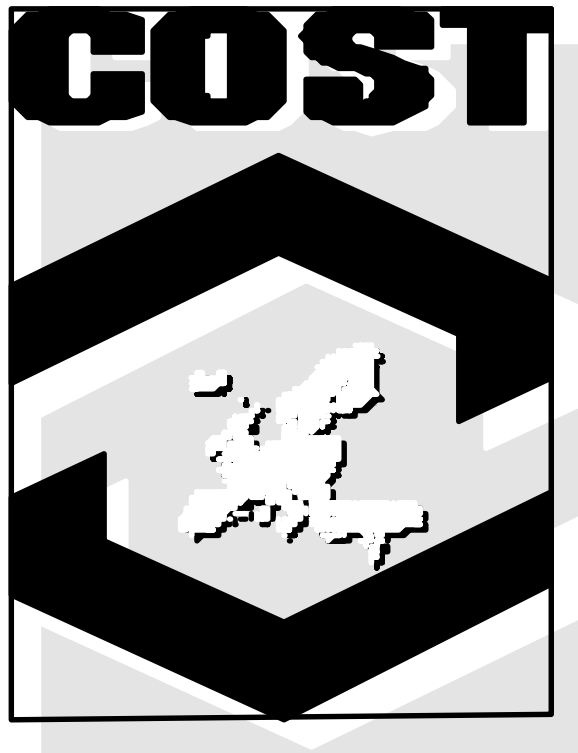


European Co-operation in the Field of Scientific and Technical Research



COST 259

Wireless Flexible Personalised Communications

Minutes of the 11th Meeting of the Management Committee,
held in Bergen (N) on 27-28 April 2000

COST 259
Minutes of the 11th Meeting of the Management Committee,
held at Bergen Kongress Senter, Bergen (N), on 27-28 Apr. 2000,
organised by Telenor

1. Opening Formalities

The Chairman, Prof. Luis M. Correia formally opened the last meeting of the Action. After that, Mr. Per Lehne, the Local Organiser, addressed the plenary for a welcome message and details on the way the meeting was organised.

The Chairman acknowledged the attendance of Dr. Tricia Willink, from CRC, Canada., as well as Prof. Kalman Fazekas, from the TC TIST, which will be evaluating the Action.

2. Adoption of the Agenda

The Agenda, shown in Annex A, was approved by unanimity.

3. Approval of the Minutes of the 10th Meeting

The minutes were approved, without corrections, unanimously.

4. Status of the Action

The Chairman informed that the number of signatory countries (18) remains unchanged, the final numbers of participating institutions and delegates being 90 and 270, respectively.

It has been clarified that the Chairman will not attend the June meeting of the TC TIST, because the Action is finished by then.

The Chairmen of the Sub-Working Groups presented a brief report on the work performed in each one during the Action.

5. Action Final Report

The Chairman thanked the effort from all editors and contributors, since a draft version of the Final Report is already available.

Each Chapter Editor presented the status of his Chapter. Basically, they are all almost finished, and just some editorial changes are needed, plus some updating with the last contributions from this meeting.

All delegates were asked to:

- send equivalences between TDs and papers in the open literature to Chapter Editors until 2000/May/12 (Action Point 22);
- send the acronym of the institution to the Chairman until 2000/May/12 (Action Point 23);
- send comments/corrections to the draft version to Chapter Editors until 2000/May/12 (Action Point 26);

Following the changes and uncertainties presently existing in COST, it is clear that COST Telecom will neither take care of printing the Final Report nor give any funding for its publication. As a consequence, the Chairman started contacting several publishers (John Wiley, Kluwer and Prentice Hall), and all of them are potentially interested in publishing the Final Report as a book. Other publishers were suggested during the meeting (Springer-Verlag, Elsevier and Artech House), which will be contacted by the Chairman as well. It was agreed that the criteria for choosing the publisher should be based on: accepting the already existing style; free copies in exchange of royalties; discount to project participants. The Chairman called the attention to the fact that publishing the Final Report as a book implies revisions corrections, which means that Chapter and Section editors must be aware that they may be requested to perform them. The Final Report is expected to be ready by June.

