



# TETRA Interoperability Certificate

## EADS, TETRA System Rel5, SwMI – EADS, THR880i, Terminal

Helsinki, February 2007

Latest Certified SwMI SW Release:	w5 3.11-0	Latest Certified Terminal SW Release:	5.18-6
Latest Certified SwMI HW Release:	DXTip Rel5	Latest Certified Terminal HW Release:	RC-2


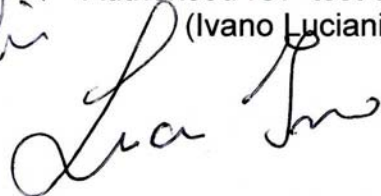
ISCOM (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) certifies, that the EADS, TETRA System Rel5, SwMI and the EADS, THR880i, terminal have been subject to interoperability testing for the “certified” features listed on second page of this certificate, in accordance with the TETRA Interoperability Profiles, TIP compliance Test Plan and related TETRA interoperability requirement tables.

The table lists all the available TETRA interoperability profiles, and summarizes the main functionalities of every profile according to the TETRA interoperability requirement tables.

A feature is “**Certified**” when it has been successfully tested during the last test session with one of the testing method described in the TETRA process document part 1 (TPD001).

A breakdown into the feature details is given in the Feature Compliance Overview section of this certificate.

Detailed test results and explanation about the procedure used to provide verdicts are listed in the Test Report associated to this Certificate.

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Date of issue:

22 Jun 2007

Test Session: EADS, Helsinki, February 2007

EADS, TETRA System Rel5, SwMI - EADS, THR880i, Terminal

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## Certified features

Tetra MoU Association, TTR001-02: SDS	
SDS Type 1, 2 or 3	-
SDS - TL	Certified

Tetra MoU Association, TTR001-05: Packet Data	
Context Management	Certified
Single slot Packet Data	-
Multi-slot Packet Data	-

Tetra MoU Association, TTR001-06: Air Interface Migration	
Registration	Certified
Group management	Certified
Group call	Certified
Individual call	Certified
Status/SDS message	Certified

TETRA MoU Association, TTR001-07: Fleet Specific Short Numbering	
Fleet Specific Short Numbering	Certified

TETRA MoU Association, TTR001-09: Ambience Listening	
Ambience Listening	Certified

Tetra MoU Association, TTR001-12: Service Interaction	
SwMI initiated Service Interaction	Certified
MS initiated Service Interaction	Certified



## Feature Compliance Overview

The first pages of this certificate provide an indication about the main interoperable TETRA features for each TIP specification (as described in the TIC-RT). The main interoperable TETRA features results depend on a set of sub-feature, the verdicts associated to each sub-feature are directly derived from the analysis of the performed test cases.

The results associated to each feature and sub-feature are shown in the “Feature compliance report” table below. The main features are indicated with grey background and the associated sub-features (or second level features) have white background.

The verdict assigned to a sub-feature is the result of the analysis of the test case results listed in the Test Report. The verdict assigned to each sub-feature is derived from one or several test case results or test steps result, the TETRA Interoperability requirement tables (TIC-RTs) indicate the link between sub-features and test cases for the certified set of equipment capabilities (see Test Report).

Verdict	Definition
<b>Passed (note x)</b>	All mandated tests or steps of tests linked to this functionality (as per TIC-RT indication) are compliant with the TIP specification relevant to this feature. A note can be associated to this result if further clarification on the behaviour of the equipment is needed.
<b>Time_limited</b>	Not all Mandated tests (as per TIC-RT indication) have been executed (ran out of time)

The verdict associated to the feature gives also indication about the method used to test that feature. The allowed testing Methods are listed in the table below, a complete description of the procedures and constraints associated to each of them can be found in the “TPD001 TETRA Interoperability Certification Process Description” document.

