



**The European Union's Tacis programme
for Azerbaijan, Georgia and Armenia**

**Supervision of supply of an
optical cable for communication
and signalling to the railways of
Azerbaijan, Georgia and
Armenia**

*Progress report
31 March 2003*



This project is funded by
European Union



A project implemented by
FINNROAD Ltd.

Supervision of supply of an
optical cable for
communication and signalling
to the railways of Azerbaijan,
Georgia and Armenia

Progress Report

31 March 2003

Form 1.2. REPORT COVER PAGE

Project Title: Supervision of Supply of an Optical Cable System for Communication and Signalling to the Railways of Azerbaijan, Georgia and Armenia

Project Number : Traceca1999

Country : Azerbaijan, Georgia, Armenia

	Local Operator	Local operator	Local Operator	EC Consultant
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Date of report: 31.03.2003

Reporting period: Progress report

Author of report: RAS/Finnroad, IK/Corenet

EC Monitoring team _____
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TACIS
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1. Project Synopsis

Form 1.3 PROJECT SYNOPSIS

Project Title:	: Supervision of Supply of an Optical Cable System for Communication and Signalling to the Railways of Azerbaijan, Georgia and Armenia
Project Number	: Traceca1999
Country	: Azerbaijan, Georgia, Armenia

Wider objectives:

The wider objective of the programme in Caucasus is the support the full use of the Traceca transport corridors through Caucasus and provide means for efficient transmission of telecommunications data for both railways and private telecommunications companies throughout the Caucasus region. It will enhance safety and security for railway operations and simultaneously enable the private telecom operators to penetrate the Trans-Caucasus communications market.

Specific Project objectives:

The objectives of this consulting assignment is to provide technical supervision of the manufacture, supply, installation, witness testing jointly with the Railways and hand-over of the optical cable system, as well as monitoring that adequate training and transfer of know-how is provided by the supplier. The consultant provides also certificates for partial and final acceptance.

Outputs:

Optical cable system installed and operational according to specifications and approved by the Supervision consultant and Recipients

Inputs:

Supervision will include monitoring and approval of manufacture and factory tests, monitoring of works progress on site, monitoring and approval of partial field testing and final testing, provision of certificates to the Contractor on accepted deliveries. Supervision will be carried out using part time expatriate principal supervisor, part time expatriate technical supervisors, as well as part time local supervisors one in each country.

Project Starting Date: 21.8.2002

Project Duration: 9 months

2. Summary of project progress since the start

2.1 General

The contract between EC and the Supervising Consultant has been signed on August 21, 2002. The extension of the contract between EC and the Contractor (Siemens) has been signed on August 27, 2002. The completion date of the whole project is 27th of May, 2003.

The new dead lines for the works in all three countries to complete the whole project by the 27th of May 2003 have been agreed in the signed minutes of coordination team meetings. The time schedule for the testing and acceptance is part of the time schedule of the project. The supervision, testing and acceptance programme of the Consultant will be finalised based on the supply schedule.

The supply of cables, pipe, equipment and system as well as the installation and connection of the system are the responsibility of the Contractor, whereas the design and implementation of cable laying and repair and facilitation of technical rooms are carried out by the Railways in each country. The role of the Supervising Consultant is to monitor project progress, witness testing jointly with the Railways, and provide certificates for partial and final acceptance.

The inception phase was reported in the inception report in October 2002 and the progress by the end of year 2002 in the progress report of 31st of December 2002.

2.2 Coordination team Meetings

Kick off Meetings were held in Azerbaijan, Georgia and Armenia between 26.9 –1.10.2002. The Tacis Task Manager for the Project, representatives of the Recipient, the Contractor and Supervising Consultant participated in the meetings.

After the kick-off meetings there has been two sets of Coordination team meetings in the project countries. Representatives of the Recipient, Contractor and Supervising Consultant have participated in these meetings.

2.3 Project Progress

2.3.1 Azerbaijan Railways

The cable and duct are installed completely and the acceptance tests have been performed and signed by Siemens. The transformers are installed between Baku-Ganja. The installation between Ganja-border is under way. Air conditioning has been installed in all rooms and the testing of them has started.