It was decided the title of the Final Report should be “Wireless Flexible Personalised Communications”, with the sub-title “COST 259: European Cooperation in Mobile Radio Research”.

There is a need to issue an Administrative Final Report as well, which will be done by the Chairman. Nevertheless, all delegates continue to be requested to send information on examples of joint collaborations with colleagues of other institutions/countries coming from this Action, so that they can be shown in this report; the deadline is 2000/May/12 (Action Point 14).

6. Budget and reimbursements

The Chairman reported that all documents concerning the budget for 1999 have already been sent to the COST Telecom Secretariat, hence it is only on the Commission hands to transfer the remaining 20 % of the budget. Once it is received, the remaining reimbursements of Short Term Missions will be performed.

As far as the AP2000 Conference Student Best Paper Award within the Action is concerned, the winner was Mr. Kimmo Kaliola (Helsinki University of Technology).

As for this meeting, reimbursements will be done directly by the COST Telecom Secretariat, as for the previous one. The Action Secretariat will collect all forms and documents, and send the whole package to Brussels.

The COST Telecom Secretariat informed the Chairman that no funding would be available for paying the Action Secretariat in 2000 and the Final Workshop (that took place immediately before this meeting), although the budget for 2000 had been submitted in due time (August 1999). The MC found this situation totally unacceptable, and it was decided that the Chairman would write a letter to the Commission, asking for the funding.

7. Status of the Proposal of a Follow-on Action

The Chairman reminded that the MoU and its Technical Annex of the proposal for a new Action was submitted in time to the TC TIST meeting on 1999/Oct/28-29. No decision on the approval of the proposal was taken at that meeting, and he was invited to present the proposal at the next TC TIST meeting, held in Brussels on 2000/Mar/01.

The rules concerning the approval of new Actions state that a decision is taken only after the previous one has been evaluated, hence only after the current Action has been evaluated by the TC TIST will the proposal for the new Action be evaluated. The next meeting of the TC TIST will be in June 2000.

The general situation of the COST framework was discussed. All delegates found that it would be worthwhile to continue, despite the fact that no funding may be available in the future for reimbursement of travel expenses, Action Secretariat, and so on. It was agreed that in that case, a new Action would start anyway, with funding for the Action Secretariat coming from an annual participation fee (250 Euro for universities and 1 000 Euro for companies, with a 50 % discount for SMEs). The possibility of having a new meeting was also discussed, and a tentative date was agreed (week starting 20th Nov. 2000).

8. Technical Challenges for the Follow-on Action

The Working Group Chairmen presented their views on the technical challenges to be solved in the next Action, which correspond TDs listed in Annex B. Some discussion was held on these matters. The basic conclusions were: the new Action will have to deal with many topics in the area of mobile/wireless communications, since this is an area far from being closed; the main topics to be addressed were identified; there will be a need for an increasing exchange of information among the WGs, since interdisciplinarity is increasing as well.

9. Presentation and Discussion of Documents

A total of 24 Temporary Documents, which are listed in Annex B, were distributed, being discussed at the Plenary and at the three WGs, Annex C.

10. Any Other Business

Prof. Luis Correia thanked all delegates that have contributed to and participated in the Final COST 259 Workshop, which took place immediately before this MCM, thus contributing for its success, not only in terms of programme (Annex E) but also in terms of attendance, with a total of participants of 74 (Annex F).

