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## **Voluntary code of practice on Call Answering and Charging arising from the Attachment of Private Equipment and Systems to the Public Switched Telephone Network**

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### Issue 1

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**Normative Information**

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**CONTENTS**

Normative Information ..... 2  
Foreword..... 4  
1 Scope ..... 4  
2 Definitions..... 4  
3 Code for suppliers of attached private equipment and systems..... 5  
4 Code for system managers and maintainers of attached private equipment and systems .6  
Annex 1 Guidance on the format and content of answering announcements..... 8  
Annex 2 Details of particular tones ..... 9

## Foreword

Oftel, through the Network Interoperability Consultative Committee (NICC), requested that a Code of Practice be developed to provide advice and guidance on the way in which calls made using the public switched telephone network (PSTN) are supervised and answered (which triggers charging). A task group was set up under the Private Systems and Terminal Suppliers Interest Group (PSTS IG) to advise NICC on the draft code of practice, recognising the need to address the cause of public complaints at the earliest possible opportunity.

The task group was advised that complaints were being received at Oftel from callers who were being charged for calls which they had attempted to make, but which they believed had not been answered. Investigations by Oftel confirmed that call attempts had generally been made, but the caller was not aware that the call had been answered; these calls fell into three broad categories:

- Calls of relatively short duration, lasting from 2 s to 10 s
- Calls to on-line data services, lasting less than 40 s
- False answering of international calls

The task group was asked to limit the recommendations to address those situations where complaints arose from the way in which attached private equipment and systems answer calls.

In preparing this document, the task group has sought to avoid constraining designers' freedom and flexibility to reduce call holding times and get non-revenue earning call attempts off the networks as quickly as possible, while balancing those concerns with callers' interests in getting clear and accurate information about how calls are being charged.

It is anticipated that, from time to time, this Code will be revised. The task group agreed that the content of this document should not impede the progress of European liberalisation, for example, of the voice telephony infrastructure (1998). The task group also noted that any major developments in the harmonisation of tones within Europe and internationally would affect the content of this document and it is recommended that the content is reviewed on the agreement of a European harmonised approach.

## 1 Scope

1.1 This Code of Practice is intended for those in the telecommunications industry who are responsible for the way in which PSTN calls are handled when received by attached private equipment and systems.

1.2 This Code of Practice sets out the principal recommendations on the use of tones and announcements transmitted to the PSTN from attached private equipment and systems (including customers' premises equipment and private networks) so as to give callers a clearer indication of when a call has been answered.

1.3 This Code of Practice should help to reduce the number of calls being charged for, which to the caller appear to be unanswered.

1.4 This Code of Practice applies to calls received by PSTN numbers which have been published or publicly advertised and where callers will generally be members of the public. However, this Code may not be appropriate for PSTN numbers intended for use only by callers having access to special information or equipment provided by or on behalf of the called party, such as user instructions, special tools or terminal equipment, specially designated keys, or software passwords.

## 2 Definitions

**Announcement** – In this code, unless otherwise stated, an announcement means a pre-recorded or synthesised voice message.

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**Answering** – The process which completes an attempt to establish a communication path over the PSTN. NOTE. For chargeable calls, this generally triggers the start of charging.

**Caller** – The person attempting to make a call over the PSTN.

**Called party** – The person answering a call made over the PSTN.

**Public Telecommunications Operator** – A body or company authorised by a licence granted under Section 7 of the Telecommunications Act 1984 to operate a public telecommunications network using telecommunication systems which have been designated as public telecommunication systems under Section 9(1) of the Act. NOTE. The term Public Network Operator is sometimes applied to such a body or company.

**Public Switched Telephone Network** – The network run by Public Telecommunications Operators (see above) to provide telephony services.

**Attached Private Equipment or System** – Attached Private Equipment or Systems are any equipment or systems which are either:

- connected directly to the PSTN, or
- connected indirectly to the PSTN

by means of the PSTN customer interface.

### **3 Code for suppliers of attached private equipment and systems**

3.1 Suppliers of attached private equipment and systems should include within the user information adequate instructions on the correct installation, use and maintenance of the equipment in order for it to be used in compliance with this Code.

3.2 Suppliers should ensure that attached private equipment and systems, when installed in accordance with the instructions provided, conform to 3.2.1 to 3.2.4 below.

3.2.1 Where the attached private equipment or system provides for automatic answer followed by an announcement or tone, and is not intended to be used for data-only calls, suppliers should ensure that the call is not answered in less than 3 s after the detection of the incoming call attempt (see also 1.4).

3.2.2 Where the attached private equipment or system provides for automatic answer suppliers should ensure that there is a means of providing an announcement or tone (see 3.2.4 below) which begins within 6 s of the call being answered.

