory Affairs Manager (Regulatory Section 11)
Office of the Communications 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 –

Principal Regulatory Affairs Manager (Regulatory Section 11)
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AMENDMENT HISTORY¹

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 sub-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.
4	Issue 6 8/13	All Section 2.2.1 & 3.2.1, Schedule B	Consequential amendments as a result of the establishment of CA on 1 April 2012, From issue 6 onward, this document is named as HKCA3101. The CLI values for SmartTone Communications Limited are included.
5	Issue 7 10/13	Section 2.2.1 & 3.2.1, Schedule B Section 2.2.1 & 3.2.1 Section 4 & Schedule B	The CLI values for China Mobile Hong Kong Company Limited are included. Update on ZY values Update the latest information on FNOs and MNOs.
6	Issue 8 11/13	Section 2.2.1 & 3.2.1, Schedule B	The CLI values for CSL Limited are included.
7	Issue 9 8/17	Whole document	Update OFCA contact, operator names, document format and Schedules A and B.
8	Issue 9.1 12/17	Section 2.2.1, Schedule B	Update operator name.
9	Issue 9.2 8/18	Section 1	A new sub-section providing flexibility in delivery of CLI of mobile network in-

¹ Amendment history before issue 3 of HKCA 3101 is not available.

			bound roamers among direct interconnected mobile networks.
10	Issue 9.3 9/19	Section 2.2.1, Schedule B	Update operator name.

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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 (“PTNs”) 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 refer to and comply with the CoP for CLI.
- 1.1.4 Regarding sending CLI information across networks, MNOs should comply with HKCA 2202. In particular, an operator should set the calling party number incomplete indicator to “1” (NI=1) in accordance with item 3.8 of Chapter III-3 of HKCA 2202.
- 1.1.5 For direct interconnected mobile networks, the MNOs of these mobile networks may deliver CLI of mobile network in-bound roamers among their mobile networks with a format which conforms to international standard other than that specified in Section 1.2.2. However, the MNOs concerned should ensure that the principles and objectives of the general requirements stipulated in Section 1.1 will not be compromised as a result of such a change in the CLI format.

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

- 1.2.1 Unless otherwise provided for in Section 1.1.5, the format of CLI for mobile network in-bound roamers and 112 calls without SIM specified in Section 1.2.2 shall be used by an MNO.
- 1.2.2 The format of CLI for mobile network in-bound roamers and 112 calls without SIM should be as follows –

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 CA ; and

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

- 1.2.3 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 CA for any changes of the CLI values. The CA will maintain a list of the values and keep the parties concerned 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 mobile network in-bound roamers and 112 calls without SIM by the MNOs in Hong Kong as based on the format and guidelines specified in Sections 1.2.2 and 1.2.3 respectively is given in Schedule A of this Guide.

1.3.2 Request for revising the CLI values in Schedule A shall be submitted by the MNOs to the CA at the following address –

Head, Regulatory 1
Office of the Communications 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 for mobile network in-bound roamers and 112 calls without SIM, the CA would update the Schedule A.

2. CLI SENT VIA 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 PTNs 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 CoP for CLI.

2.1.3 Regarding sending CLI information across networks using common channel signalling, ETS providers should comply with HKCA 2202. In particular, a provider should set the calling party number incomplete indicator to “1” (NI=1) in accordance with item 3.8 of Chapter III-3 of HKCA2202. 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,

Group 1:

such that when it is an outgoing call ²

Y = 0, and Z = 1, 2, 3, 4, 5, 6, 7, 8, 9 or 0

(Z = 1 indicates that the call is received through interconnection with CMHK PSTN
2 through HKBN PSTN
3 through ComNet PSTN
4 through HKC PSTN
5 through SMT PSTN
6 through PCCW-HKT PSTN
7 through HKBNES(HK) PSTN
8 through HGC PSTN
9 through HKBNES PSTN
0 if it is from a leased circuit or an international private leased circuit)

and, when it is an incoming call ³

Y = 1 or 2, and Z = 1, 2, 3, 4, 5, 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 = 1 indicates that the call is sent through interconnection with CMHK PSTN
2 through HKBN PSTN
3 through ComNet PSTN
4 through HKC PSTN
5 through SMT PSTN
6 through PCCW-HKT PSTN
7 through HKBNES(HK) PSTN
8 through HGC PSTN
9 through HKBNES PSTN

² An outgoing call means a call intended for routing to a place outside the Hong Kong Special Administrative Region (“HKSAR”).

³ An incoming call means a call received from a place outside HKSAR.

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

Group 2:

when it is an outgoing call

Y = 3, and Z = 1, 2, 3, 4, 5, 6, 7, 8, 9 or 0

(Z = 0 indicates that the call is received through interconnection with HKT PSTN 1-9 open for application)

and, when it is an incoming call

Y = 4 or 5, and Z = 1, 2, 3, 4, 5, 6, 7, 8, 9 or 0

(Y = 4 indicates that it is a call subject to LAC
5 indicates that it is a call not subject to LAC)

(Z = 0 indicates that the call is received through interconnection with HKT PSTN 1-9 open for application)

Group 3:

when it is an outgoing call

Y = 6, and Z = 1, 2, 3, 4, 5, 6, 7, 8, 9 or 0

(Z = 0-9 open for application)

and, when it is an incoming call

Y = 7 or 8, and Z = 1, 2, 3, 4, 5, 6, 7, 8, 9 or 0

(Y = 7 indicates that it is a call subject to LAC
8 indicates that it is a call not subject to LAC)

(Z = 0-9 open for application)

In the above,

CMHK	= China Mobile Hong Kong Company Limited
HKBN	= Hong Kong Broadband Network Limited
ComNet	= ComNet Telecom (HK) Limited
HKC	= HKC Network Limited
SMT	= SmarTone Communications Limited
PCCW-HKT	= PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited
HKBNES(HK)	= HKBN Enterprise Solutions HK Limited

