

## **General Information: Telephony Standards:**

Caller ID Standard and Market in Taiwan (August 17, 2000)

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# **Overview of Caller ID Standard and Market in Taiwan**

## **Market Status**

In 1999, Chunghwa Telecom, the state owned telephone carrier in Taiwan, had officially launched Caller ID service in Taiwan. By offering Caller ID service as part of the standard telephone package, Chunghwa Telecom is one of the first carriers to implement Caller ID on an existing network without additional charges. Since Caller ID features are traditionally considered a paid service, Chunghwa Telecom is raising the standard for what is considered basic telephone service.

Owing to the network compatibility issues, Type 1 Caller ID service is being offered in certain cities or areas only with number delivery. The incompatibility and limited service area leads to a problem of usability. Often, calls from outside the various service areas are reported as "Out Of Area". As a result, the performance of the current Caller ID Service is below some customers' expectation and anticipation. The general feeling from various Caller ID device manufacturers is that the limited service areas are reducing the benefit of Caller ID and resulting in disappointed customers. As such, the demand for Caller ID devices from consumers is slowing from the initial surge.

## **Official Caller ID Standard**

Taiwan has adopted both FSK and DTMF Caller ID transmission formats as per the ETSI Standard ETS 300-659-1. Depending on the capabilities of the central office switch serving a given area, the Caller ID data is transmitted by means of a FSK modulated carrier or by sending DTMF digits. The official Caller ID document 0003-0 was released on Nov. 22, 1999 by the Directorate General of Telecommunications, Republic Of China. For more information, please contact:

DIRECTORATE GENERAL OF TELECOMMUNICATIONS REPUBLIC OF CHINA

Tel: +886-2-2343-3657

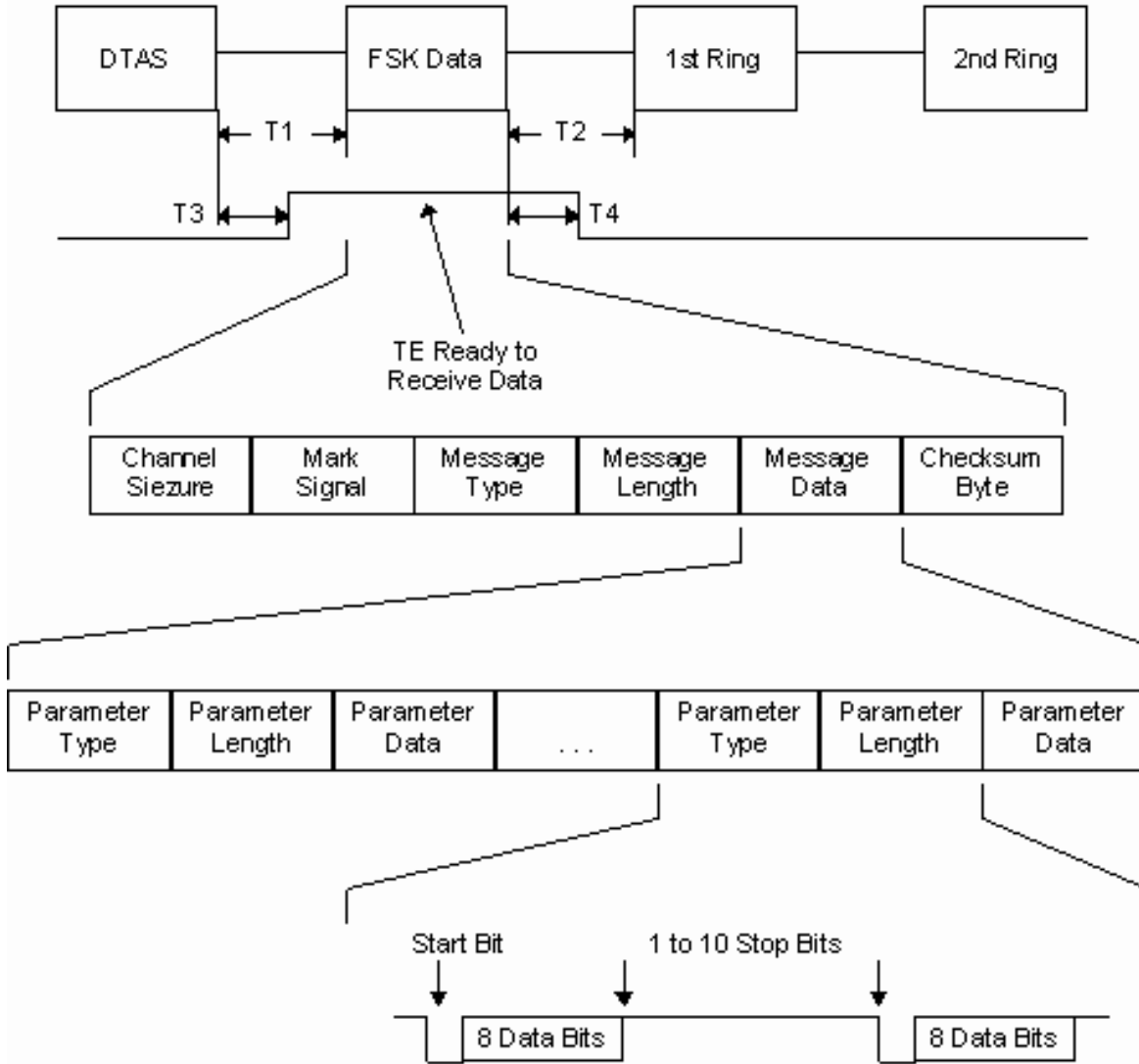
Fax: +886 - 2343-3600

Contact: YING-DI CHEN

Website: <http://www.dgt.gov.tw/trais/spec/techfmindex.html>

## **FSK Caller ID Transmission**

The FSK based Caller ID transmission method uses a Dual Tone Alerting Signal (DTAS) to inform the Terminal Equipment (TE) of an incoming Caller ID message. The Caller ID message is sent using a V.23 FSK signal, which is followed by one or more power ringing cycles. The following figure shows the sequence of events.



