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NETWORK CONNECTION SPECIFICATION OF CALLING NAME DISPLAY (CNAM) SERVICE FOR CUSTOMER PREMISES EQUIPMENT (CPE) TO BE CONNECTED BY DIRECT EXCHANGE LINE (DEL) TO THE PUBLIC SWITCHED TELEPHONE NETWORK (PSTN) IN HONG KONG

OFTA
電訊管理局

TELECOMMUNICATIONS AUTHORITY
HONG KONG

FOREWORD

1. This specification is issued pursuant to Section 32D of the Telecommunications Ordinance (Cap. 106). This specification gives the technical requirements of customer premises equipment (CPE) to be connected to the direct exchange lines (DELs) of the Public Switched Telephone Networks (PSTNs) in Hong Kong for the support of the calling name display service.

2. DEL may be provided by any one of the FTNS operators in Hong Kong. The general technical characteristics of the FTNS networks are given in HKTA 2201. Supplementary information on network characteristics and services of the FTNS networks may be obtained direct from the operators. Contact information of the FTNS operators can be found in the information note OFTA I 412. For the purpose of certification, CPE supporting the calling number display service for connection to the PSTN shall comply with this specification.

3. At present, the Office of the Telecommunications Authority (OFTA) operates a **H**ong **K**ong **T**elecommunications Equipment **E**valuation and **C**ertification ("HKTEC") Scheme. Details of the HKTEC Scheme can be found in the information note OFTA I 421. Under the Scheme, suppliers or manufacturers of CPE may apply to OFTA for certification of their equipment against this specification. The application procedures for certification of CPE can be found in the information note OFTA I 412. A prescribed label may be affixed to the equipment which has been certified by the Telecommunications Authority (TA). Details of the labelling arrangement can be found in the Standardisation Guide HKTA 3211.

4. The TA may amend any part of this specification as and when he deems necessary,

5. In case of doubt about the interpretation of this specification, the methods of carrying out the test and the validity of statements made by the manufacturers of the equipment, the decision of the TA shall be final.

6. The TA accepts no responsibility for the satisfactory performance of CPE connected to its network. CPE is not normally evaluated against performance, reliability or quality-of-service parameters.

7. The HKTA specifications and 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)
     Office of the Telecommunications Authority
     29/F, Wu Chung House,
     13 Queen's Road East,
     Wanchai,

Hong Kong.

Fax: +852 2838 5004
Email: standards@ofta.gov.hk

8. Enquiries about this specification may be directed to:-

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

Fax: +852 2803 5112
Email: standards@ofta.gov.hk

AMENDMENT TABLE

Item	Issue No.	Paragraph	Descriptions
1.	Issue 02 February 03	Foreword	Information on the Telecommunications Ordinance and HKTEC Scheme is added. The application procedure and labelling arrangement are referred to information note OFTA I 412 and HKTA 3211. The contact information for the FTNS operators is referred to the information note OFTA I 412. The others types of interface in supporting the calling number display service are deleted.
2.	Issue 02 February 03	Body Paragraph 2	The updated technical specifications issued by the Telcordia Technologies are adopted.
3.	Issue 02 February 03	Body Paragraph 3	The new evaluation requirement is added.
4.	Issue 02 February 03	Appendix 2	The new Appendix 2 – Basic Test Items is added.

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1. INTRODUCTION

This specification covers the technical requirements for customer premises equipment (CPE) to be connected to the direct exchange lines (DELs) of the public switched telephone networks (PSTNs) in Hong Kong for the support of the calling name display service.

2. TECHNICAL REQUIREMENTS

CPE designed to provide calling number display services shall comply with the following specifications:-

- HKTA 2012 - Network Connection Specification of Calling Number Display Service for Customer Premises Equipment (CPE) to be Connected to the Public Switched Telephone Network (PSTN) in Hong Kong

- Telcordia Technologies specification GR-1188 - Calling Name Delivery Generic Requirements (refer to Appendix 1 for detailed compliance)

3. EVALUATION REQUIREMENT

CPE shall comply with technical requirements in Clause 2 and shall have received a test report covering the basic test items for calling name display service given in the Appendix 2 for certification by the TA.

4. HOW TO OBTAIN THE TECHNICAL SPECIFICATIONS

4.1 To obtain the HKTA series of specifications issued by the Telecommunications Authority, please refer to paragraph 9 in the Foreword of this document.

4.2 The Telcordia Technologies specifications are available from the URL address at http://www,telcordia.com/.

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APPENDIX 1

COMPLIANCE LIST TO GR-1188

(Former Bellcore TR-NWT-001188)

CALLING NAME DELIVERY
GENERIC REQUIREMENTS

Item No.	Compliance						Descriptions / Notes
	A	B	C	D	E	F	
							Note: Only the requirements applicable to CPE are listed in this compliance list.
3.3.2							CPE Signalling
3.3.2.1	O						CPE-to-Switch Address Signalling
3.3.2.2		O					Switch-to-CPE Information Signalling Calling Name information will be sent in both on-hook state and during call waiting using on-hook data transmission associated with ringing and off-hook data transmission (described in SR-TSV-002476) respectively.

APPENDIX 2

BASIC TEST ITEMS FOR CALLING NAME DISPLAY SERVICE

Basic Items

Item No.	Test Item	Descriptions	Limits/Results
1	Reception of Continuous-phase Binary Frequency Shift Keying Data (for both on-hook and off-hook)	Detection limits of: (a) Frequency of Mark (Logical 1) (b) Frequency of Space (Logical 0) (c) Received Signal Level of Mark (d) Received Signal Level of Space (e) Reception Rate	 1200 +/- 12 Hz 2200 +/- 22 Hz -32 dBm to -12 dBm -36 dBm to -12 dBm 1200 +/- 12 baud
2	On-hook Data Associated with Power Ringing	Detection capability of data under: (a) different types of ringing signal as given in HKTA 2201 (b) the minimum silent period after the first ringing pattern	 Support all ringing patterns in HKTA 2201 ≤ 250 ms
3	Display of Data	Display results of: (a) Normal Call with Calling Number (b) Normal Call with Calling Name (c) Private Call (d) Out-of-area Call	 Show Calling Number Show Calling Name Show “private” indication Show “Out-of-area” indication
4	Error Treatment	Display results of: (a) Invalid Checksum (b) Unrecognised Message Type Word	 Display error message or no display Display error message or no display

Additional Items for CPE Supporting Off-hook Data Reception

Item No.	Test Item	Descriptions	Limits
5	Reception of CPE Alerting Signal (CAS)	Detection of CAS signal of: (a) Frequency of Lower Tone (b) Frequency of Upper Tone (c) Dynamic Range (d) Tone Duration	 2130 Hz +/- 0.5% 2750 Hz +/- 0.5% -32 dB to –14 dBm per tone 75 to 85 ms
6	Transmission of Acknowledgement Signal (ACK)	Generation of ACK signal: (a) Frequency of Lower Tone (b) Frequency of Upper Tone (c) Power Level of Lower Tone (d) Power Level of Upper Tone (e) Signal Duration	 941 Hz +/- 1.5% 1633 Hz +/- 1.5% -9.5 dBm +/- 1 dB -7.5 dBm +/- 1 dB 55 to 65 ms