NOTE 1. Where practicable, the time between the call being answered and the application of an announcement or tone should be no more than 3 s.

NOTE 2. A tone such as that given in ITU-T recommendation V.25 is sent by attached private equipment or systems to set up a data or facsimile communication and is generally accepted by callers as an indication that the call has been answered.

3.2.3 Where the attached private equipment or system, after answering a call, provides an announcement that is not configurable by the user, suppliers should ensure that the announcement clearly indicates to a caller that the call has been answered. (See Annex 1 for an example.)

Where the attached private equipment or system has a capability which allows the selection or preparation of the answering announcement, suppliers should ensure that the user information provided gives guidance on the format and content of answering announcements. The user information should state that announcements should clearly indicate to the caller that the call has been answered (see Annex 1 for an example).

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NOTE 1. The immediate application, following answering, of music on hold would not clearly identify to a caller that the call has been answered.

NOTE 2. Under conditions of major equipment failure, attached private equipment and systems connected to channel associated signalling (CAS) direct dialling in (DDI) and analogue DDI services may return an "out of service" announcement free of charge to callers in response to incoming call attempts. Mandatory regulations specify the content of this announcement and prohibit the return of an answer signal. The guidance in Annex 1 does not apply in these circumstances.

3.2.4 Suppliers should ensure that attached private equipment and systems do not, after answering a call, cause tones to be sent to the caller which might reasonably be confused with any of the following tones currently in use in the UK PSTN unless a clear indication of answer is first provided to the caller:

- Awaiting answer indication (Ring tone)
- Number engaged indication
- Path engaged indication (Equipment engaged tone)
- Connection not admitted indication (Number Unobtainable tone)
- Special information tone

Details of particular tones are given in Annex 2.

NOTE. The correct behaviour of attached private equipment and systems which, when handling incoming PSTN calls, diverts them to another PSTN number or private network number needs to be carefully considered to ensure compliance with the Recommendations of 3 above.

#### **4 Code for system managers and maintainers of attached private equipment and systems**

NOTE 1. System managers and maintainers may carry out the functions of a supplier, and are invited to consider the extent to which they should apply section 3 of this code to their own individual circumstances.

4.1 System managers and maintainers should implement procedures which ensure that the method of handling and answering incoming calls is in compliance with this Code.

4.2 Where a call may be answered by an announcement, and where the equipment has a capability which allows the selection or preparation of the answering announcement, system managers and maintainers should ensure that the wording clearly indicates to the caller that the call has been answered (see Annex 1 for an example).

4.3 System managers and maintainers should ensure that any announcements do not imply that the call will be answered at some point in future, since any call receiving such an announcement will already have been answered.

4.4 System managers and maintainers should ensure that their equipment or system is configured so that, after answering a call, it does not cause tones to be sent to the caller which might reasonably be confused with any of the following tones currently in use in the UK PSTN unless a clear indication of answer is first provided to the caller:

- Awaiting answer indication (Ring tone)
- Number engaged indication
- Path engaged indication

- Connection not admitted indication (NU tone)
- Special information tone

Details of particular tones are given in Annex 2.

NOTE 2. The correct behaviour of attached private equipment and systems which, when handling incoming PSTN calls, diverts them to another PSTN number or private network number needs to be carefully considered to ensure compliance with the recommendations of 4 above.

**Guidance on the format and content of answering announcements**

When selecting or preparing an answering announcement you should ensure that the wording makes clear that the call has been answered.

You should check that the announcement does not imply that the call will be answered at some point in future, since any call receiving such an announcement will already have been answered.

You should not say "Your call will be answered". An example of an answering announcement suitable for a call placed in a queue is:

"Thank you for calling XYZ Co. Your call has been answered and placed in a queue, as all of our operators/agents are engaged at present."

**Details of particular tones**

Tone	Frequency (Hz)	Cadence (ms)	Notes
Awaiting answer indication (Ring tone)	400 or 450 modulated by 50, 25 or 17 OR 400 plus 450 at approximately the same level	400 on 200 off 400 on 2,000 off 350 on 220 off then start at any point in: 400 on 200 off 400 on 2000 off	
Number engaged indication (engaged or busy tone)	400	375 on 375 off	
Path engaged indication (equipment engaged tone)	400	400 on 350 off 225 on 525 off	The shorter tone is also louder than the longer tone
Connection not admitted indication (number unobtainable tone)	400	continuous	
Special information tone	950 + 50 1400 + 50 1800 + 50	Each tone is sent for 330 + 70 ms in the order given and with silent periods of up to 30 between adjacent signals	

**END**