Testing Method	Description
<b>Complete</b>	All mandated tests associated to the feature have been executed.
<b>Spot</b>	Only a selection of the mandatory test cases associated to the feature has been executed during the test session. These tests are a subset of the tests performed on an equivalent software which has been “completely” tested against the same functionality on a different equipment, see manufacturer declaration in annex A.
<b>Regression</b>	Only a selection of the mandatory the test cases associated to the feature is executed during the test session. These tests are a subset of the tests performed on a previous version of the same software which has been complete tested in a previous test session against the same functionality, see manufacturer declaration in annex A.



<b>Regression on spot</b>	The regression method has been applied on the verdicts based on the spot testing method.
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Depending on equipment capabilities declared by the manufacturer, some features or sub-feature cannot be tested. The following table describes meaning of the used abbreviation:

<b>Indication</b>	<b>Definition</b>
<b>SwMI-nr MS-nr</b>	The SwMI and MS do not support the minimum features required to verify these items
<b>SwMI-nr</b>	The SwMI does not support the minimum features required to verify these items
<b>MS-nr</b>	The MS does not support the minimum features required to verify these items

ISCOM has made every effort to ensure that every result have been correctly evaluated in accordance with the relevant TIPs, Test Plans and TIC-RTs. ISCOM has no liability for the test results, or towards the manufacturers.

The table on the following page lists HW and SW releases of SwMI and Terminal under test in the last four test sessions and the used TIP specifications, Test Plans, and TIC-RTs.

This Certificate and Certificates from previous test sessions are available on the TETRA MoU Association web site (<http://www.tetramou.com/tetramou.aspx?&id=2636>).

The feature results are shown in the tables below.



## Information on equipment under test and document references

<b>Test Session Date/Place</b>	<b>EADS, Helsinki, February 2007</b>			
<b>SwMI Type</b>	TETRA System Rel5			
<b>SwMI HW Release</b>	DXTip Rel5			
<b>SwMI SW Release</b>	w5 3.11-0			
<b>Terminal Type</b>	THR880i			
<b>Terminal HW release</b>	RC-2			
<b>Terminal SW release</b>	5.18-6			
<b>TIP Specs and TIP Compliance Test Plans</b>				
<b>SDS</b>	TTR001-02 v 2.0.1 IOP001-02 v 2.0.0 TIC-RT001-02 v 2.0.1			
<b>PD</b>	TTR001-05 v 2.0.0 IOP001-05 v 2.0.0 TIC-RT001-05 v 2.2.0			
<b>AIM</b>	TTR001-06 v 2.0.1 IOP001-06 v 1.0.0 TIC-RT001-06 v 1.1.0			
<b>FSSN</b>	TTR001-07 v 1.0.0 IOP001-07 v 2.0.0 TIC-RT001-07 v 1.1.4			
<b>AL</b>	TTR001-09 v 2.0.0 IOP001-09 v 1.1.0 TIC-RT001-09 v 1.1.1			
<b>SI</b>	TTR001-12 v 1.0.0 IOP001-12 v 1.0.0 TIC-RT001-12 v 1.1.2			



## Feature compliance report

Test Session	EADS Helsinki February 2007			
<b>TTR001-02 SDS</b>				
<b>SDS Type 1, 2 or 3</b>				
SDS Type 1	MS-nr			
SDS Type 2	MS-nr			
SDS Type 3	MS-nr			
<b>SDS-TL</b>	<b>PASSED Spot</b>			
Individually Addressed	PASSED Complete			
Group Addressed	PASSED Spot			
Using MS-ISDN dialling	Spot			
Using UCS2 coding scheme	Spot			
<b>TTR001-05 Packet Data</b>				
<b>Context Management</b>	<b>PASSED Spot</b>			
Context Activation	PASSED Spot			
User authentication	PASSED Spot			
<b>Single Slot Packet Data</b>	<b>FAILED Spot</b>			
Data Transfer	Spot			
Cell re-selection	FAILED			
<b>Multi Slot Packet Data</b>				
Data Transfer	SwMI-nr MS-nr			