All deliveries are completed and all OTNs (48) and PABXs (12) have been installed. The system between Baku - Kazi Magomed has been commissioned.

2.3.2 Georgian Railways

The duct has been laid and cable has been blown completely. The rehabilitation of the technical rooms (including the power supply and air conditioning) are completed. PTT connections have been installed.

All deliveries are completed. The cable sections Kashuri-Tbilisi, Tbilisi-Gardabani and Tbilisi-Sadakhlo has been tested and accepted by Siemens. Testing of the sections Supsa-Samtredia, Poti-Samtredia and Samtredia-Kashuri is under way. All installations of OTNs and PABXs (except new installation of Tbilisi Crossing) are completed.

In the end of March there was again a cable damage in a non-accepted cable section which caused additional cable works.

2.3.3. Armenian Railways

Reconstruction works of the technical rooms, including power supply, grounding and air conditioning are completed. The duct has been laid and cable blown. 2 Mbit digital path from PTT to the technical room in Yerevan is not yet ready.

All deliveries of the equipment are completed. The rack including the Ayrum OTN must be delivered to Armenia from Georgia. All closures except the ones in five cable sections have been installed. The installation works of OTN and PABX have been completed in 29 stations (out of 33 stations). The delay in the installation works was caused by the cold winter.

Risks

The new dead line of the Contract is May 2003. In order to complete the project according to the specified dead lines, cooperation of all parties is required to be fully aware of the project progress and practical problems and to adjust the actions accordingly. In general all dead lines of the project are so tight that in order to complete the project by the stated dead-line, no deviation in any of the tasks is acceptable. Also the testing period is very tight and very close to the completion of the project dead line.

Azerbaijan Railways

No major problems can be seen at the moment in completion of the project by the agreed dead-lines of the project.

Georgian Railways

If some additional mistakes will be found in the civil works the completion of the installation of the equipment in time is not possible and therefore the completion of the project will be threatened.

Armenian Railways

No major problems can be seen at the moment in completion of the project by the agreed dead-lines of the project.

3. Summary of project planning for the remainder of the project

The duties of the supervision assignment for the remainder of the project include the following tasks:

- a) Overall supervision of the project by the EU consultant and the local supervisors
- b) Witnessing of the following activities according to a sampled and selected witness program:
 - The on-site installation of the equipment and completion of the civil works
 - The partial acceptance tests and system acceptance tests
 - The completion tests
- c) Participation in the coordination team meetings and project meetings
- d) Reporting as agreed in the Inception Report
- e) Provision to Tacis of the following certificates:
 - Certificates of Progress
 - Certificates of Completion
- f) Environmental monitoring of the project
- g) List of consultant tasks during the ongoing reporting period:
 - Coordination Team Meetings
 - Monitoring of completion of civil works
 - Monitoring of equipment installation
 - Monitoring and witness testing of the system

4. Project progress in reporting period

4.1 Achievements in comparison with planned results

There is only some minor deviation in the achievements compared with the planned results. Partly this deviation was caused by the cold winter .

In October 2002 the representatives of the three recipient countries signed a protocol where the recipient enterprise accept that all additional cost outside the project scope shall be financed and paid by the recipient countries.

4.2 Coordination team Meetings

The latest Coordination team meetings were held between 17.3-24.3.2003. All the meetings were participated by the Recipient, Contractor and Supervising Consultant. The new deadlines were agreed in the Coordination Team Meetings. The next meetings have been agreed to be held in May 2003. The minutes of the meetings are in Annex 5.

4.3 Progress of Works

4.3.1 Azerbaijan Railways

Civil work progress

- The acceptance tests for duct laying and cable blowing have been performed and signed by Siemens. Siemens will give the measurement results to Finnroad by the end of March.
- All technical rooms (48) are rehabilitated. The transformers are installed between Baku-Ganja. The installation between Ganja-border is under way. Air conditioning has been installed in all rooms and the testing of them has started.
- PTT connections are not ready. The equipment for the connections have been ordered and they are ready for delivery at the factory.

