



## Cooperative Radio Communications for Green Smart Environments

8th Management Committee  
Meeting & Joint Workshop  
Ghent, 25-27 Sept 2013



*Prof. Narcis Cardona*  
*Univ. Politecnica Valencia*  
*iTEAM Research Institute*



1. Opening formalities
2. Adoption of the Agenda
3. Approval of the Minutes of the last MCM
4. Status of the Action
5. Report from Grant Holder
6. Proposal of New Sub-Working Group
7. Final Book: ToC, editors and calendar
8. Presentation and discussion of Technical Documents
  
9. Reports from Group Chairs
10. Newsletter
11. Training activities (TS and Tutorials)
12. Liaisons with International Bodies and Projects
13. Future meetings
14. AOB
15. Close of Meeting

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ATTENDANCE LISTS:

Please sign the  
THREE attendance lists for the MCM  
(one per day)  
&  
ONE attendance list for  
EVERY WG/SWG/TWG you attend

*Registration receipts are available at reception desk*

### 3. Approval of the Minutes of the last MCM



Minutes are available under ...[\official documents](#) and after MC approval also under ...[\meetings](#)

The PDF file contains hyperlinks to WGs Minutes and other documents like reports from liaisons rapporteurs, etc.

--> Approval?

Number of signatories countries: 28

Number of COST country entities (institutes, etc.) currently participating: 121

Number of non-COST countries: 7\*

Number of non-COST entities (institutes, etc.) currently participating: 14

Number of MC Members: 52 (+ Chair)

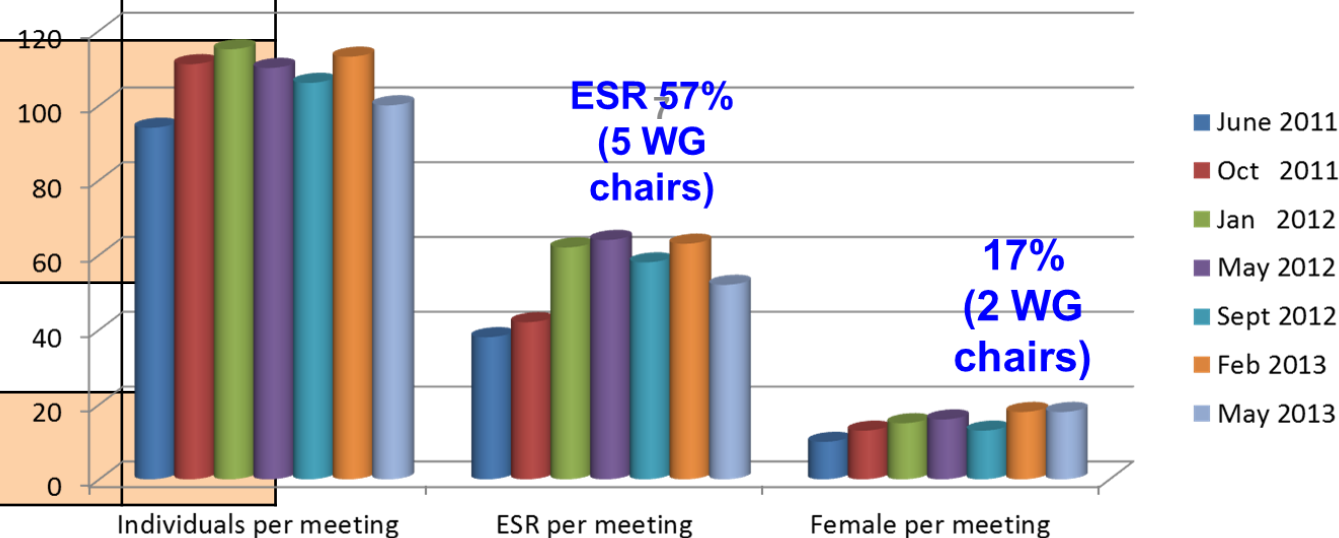
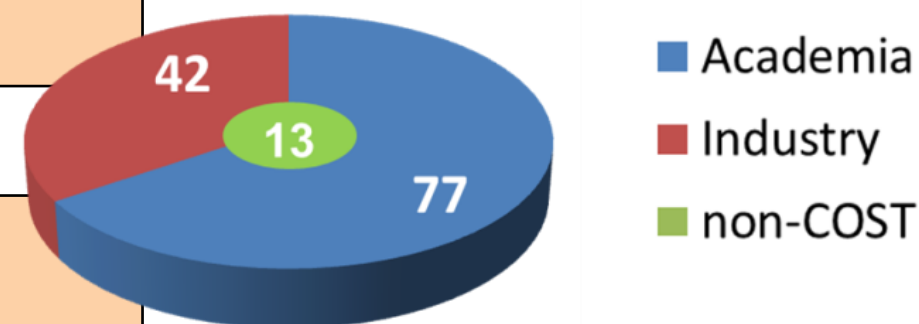
Number of registered experts so far: 504



## 4. Status of the Action

| Activity (No.)                                                    | Year 1          | Year 2    | Year 3 | Year 4 |
|-------------------------------------------------------------------|-----------------|-----------|--------|--------|
| MC/WG Meetings                                                    | 3(+KO) / 3 (+1) | 3 / 3     |        |        |
| STSMs                                                             | 6               | 11        |        |        |
| Training Schools                                                  | 1               | 3         |        |        |
| Workshops                                                         | 1               | 1         |        |        |
| Joint Publications                                                | 26              | 74        |        |        |
| Participating COST Countries / Institutions                       | 28 / 112        | 28 / 114  |        |        |
| Participating non-COST-countries / institutions                   | 7 / 11          | 7 / 13    |        |        |
| No. of individual participants (registered / average per meeting) | 342 / 105       | 461 / 115 |        |        |
| Share ESRs                                                        | 58%             | 57%       |        |        |
| Share female researchers                                          | 15%             | 17%       |        |        |

IC1004 – Action Data  
Reported @ APC meeting  
11-13 June 2013, Malta



### JOINT WORKSHOP:

IC1004 + VISTA Joint Workshop on  
“Terminal Antenna Systems for 4G and Beyond”

25 Sept 2013; Ghent, Belgium

Chairs: Marta Martínez & Buon Kiong Lau

Attended by **120** persons

# 4.1. Status of the Action. Recent Activities

Prof. Alain Sibille

@ Annual Progress Conference of the COST ICT Domain, Malta 11-13 June



**Cooperative Radio Communications for Green & Smart Environments**  
IC1004

Start date: 19/05/2011  
End date: 18/05/2015  
Year: 2

**Prof. Alain Sibille**  
Working Groups Coordinator

COST is supported by the EU Framework Programme

ESF provides the COST Office through a European Commission contract

Action poster



**COST**  
EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

COST Action no. IC1004 2011 | 2015

**Cooperative Radio Communications for Green Smart Environments**

**Objectives**

- Increase the knowledge on Radio Communication Systems and Networks within the framework of Energy Efficiency and Smart Environments
- Play a supporting role to European Industry, contribute to the deployment of future Wireless Systems (beyond 4G)
- Train Early Stage Researchers in the field of Cooperative Radio Communications for Green Smart Environments.