The timing limits are defined as follows:

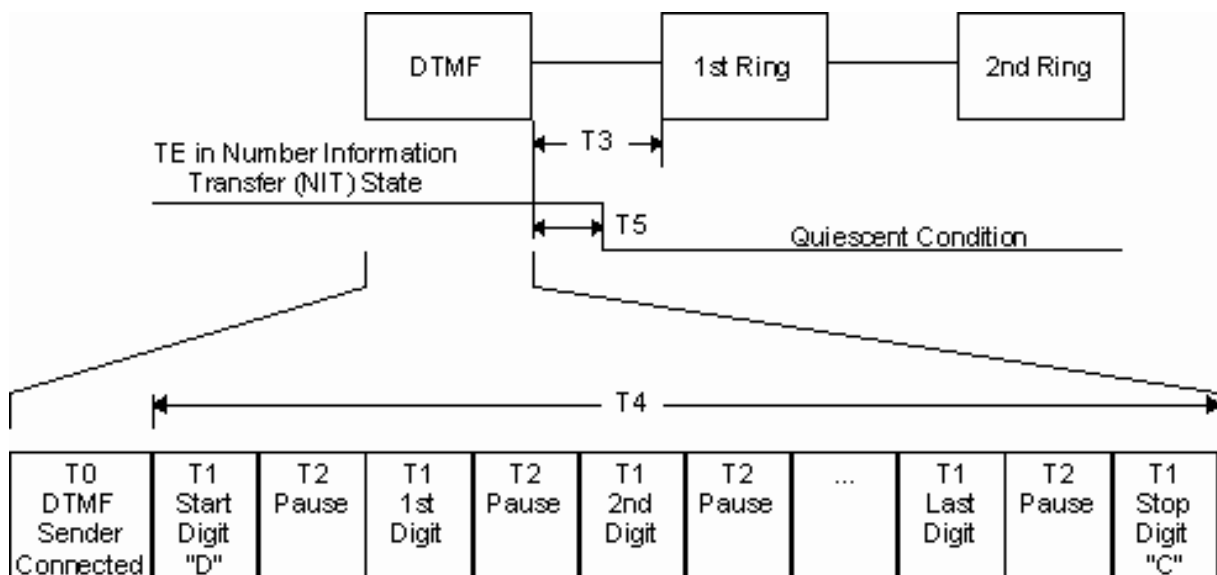
	Description	Value
T1	Silence time from DTAS to start of FSK data	$\geq 45$ ms and $\leq 500$ ms
T2	Delay from end of FSK data transmission to first ring	$\geq 200$ ms and $\leq 500$ ms
T3	Delay from the end of DTAS where the TE must be ready to receive the FSK data	$\leq 45$ ms
T4	Delay from the end of the FSK data where the TE must reject further data	$\leq 150$ ms

The Reason of Number Absence parameter type is slightly modified from the ETSI specification. The following list shows the representations used:

Reason of Number Absence	Interpretation
"C"	Coin/Public Phone Call
"I"	International Call
"O"	Out of Area Call
"P"	Private Call

## DTMF Caller ID Transmission

The DTMF based Caller ID transmission method sends a series of DTMF digits prior to the first ringing cycle. As shown in the following figure, the calling number is sent following a "start" digit and ends when the "stop" digit is detected.



The timing limits are defined as follows:

	Description	Value
T0	Pause for the central office switch to connect the DTMF sender to the voice path	50 ms ~ 400 ms
T1	Duration of the DTMF digits	$\geq 50$ ms
T2	Inter-digit pause	$\geq 50$ ms
T3	Delay from the end of the last DTMF digit to the start of 1st ringing cycle	$\geq 150$ ms and $\leq 700$ ms
T4	Time required to send all the DTMF digits	$\leq 3000$ ms

T5	Return to quiescent state after receiving the DTMF stop digit "C"	=< 150 ms
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The transfer of number information is to be regarded as completed when one of the following criteria are met:

1. The DTMF digit "C" (stop code) is received;
2. Ringing signal is detected;
3. After receipt of a DTMF digit the DTMF pause condition is present for more than 1 second.

At least the criteria 2 and 3 shall be supported by the TE, as these criteria will guarantee in both normal and abnormal number information transfer procedures, that the NIT state is left before, or as soon as possible, the line entering an off-hook loop condition.

### **Caller ID Testing and Approval Authorities**

Caller ID Terminal equipment are subject to formal approval before they are permitted to be sold to the general public in Taiwan. For further information, please contact the following Official Approval Authorities:

ETC (Electronics Testing Center, Taiwan)  
Tel : +886-3-328-0026  
Fax: +886-3-328-3928  
Contact: S.C. Chen  
E-mail: johnson@etc.org.tw

TL (Telecommunication Laboratories Chunghwa Telecom Co., Ltd.)  
Tel: +886-2-2326-2470  
Fax: +886-3-424-5556  
Contact: Jin Chuan Chan  
E-mail: wxmc@ms7.hinet.net