The Action Points from this meeting were as follows:

No.	Action	Who	Deadline
1	Send information on www address to the <i>Webmaster</i>	Those who still have not done it.	ASAP
2	Send files with abstracts of TDs to the <i>Webmaster</i>	Those who still have not done it.	ASAP
8	Check information contained on the www site, and send corrections to the <i>Webmaster</i>	All	ASAP
14	Send list of joint collaboration results within the project to the <i>Chairman</i>	All	2000/May/12
22	Send equivalences between TDs and papers in the open literature to <i>Chapter Editors</i>	All	2000/May/12
23	Send acronym of the institution to <i>Chairman</i>	All	2000/May/12
25	Submit papers to the 5 th OFDM Workshop	All	2000/Jun/04
26	Send comments/corrections to the Final Report to <i>Chapter Editors</i>	All	2000/May/12
25	Submit papers to the 4 th EPMCC	All	2000/Sep/15

11. Close of the Meeting

The meeting was attended by a total of 60 people, Annex D. The Chairman thanked the Local Organiser for hosting the meeting, and all delegates for their participation. Besides that, the Chairman thanked the Vice-Chairman, the WGs Chairmen, the SWGs Chairmen as well as all participants for their effort and collaboration during the project, which contributed in a decisive way to its success. After this, the meeting and the Action were formally closed.

Annex A

Agenda

1. Opening formalities
2. Adoption of the Agenda
3. Approval of the Minutes of the 10th Meeting in Valencia
4. Status of the Action
5. Action Final Report
6. Budget and reimbursements
7. Status of proposal of the follow up Action
8. Technical challenges for the follow up Action
9. Presentation and discussion of documents
10. Any other business
11. Close of Meeting

Annex B

List of Documents

TD(00)	Title	Author(s)	Affiliation(s)	Country(ies)	WG
036	WG1 10 th meeting report	Stephen Barton	University of Manchester	United Kingdom	Pl.
037	WG2 10 th meeting report	Ernst Bonek	TU Wien	Austria	Pl.
038	WG3 10 th meeting report	Thomas Kürner	E-Plus Mobilfunk	Germany	Pl.
039	SWG2.1 Minutes of Valencia meeting	Martin Steinbauer	TU Wien	Austria	Pl.
040	SWG3.1 Minutes of Valencia meeting	Andreas Eisenblätter	ZIB	Germany	Pl.
041	Efficient OFDM Transmission without Cyclic Prefix over Frequency-Selective Channels	Martin Toeltsch and Andreas Molisch	TU Wien	Austria	1
042	Results of Double-Directional Channel Sounding Measurements	Thomas Zwick, Dirk Hampicke, Jürgen Maurer, Andreas Richter, Gerd Sommerkorn, Reiner Thomä, and Werner Wiesbeck	Universität Karlsruhe, Technische Universität Ilmenau	Germany	2
043	Obtaining lower bounds on co-channel interference in GSM-Networks by Semidefinite Programming	A. Eisenblätter	ZIB	Germany	1, 3
044	Benchmarking for Frequency Allocation	A. Eisenblätter and Th. Kürner	ZIB, E-Plus Mobilfunk	Germany	3
045	A statistical Model for Connectivity Between Mobiles and Base Stations	John Orriss and Stephen Barton	University of Manchester	United Kingdom	1, 3
046	Effect of Base Station Location on the Transmission Power Levels of an Indoor TDD System	Andreas Gehring and Thomas Neubauer	TU Wien	Austria	3
047	On the distribution of relevant radio channel figures in different propagation environments for performance evaluation of WCDMA systems	Andreas Alayon Glazunov and Jan-Erik Berg	Ericsson Radio Systems AB	Sweden	1, 2
048	The Non-Alignment Properties of BPSK Sequences with Good Peak Factor	Matthew G. Parker	University of Bergen	Norway	1
049	Performance of Directed Retry in Cellular Environments: Extension to the Non-Uniform Case	A. Zanella, J. Orriss, S.K. Barton, R. Verdone	University of Bologna, University of Manchester	Italy, United Kingdom	1, 3

