



SIN 359

Issue 1.3

April 2009

Suppliers' Information Note

For The BT Network

Text Relay Service Description

Each SIN is the copyright of British Telecommunications plc. Reproduction of the SIN is permitted only in its entirety, to disseminate information on the BT Network within your organisation. You must not edit or amend any SIN or reproduce extracts. You must not remove BT trade marks, notices, headings or copyright markings.

This document does not form a part of any contract with BT customers or suppliers.

Users of this document should not rely solely on the information in this document, but should carry out their own tests to satisfy themselves that terminal equipment will work with the BT network.

BT reserves the right to amend or replace any or all of the information in this document.

BT shall have no liability in contract, tort or otherwise for any loss or damage, howsoever arising from use of, or reliance upon, the information in this document by any person.

Due to technological limitations a very small percentage of customer interfaces may not comply with some of the individual characteristics which may be defined in this document.

Publication of this Suppliers' Information Note does not give or imply any licence to any intellectual property rights belonging to British Telecommunications plc or others. It is your sole responsibility to obtain any licences, permissions or consents which may be necessary if you choose to act on the information supplied in the SIN.

Those BT services marked TM indicates it is a trade mark of British Telecommunications plc.

This SIN is available in Portable Document Format (pdf) from: <http://www.sinet.bt.com/index.htm>

Enquiries relating to this document should be directed to: help@sinet.bt.com

CONTENTS

1.	INTRODUCTION.....	3
1.1	PROTOCOLS.....	3
1.2	ANNOUNCEMENTS FROM THE TEXT RELAY	3
1.3	CALL TYPES.....	4
2.	ACCESS TO TEXT RELAY AND CALL SET-UP.....	4
2.1	CALLS FROM A TEXTPHONE USER.....	4
2.2	CALLS FROM A VOICE USER.....	5
3.	CONVERSATION IN PROGRESS	5
3.1	VOICE-THROUGH.....	5
3.2	RELAY ASSISTANT	6
3.3	VOICE CARRY OVER	6
3.4	TEXT-THROUGH	6
4.	ADDITIONAL SERVICES.....	6
4.1	CALLING LINE IDENTIFICATION	6
4.2	CALL RETURN.....	6
4.3	INTERNATIONAL CALLS	7
5.	FURTHER INFORMATION	7
6.	REFERENCES.....	7
7.	ABBREVIATIONS	7
8.	HISTORY	8

1. Introduction

This SIN describes the Text Relay service (the Service) that is provided for PSTN customers who need to use textphones because of their disabilities.

The Service offers the option of routing calls that will or could involve textphone communications through the Text Relay platform. The Text Relay platform is accessed on a per call basis by prefixing the full national number with a Text Relay prefix.

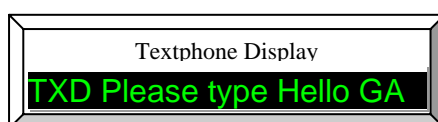
The Service provides the following features:

- uses V.18^[1] compliant modems
- automated access to a Relay Assistant
- access to operator assistance and Directory Information Services using the existing short code numbers prefixed with 18001 and a Public Emergency Call Service using 18000
- call progress voice announcements in a form suitable for textphone users
- allows communications between incompatible textphones
- the Calling Line Identification number of the calling line, or the reason for its absence, is passed through the Service.

1.1 Protocols

Text Relay uses V.18 compliant modems to connect to the textphones using the Service. While these modems support the protocols within the V.18 Recommendation it would be advantageous to the customers if they use the carrier based protocol such as native V.18, V.21^[2] or V.23^[3].

If the textphone is using one of the non-carrier based textphone protocols, such as Baudot, then the modem will need some characters to be typed by the user in order to detect the protocol being used. To prompt the user a message will be sent to the textphone e.g.:

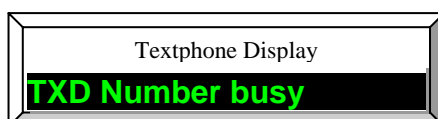


Additionally, for textphones which do not generate tones during a state change i.e. from voice to text or from text to voice, a signal will have to be typed or keyed.