**Working Groups**

- WG1 – Radio Channel Modelling
  - SWG 1.1 – Indoor systems
- WG2 – Radio Signalling
  - SWG 2.1 – Cooperative Communications
- WG3 – Radio Access Networks
- Topical Working Groups:
  - TWG1 – Body Environment Networks
  - TWG2 – Vehicular Communications
  - TWG3 – Indoor Communications
  - TWG4 – Urban Area Networks
  - TWG5 – OTAs (Over-the-air Testing)

**Main Achievements**

- Multi-link MIMO Radio Channel Model published, public code made available
- IC1004 is pioneer in the modelling of the Dense / Ultra Wideband Component
- Vehicular Radio Channel Model for 5 GHz band, for Traffic Safety Applications
- Methods for Complex Radio Wave Propagation Simulation in Enclosed Spaces
- Passive Indoor Localization Techniques for Security and Safety Measures
- Harmonization of Radio Access Network Simulation Platforms, mainly for LTE-U
- Energy Consumption Model for Multi-RAT Networks
- New Channel modelling approach for Body-Centric applications
- Algorithms for Interference Management and Mobility Optimization
- Real-time Ultra-wideband Multi-antenna Channel Simulation at 60 GHz
- Alignment and calibration of Methods for MIMO OTA system for User Equipment

**Gender Balance and Early Stage Researchers**

- 56% of COST IC1004 participants are ESRs, as they are in the centre of IC1004 strategy. 2 of the Topical Working Groups are ESRs
- ESRs have also been supported by COST IC1004 with 10 STGRs per year and more than 50 grants to attend the 2 Training Schools organized every year
- 17% of COST participants are female, two of them are Chairs of Working Groups

**Dissemination**

- Training Schools on "Vehicular Connectivity", "Wireless Body Area Networks", "Propagation Measurement, Modelling, and OTA-Emulation", and "Tools for cooperative communications"
- Contributions to 3GPP RAN4, 5G NR ITG and OTG, MOSS
- Newsletter Issues, Position Paper on COST Actions role in Horizon2020
- Special Issues in Journals, +100 joint publications, +50 special sessions organized at major conferences, above 300 references in scholar databases.

**Information and Communication Technologies (ICT)**

Participating countries: 28  
AT, BE, BG, CH, CY, CZ, DE, DK, ES, FI, FR, GR, HR, IE, IL, IT, LU, MK, NL, NO, PL, PT, RO, RS, SI, SK, SE, UK

Informal Collaboration:  
AU, US, CN, JP, CA, CO, ME

**Contact details**  
Chair of the Action  
Narcís Cardona  
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Domain Committee Rapporteur  
Prof. Jan Simek  
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Science Officer (COST Office)  
Ralph Seibner  
Ralph.Seibner@cost.eu  
Website  
www.ic1004.org

COST IC1004 is an inclusive Scientific Network of knowledge, where academics meet industry to discuss on the new Wireless Communications Challenges

COST is supported by the EU FP7 Framework Programme

ESF provides the COST Office through a European Commission contract

## 4.1. Status of the Action. Recent Activities



# Future Network & Mobile Summit 2013

3 - 5 July 2013, Lisbon, Portugal

Username:  Password:  [Login](#) [Password reminder](#)

**General Information**

- Welcome
- Mailing List
- Committees
- Steering Committee
- Contact Us

**Programme**

**Registration**

**Call for Papers**

**Online Submission**

**Exhibition**

**Paper Repository**

**Previous Events**

**09:00 Session 11e: COST ICT: Networks and More**

Chair: Ralph Stübner, COST Office, Belgium

**The COST Domain**  
Soulla Louca, Univer

**The COST Framework**  
Ralph Stübner, CO

**COST Action IC09**  
**Cognitive Radio/**  
Arturas Medeisis, V

**COST Action IC09**  
**Heterogeneous V**  
Jocelyn Fiorina, Su

**COST IC1004 Act**  
**Efficiency in com**  
Narcis Cardona, Ur

**Impact of Realist**  
**Network Experie**  
Dennis Rose, Tech

**Statistical Modell**  
Alain Sibille, Teleco

**Traffic Steering b**  
Salvador Luna-Ran

**Designing Advan**  
**Deployment Tool**  
Margot Deruyck, G




### Cooperative Radio Communications for Spectrum and Energy Efficiency in coming Data Traffic Scenarios

*Prof. Narcís Cardona*  
*Chairman of COST IC1004*  
*Vice-Director of iTEAM Research Institute*



UNIVERSITAT  
POLITÈCNICA  
DE VALÈNCIA

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FuNEMS 2013, Lisbon (PT) 3-5 July 2013

### Challenges (Jun'13-May'14) **as shown at APC Meeting**

#### 1. **Scientific** (*selection from those reported at Work Plan for 3rd Year*):

- Validation of cooperative elements of COST Radio Channel Model
- Parameterization of COST model to Outdoor-to-indoor scenarios, diffuse/dense multipath and frequency versatility from 0.9 to 60 GHz
- Extension of cooperative radio communications beyond 2 hops
- Publish the IC1004 Urban Environment Reference Simulation Scenarios
- Energy efficiency in Self-Organising, Cooperative, Femtocell and HETNETS
- Integration of mobility, NS3, and channel models into a common simulation platform for vehicle communications and traffic safety
- 60 GHz indoor radio channel modelling and measurements
- Publish the IC1004 Body Area Networks Radio Channel model
- Calibration of OTA test-beds and test-zone compensation

#### 2. **Liaisons to Industry and Standardisation Bodies:**

- Keep being active in CTIA, RAN4 of 3GPP, ETSI
- Increase the International projects liaisons: METIS, LEXNET, GreeNets, iPLAN, ABSOLUTE, SEMAFOR, DIWINE, ...
- Keep increasing the industrial involvement in COST IC1004

#### 3. **Training & Dissemination:**

- Training Schools and Short Courses on SAR, Experimental Research, 4G Planning, +Tutorials
- Newsletter, Special sessions, Special issues, Joint Publications...
- White paper on 5G Technology Challenges

### Current Non-COST Members (14):

- ComSearch (US); Motorola Mobility (US); NIST (US); NICT (JP); Tokyo Institute of Technology (JP); JAIST (JP); Tongji University (CN); BUPT (CN); ABP (CN); ICESI (CO); CRC (CA); Univ. of Montenegro (ME)\*; La Trobe Univ.\*\*(AU);