Contractor's work progress

- All deliveries are completed
- All OTNs (48) and all PABXs (12) have been installed
- The system between Baku - Kazi Magomed has been commissioned.

The agreed deadlines for the completion of the tasks are:

Responsibilities of Railways:

- The Railways will pay the advance payment of the equipment for the PTT connections in Baku and Ganja by the 28th of March. The connections to the PTT will be completed by the 10th of April.
- The installation of the transformers (between Ganja and the border) will be completed by the 30th of March.
- The commissioning of the air conditioning will be completed by the 30th of March.

Responsibilities of Siemens:

- Commissioning of the equipment will be completed by the 15th of April 2002
- Network integration and commissioning of the whole system will be completed by the 31st of April.

The acceptance test for the cable can start 21st of April. The system must be ready for acceptance test made by the Railways and Finnroad on the 1st of May 2003. The provisional acceptance certificate for Azerbaijan can then be issued before 17th of May 2003.

4.3.1 Georgian Railways

Civil work progress

- The duct has been laid and cable has been blown completely.
- The rehabilitation of the technical rooms (including the power supply and air conditioning) are completed.
- PTT connections have been installed.

Contractor's work progress

- The cable sections Kashuri-Tbilisi, Tbilisi-Gardabani and Tbilisi-Sadakhlo has been tested and accepted by Siemens. Testing of the sections Supsa-Samtredia, Poti-Samtredia and Samtredia-Kashuri is under way.
- All installations of OTNs and PABXs (except new installation of Tbilisi Crossing) are completed.

The agreed deadlines for the completion of the tasks are:

Responsibilities of the Railways:

- The last cable corrections between Samtredia-Kashuri (if any) will be completed by the 10.4.2003.
- PTT connections will be commissioned by the 4.4.2003.

Responsibilities of the contractor Siemens:

- The installation of the closures between Samtredia-Kashuri (if any) will be completed by the 10.4.2003.
- Testing and acceptance for the cable installation between sections Supsa-Samtredia, Poti-Samtredia and Samtredia-Kashuri will be completed by the 10.4.2003.
- The accepted cable sections must be immediately certified. The test results of the remaining cable sections must be given immediately after the testing to Finnroad.
- Commissioning of the OTNs and PABX (without Tbilisi Crossing) will be completed by the 30.4.2003.
- Deliveries of OTN and PABX for Tbilisi Crossing will be in Georgia by the 20.4.2003.
- Installation of OTN and PABX for Tbilisi Crossing will be completed by the 30.4.2003.
- Commissioning of OTN and PABX for Tbilisi Crossing will be completed by the 10.5.2003.
- Network integration will be completed by the 15.5.2003.

The partial acceptance test can therefore start on the 1.5.2003 and system acceptance test in Georgia on the 16.5.2003. The completion of the acceptance testing is by the 17.5.2003.

4.3.3 Armenian Railways

Civil work situation

- Reconstruction works of the technical rooms with power supply, grounding and air conditioning are completed.
- The duct has been laid and cable blown. The cable works has been tested and accepted.
- 2 Mbit digital path from PTT to the technical room in Yerevan is not yet ready.
- Customer data has been given to Siemens.

Contractor's work progress

- All deliveries of the equipment are completed. The rack including the Ayrum OTN must be delivered to Armenia from Georgia.
- All closures except the ones in five cable sections have been installed.
- The installation works of OTN and PABX have been completed in 29 stations (out of 33 stations). The delay in the installation works was caused by the cold winter.

The agreed deadlines for the completion of the tasks are:

Responsibilities of Railways:

- The Railways must provide 2Mbit digital path from PTT to the technical room by the 15th of April 2003.

Responsibilities of Siemens:

- The installations of the remaining four stations (including Ayrum) must be completed by the 6th of April 2003.
- The remaining closures in the five sections must be completed by the 10th of April 2003.
- Commissioning of the system must be completed by the 20th of April 2003.
- Final test results of the cable must be given to Finnroad by the 30th of April 2003.

