

COST IC1004
Final Workshop and
Management Committee Meeting
May 5-7, 2015
Valencia, Spain

Start time: Tuesday 5-May-2015, 9:00
End time: Thursday 7-May-2015, 16:15

Agenda:

Monday May 4th

Venue: Palacio de Congresos, Valencia

19:45 Welcome cocktail

Meeting points:

19:20 Front door Hotel [Barceló](#) (by City of the Arts)

19:35 Front door Hotel [Reina Victoria](#) (by City Hall).

19:45 [Palacio de Congresos](#)

Tuesday May 5th

Venue: Museo Príncipe Felipe, Ciudad de las Artes y las Ciencias.

8:30 Registration

Workshop on "Radio Channel Models for Higher Frequency Bands"

9:00 Opening

9:15 **"Millimeter-wave channel modeling - big challenges ahead".**

Invited talk. Katsuyuki Haneda ; Aalto Univ., Finland

9:50 **5G radio access and channel modeling**; Fredrik Harrysson, Jonas Medbo and Henrik Asplund, Ericsson Research, Sweden

10:15 **Measured Wideband Characteristics of Indoor Channels at Centimetric and Millimetric Bands**; Wei Fan, Jesper Ø. Nielsen, Ines Carton Llorente, Kim Olesen and Gert F. Pedersen; Aalborg University, Denmark

10:40 *Coffee Break*

11:05 **Item Level Characterization of mm-wave Indoor Propagation**; M.Zoli¹, S.Häfner², E.M.Vitucci¹, R Müller², F.Fuschini¹, D.Dupleich², M.Barbiroli¹, J.Luo³, E.Schulz³, V. Degli-Esposti¹, R. S. Thomä³ ; (1) Univ. of Bologna, (2) Ilmenau Univ. of Technology, (3) Huawei Technologies Dusseldorf GmbH, Munich)

11:35 **Quasi-Deterministic millimeter wave channel models for access and backhaul in MiWEBA**; R.J. Weiler, M. Peter, W. Keusgen [Fraunhofer HHI]; A. Maltsev, I. Karls, A. Pudeyev I. Bolotin [Intel]; I. Siaud, A.M. Ulmer-Moll [Orange]

12:00 **Proposal on mmWave Channel Modeling for 5G Cellular System**; Sooyoung Hur, Sankyu Baek, Byungchul Kim and Jeongho Park; DMC R&D Center; Samsung Electronics, Suwon, Korea

12:25 **Channel sounding at Submillimeter Wave Frequencies**; Maria-Teresa Martinez-Ingles¹, Davy P. Gaillot², Juan Pascual-Garcia¹, Jose-Maria Molina-Garcia-Pardo¹, José-Víctor Rodríguez¹, Lorenzo Rubio³

and Leandro Juan-Llácer¹; (1) U.P. Cartagena, Spain; (2) U. of Lille , France; U.P. València, Spain

- 12:50 **Urban Microcellular Channel Characteristics at 11GHz**; Minseok Kim¹, Jun-ichi Takada², Yuyuan Chang², Jiyun Shen³, Yasuhiro Oda³, Satoshi Suyama³; (1) Niigata University, Japan; (2) Tokyo Institute of Technology, Japan; (3) NTT Docomo, Japan
- 13:15 Concluding remarks
- 13:30 *Lunch*

Workshop on "Evolution of Radio Access Network Technologies towards 5G"

- 14:30 Opening
- 14:35 **Towards User-Centric Operation in 5G Networks**; Jose F. Monserrat, Irene Alepuz, Jorge Cabrejas (iTEAM-U.P.Valencia); Vicente Osa, Javier López, María J. Domenech, Vicent Soler; (Astellia), Spain
- 15:00 **A Perspective on Virtual Radio Access Network**; Luisa Caeiro (EST Setubal, Portugal), Sina Khatibi, Lucio S. Ferreira, Luis M. Correia (IST/INOV – INESC, University of Lisbon), Portugal
- 15:25 **Green Oriented Multi-Techno Link Adaptation metric for 5G Multi-Techno Heterogeneous Networks**; Isabelle Siaud, Anne-Marie Ulmer-Moll, Orange Labs Rennes, France
- 15:50 Coffee break
- 16:10 **Invited Talk: 5G Channel Models by METIS Project**; Pekka Kyösti (Anite, Finland)
- 16:35 **Energy Harvesting Device-to-Device Communications for 5G**; Yan Zhang (Simula Research Laboratory), Norway
- 17:00 **The Effects of UE Location on Pilot Contamination in Collocated and Distributed Massive MIMO**; Paul Harris; Mark Beach, Simon Armour (University of Bristol), U.K.
- 17:25 **Location based distributed Failure Management for 5G Ultra-Dense Small Cell Networks**; S. Fortes, R. Barco, A. Aguilar (Univ. of Malaga), Spain
- 17:50 Concluding remarks
- 18:00 End of Workshop
- 18:15 (optional) Depart of 2 hours guided visit to Valencia. Meeting point: venue.