### **Recently approved by CSO:**

- China, Beijing Jiaotong University (BJTU)

| 2 Approved |      |                      |                      |                                                                                        |                                                                                              | 14                     |
|------------|------|----------------------|----------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------|
| #          | ID   | Type                 | Action               | Country                                                                                | Institution                                                                                  | Participation          |
|            |      | <input type="text"/> | <input type="text"/> | <input type="text"/>                                                                   | <input type="text"/>                                                                         | <input type="text"/>   |
| 11         | 869  | CIPF                 | IC1004               |  CN | Beijing University of Posts and Telecommunications, Wireless Technology Innovation Institute | Approved on 2012-03-28 |
| 12         | 900  | CIPR                 | IC1004               |  US | National Institute of Standards and Technology                                               | Approved on 2012-12-14 |
| 13         | 1055 | CIPR                 | IC1004               |  CN | Academy of Broadcasting Planning                                                             | Approved on 2012-12-14 |
| 14         | 1218 | CIPR                 | IC1004               |  CN | Beijing Jiaotong University (BJTU)                                                           | Approved on 2013-09-16 |

- 17 STSMs completed during the first and second year term  
+3 in progress already within the 3<sup>rd</sup> year term

### - - OPEN CALL - -

Send your applications (eCOST, [chair@ic1004.org](mailto:chair@ic1004.org) in cc) at least 6 weeks in advance to the STSM starting date

- Results presented at Meetings  
...and literature? Please REPORT ([chairman@ic1004.org](mailto:chairman@ic1004.org))

### OPEN CALL

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#### Procedure

applicant fulfill form at eCOST tool:

<https://e-services.cost.eu/stsm>

and sends it to Chairman and Host Institution

(6 weeks prior to the STSM start)

#### Evaluation

- Applications will be evaluated by Evaluation Panel including at least three among WGs Chairs.

Guidelines @ [www.cost.eu](http://www.cost.eu)

COST ICT Domain is providing **Conference Grants for Early Stage Researchers**.

- Several calls per year. Only one or two grants assigned per call for the whole Domain actions. Only **one candidacy** proposal per Action and call

Criteria for IC1004 pre-selection of candidates:

- Mention the COST IC1004 in the document (mandatory)
- Relevance of the conference in our area
- Relevance of the topic for the Action objectives
- CV of the applicant
- Activities of the Applicant's Institution related to COST IC1004

Chairman, committed by the MC, assessed by the Steering Committee evaluates the applications received and proposes a candidate

→Comments?

**NEW CALL, CLOSING 15-OCT.**

**IC1004 Requires to have your applications by 7th OCT**

I asked the DC about their criteria, with the following answer:

*The process we follow for the evaluation of the ESR grants is as follows:*

- 1. The applications are being checked first by the COST Office to ensure that all the necessary documents are in place.*
- 2. The COST Office sends the applications to the DC-ICT executive group for ranking. The Executive Group ranks the applications based on the following criteria:*
  - a. How can the event help the career of the applicant?*
  - b. What is the benefit for the current research of the ESR?*
  - c. What is the benefit of the COST Action?*
  - d. What are the networking reasons for going to the international conference?*

*Please note that there is no specific weight for each of the above. The Executive Group ranks them and the highest average is considered.*

IC1004 follows the rules of COST as in the Vademecum provided by COST Office ([www.cost.eu](http://www.cost.eu))

Nevertheless, due to the Action size, some internal rules have been approved in order to properly organise meetings and activities:

### 1. Registration / De-registration:

“Any registered institution has access to the Member’s Area of the IC1004 Web site. Institutions not contributing with at least one TD per year period (two TDs per year period in the case of non-COST) are denied access from Member’s Area. If still interested, they can present a TD to any coming meeting and get *re-registered*”.

(Approved at 2<sup>nd</sup> MCM)

## 4.6. Status of the Action. Rules reminder

“Any registered institution has access to the Member’s Area of the IC1004 Web site. Institutions not contributing with at least one TD per year period (two TDs per year period in the case of non-COST) are denied access from Member’s Area. If still interested, they can present a TD to any coming meeting and get re-registered”. (Approved at 2<sup>nd</sup> MCM)

- 14 Institutions have no contributed at all (de-registered)
- 10 have no contributed during last 4 meetings (de-registered)
- All non-COST Institutions have accomplished the rule
- Average per (active) Institution so far: 7,3 TDs\*

### Third Year term (June 1, 2013 - May 31, 2014)

Granted: 177.900 EUR

| Type of expenditure           | Approved  | Agreed at Ilmenau |
|-------------------------------|-----------|-------------------|
| 1. Meetings and WS            | 102.800   | 106.300           |
| 2. STSMs                      | 13.400    | 13.400            |
| 3. Training schools           | 36.000    | 32.500            |
| 4. Dissemination/ Publicat.s  | 1.500     | 1.500             |
| 5. Others                     | 1.000     | 1.000             |
| Secretariat - 15% of sum(1:6) | 23.200    | 23.200            |
| <b>TOTAL</b>                  | 177.900 € | <b>177.900 €</b>  |

|            |                                                |
|------------|------------------------------------------------|
| June 2013  | Second Year YFR sent to COST                   |
| July 2013  | Second Year YFR validated by COST              |
| Sept. 2013 | Waiting to receive the first installment (65%) |

### Third Year term (June 1, 2013 - May 31, 2014)

| Type of expenditure              | Budget              | Already spent     | To be spent    | Budget Left         |
|----------------------------------|---------------------|-------------------|----------------|---------------------|
| 1. Meetings                      | € 99.800,00         | 3.396,78 €        |                | 96.403,22 €         |
| 2. Workshop Supports             | 3.000 €             |                   | 3.000 €        | 0,00 €              |
| 3. STSMs                         | € 13.400,00         | 750 €             | 900 + 1.750 €  | 10.000 €            |
| 4. Training schools              | € 32.500,00         |                   |                | 32.500 €            |
| 5. Dissemination/<br>Publicat.s  | € 1.500,00          |                   |                | 1.500 €             |
| 6. Others (bank fees)            | € 1.000,00          |                   |                | 1.000 €             |
| Secretariat - 15% of<br>sum(1:6) | € 23.200,00         | 622,02 €          |                | 22.577,98 €         |
| <b>TOTAL</b>                     | <b>€ 177.900,00</b> | <b>4.768,80 €</b> | <b>5.650 €</b> | <b>167.481,20 €</b> |

### Travel and Reimbursement issues

**Online Travel Reimbursement Request** in e-COST (since Sept.2012)

The eligible participants have to:

Step 1/5 --> Accept or decline the invitation

Step 2/5 --> Decide whether you wish to claim the reimbursement or not

Step 3/5 --> Fill in your online Travel information and expenses and upload the supporting documents (i.e. plane ticket, boarding pass, train or coach ticket)

Step 4/5 --> Select the bank account you would like to get reimbursed

Step 5/5 --> Submit the claim

**Final step:** download the travel reimbursement form, print it and take it with you at the Meeting → **handle to IC1004 SECRETARY (Silvia)**

### Travel and Reimbursement issues

Reimbursements for this MCM: 35 (MC or official substitutes) entitled, over 105 participants

Reimbursement will be based on COST rules.

- In case you have already filled and downloaded your reimbursement form, please give it to the Secretary (Silvia) **during** the meeting
- In case you need to send it by POST, please do it no later than **October 15th, 2013**

During the WG1 sessions in 7th MCM (Ilmenau) it was discussed about the convenience of launching a working group to specifically work on the promotion of COST IC1004 channel models to Standardisation Bodies and to other external Projects (FP7, ...)

