



IST doc.10

TETRA Terminal Interoperability Certificate

November 2002

MOTOROLA

| Manufacturer | Terminal Type | Software/Hardware Release No. | Dates of testing |
|--------------|---------------|---|----------------------|
| Motorola | MTP700 | SW: MR1.2 TEA2 software, R78.03.10; HW: PMUE1825A | 6-8 November 2002 |

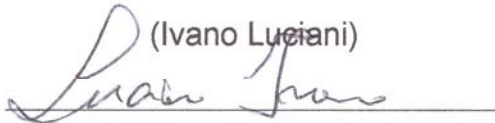
ISCTI (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) has witnessed that the MOTOROLA terminal is operating in accordance with:

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

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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 Type | 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 | Motorola MTP700 |
|--|---|--------------------|
| 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 | - |
| 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 | P |
| 2.3.16 | Call Related Signalling Call from class 1 MS to Class 2 MS - 1.3.1.3 | P |
| 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 | P |
| 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 | Motorola MTP700 |
|--------|--|--------------------|
| 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 | - |
| 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 | - |
| 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 |