Wednesday May 6th

Venue: iTEAM, CPI Buildings, Universitat Politecnica de Valencia

13th Management Committee Meeting

- 8:30 Registration open
- 9:00-9:45 MCM Plenary
- 9:45-10:45 Working Group Sessions

<i>Plenary</i>	<i>TD number</i>	<i>Room</i>
TWG-i +WG1	12, 17, 9	Blue
TWG-O	26, 27, 28	Red
TWGU + WG3	14, 16, 30	Yellow

- 10:45-11:15 Coffee Break
- 11:15-13:00 Working Group Sessions

WG1 +SWG1.2	20, 49, 50, 24, 38 (mm)	Blue
SWG2.1 +WG2	6, 32, 25 +DISC	Red
WG3	2, 15, 21, 29, 42, 48	Yellow

13:00-14:15 Lunch

14:15-16:00 Working Group Sessions

WG1	41, 36, 18, 22, 11	Blue
TWG-V	31, 33, 34, 35, 40	Red
TWG-O	39, 45 + DISC	Yellow

16:00-16:30 Coffee Break

16:30-18:00 Working Group Sessions

SWG1.1	3, 44, 46, 47 +DISC	Blue
TGW-B	5, 7, 8, 10 +DISC	Red
WG3 + TWGU	4, 19, 13, 23 +DISC	Yellow

19:20 Buses depart to dinner

(Meeting points: 19:20 H. Reina Victoria, 19:40 H.Barceló)

20:00 Social event & dinner at [Balneario Las Arenas](#)

Thursday May 7th

Venue: iTEAM, [CPI Main Auditorium](#) (Blue Cube), Universitat Politecnica de Valencia

13th Management Committee Meeting

- 9:00 Narcis Cardona (iTEAM-U.P.Valencia, ES)
The future of (Radio)COST Action, "IRACON. The 5G and what may happen beyond"
Abstract: not available
- 9:20 Roberto Verdone (CNIT-Univ. Bologna, Italy) "Network Architectures for the future IoT"
Abstract: The IoT is a concept that includes a variety of applications, from automotive to agriculture fields. It is now agreed that the design of 5G networks will take account of the IoT paradigm, to fulfill specific requirements posed by some IoT applications. On the other hand, what network architecture will better serve the IoT applications is still undefined. This talk will discuss some of the options currently envisaged for the integration of the IoT in 5G design, from the viewpoint of network architectures.
- 9:40 Invited Talk: Carles Anton (CTTC, Barcelona) "Energy Harvesting for Wireless Sensor Networks: recent work and challenges"
Abstract: Energy harvesting has become a key enabler for a sustainable operation of wireless sensor networks. By efficiently using the energy scavenged from the environment (e.g. solar, thermal, kinetic, electromagnetic or other sources) network lifetime can be substantially extended. In this talk, we will present some recent work in our group on the design of EH-aware packet scheduling and power allocation schemes aimed to maximized the aggregated throughput or minimizing distortion in the reconstructed source(s). Both point-to-point and point-to-multipoint communication scenarios will be considered. Particular attention will be paid to the impact of time/ spatial correlation in the observed data and/or the sampling process(es), zero-energy operation, or latency constraints arising in some specific applications.
- 10:10 Reiner Thomä (T.U. Ilmenau), "Challenges for Channel Sounding at mm-Wave Frequencies"
Abstract: (not available)
- 10:40 Coffee Break
- 11:00 B. K. Lau (Lund Univ., SE), "Antenna Design Paradigms for Future Wireless"
Abstract: (not available)

- 11:30 R. D'Errico (CEA-LETI, FR) and K. Y. Yazdandoost (NICT, JP) "A radio channel model for body-centric communications"
Abstract: This talk presents the results of radio channel modeling activities in the IC1004 Topical Working Group on Body Environment. Radio channel models for on-body and off-body communications are presented, focusing on the dynamic aspects caused by the human mobility and the body-worn antenna effect on channel characteristics. Perspectives on BAN-centric communications in the framework of 5G will be discussed.
- 12:00 Wim Kotterman (T.U. Ilmenau, DE); "Over-the-Air testing beyond downlink 4/5G MIMO"
Abstract: (not available)
- 12:30 Rocco Di Taranto (Chalmers, SE) "Location-Aware Communications for 5G Networks"
Abstract: "Fifth-generation (5G) networks will be the first generation to benefit from location information that is sufficiently precise to be leveraged in wireless network design and optimization. We argue that location information can aid in addressing several of the key challenges in 5G, complementary to existing and planned technological developments. These challenges include an increase in traffic and number of devices, robustness for mission-critical services, and a reduction in total energy consumption and latency. This article gives a broad overview of the growing research area of location-aware communications across different layers of the protocol stack. We highlight several promising trends, tradeoffs, and pitfalls."
- 13:00 Lunch
- 14:00 Silvia Ruiz (Barcelona TECH-UPC, ES); "Advances in HetNets"
Abstract: (not available)
- 14:30 Alister Burr (U. York, UK); "New physical layer challenges for 5G"
Abstract: (not available)
- 15:00 Erik Ström (Chalmers, SE); "V2X Communication: State-of-the-art and Open Problems"
Abstract: (not available)
- 15:30-16:15 **Closing Plenary**
- Coffee