Test Session	EADS Helsinki February 2007			
<b>TTR001-06 Air Interface Migration</b>				
<b>Registration</b>	<b>Spot</b>			
Migrating	Spot			
<b>Group management</b>	<b>Spot</b>			
Local group attachment on Foreign SwMI	Spot			
Foreign group attachment	SwMI-nr MS-nr			
<b>Group call</b>	<b>Spot</b>			
Group call to local group on foreign SwMI	Spot			
Group call to foreign group	SwMI-nr MS-nr			
<b>Individual call</b>	<b>PASSED Spot</b>			
SSI/TSI addressed	PASSED Complete			
FSSN addressed	Spot			
MS-ISDN addressed	Spot			
<b>Status/SDS message</b>	<b>Spot</b>			
Individually addressed SDS	Spot			
Group addressed SDS	SwMI-nr			
<b>TTR001-07 Fleet Specific Short Numbering</b>				
<b>Fleet Specific Short Numbering</b>	<b>PASSED Spot</b>			
FSSN Addressed Individual Call	PASSED Complete			
FSSN as CPI/TPI in Group Call	Spot			
FSSN Addressed Status Messages	Spot			
FSSN Addressed SDS Text Messages	Spot			
<b>TTR001-09 Ambience Listening</b>				
<b>Ambience Listening</b>	<b>PASSED Spot</b>			
SS-AL Call Setup	Spot			
MS initiated SS-AL disconnection	PASSED Spot			
No Indication to affected user	PASSED Spot			



<b>Test Session</b>	<b>EADS Helsinki February 2007</b>			
<b>TTR001-12 Service Interaction</b>				
<b>MS initiated Service Interaction</b>	<b>PASSED Spot</b>			
MS initiated Circuit Mode Call during another Circuit Mode Call	PASSED Complete			
MS initiated Circuit Mode Call during Packet Mode Transfer	PASSED Spot			
MS initiated Packet Mode Transfer during Circuit Mode Call	MS-nr			
<b>SwMI initiated Service Interaction</b>	<b>Spot</b>			
SwMI initiated Circuit Mode Call during another Circuit Mode Call	Spot			
SwMI initiated Circuit Mode Call during Packet Mode Transfer	Spot			
SwMI initiated Packet Mode Transfer during Circuit Mode Call	SwMI-nr MS-nr			

**General Note:** In Air Interface Migration TTR001-06 the actual software implementation does not assign address type (V)ASSI different from USSI or ISSI.



# Annex A: Declarations (Spot and Regression)

<b>TETRA MoU</b> <b>IOP Testing and Certification</b>	
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## Commonality Declaration – Feb 2007

We: **EADS Secure Networks Oy**

Of: **Mattilanniemi 6**  
**40100 JYVÄSKYLÄ**  
**FINLAND**

declare that for IOP testing, the two following products are equivalent:

Product	Software Release	Hardware Release
TMR880i	5.18-6	RC-9
THR880i	5.18-6	RC-2

This declaration is made due to these two products having identical software code for implementing the upper and lower MAC, layer 2, and layer 3 protocols in accordance with EN 300 392-2 with reference to IOP testing, having only differences related to them supporting different hardware platforms.

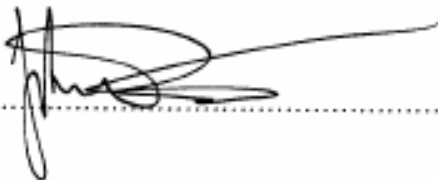
The two products have different software part numbers due to them supporting different hardware platforms.

We therefore request spot testing of the **THR880i** during the official IOP test session at **Helsinki** in **Feb 2007** with the **EADS SwMI**, where full testing of the **TMR880i** will be performed.

Functionalities to be spot tested are listed in the relevant matrix.

*For and on behalf of **EADS Secure Networks***

*Authorised signatory:*

  
 ..... Date 14.06.2007 .....