Proposal of creating the  
SWG 1.2 on «Channel modelling contribution to standardisation»  
(preliminary)

Chairman: Tommi Jämsä (FI)

**APPROVAL?**

## 7. Final Book. Calendar

|            |                | Who    |                                                                                                       |
|------------|----------------|--------|-------------------------------------------------------------------------------------------------------|
| Today      | Ghent          | Editor | Launch process, approve calendar                                                                      |
| 5-Feb-2014 | <b>Ferrara</b> | MC     | Selection of topics, ToC proposal (Chapters)<br>Appoint Chapter editors<br>Approval of EB, ToC and CE |
|            |                | CE     | Definition sections and SE                                                                            |
|            |                | E      | Contact Publishers                                                                                    |
|            |                | EB     | TD to chapters map                                                                                    |
|            |                | EB     | Definition of edition Guidelines                                                                      |
| May-14     | <b>Aalborg</b> | MC     | Approval of ToC+sections + TD to Chapters map                                                         |
|            |                | CE     | TDs to Sections map                                                                                   |
|            |                | All/SE | Start contributions, comments                                                                         |
| Sep-14     | 11th MCM       | MC     | Approve TD sections mapping, review status                                                            |
| Dic-14     |                | E      | First Draft ready, Request for comments                                                               |
| Jan-15     |                | All    | Comments                                                                                              |
| Feb-15     | 12th MCM       | MC     | <b>Approval First draft</b>                                                                           |

## 7. Final Book. Calendar

| Who       |          |     |                                                       |
|-----------|----------|-----|-------------------------------------------------------|
| ...       |          |     |                                                       |
| Feb-15    | 12th MCM | MC  | Approval First draft                                  |
|           |          | All | Contributions and comments                            |
| Abr-15    |          |     | E<br>Second draft ready                               |
| May-15    | Valencia | MC  | Approval 2nd draft except TDs in Valencia             |
| jun-15    |          |     | CE<br>Final contributions / late TDs to Sect. mapping |
| 21-jul-15 |          |     | E<br><b>Final draft</b>                               |
|           |          | All | Final Review                                          |
| 30-Sep-15 |          |     | E<br><b>Book finished</b>                             |

Proposal:

**Editor: Chair**

**Steering Committee launch the process**

**Editorial Board: SC + experts**

**Chapter Editors: appointed in Ferrara**

**Section editors: TBD**

Next period activity (until Ferrara meeting):

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Contribute to the list of topics  
ToC proposal (Chapters)  
Volunteer for Chapter editor

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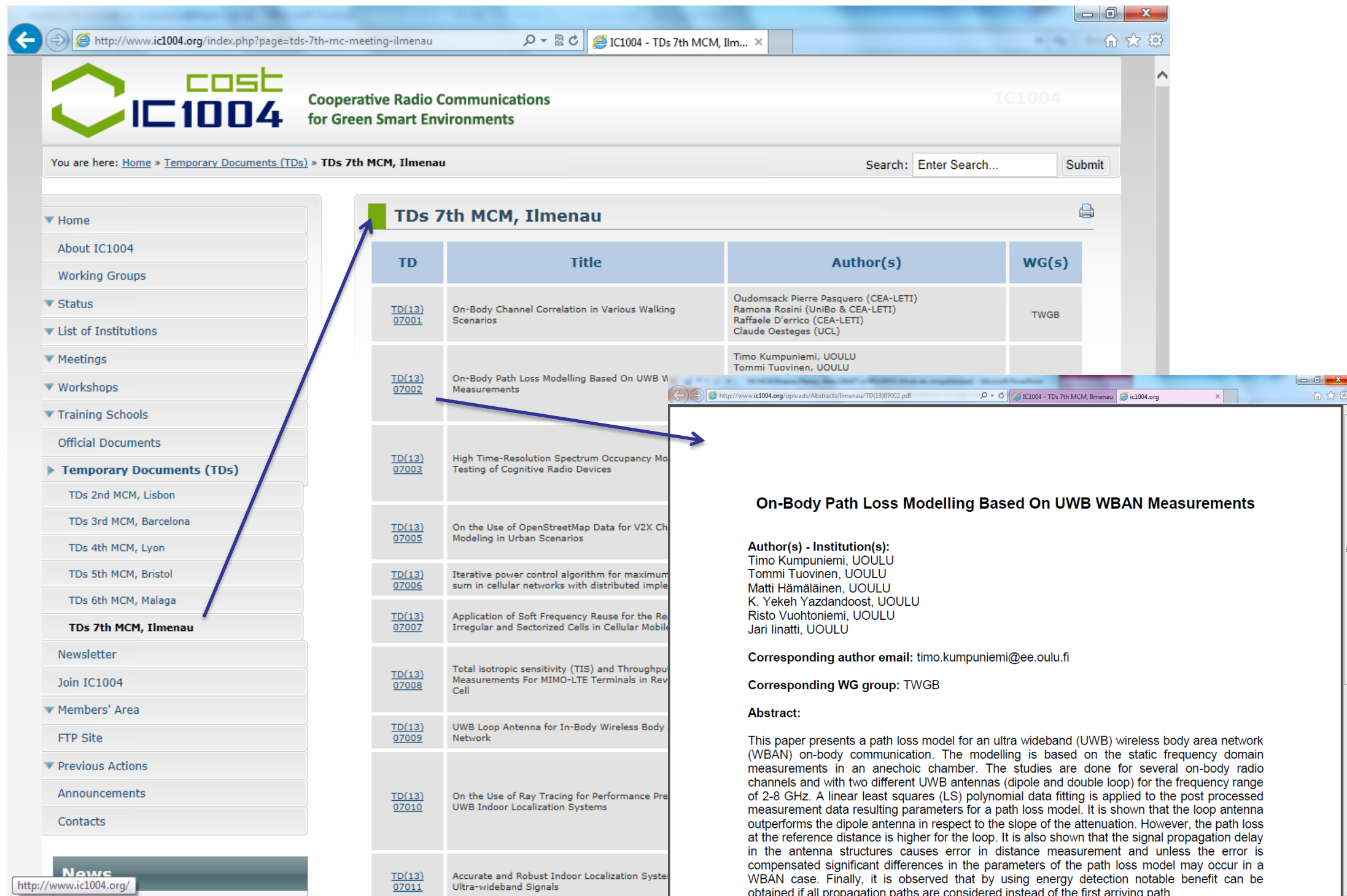
4-Jan-2014    Ferrara    MC

Selection of topics  
Approval of Editorial Board , Table of Contents and Chapter Editors

---

- There are **75! TDs** to be presented at this MCM.
  - 77 received by the deadline
  - 2 Withdrawn: TD(13)... 50, 65

TD abstracts are open available at [www.ic1004.org](http://www.ic1004.org) and full TDs under “Members’ Area”



IC1004 Cooperative Radio Communications for Green Smart Environments

You are here: [Home](#) > [Temporary Documents \(TDs\)](#) > [TDs 7th MCM, Ilmenau](#)

Search:  Enter Search...