1.2 Announcements from the Text Relay

Call status announcements from the Service to the customer are delivered in a form appropriate to that customer at that moment. A textphone user will receive announcements in text using a protocol compatible with their textphone and a voice user will receive announcements as tones or voice.

All text announcements from the Service will be prefixed with "TXD" so that the customer can identify that the announcement has been sent by the Service and not by the distant end. An example of such a message follows:



1.3 Call Types

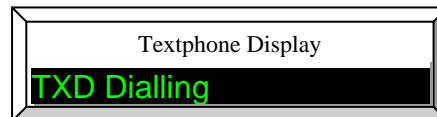
The Service provides automatic access to a Relay Assistant for voice-to-textphone and textphone-to-voice calls. The Service also supports both textphone-to-textphone and voice-to-voice calls.

2. Access to Text Relay and Call Set-up

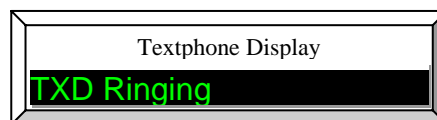
2.1 Calls from a Textphone User

To use the Service a textphone caller will prefix the full national number they are calling with the Text Relay prefix, 18001. The Service will not require a pause between the access code and the telephone number. If a textphone user wants to call a number such as 02085461601 then the number they will dial will be 1800102085461601.

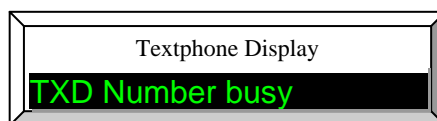
Before the second leg of the call is connected a V.18 modem establishes text communications with the calling textphone. This modem is then used to convey call status information such as:



When the call is connected through to the called telephone, and that telephone 'rings', the Service sends a text message to the caller indicating that the telephone they are calling is ringing:



If the telephone is busy then the caller will receive the following text message indicating this:



When the call is answered the Service will detect whether there is a textphone present or not. If there is no textphone then a Relay Assistant will be connected into the call. If there is a textphone then a second V.18 modem is connected and text communication can commence between the two parties via the V.18 modems.

2.2 Calls from a Voice User

For voice users the Text Relay prefix is 18002. Voice users should use the Service when they wish communicate with a textphone user or when they think there is the possibility that the call may be answered by a textphone user, as in the case of a household of people with mixed ability i.e. textphone and voice users.

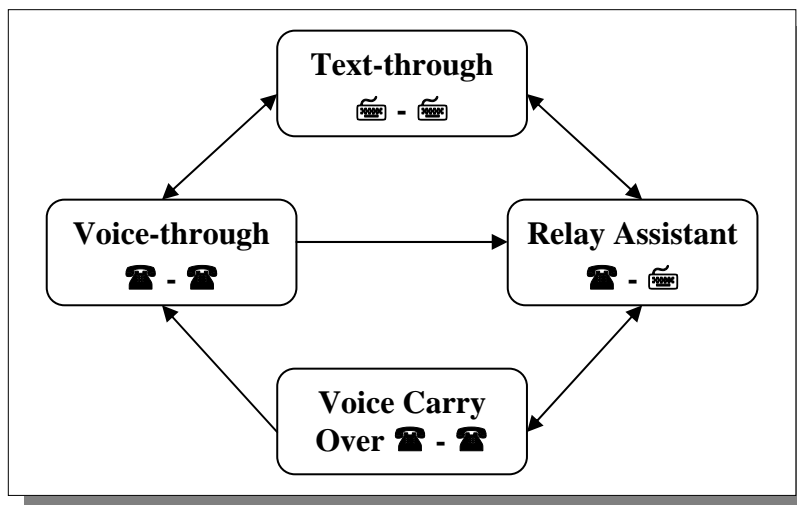
A voice caller will dial the Text Relay prefix followed by the full national number, so that 02085461601 will become 1800202085461601.

When the call is connected through to the called number the caller hears ringing, busy or failure tones or they will receive an equivalent Text Relay voice announcement.

When the call is answered the Service will detect whether there is a textphone present or not. If there is a textphone then a Relay Assistant will be connected in to the call. If no textphone is present then the voice path is switched through allowing the conversation to commence.

