



IST doc.10 rev.2

# TETRA Terminal Interoperability Certificate

September 2005

**NOKIA**

Manufacturer	Type	Software/Hardware Release No.	Period of testing
<b>Nokia</b>	<b>THR880i</b>	<b>SW: 3.37-1</b> <b>HW: RC-2</b>	<b>30/31 August 2005</b>

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

## TETRA Interoperability Profile:

**TETRA MoU, TTR001-05, Packet Data, Ver. 1.0.0, November 2000**

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

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## Information on the equipments used for testing in the September 2005 IOP Test Session

The tests were performed using the following SwMI:

Manufacturer	Type	Software/Hardware Release No.
R&S Bick Mobilfunk GmbH	ACCESSNET-T	SW: 5.0 HW: 5.0

## Additional information about the test performed

The tests were performed in the LA1 and LA2 sites. The SwMI was operating with the following configuration:

MCC	250
MNC	1
Colour code	21 (LA105) and 22 (LA106)
LA1 carrier frequency (BS Tx)	390.1375 MHz
LA2 carrier frequency (BS Tx)	390.6125 MHz
PSTN gateway SSI	16777186
Subscriber classes	FFFF <sub>16</sub>

**Note:** TIP compliance testing focuses on functionality on the OSI model layers two, three and higher and therefore is frequency band independent.



## IOP Test Plans used for testing

The following Test Plans were used in the Test Session:

TETRA MoU, IOP001-05, Packet Data, Ver. 1.1.0

## Test Results

The test results are shown in the tables below.

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

The test result tables on the next pages 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 or the MS; and – if the test case was executed – the result of the test. Each table entry may take one of seven values:

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



Rohde-Schwarz SwMI			Nokia THR880i
TTR001-05	<b>PACKET DATA</b>	IOP001-05	
TTR001-05 7	<b>Packet Data functions</b>	IOP001-05	
TTR001-05 7.1	<b>Context Activation</b>	IOP001-05	
TTR001-05 7.1.1	<b>TE IPCP Initiated, Static Address (TE supplied)</b> Packet Data context activation, static IP address.	IOP001-05 1.1.1	P
TTR001-05 7.1.2	<b>TE IPCP Initiated, Dynamic Address</b> Packet Data context activation, dynamic IP address.	IOP001-05 1.1.2	P
TTR001-05 7.1.3	<b>User Authentication using PAP</b> Packet Data context activation, with PAP user authentication.	IOP001-05 1.1.3	P
TTR001-05 7.1.3	<b>User Authentication using PAP</b> Packet Data context activation, APN index selected.	IOP001-05 1.1.5	N/A
TTR001-05 7.1.4	<b>User Authentication using CHAP</b> Packet Data context activation, with CHAP user authentication.	IOP001-05 1.1.4	P
TTR001-05 7.1.5	<b>Failed user authentication</b> Packet Data context activation rejected, PAP user authentication.	IOP001-05 1.1.7	P
TTR001-05 7.1.5	<b>Failed user authentication</b> Packet Data context activation rejected, CHAP user authentication.	IOP001-05 1.1.8	P
TTR001-05 7.1.6	<b>Provisioning Reject</b> Packet Data context activation, activation rejected.	IOP001-05 1.1.6	P
TTR001-05 7.1.6	<b>Provisioning Reject</b> Packet Data context activation rejected, invalid APN index selected.	IOP001-05 1.1.9	P
TTR001-05 7.2	<b>Context Deactivation</b>	IOP001-05	
TTR001-05 7.2.1	<b>MS initiated deactivation</b> Packet Data context deactivation, MS initiated, AL not established.	IOP001-05 1.2.3	P
TTR001-05 7.2.1	<b>MS initiated deactivation</b> Packet Data context deactivation, MS initiated, AL established.	IOP001-05 1.2.4	P
TTR001-05 7.2.1.1	<b>Explicit on SwMI PDCH access</b> Data transmission, SwMI initiated PDCH access, MS reject.	IOP001-05 1.3.7	P
TTR001-05 7.2.2	<b>SwMI initiated deactivation</b> Packet Data context deactivation, SwMI initiated, AL not established.	IOP001-05 1.2.1	P
TTR001-05 7.2.2	<b>SwMI initiated deactivation</b> Packet Data context deactivation, SwMI initiated, AL established.	IOP001-05 1.2.2	P
TTR001-05 7.3	<b>PDCH Access</b>	IOP001-05	
TTR001-05 7.3.1	<b>MS Initiated access on the MCCH</b> Data transmission, MS initiated PDCH access, AL not established, no AL QoS re-negotiation.	IOP001-05 1.3.1	P
TTR001-05 7.3.1	<b>MS Initiated access on the MCCH</b> Data transmission, MS initiated PDCH access, AL not established, AL QoS re-negotiation.	IOP001-05 1.3.2	P
TTR001-05 7.3.1	<b>MS Initiated access on the MCCH</b> Data transmission, MS initiated PDCH access, AL established.	IOP001-05 1.3.3	P
TTR001-05 7.3.2	<b>SwMI initiated access on the MCCH</b> Data transmission, SwMI initiated PDCH access, AL not established.	IOP001-05 1.3.4	P
TTR001-05 7.3.2	<b>SwMI initiated access on the MCCH</b> Data transmission, SwMI initiated PDCH access, AL established.	IOP001-05 1.3.5	P
TTR001-05 7.3.3	<b>MS Initiated Access Reject</b> Data transmission, MS initiated PDCH access, SwMI reject.	IOP001-05 1.3.6	P
TTR001-05 7.4	<b>SN Data transfer</b>	IOP001-05	
TTR001-05 7.4	<b>SN-DATA transfer</b> Data transmission, MS initiated PDCH access, AL not established, no AL QoS re-negotiation.	IOP001-05 1.3.1	P
TTR001-05 7.4	<b>SN-DATA transfer</b> PDCH Access, Data transmission, MS initiated PDCH access, AL not established, AL QoS re-negotiation.	IOP001-05 1.3.2	P
TTR001-05 7.4	<b>SN-DATA transfer</b> Data transmission, MS initiated PDCH access, AL established.	IOP001-05 1.3.3	P
TTR001-05 7.4	<b>SN-DATA transfer</b> Data transmission, SwMI initiated PDCH access, AL not established.	IOP001-05 1.3.4	P