TD(00)	Title	Author(s)	Affiliation(s)	Country(ies)	WG
050	Towards an Efficient Hardware Implementation of Recurrent Neural Network Based Multiuser Detection	W.G. Teich, W. Schlecker, A. Engelhart, R. Gessler, and H.-J. Pfleiderer	University of Ulm	Germany	1
051	Sophisticated Neural Networks for the Planning of Urban Radio Networks	Thomas Binzer, G. Wölfle, R. Hoppe and F.M. Landstorfer	University of Stuttgart	Germany	2
052	A Vision for Possible WG 3 tasks within a Follow-on Project of COST 259	Thomas Kürner	E-Plus Mobilfunk	Germany	Pl.
053	CDMA Network planning: Simplified procedures	J. Jiménez, C. Canales, E. Alonso and I. Berberana	Telefonica I+D, Telefónica Servicio Móviles	Spain	3
054	Frequency Planning Using Simulated Annealing	Luis Jordán de Urries, M. A. Diaz Guerra and Ignacio Berberana	Telefonica I+D	Spain	3
055	Simulation of the Physical Layer of UTRA-FDD and modelling by means of Hidden Markov Models	J. J. Olmos and S. Ruiz	Universitat Politècnica de Catalunya	Spain	1
056	Array Measurements of the Double-Directional Mobile Radio Channel	Martin Steinbauer, Dirk Hampicke, Gerd Sommerkorn, Axel Schneider, Andreas F. Molisch, Reiner Thomä and Ernst Bonek	TU Wien, TU Ilmenau, FT Wien	Austria, Germany	2
057	3D Radio Environment Measurements at 900 MHz and 2000 MHz.	Mikael Bergholz Knudsen	Bosch Telecom Denmark A/S	Denmark	2
058	Future Developments of Radio Systems	Alister Burr	University of York	United Kingdom	Pl.
059	What Next in Antennas and Propagation	Ernst Bonek	TU Wien	Austria	Pl.

Annex C

Sessions Schedule

	Thursday	Friday
9:00 / 10:30	-	Plenary
10:30 / 12:30	WGs 1+3	Plenary
14:00 / 15:30	WGs 1, 2, 3	
16:00 / 17:30	WGs 1, 2, 3	

Annex D

Attendance List

Country	Name	Affiliation
Austria	Ernst Bonek	INTHF TU-Wien
	Hermann Bühler	Ingenieurbüro Hermann Bühler
	Andreas Gehring	INTHF TU Vienna
	Klaus Hugl	INTHF TU-Wien
	Martin Steinbauer	INTHF TU-Wien
	Martin Toeltsch	INTHF TU-Wien
Belgium	Emmanuel Van Lil	K.U. Leuven
Canada	Tricia Willink	Communications Research Centre
Denmark	Morten Christensen	Bosch Telecom Denmark
	Mikael Bergholz Knudsen	Bosch Telecom Denmark
	Pertti Vainikainen	Center For PersonKommunikation
	Gert Frølund Pedersen	Aalborg University
Finland	Seppo Karhu	University of Oulu
France	José Baro	Alcatel
	Pierre Degauque	University of Lille
	Martine Lienard	University of Lille
Germany	Christian Bornkessel	IMST
	Andreas Eisenblätter	ZIB
	Gerd Friedrich	Forschungsgemeinschaft Funk
	Henning Früchtling	University of Kassel
	Ralf Kattenbach	University of Kassel
	Thomas Kürner	E-Plus Mobilfunk
	Nadja Lohse	TU Dresden
	Jürgen Maurer	University of Karlsruhe
	Jörg Pamp	IMST
	Andreas Schmidbauer	Technische Universitaet München
	Matthias Schneider	IMST
	Thomas Zwick	University of Karlsruhe
	Thomas Binzer	Univerity of Stuttgart
	Werner Teich	University of Ulm
	Martin Weckerle	University of Kaiserslautern
Hungary	Kalman Fazekas	Budapest University of Technology
Ireland	Cyril Burkley	University of Limerick
	Saul Torrico	Comsearch
Italy	Eleni Brisku	CSELT
	Maurizio Magarini	Politecnico Milano
	Daniele Tortora	Siemens ICN
	Carlo Mannino	Universita' Di Roma
	Roberto Verdone	University of Bologna
The Netherlands	Wim Kotterman	KPN