The acceptance tests for the system will start on the 21st of April 2003. Testing and certification of the system must be completed by the 17th of May 2003.

4.4 Deviations from updated original planning and reasons

The following main steps were noted from the updated time schedule:

- The progress of the project in Azerbaijan Railways is mainly following the updated time schedule.
- The progress of the project in Georgian Railways is mainly following the updated time schedule. The re-implementation of Tbilisi Crossing station (Force Major) may anyhow cause deviation to the completion of the system.
- The progress of the project in Armenian Railways is mainly following the updated time schedule.

4.5 Specific action needed from the local authorities- including the Coordination Units concerned and/or the EC (suggested solutions)

No further extension to project completion can be granted anymore. Therefore the local authorities should do their best efforts to help the Railways and Siemens to meet their dead lines.

5. Project planning for next reporting period

The special actions for the next reporting period are:

- The monitoring the acceptance test of the cabling in all three countries
- The monitoring of the completion of the civil works in all three countries
- The monitoring of the installation of the equipment in all three countries
- The acceptance testing of the partial and system tests in all three countries
- The final report of the project

The plan for performing the acceptance test and certification is in Annex 6.

NOTE.

For the tight time schedule to complete the project there is no time to make draft version of the final report. Therefore we will make straight the final report.

LIST OF ANNEXES

- Annex 1: FORM 2.2 PROJECT PROGRESS REPORT
- Annex 2: FORM 2.3 RESOURCE UTILISATION REPORT
- Annex 3: FORM 2.4 OUTPUT PERFORMANCE REPORT
- Annex 4: FORM 2.5 PLAN OF OPERATIONS FOR THE NEXT PERIOD
- Annex 5: MINUTES OF THE MEETINGS IN DECEMBER 2002.
- Annex 6: PLAN FOR THE ACCEPTANCE TEST AND CERTIFICATION

Annex 1: FORM 2.2 PROJECT PROGRESS REPORT

Form 2.2. PROJECT PROGRESS REPORT

Project title : Caucasus Optical Cable System Supervision				Project number : Traceca1999				Country :Azerbaijan, Georgia, Armenia				Page :				
Planning period : 01-06/2003				Prepared on : 31.03.2003				EC Consultant : Finnroad with Railtelia, Helsinki								
Project objectives : Specific objective of this supervision project is to assure the proper technical execution of the supply of an optical cables system for communication and signalling to the railways of Azerbaijan, Georgia and Armenia. The overall objective is to improve communication systems, promote the full use of TRACECA corridor as well as to increase competition in the telecommunications sector in Caucasus.																
No		ACTIVITIES		TIME FRAME 2003				INPUTS								
				Months				PERSONNEL EC CONSULTANT		LOCAL CONSULTANTS		EQUIPMENT AND MATERIAL		OTHER		
				01	02	03	04	05	06	Planned	Utilised	Planned	Utilised	Planned	Utilised	Planned
1.	Coordination team meetings							22 d	10 d	24 d	12 d					Flights + DSAs as per contract
2.	Certificate of deliveries							2 d	2 d	0 d	0 d					
3.	Monitoring acceptance test of the cabling							1 d	1 d	8 d	3 d					
4.	Monitoring acceptance test of the technical rooms							1 d	1 d	8 d	8 d					
5.	Monitoring equipment installation in Azerbaijan, Georgia and Armenia							4 d	4 d	22 d	22 d					
6.	Witness testing of the partial and system testing							22 d	0 d	22 d	0 d					
7.	Certificate of partial and system tests							2 d	0 d	2 d	0 d					
8.	Progress reports							3 d	3 d	8 d	8 d					
9.	Certificate of Completion report							5 d	0 d	6 d	0 d					
				TOTAL (days)				62 d	21 d	100 d	53 d					