**TDs 7th MCM, Ilmenau**

| TD                           | Title                                                                                                           | Author(s)                                                                                                                         | WG(s) |
|------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------|
| <a href="#">TD(13) 07001</a> | On-Body Channel Correlation in Various Walking Scenarios                                                        | Oudomsack Pierre Pasquero (CEA-LETI)<br>Ramona Rosini (UniBo & CEA-LETI)<br>Raffaele D'errico (CEA-LETI)<br>Claude Oesteges (UCL) | TWGB  |
| <a href="#">TD(13) 07002</a> | On-Body Path Loss Modelling Based On UWB WBAN Measurements                                                      | Timo Kumpuniemi, UOULU<br>Tommi Tuovinen, UOULU                                                                                   |       |
| <a href="#">TD(13) 07003</a> | High Time-Resolution Spectrum Occupancy Monitoring of Cognitive Radio Devices                                   |                                                                                                                                   |       |
| <a href="#">TD(13) 07005</a> | On the Use of OpenStreetMap Data for V2X Channel Modeling in Urban Scenarios                                    |                                                                                                                                   |       |
| <a href="#">TD(13) 07006</a> | Iterative power control algorithm for maximum sum in cellular networks with distributed implementation          |                                                                                                                                   |       |
| <a href="#">TD(13) 07007</a> | Application of Soft Frequency Reuse for the Reuse of Irregular and Sectorized Cells in Cellular Mobile Networks |                                                                                                                                   |       |
| <a href="#">TD(13) 07008</a> | Total isotropic sensitivity (TIS) and Throughput Measurements For MIMO-LTE Terminals in Rev. Cell               |                                                                                                                                   |       |
| <a href="#">TD(13) 07009</a> | UWB Loop Antenna for In-Body Wireless Body Area Network                                                         |                                                                                                                                   |       |
| <a href="#">TD(13) 07010</a> | On the Use of Ray Tracing for Performance Prediction of UWB Indoor Localization Systems                         |                                                                                                                                   |       |
| <a href="#">TD(13) 07011</a> | Accurate and Robust Indoor Localization Systems for Ultra-wideband Signals                                      |                                                                                                                                   |       |

**On-Body Path Loss Modelling Based On UWB WBAN Measurements**

**Author(s) - Institution(s):**  
 Timo Kumpuniemi, UOULU  
 Tommi Tuovinen, UOULU  
 Matti Hämäläinen, UOULU  
 K. Yekeh Yazdandoost, UOULU  
 Risto Vuoltoniemi, UOULU  
 Jari Linatti, UOULU

**Corresponding author email:** timo.kumpuniemi@ee.oulu.fi

**Corresponding WG group:** TWGB

**Abstract:**  
 This paper presents a path loss model for an ultra wideband (UWB) wireless body area network (WBAN) on-body communication. The modelling is based on the static frequency domain measurements in an anechoic chamber. The studies are done for several on-body radio channels and with two different UWB antennas (dipole and double loop) for the frequency range of 2-8 GHz. A linear least squares (LS) polynomial data fitting is applied to the post processed measurement data resulting parameters for a path loss model. It is shown that the loop antenna outperforms the dipole antenna in respect to the slope of the attenuation. However, the path loss at the reference distance is higher for the loop. It is also shown that the signal propagation delay in the antenna structures causes error in distance measurement and unless the error is compensated significant differences in the parameters of the path loss model may occur in a WBAN case. Finally, it is observed that by using energy detection notable benefit can be obtained if all propagation paths are considered instead of the first arriving path.

## **TDs allocation to WGs**

|           |                                                     |      |
|-----------|-----------------------------------------------------|------|
| WG 1      | 13, 44, 45, 48, 49, 51, 70, 72, 73                  | (9)  |
| WG 2      | 21, 27, 75, 76                                      | (4)  |
| WG 3      | 10, 14, 16, 17, 36, 37, 43, 56, 57, 64, 69          | (11) |
| SWG 1.1   | 18, 30, 41, 74                                      | (4)  |
| SWG 1.2   | 8, 9                                                | (2)  |
| SWG 2.1   | 20, 23, 31, 38                                      | (4)  |
| TWG-B     | 1, 3, 5, 11, 25, 32, 33, 40, 42, 52, 55, 60, 67, 68 | (14) |
| TWG-V     | 2, 6, 24, 29, 77                                    | (5)  |
| TWG-U     | 12, 15, 47, 54, 58                                  | (5)  |
| TWG-i     | 4, 19, 22, 26, 34, 53, 63, 66, 71                   | (9)  |
| TWG-O     | 7, 28, 35, 39, 46, 59, 61, 62                       | (8)  |
| withdrawn | 50, 65                                              |      |

## WGs sessions Schedule

|       | Thu 26th  | TD#                     | sum | Room | Fri 27th    | TD#                   | sum |       |
|-------|-----------|-------------------------|-----|------|-------------|-----------------------|-----|-------|
| 09:00 | PLENARY   |                         |     | Ver  | Body        | 25, 42, 55, 60, 68    | 5   | 08:30 |
|       |           |                         |     | Bla  | OTA         | 7, 28, 46, 35, 39     | 5   |       |
|       |           |                         |     | Oud  | Urban       | 15, 47, 54, 58, 12    | 5   |       |
| 10:30 |           |                         |     | Pri  | (Vehicular) | DISC                  | 0   |       |
|       | Coffee    |                         |     |      | Coffee      |                       |     |       |
| 11:00 | WG1       | 13, 45, 51, 72          | 4   | Ver  | Body        | 1, 52, 33, 40         | 4   | 11:00 |
|       | WG2       | 21, 27, 75, 76          | 4   | Bla  | OTA / 1.1   | 59, 61, 62 / 30, DISC | 4   |       |
| 12:30 | WG3       | 17,10,56,16             | 4   | Oud  | Indoor      | 34, 63, 66, 22, DISC  | 4   | 12:30 |
|       | Lunch     |                         |     |      | Lunch       |                       |     |       |
| 13:30 | WG1       | 70, 48,49, 44, 73       | 5   | Ver  | SWG1.2      | 8, 9, DISC            | 2   | 13:30 |
|       | WG2.1     | 20, 23, 31, 38, DISC    | 4   | Bla  | SWG1.1      | 18, 41, 74            | 3   |       |
|       | WG3       | 37,57,43,64,14          | 5   | Oud  | WG3         | 36,69,DISC            | 2   | 14:30 |
| 15:30 |           |                         |     | Pri  | Coffee      |                       |     |       |
|       | Coffee    |                         |     |      | PLENARY     |                       |     | 14:45 |
| 15:45 | Body      | DISC, 3, 32, 5, 11, 67  | 5   | Ver  |             |                       |     |       |
|       | Indoor    | 4, 53, 26, 19, 71, DISC | 5   | Bla  |             |                       |     |       |
|       | Vehicular | DISC, 2, 6, 24, 29, 77  | 5   | Oud  |             |                       |     | 16:15 |
| 17:45 |           |                         |     | Pri  |             |                       |     |       |

### TOPICS TO DISCUSS during WG sessions

- Election of TWGs Chairs (Body, Vehicular)
- Proposals for joint activities to projects, other actions,...
- Dissemination activities, conferences
- Book contributions to Table of Contents
- ...