Norway	Ragnar Eckhoff	Telenor
	Arild Jacobsen	Telenor R&D
	Per H. Lehne	Telenor
	Ellen Røhne	Post- and Telecommunication Authority
Portugal	Luis M. Correia	Instituto Superior Tecnico
	Pedro Lourenço	Telecel
	Antonio Rodrigues	Instituto Superior Tecnico
Slovenia	Tomaz Javornik	Institut Jozef Stefan
Spain	Jose Jimenez	Telefonica
	Silvia Ruiz-Boque	Universitat Politecnica de Catalunya
Sweden	Andres Alayon Glazunov	Ericsson Research
	Yngve Hamnerius	Chalmers Univ. of Technology
	Kristina Gold	Ericsson Mobile Communication
	Bo G. H. Olsson	Telia Research
Switzerland	Jean-Frédéric Wagen	EIA-FR
United Kingdom	Kevin Boyle	Philips Research
	Terry Kenny	Multiple Access Communication
	John Orriss	Manchester University
	Alistair Burr	University of York
	Stephen K. Barton	Manchester University

Annex E

Workshop Programme

COST 259 Final Workshop:

"The Mobile Terminal and Human Body Interaction"

Wednesday 26th April 2000

09:00 - **Welcome and opening of the Workshop**

09:15 *Local organizer, COST 259 Chairman*

Session I: Test Methods for Mobile Terminals

Chair: Gert F. Pedersen, CPK, Aalborg University, Denmark

09:15 - **Mobile Communication and Dosimetry - Invited paper**

10:15 *Dr. Georg Neubauer, Austrian Research Center Seibersdorf*

10:15 - **State of the Art Investigation Methods for Characterizing Mobile Phones with**

10:50 **Regard to User Interaction**

Christian Bornkessel, Matthias Schneider, Achim Bahr

10:50 - **Coffee Break**

11:20

11:20 - **Telia Scattered Field Measurements of Mobile Terminal Antennas**

11:55 *Bo Olsson*

11:55 - **Comparison of Three Methods for Measuring Total Radiated Power of Handheld Phones.**

12:30

Joonas Krogerus, Kalle Kiesi, Veli Santomaa

12:30 - **Lunch**

14:00

Session II: Antenna design and performance

Chair: Matthias Schneider, IMST, Germany

14:00 - **Antenna Measurements of Wireless Communications Devices Including Human**

14:35 **Body Interaction Effects**

Per O. Iversen

14:35 - **Slot Antennas for Cellular Phone**

15:10 *Franco Moglie, Massimiliano Gambini, Alessandro Neri*

15:10 - **Coffee Break**

15:30

15:30 - **Performance Analysis of Small Antennas Mounted on Mobile Handset**

16:05 *Pertti Vainikainen, J. Ollikainen, O. Kivekäs, I. Kelder*

16:05 - **Investigation of Mobile Phone Antennas with Regard to Power Efficiency and**

16:40 **Radiation Safety**

Harald Haider, H. Garn, Georg Neubauer, G. Schmid

16:40 - **Discussion**

17:00

Thursday 27th April 2000

Session III: Radiation exposure and limitation techniques

Chair: Ernst Bonek, TU Wien, Austria

09:00 - **Health Effects of Mobile Phones: Recent Scientific and Policy Developments -**
10:00 **Invited Paper**
Prof. Kenneth R. Foster, University of Pennsylvania, USA

10:00 - **Absorption and Bodyloss of Handheld Phones**
10:35 *Gert Frølund Pedersen*
10:35 - **Coffee Break**
10:55

10:55 - **Measurement System to Determine SAR and Radiation Pattern of Mobile**
11:30 **Telephones Considering the Human Head**
Michael Klar, Michael Mahler, Hans-Oliver Ruoß, Wolfgang Spreitzer, Georg Fässler

11:30 - **Comparison of the Numerical and Experimental Evaluation of the SAR Employing a**
12:05 **Spherical Benchmark Configuration**
Nobby Stevens, Luc Martens, Katja Pokovic, Niels Kuster