Annex 2: FORM 2.3 RESOURCE UTILISATION REPORT

FORM 2.3 RESOURCE UTILIZATION REPORT

Project title: Caucasus Optical Cable System Supervision		Project number: Traceca 1999		Country: Azerbaijan, Georgia, Armenia		Page: 1/1
Planning period: 1.1.2003 – 21.05.2003		Prepared on: 31.03.2003		EC Consultant: Finnroad with Corenet, Helsinki		
Project objectives: See Synopsis						
SOURCE INPUT	TOTAL PLANNED	PERIOD PLANNED (5 mth)	PERIOD REALISED (3 mth)	TOTAL REALIZED	AVAILABLE FOR REMAINDER	
PERSONNEL						
EC Consultant	95 d	62 d	21 d	54 d	41 d	
Local Experts	150 d	100 d	53 d	103 d	47 d	
Sub-total						
EQUIPMENT AND MATERIAL						
Sub-total						
OTHER INPUTS						
Sub-total						
TOTAL						

Annex 3: FORM 2.4 OUTPUT PERFORMANCE REPORT

FORM 2.4 OUTPUT PERFORMANCE REPORT

Project title: Caucasus Optical Cable System Supervision	Project number: Traceca 1999	Country: Azerbaijan, Georgia, Armenia	Page: 1/1
Prepared on: 31.03.2003		EC Consultant: Finnroad with Corenet , Helsinki	
Output results	Deviation original plan + or - %	Reason for deviation <i>Verifiable Indicators</i>	Comment or constrains & assumptions
1. Reconstruction works (including air conditioning, grounding, power supply) completed by Railways in all 3 countries	+ 0 %	1. Site approval letters has not yet issued by Supplier to each Recipient	1.
2. Cable corrections must be completed in Armenia and Georgia (31.12.02)	+10 %	2. For the cold winter Siemens could not make the closures and provide the final Cable joint test results	2. C: Siemens will complete all closures by the 6 th of March and provide all cable measurement results by the 30 th of April 2003.
3. Equipment delivery completed by Supplier in all 3 countries	0 %	3. <i>Number and type of equipment verified by Consultant to match with the supply contract</i>	3. A: Consultant can check delivery upon arrival in one location in each country
4. Installation and commissioning of the system completed by Supplier (20.04.03)	0 %	4. <i>Partial and system Acceptance Test reports and Test of Completion reports provided by Supplier and approved by Consultant</i>	4.
5. Training of system operators completed by Supplier (21.05.03)	0 %	5. <i>Lists of trained staff in each country including signed presence sheets, as well as contents and material of each training course submitted by Supplier and approved by Recipient</i>	5. A: Adequate number of qualified trainees will be made available by each Recipient
6. As-built drawings of system delivered by Supplier to the Recipients (21.05.03)	0%	6. <i>As-built drawings approved by Recipients</i>	6. A: Translations of all manuals shall be made by qualified telecom technical translators
7. System handed over to the Recipients (17.05.03)	0%	7. <i>Certificate of Acceptance issued by each Recipient, Certificate of Completion issued by Consultant</i>	7.

Annex 4: FORM 2.5 PLAN OF OPERATIONS FOR THE NEXT PERIOD

Form 2.5. PLAN OF OPERATIONS FOR THE NEXT PERIOD (Work programme)

Project title : Caucasus Optical Cable System Supervision		Project number : Traceca1999		Country :Azerbaijan, Georgia, Armenia		Page :					
Planning period : 01-05/2003		Prepared on : 31.03.2002		EC Consultant : Finnroad with Corenet, Helsinki							
Project objectives: Specific objective of this supervision project is to assure the proper technical execution of the supply of an optical cables system for communication and signalling to the railways of Azerbaijan, Georgia and Armenia. The overall objective is to improve communication systems, promote the full use of TRACECA corridor as well as to increase competition in the telecommunications sector in Caucasus.											
		TIME FRAME						INPUTS			
		First half / 2003 (months) present contract end date						PERSONNEL		EQUIPMENT AND MATERIAL	OTHER
No	ACTIVITIES	01	02	03	04	05	06	EC Consultant	Local Experts		
1.	Coordination team meetings							12 d	12 d	Office equipment	Flights + DSAs as per contract
2.	Certificate of deliveries							0 d	0 d		
3.	Monitoring acceptance test of the cabling							0 d	5d		
4.	Monitoring acceptance test of the technical rooms							0 d	0 d		
5.	Monitoring equipment installation in Azerbaijan, Georgia and Armenia							0 d	0 d		
6.	Witness testing of the partial and system testing							22 d	22 d		
7.	Certificate of partial and system tests							2 d	2 d		
8.	Progress reports							0 d	0 d		
9.	Certificate of Completion report							5 d	6 d		
						TOTAL (days) Available in contract		41 d (41) d	47 d (47) d		