### Election of TWG Chairs:

Candidates for chairing TWGV for the remaining duration of the action :

- Erik Ström (Chalmers, Sweden)
- Levent Ekiz (BMW, Germany)
- ...

Candidates for chairing TWGB for the remaining duration of the action:

- Kamya Y. Yazdandoost (NICT, Japan)
- Raffaele D'Errico (CEA-LETI, France)
- ...

...MC Plenary continues on Friday at 14:45

Attendance lists from WGs/SWGs/SIGs:

Have you signed the  
**GENERAL ATTENDANCE LIST?**

No signature, no reimbursement...

Plenary session  
Resume at  
14:45

Attendance lists from WGs/SWGs/SIGs:  
Did you sign the **general attendance list** for  
the three days?  
No signature, no reimbursement...

1. Opening formalities
2. Adoption of the Agenda
3. Approval of the Minutes of the last MCM
4. Status of the Action
5. Report from Grant Holder
6. Proposal of New Sub-Working Group
7. Final Book: ToC, editors and calendar
8. Presentation and discussion of Technical Documents
  
9. Reports from Group Chairs
10. Newsletter
11. Training activities (TS and Tutorials)
12. Liaisons with International Bodies and Projects
13. Future meetings
14. AOB
15. Close of Meeting

- Disciplinary Working Groups:
  - WG1: Claude Oestges, U.C.L. (BE)
  - SWG1.1: Buon Kiong Lau (SE)
  - SWG1.2: Tommi Jämsä
  - WG2: Alister Burr, U.York (UK)
  - SWG2.1: Jan Sykora (CZ)
  - WG3: Silvia Ruiz, U.P.C. (ES)
  
- Topical Working Groups Coordinator:
  - TWGC: Alain Sibille, Telecom ParisTech (FR)

- Vehicular Environment, TWG-V  
Levent Ekiz (DE), Erik Strom (SE)
- Body Environment, TWG-B  
Raffaele D'Errico (FR), Kamyaz Yazdandoost (JP)
- Urban Environment, TWG-U  
Sana Salous (UK), Denis Rose (DE)
- Indoor Environment, TWG-I  
Pawel Kulakowski (PL), Klaus Vitrisal (AT)
- MIMO-OTA Testing, TGW-O  
Gert Pedersen (DK), Wim Kotterman (DE)

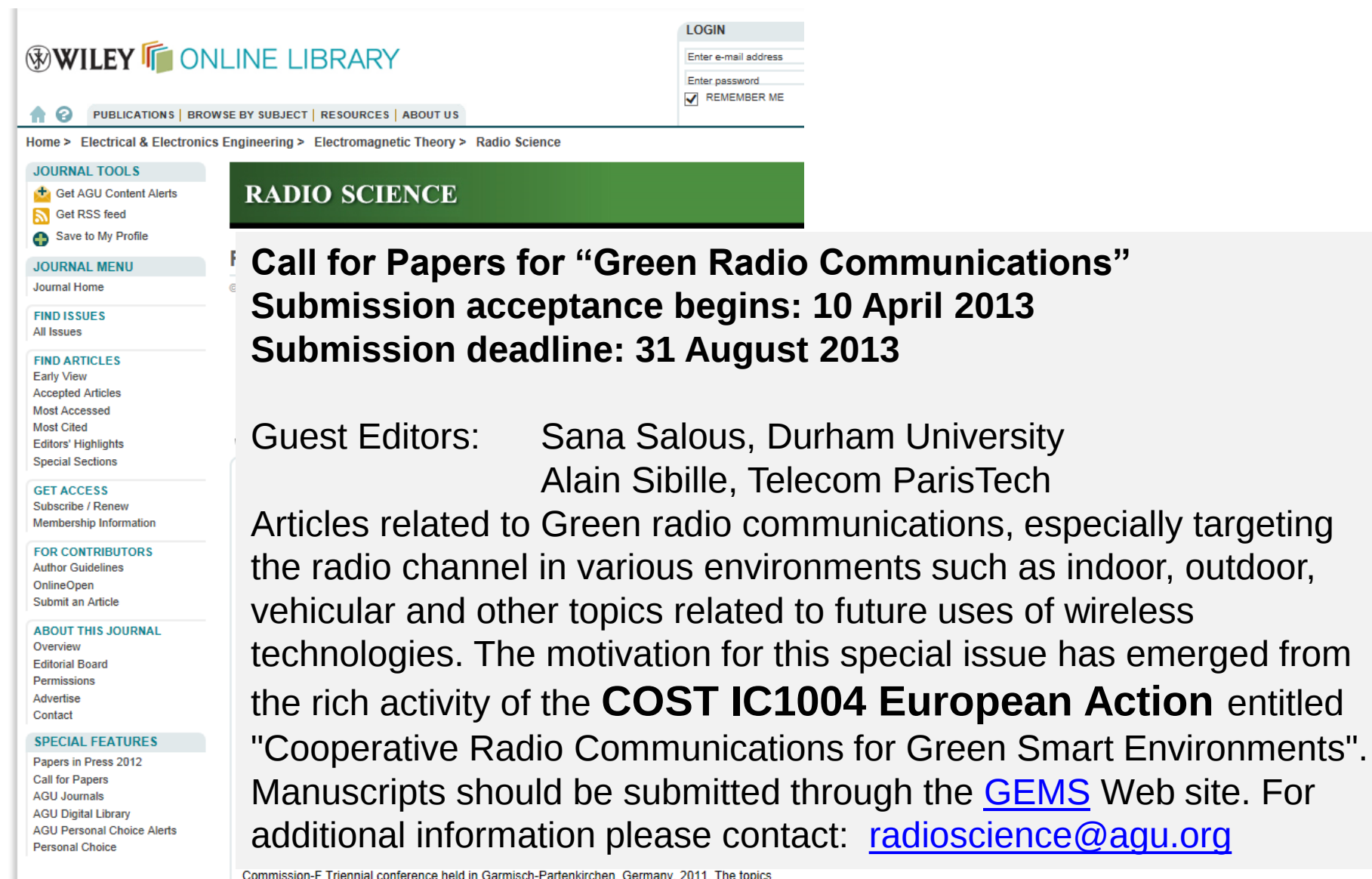
### Newsletter

Editor: Prof. Alain Sibille

Welcome to distribute the link among your professional contacts:

