



IST doc.10

TETRA Terminal Interoperability Certificate

November 2002

CLEARTONE

Manufacturer	Terminal Type	Software/Hardware Release No.	Dates of testing
Cleartone	CM9000P	SW: TMPO 36G4C HW: 1.5	11-12 November 2002

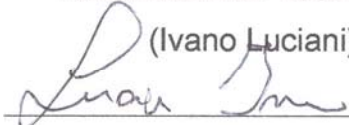
ISCTI (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) has witnessed that the Cleartone terminal is operating in accordance with:

TETRA Interoperability Profile:

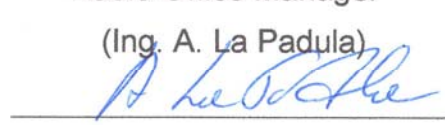
TIP Part 11: Air Interface Encryption - TTR 001-11 ver. 1.0.0, December 2001

The test results for the tested features can be found in the tables of this certificate.

Authorised IOP test engineer

(Ivano Luciani)


Radio Office Manager

(Ing. A. La Padula)


ISCTI has made every effort to ensure that tests have been made correctly, and in accordance with the relevant TIPs. ISCTI has no liability for the test results, or towards the manufacturers.

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Information about the equipment used for testing

Testing during the November 2002 IOP Test Session:

The tests were performed using the following infrastructure:

Manufacturer	Infrastructure	Software/Hardware Release No.
Motorola	Dimetra IP R5.0	ZC SW: ZC_APP_ZCTE_R05.00.11.07 NM SW: DMNM-R11.00.09.07 EBTS SW: TSC_PR3_APP- E05.30.63BRC_APP-E05.20.50

Additional information about the test performed

The tests were performed in the 380-400 MHz band. The SwMI was operating with the following configuration:

MCC	238
MNC	01
Colour code	41
LA20 carrier frequency (BS Tx)	393.6125 MHz
LA21 carrier frequency (BS Tx)	393.5375 MHz
LA30 carrier frequency (BS Tx)	421.075 MHz
LA31 carrier frequency (BS Tx)	421.175 MHz
PSTN gateway telephone number	43488011
Subscriber classes	FFFF ₁₆



Test Results

The test results are shown in the tables below.

Test results and the certificates from previous IOP test session are available on TETRA MoU web site (<http://www.tetramou.com/interoperability>).

Tables indicate whether or not tests addressing a specific requirement of the TIP specification have been performed, whether or not the requirement is applicable for the SwMI, and the result of the test if executed. Each entry of the table may take one of seven values:

-	No test performed.
N/A	Not applicable for the SwMI
NTPA	No Test Plan/case Available
P	Pass
No	Not supported by Terminal
F	Fail
I	Inconclusive

The test results have been derived from examining the behaviour of a live system. The verdicts indicated are based on the log evaluation of the information exchange between the SwMI and the terminals indicated in the following tables. The verdicts reflect the fact that at the time of the IOP testing it was/was not possible to demonstrate a behaviour that was in accordance with the related requirement.

ISCTI has made every effort to ensure that tests are in accordance with the relevant TIPs. ISCTI has no liability for the test results, or towards the manufacturers.



MOTOROLA SwMI		ClearTone CM9000P
Table 6: AIE TIP: TTR 001-11		
Air Interface Encryption functions		
2.3 General Signalling Assumptions		
2.3.6	Security Class 2 Registration with encryption applied. Authentication not required by SwMI - 1.1.1	No
2.3.6	Security Class 2 Registration with encryption applied. Authentication required by SwMI -1.1.2	No
2.3.6	Security Class 2 Registration without encryption applied. Authentication not required by SwMI -1.1.3	P
2.3.6	Security Class 2 Registration without encryption applied. Authentication required by SwMI - 1.1.4	P
2.3.6	Security Class 2 Undeclared cell re-selection - 1.2.1	P
2.3.6	Security Class 2 Unannounced cell re-selection -1.2.2	P
2.3.7	Security Class 3	N/A
2.3.8	DCK Forwarding using announced type 1 cell re-selection	N/A
2.3.9	DCK Forwarding using announced type 2 cell re-selection	N/A
2.3.10	DCK forwarding using OTAR PREPARE and OTAR NEW CELL	N/A
2.3.11	Change of security Class or Cipher Key on the serving cell	N/A
2.3.15.1	MS CCK Management	N/A
2.3.16	Call Related Signalling Call from class 2 MS to Class 2 MS - 1.3.1.1	P
2.3.16	Call Related Signalling Call from class 2 MS to Class 1 MS - 1.3.1.2	No
2.3.16	Call Related Signalling Call from class 1 MS to Class 2 MS - 1.3.1.3	No
2.3.16	Call Related Signalling Call from Class 2 MS to Class 2 Group -1.3.2.1	P
2.3.16	Call Related Signalling Call from class 2 MS to Class 1 Group -1.3.2.2	No
2.3.17	Call Unrelated Signalling Status from Class2 MS in Class 1 Group call to idle Class 2 MS – 1.4.1	N/A
2.3.17	Call Unrelated Signalling Status from idle Class 2 MS to Class 2 MS in Class 1 Group call – 1.4.2	N/A
2.3.17	Call Unrelated Signalling Status from Class 3 MS in Class 1 group call to Class 3 MS – 2.4.1	N/A
2.3.17	Call Unrelated Signalling Status from Class 3 MS to Class 3 MS in Class 1 group call – 2.4.2	N/A
2.3.20	AI Signalling Protection Registration with encryption applied. Authentication not required by SwMI - 1.1.1	No



	MOTOROLA SwMI	ClearTone CM9000P
2.3.20	AI Signalling Protection Registration with encryption applied. Authentication required by SwMI -1.1.2	No
2.3.20	AI Signalling Protection Registration without encryption applied. Authentication not required by SwMI -1.1.3	P
2.3.20	AI Signalling Protection Registration without encryption applied. Authentication required by SwMI - 1.1.4	P
2.3.20	AI Signalling Protection Undeclared cell-reselection - 1.2.1	P
2.3.20	AI Signalling Protection Unannounced cell re-selection - 1.2.2	P
2.6	Signalling Scenarios	
2.6.2	MS-initiated location updating with SCK ciphering, no SCK request, no authentication Registration with encryption applied. Authentication not required by SwMI - 1.1.1	No
2.6.2	MS-initiated location updating with SCK ciphering, no SCK request, no authentication Registration without encryption applied. Authentication not required by SwMI - 1.1.3	P
2.6.3	MS-initiated location updating with SCK ciphering, and authentication Registration with encryption applied. Authentication required by SwMI -1.1.2	No
2.6.3	MS-initiated location updating with SCK ciphering, and authentication Registration without encryption applied. Authentication required by SwMI -1.1.4	P
2.6.4	MS-initiated location updating with SCK ciphering and SCK request	NTPA
2.6.5	SwMI-initiated location updating with SCK ciphering, SCK request and authentication	NTPA
2.6.6	MS-initiated location updating with DCK ciphering, CCK request and authentication	N/A
2.6.7	MS-initiated location updating with DCK ciphering (no CCK request, no authentication)	N/A
2.6.8	MS-initiated location updating with DCK ciphering, and authentication	N/A
2.6.9	MS-initiated location updating with DCK ciphering, and CCK request	N/A