Rohde-Schwarz SwMI			Nokia THR880i
TTR001-05 7.4	<b>SN-DATA transfer</b> Data transmission, SwMI initiated PDCH access, AL established.	IOP001-05 1.3.5	P
TTR001-05 7.5	<b>End of Data</b>	IOP001-05	
TTR001-05 7.5.1	<b>Normal</b> Data transmission, MS initiated PDCH access, AL not established, no AL QoS re-negotiation.	IOP001-05 1.3.1	P
TTR001-05 7.5.1	<b>Normal</b> Data transmission, MS initiated PDCH access, AL not established, AL QoS re-negotiation.	IOP001-05 1.3.2	P
TTR001-05 7.5.1	<b>Normal</b> Data transmission, MS initiated PDCH access, AL established.	IOP001-05 1.3.3	P
TTR001-05 7.5.1	<b>Normal</b> Data transmission, SwMI initiated PDCH access, AL not established.	IOP001-05 1.3.4	F1
TTR001-05 7.5.1	<b>Normal</b> Data transmission, SwMI initiated PDCH access, AL established.	IOP001-05 1.3.5	P
TTR001-05 7.5.1	<b>Normal</b> Cell re-selection during data transmission.	IOP001-05 1.4.1	-
TTR001-05 7.5.1	<b>Normal</b> Cell re-selection without data transmission at MS side, READY state.	IOP001-05 1.4.2	F1
TTR001-05 7.5.1	<b>Normal</b> Cell re-selection without data transmission, STANDBY state.	IOP001-05 1.4.3	P
TTR001-05 7.6	<b>Advanced Link Set-up</b>	IOP001-05	
TTR001-05 7.6.1	<b>MS initiated AL Set-up</b> Data transmission, MS initiated PDCH access, AL not established, no AL QoS re-negotiation.	IOP001-05 1.3.1	P
TTR001-05 7.6.1	<b>MS initiated AL Set-up</b> Data transmission, SwMI initiated PDCH access, AL not established.	IOP001-05 1.3.4	P
TTR001-05 7.6.2	<b>MS Initiated AL Reset</b> Cell re-selection during data transmission.	IOP001-05 1.4.1	-
TTR001-05 7.7	<b>Advanced Link Data Transfer</b>	IOP001-05	
TTR001-05 7.7.1	<b>Normal Down-link</b> Data transmission, SwMI initiated PDCH access, AL not established.	IOP001-05 1.3.4	F1
TTR001-05 7.7.1	<b>Normal Down-link</b> Data transmission, SwMI initiated PDCH access, AL established.	IOP001-05 1.3.5	F1
TTR001-05 7.7.4	<b>Normal Up-link</b> Data transmission, MS initiated PDCH access, AL not established, no AL QoS re-negotiation.	IOP001-05 1.3.1	P
TTR001-05 7.7.4	<b>Normal Up-link</b> Data transmission, MS initiated PDCH access, AL not established, AL QoS re-negotiation.	IOP001-05 1.3.2	P
TTR001-05 7.7.4	<b>Normal Up-link</b> Data transmission, MS initiated PDCH access, AL established.	IOP001-05 1.3.3	P
TTR001-05 7.7.4	<b>Normal Up-link</b> Cell re-selection without data transmission, STANDBY state.	IOP001-05 1.4.3	P
TTR001-05 7.8	<b>Advanced Link Disconnection</b>	IOP001-05	
TTR001-05 7.8.1	<b>MS initiated Context Deactivation</b> Packet Data context deactivation, MS initiated, AL established.	IOP001-05 1.2.4	P
TTR001-05 7.8.2	<b>SwMI initiated Context Deactivation</b> Packet Data context deactivation, SwMI initiated, AL established.	IOP001-05 1.2.2	P
TTR001-05 7.10	<b>Cell re-selection</b>	IOP001-05	
TTR001-05 7.10.1	<b>BS Data</b> Cell re-selection without data transmission at MS side, READY state.	IOP001-05 1.4.2	P
TTR001-05 7.10.2	<b>MS Data</b> Cell re-selection during data transmission.	IOP001-05 1.4.1	-

**Comments:**

- F1 MS sends AL-ACK in random access instead of using the reserved access opportunities, after that MS ready timer expires before SwMI ready timer and the MS sends END OF DATA.