	(former WTT HK Limited/Wharf T&T Limited)
HGC	= HGC Global Communications Limited
HKBNES	= HKBN Enterprise Solutions Limited
HKT	= Hong Kong Telecommunications (HKT) Limited (former CSL 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 requirements 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 PTNs 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 refer to and comply with the CoP for CLI.
- 3.1.3 Regarding sending CLI information across networks using network-to-network signalling standard, ETS providers should comply with HKCA 2202. In particular, a provider should set the calling party number incomplete indicator to “1” (NI=1) in accordance with item 3.8 of Chapter III-3 of HKCA 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 their service platforms. If an ETS provider has both “305” to “309” traffic and 15XX/16XX traffic in the same ETS platform, it shall label the outgoing ETS traffic in accordance with Section 2.2 –

30(5-9)xxx ZY where

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

Group 1:

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

Y = 0, and Z = 1, 2, 3, 4, 5, 6, 7, 8, 9 or 0

(Z = 1 indicates that the call is received through interconnection with CMHK PSTN
2 through HKBN PSTN)

- 3 through ComNet PSTN
- 4 through HKC PSTN
- 5 through SMT PSTN
- 6 through PCCW-HKT PSTN
- 7 through HKBNES(HK) PSTN
- 8 through HGC PSTN
- 9 through HKBNES 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 = 1, 2, 3, 4, 5, 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 = 1 indicates that the call is sent through interconnection with CMHK PSTN
2 through HKBN PSTN
3 through ComNet PSTN
4 through HKC PSTN
5 through SMT PSTN
6 through PCCW-HKT PSTN
7 through HKBNES(HK) PSTN
8 through HGC PSTN
9 through HKBNES 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

Group 2:

when it is an outgoing call

Y = 3, and Z = 1, 2, 3, 4, 5, 6, 7, 8, 9 or 0

(Z = 0 indicates that the call is received through interconnection with HKT PSTN
1-9 open for application)

and, when it is an incoming call

Y = 4 or 5, and Z = 1, 2, 3, 4, 5, 6, 7, 8, 9 or 0

(Y = 4 indicates that it is a call subject to LAC
5 indicates that it is a call not subject to LAC)

(Z = 0 indicates that the call is received through interconnection with HKT PSTN
1-9 open for application)

Group 3:

when it is an outgoing call

Y = 6, and Z = 1, 2, 3, 4, 5, 6, 7, 8, 9 or 0

(Z = 0-9 open for application)

and, when it is an incoming call

Y = 7 or 8, and Z = 1, 2, 3, 4, 5, 6, 7, 8, 9 or 0

(Y = 7 indicates that it is a call subject to LAC

8 indicates that it is a call not subject to LAC)

(Z = 0-9 open for application)

- 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 MNOS/FNOS

4.1 GENERAL REQUIREMENTS FOR THE HANDLING OF CLI BY MNOS/FNOS

- 4.1.1 These requirements should be observed by all MNOs/FNOs including external fixed network operators, for transmission of CLI information of calls sent via their networks to the PTNs in Hong Kong.

- 4.1.2 In relation to the transfer and management of CLI information and provision of related customer services, operators should refer to and comply with the CoP of CLI .

- 4.1.3 Regarding sending CLI information across networks using network-to-network signalling standard, MNOs/FNOs should comply with HKCA 2202. In particular, a provider should set the calling party number incomplete indicator to “1” (NI=1) in accordance with item 3.8 of Chapter III-3 of HKCA 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 MNOS/FNOS

- 4.2.1 An MNO/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 MNO/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 MNO/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.

SCHEDULE A

LIST OF CLI VALUES FOR IN-BOUND ROAMERS USED BY MNOS IN HONG KONG AND 112 CALLS WITHOUT SIM

Mobile Network	CLI values for In-bound Roamers (Note 1)	CLI values for 112 Calls without SIM (Note 1)
China Mobile Hong Kong Company Limited	4850 0999	4850 0999
Hong Kong Telecommunications (HKT) Limited - CDMA2000	4820 0999	4820 0999
Hong Kong Telecommunications (HKT) Limited (former CSL Limited)	4880 0999	4880 0999
Hutchison Telephone Company Limited - 2G	4800 0999	4800 0999
Hutchison Telephone Company Limited - 3G, 4G	4930 0999	4930 0999
SmarTone Mobile Communications Limited	4830 0999	4830 0999

Note 1 : Not applicable for Mobile Virtual Network Operator (MVNO) Services Licensees, a list of which can be found at http://app1.coms-auth.hk/apps/telecom_lic/content/sbo_lic_list.asp.

SCHEDULE B

LIST OF CLI VALUES FOR IN-BOUND EXTERNAL CALLS SENT VIA MNOS/FNOS

MNOs/FNOs	CLI values for in-bound external calls set by MNO/FNO who operates the first landing network
China Mobile Hong Kong Company Limited	1523 1100
ComNet Telecom (HK) Limited	0050 3100
HKC Network Limited	0059 4100
Hong Kong Broadband Network Limited	0030 2100
HKBN Enterprise Solutions Limited	2090 9100
Hong Kong Telecommunications (HKT) Limited (former CSL Limited)	1678 0400
HGC Global Communications Limited	2080 8100
PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited	2000 6100
Reach Networks Hong Kong Limited and Reach Cable Networks Limited (“Reach”)	Note 2
SmarTone Communications Limited	1638 5100
HKBN Enterprise Solutions HK Limited (former WTT HK Limited/Wharf T&T Limited)	2070 7100

Note 2 : 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, PCCW-HKT will insert the CLI value of 2980 99xx.

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