3. Conversation In Progress

Once a call has been established and the called party answers the Service will support four different modes or ways of communicating, each of these modes is described below. A call will stay in each mode until one or both of the terminals change i.e. one party switches from text to voice or vice versa. At this point the Service decides which mode to move the call into, dependent on the terminals that are present at each end of the call. The next mode is also dependent on the previous mode as shown in the diagram.



3.1 Voice-through

In this mode the Service connects the calling party directly to the called party in the same way as a call that has been dialled direct through the PSTN. Voice-through mode will be used when two voice users are talking to each other or when two textphone users have switched to Voice-through.

3.2 Relay Assistant

A Relay Assistant will be used when one party is a textphone user and the other is a voice user. Text from the textphone user is read and spoken to the voice user by the Relay Assistant. In the other direction the Relay Assistant types the spoken message from the voice user to the textphone user. When the Service detects that a Relay Assistant is required both parties are informed, using the appropriate means, that a Relay Assistant is being connected.

Under normal conditions the Relay Assistant will remain connected in to the call until they are no longer required. This may not necessarily be the end of the call e.g. when parties switch over to Voice Through. However, if a situation arises when a call requires a Relay Assistant and none is free then a Relay Assistant whose call is currently in Voice Through will be released to deal with the new call. Their existing call will be reallocated to another Relay Assistant when the parties require a Relay Assistant again.

3.3 Voice Carry Over

This mode is when there is a Relay Assistant associated with the call. From the point of view of the conversation the mode is the same as Voice-through i.e. voices can travel in either direction. However, the difference is that a Relay Assistant is associated with, and monitoring the call. From Voice-through mode the call can either return to the Relay Assistant or if they are no longer required it will go into Voice-through.

3.4 Text-through

When in Text-through Mode the Service allows text communications to take place between two textphone users. The textphones do not have to be compatible as the Service provides translation between incompatible textphones. When two textphones are connected together through the Service the textphones do not actually connect directly to each other. Each textphone is in fact connected to a V.18 modem and the two modems communicate with each other. Using this approach allows conversation to take place between incompatible textphones that previously were unable to communicate.

4. Additional Services

4.1 Calling Line Identification

The Service allows the Calling Line Identification (CLI) to be passed to the called party in a similar way to a PSTN call. As with a standard call the CLI can be withheld or released by dialling 141 (per call withhold) or 1470 (per call release) **before** the Text Relay prefix.

4.2 Call Return

Dialling 1471 after the Text Relay access code gives users the CLI of the last incoming call that used the Service. Users then have the option of keying 3, which will instruct the Service to attempt a return call. This facility operates independently of the PSTN Call Return service.

4.3 International Calls

Text Relay will allow both textphone and voice users to make calls to international telephone numbers by using the access prefix. Language translation is not provided by the Service and character-set compatibility cannot be guaranteed.

5. Further information

Further information for the service can be obtained from the Text Relay website at www.textrelay.org.

If you have enquiries relating to the contents of this document then please e-mail help@sinet.bt.com

6. References

ITU-T Recommendation

[1]	V.18	Recommendation V.18 - Operational and interworking requirements for DCEs operating in the text telephone mode
[2]	V.21	Recommendation V.21 - 300 bits per second duplex modem standardized for use in the general switched telephone network
[3]	V.23	Recommendation V.23 - 600/1200-baud modem standardized for use in the general switched telephone network

For copies of referenced documents please see the document sources page at <http://www.sinet.bt.com/usenum.htm#docsources>

7. Abbreviations

CLI	Calling Line Identification
ITU-T	International Telecommunication Union - Telecommunications Standardization Sector
PSTN	Public Switched Telephone Network
RNID	Royal National Institute for Deaf People
TXD	BT Text Relay
SIN	Suppliers' Information Note

8. History

Issue 1.0	November 2000	
Issue 1.1	September 2002	Editorial update.
Issue 1.2	September 2004	Clause covering compliance of terminal equipment removed. Editorial changes.
Issue 1.3	April 2009	Name change from TextDirect to Text Relay

***WE WOULD BE GRATEFUL IF YOU WOULD SPEND A FEW MINUTES TO
COMPLETE AN ONLINE CUSTOMER SATISFACTION FORM AT
[HTTP://WWW.SINET.BT.COM/HAPPY.HTM](http://www.sinet.bt.com/happy.htm).***

~ END ~