<http://www.ic1004.org/index.php?page=newsletter>

### URSI RADIO SCIENCE: Special section on "Green Radio Communications", submissions in GEMS, close on **30 Sept**, 2013

The screenshot shows the Wiley Online Library interface. At the top, there's a navigation bar with 'PUBLICATIONS | BROWSE BY SUBJECT | RESOURCES | ABOUT US'. Below this, a breadcrumb trail reads 'Home > Electrical & Electronics Engineering > Electromagnetic Theory > Radio Science'. The main content area has a green header 'RADIO SCIENCE'. Below the header, the text reads: 'Call for Papers for “Green Radio Communications”', 'Submission acceptance begins: 10 April 2013', and 'Submission deadline: 31 August 2013'. It then lists 'Guest Editors: Sana Salous, Durham University' and 'Alain Sibille, Telecom ParisTech'. The main body of text describes the special section on 'Green radio communications', mentioning the 'COST IC1004 European Action' and the 'Cooperative Radio Communications for Green Smart Environments'. It states that manuscripts should be submitted through the GEMS Web site and provides the contact email 'radioscience@agu.org'. A sidebar on the left contains various links like 'JOURNAL TOOLS', 'JOURNAL MENU', 'FIND ISSUES', 'FIND ARTICLES', 'GET ACCESS', 'FOR CONTRIBUTORS', 'ABOUT THIS JOURNAL', and 'SPECIAL FEATURES'. A small footer at the bottom of the page mentions the 'Commission-F Triennial conference held in Garmisch-Partenkirchen, Germany, 2011. The topics'.

**ICT 2013** November 6th to 8th, Vilnius, Lithuania.  
organized by the European Commission, Directorate General CONNECT  
<http://ec.europa.eu/digital-agenda/en/ict-2013>.

COST networking session and booth

**Action Poster**, prepared for the APC 2013 (June).  
An updated version will be ready by Sunday, October 14th

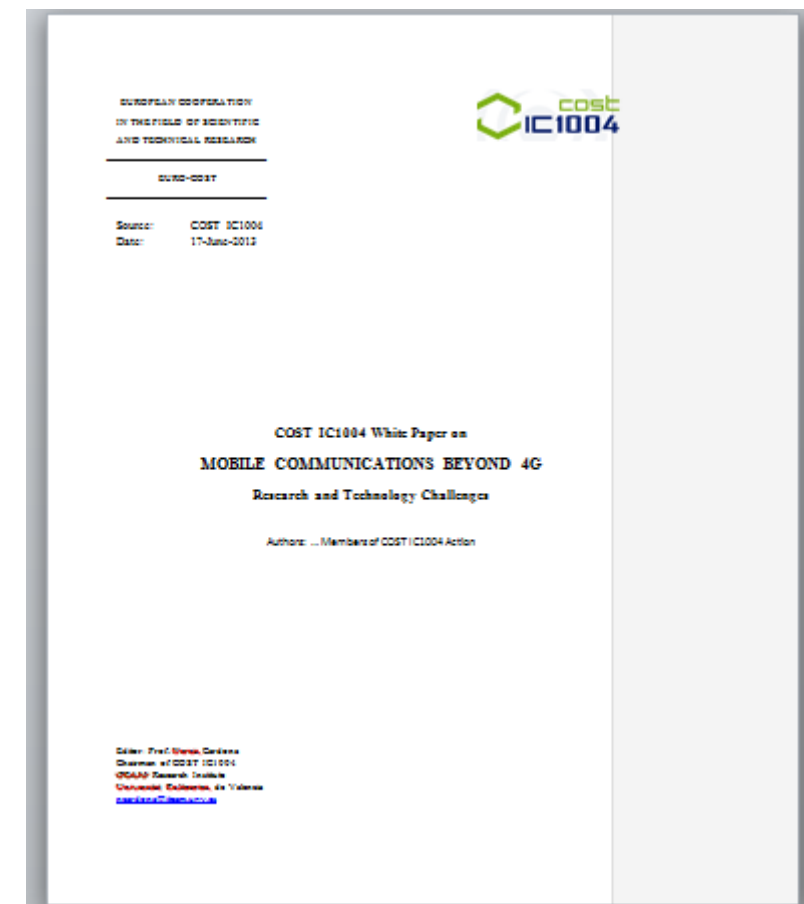
Send your inputs very soon : **October 7th**

+About 40 conferences/courses/events with COST participants involved in organisation; announced at ([www.ic1004.org](http://www.ic1004.org))

...all under [www.ic1004.org//announcements](http://www.ic1004.org//announcements)

### White Paper

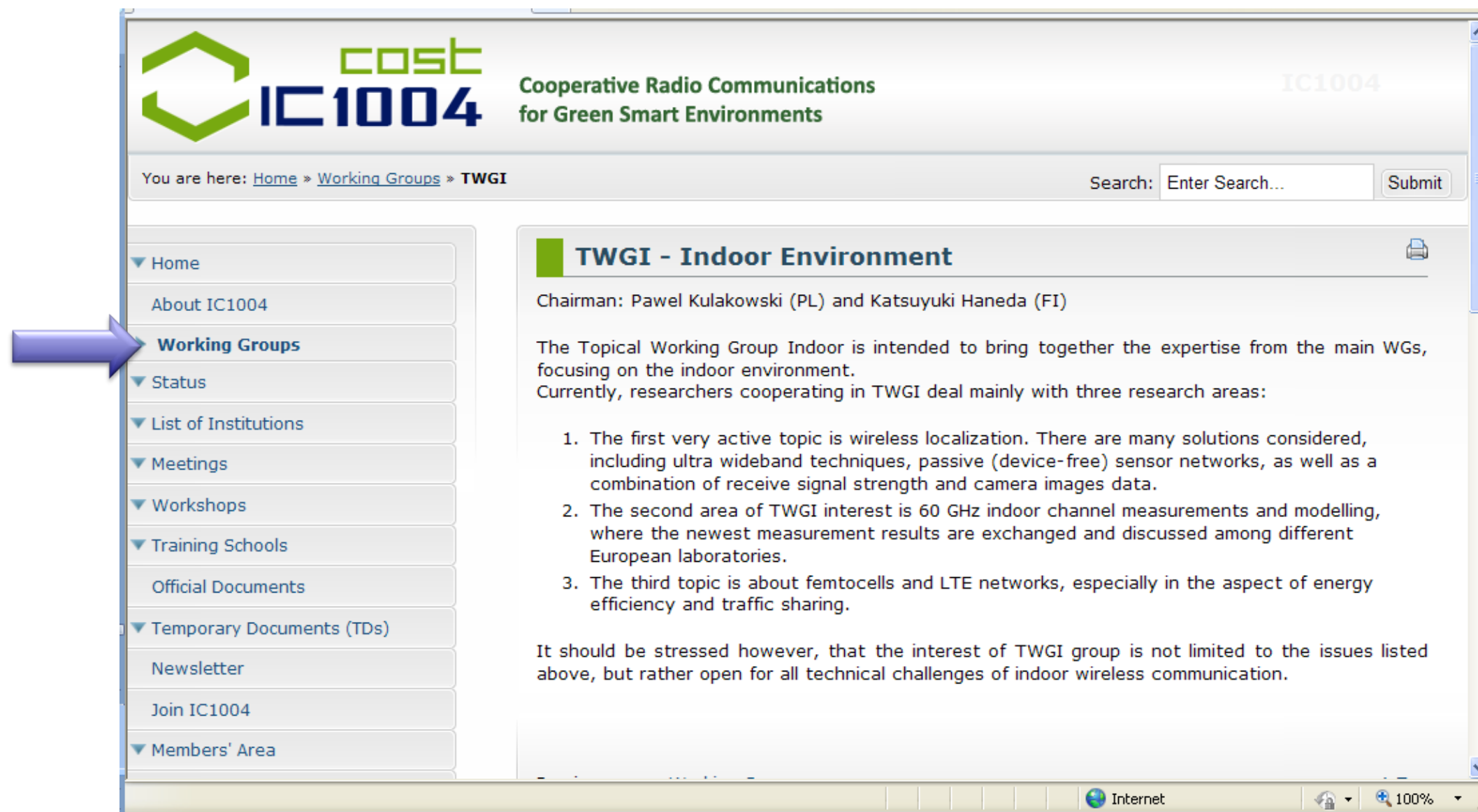
- Some contributions received after Ilmenau meeting
- First draft version written (Chair)
- In review by Steering Committee
- 8th October circulated for comments
- 19th October ready