12:05 - **Discussion**
12:30
12:30 - **Lunch**
14:00

Annex F

Workshop Attendance List

Country	Name	Affiliation
Austria	Ernst Bonek	INTHF TU-Wien
	Hermann Bühler	Ingenieurbüro Hermann Bühler
	Klaus Hugl	INTHF TU-Wien
	Georg Neubauer	Research Center Seibersdorf
	Martin Steinbauer	INTHF TU-Wien
	Martin Toeltsch	INTHF TU-Wien
Belgium	Luc Martens	Universiteit Gent – Ghent University
	Emmanuel Van Lil	K.U. Leuven
Canada	Tricia Willink	Communications Research Centre
Croatia	Dina Simunic	University of Zagreb
Denmark	Morten Christensen	Bosch Telecom Denmark
	Mikael B. Knudsen	Bosch Telecom Denmark
	Pertti Vainikainen	Center For PersonKommunikation
	Gert F. Pedersen	Aalborg University
Finland	Seppo Karhu	University of Oulu
	Kalle Kiesi	Nokia Reserch Center
	Joonas Krogerus	Nokia Reserch Center
	Maarit Melvasalo	VTT Information Technology
	Mika Piisilä	Filtronic LK
	Jari Talkara	Nokia Mobile Phones
France	José Baro	Alcatel
	Thierry Bousquet	Alcatel CIT
	Pierre Degauque	University of Lille
	Martine Lienard	University of Lille
Germany	Christian Bornkessel	IMST
	Andreas Czylwik	T-Nova
	Andreas Eisenblätter	ZIB
	Gerd Friedrich	Forschungsgemeinschaft Funk
	Henning Früchting	University of Kassel
	Ralf Kattenbach	University of Kassel
	Michael Klar	Robert Bosch
	Thomas Kürner	E-Plus Mobilfunk
	Jürgen Maurer	University of Karlsruhe
	Jörg Pamp	IMST
	Andreas Schmidbauer	Technische Universitaet München
	Matthias Schneider	IMST
	Thomas Zwick	University of Karlsruhe
	Jan Steuer	University of Hannover
	Werner Teich	University of Ulm
Martin Weckerle	University of Kaiserslautern	

Hungary	Kalman Fazekas	Budapest University of Technology
Ireland	Cyril Burkley	University of Limerick
	Saul Torrico	Comsearch
Italy	Eleni Brisku	CSELT
	Maurizio Magarini	Politecnico Milano
	Carlo Mannino	Universita' Di Roma
	Franco Moglie	University of Ancona
	Rosanna Pinto	ENEA
	Daniele Tortora	Siemens ICN
	Roberto Verdone	University of Bologna
The Netherlands	Wim Kotterman	KPN
Norway	Ragnar Eckhoff	Telenor
	Arild Jacobsen	Telenor R&D
	Per H. Lehne	Telenor
	Matthew Parker	University of Bergen
	Ellen Røhne	Post- and Telecommunication Authority
Portugal	Luis M. Correia	Instituto Superior Tecnico
	Pedro Lourenço	Telecel, SA
	Antonio Rodrigues	Instituto Superior Tecnico
Slovenia	Tomaz Javornik	Institut Jozef Stefan
Spain	Jose Jimenez	Telefonica
	Silvia Ruiz-Boque	Universitat Politecnica de Catalunya
Sweden	Gert Anger	Swedish Radiation Protection Institute
	Thomas Bolin	Ericsson Mobile Communication
	Igor Egorov	Ericsson Mobile Communication
	Bo G. H. Olsson	Telia Research
	Kristina Gold	Ericsson Mobile Communication
Switzerland	Kenneth R Foster	World Health Organization
	Jean-Frédéric Wagen	EIA-FR
USA	Gianni Barone	SATIMO LLC
United Kingdom	Kevin Boyle	Philips Research
	Alister Burr	University of York
	Terry Kenny	Multiple Access Communication
	John Orriss	University of Manchester