Annex 5: MINUTES OF THE COORDINATION TEAM MEETINGS

SUPPLY OF AN OPTICAL CABLE FOR COMMUNICATION AND SIGNALLING TO THE RAILWAYS OF GEORGIA, ARMENIA AND AZERBAIJAN

COORDINATION TEAM MEETING IN BAKU, 17.3.2003

MINUTES OF THE MEETING

Participants:

National Railways:	Mr Musa Panahov Mr Vahid Karaev Mr Djamshid Garakhanov
Contractor (Siemens):	Mr Thomas Hubert Ms Sevinj Kerimova
Traceca Coordinating Unit: Supervisor (Finnroad):	Mr Marc Graille Ms Irja Koskela Mr Mamedali Aminov

1. Opening of the meeting

Mr Panahov opened the meeting and welcomed all the participants. Mr Karaev briefed on the progress achieved up to date. Generally there are no problems or questions at the moment.

Traceca Coordination on behalf of EC has stated that there is no extension for the project. Therefore all the works (including commissioning and certifications) of the project must be completed by the 17th of May 2003.

2. Present situation of the Project

Civil work progress

- The acceptance tests for duct laying and cable blowing have been performed and signed by Siemens. Siemens will give the measurement results to Finnroad by the end of March.
- All technical rooms (48) are rehabilitated. The transformers are installed between Baku-Ganja. Air conditioning has been installed in all rooms and the testing of them is starting.
- PTT connections are not ready. The equipment for the connections have been ordered and they are ready for delivery at the factory.

Contractor's work progress

- All deliveries are completed
- All OTNs (48) and all PABXs (12) have been installed
- The system between Baku - Kazi Magomed has been commissioned.

3. Deadlines

Responsibilities of Railways:

- The Railways will pay the advance payment of the equipment for the PTT connections in Baku and Ganja by the 28th of March. The connections to the PTT will be completed by the 10th of April.
- The installation of the transformers (between Ganja and the border) will be completed by the 30th of March.
- The commissioning of the air conditioning will be completed by the 30th of March.

Responsibilities of Siemens:

- Commissioning of the equipment will be completed by the 15th of April 2002
- Network integration and commissioning of the whole system will be completed by the 31st of April.

The acceptance test for the cable can start 21st of April. The system must be ready for acceptance test made by the Railways and Finnroad on the 1st of May 2003. The provisional acceptance certificate for Azerbaijan can then be issued before 17th of May 2003.

4. Time-schedule of the project

- The updated time-schedule basing on the signed minutes of meetings must be provided to EC via Finnroad by Siemens and Railways without delay after the mission.

5. Test procedures and Certificates

- The test report shall be issued by Siemens to Railways and Finnroad for acceptance no more than 14 days after completion of the test.
- After the acceptance of the test Finnroad will issue test certificate.

6. Next coordination team meeting

- Next coordination team meeting will be held in May 2003.

Signed in Azerbaijan on the 17th of March 2003

For Azerbaijan Railways

Mr Vahid Karaev
Head of Department

For Contractor

For Supervising Consultant

Mr Thomas Hubert
Site Project Manager

Ms Irja Koskela
Principal Supervisor

CO-ORDINATION TEAM MEETING IN TBILISI, 19.03. 2003

MINUTES OF THE MEETING

Participants:

National Railways: Mr Tengiz Donadze
 Mr Soso Rostiashvili
 Mr Tamaz Kuchava

Contractor (Siemens): Mr Georg Strasser
Mr Thomas Hubert
Ms Eka Kandelaki

National Secretary : Mr Gogi Gogiashvili
Supervisor (Finnroad): Ms Irja Koskela
Mr Mamuka Chantladze

Sakkavshirmsheni,
Subcontractor of NR: Temur Kutchukhidze

1. Opening of the meeting

Mr Donadze opened the meeting and welcomed all the participants.