### Web Page

- Description of WGs Activities for the Web Page

(T-) (S-) WG Chairs: Please send updates (open)



- Training School(s):

First IC1004 Training School: “Vehicular Connectivity”

May 21-23, 2012, Vienna; 45 registered // 20 grants

Joint IC1004-WiserBAN Training School: “Wireless Body Area Networks”

June 4-6, 2012, Bologna; 50 registered

Third IC1004 Training School: “Propagation Measurement, Modelling, and OTA-Emulation”

November 12-14 2012, Ilmenau (Germany); 28 attended, granted

Fourth IC1004 Training School: “Tools for Cooperative Communications”

20-22 May 2013, Prague; 30 attendees, granted

### IC1004 / Newcom# School:

"Beyond 4G Networks in Cities: From Theory to Experimentation and Back"

- Venue: Barcelona (CTTC premises)
- Dates: 25-28 November 2013 (Monday noon to Thursday afternoon)
- Local Organiser: Miquel Payaro (CTTC)
- SC: D. Dardari (UniBO), C. Oestges (UCL), M. Payaro (CTTC), R. Verdone (UniBO)
- Three Exp. Tracks: Radio Channel Characterisation / Localisation / Multi-Hop Networks
- Keynote Opening by Werner Mohr, NSN
- First day: theory (three tracks in sequence)
- Second day: practice (three tracks in parallel) OR seminars
- 3<sup>rd</sup> day: theory (three tracks in sequence)
- Attendees: max 15 students per experimental track plus open access to the seminars
- Lecturers: part from IC1004, part from Newcom#, part from outside

IC1004: Trainers travel costs, 25 grants for PhD and ESRs, organisat. support = 2000€

NEWCOM#: Trainers travel costs, organisat. support = 2500 EUR

EURACON: logistics

### 6th IC1004 Training School

“SAR & EM exposure in wireless networks” (preliminary)

Joint with LExNET FP7 project

Venue: Paris (Telecom Paristech)

Dates: 2 ½ days **15-17 APRIL-2014** (TBC)

Organiser: Alain Sibille (Telecom Paristech)

Attendees: 30 - 35 students

<http://www.ic1004.org/training-schools>

IC1004 support: Trainers travel costs, 25 grants for PhD and ESRs, organisational support (as approved in 3rd Year Term Budget)

### Short Course at EuCAP 2014

“Radio channels for cellular communications” (Preliminary title)

Venue: The Hague (Netherlands)

Dates: 11 April 2014 (@ EuCAP conference)

Organiser: **Claude Oestges** (UCL)

Attendees: 30 - 35 students

IC1004 support: 3.5 k€

- Buon Kiong Lau (SE), VISTA
  - Workshop, Cross presentations, ...
- Sana Salous, (UK) Vice-Chair of URSI C
- Istvan Szini (USA), CTIA
- Moray Rumney, 3GPP RAN4
- Fernando Velez (PT) IC905, TERRA → Raul Chaves
  - Cross presentations/(sessions?), Chair invited to next meeting (Nov.2014), ...
- Haibin Zhang, (NL) GreenTouch

- Narcis Cardona, (ES) METIS
- Roberto Verdone, Newcom#, EurACON
- Alister Burr, Diwine
- Alain Sibille, Lexnet,...

Rapporteurs are kindly asked to report at plenaries and to send a short written report.

Please send your reports to Secretary by **October 15th**

### 9th MCM

5-7 Feb 2014 Ferrara, Italy

Local organisers: Vellio Tralli, Roberto Verdone

### 10<sup>th</sup> MCM and Workshop

26-28 May 2014, Aalborg

Organiser: Gert Pedersen

→ DATES APPROVAL?

- September 2014 is open, ...Montenegro, Krakow, Dublin
- Jan/Feb 2015, ...

## 15. Close of Meeting

Action Points after 8th MCM:

| AP  | WHAT                                | WHO               | WHOM      | WHEN   |
|-----|-------------------------------------|-------------------|-----------|--------|
| 8.1 | Apply for ESR grants to conferences | ESRs              | Chair     | 7-Oct  |
| 8.2 | Send comments to Action poster      | All               | Chair     | 7-Oct  |
| 8.3 | Send reimbursement invoices docs    | Those entitled to | Secretary | 15-Oct |
| 8.4 | Send Minutes of Group Meetings      | Group Chairs      | Chair     | 15-Oct |
| 8.5 | Liaisons: send reports              | Rapporteurs       | Secretary | 15-Oct |

## 15. Close of Meeting

Action Points after 8th MCM:

| AP  | WHAT                             | WHO              | WHOM         | WHEN        |
|-----|----------------------------------|------------------|--------------|-------------|
| 8.6 | WG activities description update | WG Chairs        | Chair        | 15-Oct      |
| 8.7 | Proposal of Book topics and ToC  | All              | Chair        | 31-Dic      |
| 8.8 | Send STSM Applic.                | Those interested | eCOST +Chair | <u>Open</u> |
| 8.9 | Tutorials: proposals             | All              | Chair        | Anytime     |

## 15. Close of Meeting

Action Points after 8th MCM:

| AP   | WHAT                             | WHO                                            | WHOM      | WHEN   |
|------|----------------------------------|------------------------------------------------|-----------|--------|
| 8.10 | Register to 7th MCM              | attendees                                      | website   | 20-Jan |
| 8.11 | Request TD number                | authors                                        | website   | 20-Jan |
| 8.12 | Entitle substitutions            | MC                                             | Secretary | 20-Jan |
| 8.13 | Submit full TD                   | Authors after <b>after</b><br><b>8.10+8.11</b> | website   | 27-Jan |
|      | Book flights for Ferrara meeting | attendees                                      | -         | ASAP   |



**Cooperative Radio Communications for Green Smart Environments**



**THANK YOU !**

**See you in Ferrara,  
February 5-7**