On behalf of EC Ms Koskela stated that there is no extension for the project. Therefore all the works (including commissioning and acceptance certifications) of the project must be completed by the 17th of May 2003. The ambition and wish of all parties of the project is to finalise the project successfully inside the specified deadlines of this protocol.

2. Present situation of the Project

Civil work progress

- The duct has been laid and cable has been blown completely.
- The rehabilitation of the technical rooms (including the power supply and air conditioning) are completed.
- PTT connections have been installed.

Contractor's work progress

- The cable sections Kashuri-Tbilisi, Tbilisi-Gardabani and Tbilisi-Sadakhlo has been tested and accepted by Siemens.
- Testing of the sections Supsa-Samtredia, Poti-Samtredia and Samtredia-Kashuri is under way.
- All installations of OTNs and PABXs (except new installation of Tbilisi Crossing) are completed.

3. Deadlines

Responsibilities of Railways:

- The last cable corrections between Samtredia-Kashuri (if any) will be completed by the 10.4.2003.
- PTT connections will be commissioned by the 4.4.2003.

Responsibilities of Siemens:

- The installation of the closures between Samtredia-Kashuri (if any) will be completed by the 10.4.2003.
- Testing and acceptance for the cable installation between sections Supsa-Samtredia, Poti-Samtredia and Samtredia-Kashuri will be completed by the 10.4.2003.
- The accepted cable sections must be immediately certified. The test results of the remaining cable sections must be given immediately after the testing to Finnroad.
- Commissioning of the OTNs and PABX (without Tbilisi Crossing) will be completed by the 30.4.2003.
- Deliveries of OTN and PABX for Tbilisi Crossing will be in Georgia by the 20.4.2003.
- Installation of OTN and PABX for Tbilisi Crossing will be completed by the 30.4.2003.

- Commissioning of OTN and PABX for Tbilisi Crossing will be completed by the 10.5.2003.
- Network integration will be completed by the 15.5.2003.

The partial acceptance test can therefore start on the 1.5.2003 and system acceptance test in Georgia on the 16.5.2003. The completion of the acceptance testing is by the 17.5.2003.

4 Time-schedule of the project

The time-schedule with the detailed test plan must be provided by Siemens and Railways to EC via Finnroad without delay after the mission.

5. Test procedures and Certificates

The test report shall be issued by Siemens to Railways and Finnroad for acceptance immediately (no more than 14 days) after completion of the test.

After the acceptance of the test in Georgia, Finnroad will issue test certificates.

6. Other matters

Optical characteristics in the technical specifications of the contract are as follows:

- The attenuation for fiber 0,35 dB/km
- The attenuation for cable 0,36 dB/km (on drum)
- The average loss per splice <0,1 dB and maximum 0,3 dB

Therefore it was noted that basing on the measured values all the fibers in the already tested sections meet the specifications except two fibers in one of the sections between Gardabani-Rustavi. One fiber is cut and one fiber has high attenuation value (0,56 dB/km).

It was stated by the Railways that because these fibers are used only as their spare fibers they accept the cable as such and they don't have any claims.

It was agreed in the meeting that all the tested and accepted cable sections will be taken under the control of the system by the 31.3.2003.

7. Next co-ordination team meeting

Next co-ordination team meeting will be held in May 2003.

Signed in Georgia on the 19th of March 2003.

For Georgian Railways

Mr Tengiz Donadze
Technical Director, Deputy General Director

For Contractor

For Supervising Consultant

Mr Georg Strasser
Site Project Manager

Ms Irja Koskela
Principal Supervisor

CO-ORDINATION TEAM MEETING IN YEREVAN, 21.03.2003

MINUTES OF THE MEETING

Participants:

Armenian Railways: Mr Vahagn Karaghezyan
Mr Arshak Hovanessyan

Contractor (Siemens): Mr Georg Strasser
Mr Thomas Hubert
Ms Zara Airyan

Supervisor (Finnroad): Ms Irja Koskela
Mr Khachatur Manukyan

1. Opening of the meeting

Mr Karaghezyan opened the meeting and welcomed all the participants.

On behalf of EC Ms Koskela stated that there is no extension for the project. Therefore all the works (including commissioning and acceptance certifications) of the project must be completed by the 17th of May 2003. The ambition and wish of all parties of the project is to finalise the project successfully inside the specified deadlines of this protocol.

Both parties stated that no problems or questions which has not stated in this minutes of meetings exist at the moment.

2. Present situation of the Project

Civil work progress

- Reconstruction works of the technical rooms with power supply, grounding and air conditioning are completed.
- The duct has been laid and cable blown. The cable works has been tested and accepted.
- 2 Mbit digital path from PTT to the technical room in Yerevan is not yet ready.
- Customer data has been given to Siemens.

Contractor's work progress

- All deliveries of the equipment are completed. The rack including the Ayrum OTN must be delivered to Armenia from Georgia.
- All closures except the ones in five corrected sections have been installed.
- The installation works of OTN and PABX have been completed in 29 stations (out of 33 stations). The delay in the installation works was caused by the cold winter.

3. Deadlines

Responsibilities of Railways:

- The Railways must provide 2Mbit digital path from PTT to the technical room by the 15th of April 2003.

Responsibilities of Siemens:

- The installations of the remaining four stations (including Ayrum) must be completed by the 6th of April 2003.
- The remaining closures in the five sections must be completed by the 10th of April 2003.
- Commissioning of the system must be completed by the 20th of April 2003.

- Final test results of the cable must be given to Finnroad by the 30th of April 2003.

The acceptance tests for the system will start on the 21st of April 2003. Testing and certification of the system must be completed by the 17th of May 2003.

4. Time-schedule of the project

The updated time-schedule basing on the signed minutes of meeting must be provided to EC via Finnroad by Siemens without delay after the mission.

5. Test procedure and Certificates

The test report shall be issued by Siemens to Railways and Finnroad for acceptance no more than 14 days after completion of the test.

After the acceptance of the test in Armenia, Finnroad will issue test certificates.

6. Next co-ordination team meeting

Next co-ordination team meeting will be held in May 2003.

Signed in Yerevan on the 21st of March 2003.

For Armenian Railways

Mr Vahagn Karaghezyan
First Vice Director of Armenian Railways

For Contractor

For Supervising Consultant

Mr Thomas Hubert
Site Project Manager

Ms Irja Koskela
Principal Supervisor

Annex 6: PLAN FOR THE ACCEPTANCE TEST AND CERTIFICATION

ANNEX 6: PLAN FOR THE ACCEPTANCE TEST AND CERTIFICATION (31.3.2003/iko)

	week 14 (start 31.3)	week 16 (start 7.4)	week 16 (start 14.4)	week 17 (start 21.4)	week 18 (start 28.4)	week 19 (start 5.5)	week 20 (start 12.5)	week 21 (start 19.5)
Test protocols of cable (AZE)	> 31.3		> 20.4	> 15.4 > 20.4	> 30.4	> 30.4	> 10.5 (T)	> 15.5
Test protocols of cable (ARM)								
Test protocols of cable (GE)								
** PAC Acceptance certification (for cable)								
Commissioning and protocols of equipment (AZE)								
Commissioning and protocols of equipment (ARM)								
Commissioning and protocols of equipment (GE)								
** PAC Acceptance certification (for equipment)								
Commissioning and protocols of system (AZE)								
Commissioning and protocols of system (ARM)								
Commissioning and protocols of system (GE)								
** TOC Acceptance certification								
Acceptance certification at site								

*** protocols includes the test results