



Cartagena, May 29 - June 1, 2018

**Subject | Minutes of the 7<sup>th</sup> Management Committee Meeting of COST Action CA15104 “Inclusive Radio Communication Networks for 5G and beyond (IRACON)”**

**Cartagena, Spain  
30/05/2018**

## **1. Welcome to participants/Opening formalities**

Prof. Claude Oestges, Chair of the Action, opened the meeting at 9.00 am. The participants were welcomed by the Local Organizer, Dr. D. José María Molina García-Pardo, Universidad Politécnica de Cartagena, Department of Information and Communication Technologies. Information about local arrangements were provided to the audience.

The Chair acknowledged the fulfilment of the quorum, i.e. at least two thirds of the COST countries participating in the Action are represented at the 7<sup>th</sup> MCM.

## **2. Adoption of the Agenda**

The agenda for the 7<sup>th</sup> MCM was adopted without modifications, based on the online version previously circulated.

## **3. Approval of minutes and matters arising of last meeting (MCM6, Nicosia)**

The minutes of the 6<sup>th</sup> MCM were posted on the IRACON website, under the section “Meetings & Events”, “Meetings”, “6<sup>th</sup> MC meeting and 6<sup>th</sup> technical meeting”, “Documents”, “Minutes (and attachments)”. The minutes have been approved.

The Chair reminded to sign the official attendance list for each day of the meeting attended and to sign one attendance list for each WG/EWG attended. No reimbursement of travel expenses (for those entitled to) will be processed if attendance lists are not duly signed.

Prof. Oestges announced that the Newsletter meeting for the Members of the Steering Committee (i.e. the WG Chairs) will be held on Thursday 31<sup>st</sup> at 5:30 pm, in room PB.5

## **4. Status of the Action**

The updated number of **Signatory Countries** is the following:

- Number of signatory countries: 35 (out of 36)
- Number of MC Members: 66 (+ Chair)

The status of Kosovo has recently been changed from International Partner Country to Near Neighbour Country.



Regarding the International Partner Country Institutions, the Chair informed about a pending approval from the University of Canterbury (NZ). The suggestion of the Core Group was to invite this institution to attend one meeting before it can be granted a role as observer (i.e. 2 contributions per year). This would allow presenting them and discussing with them directly the possibility of being involved in the Action

The Chair reminded that contributing to the Action is important and that Action participants have to fulfil some obligations, in particular: **COST Country institutions & Near Neighbour Country institutions** must contribute with a TD, a tutorial, etc., at least at ONE meeting/training school per year. If this condition is not fulfilled, the institution will be deregistered from the IRACON website.

In this regard, the attendees were also reminded that TDs and materials produced within the Action are not publications, but rather technical documents of the project for internal use.

As for the **International Partner Countries**, the criteria for approval were reiterated as follows:

- According to COST rules, there must be a mutual benefit behind the approval of a Non-COST Institution (NCI)
- Other criteria include: scientific excellence (Universities), role in the industrial context (Industries), technical topics and WGs addressed, geographic balance

The requested commitment to the Action is slightly different from that of the other countries as it envisages to present contributions (TDs, tutorial, etc.) at minimum TWO meetings/training schools per year. Once again, in case of non-fulfilment the institution will be deregistered from the IRACON website.

A few slides with important reminders were shown to participants:

### **Reimbursement Eligibility**

Eligible participants reminded to always refer to the COST Vademecum.

In this regard, the audience was informed that IRACON has been assigned a new COST Administrative Officer.

#### ➤ **MC meetings**

- ✓ Up to two MC members per COST Country
- ✓ MC members can be replaced by officially nominated MC substitute, if the Chairman and GH receive request by given deadline
- ✓ Eligibility priority for MC meetings:
  1. All MC members who apply, or MC official substitutes, Action Chair, Secretary, invited speakers and ECI representative
  2. WG/EWG/SWG Chairs (while budget is available\*)
  3. Non-MC members, presenting a TD, when replacing an MC member (while budget is available\*)



4. Other experts, one per country (while budget is available\*)

➤ **Technical meetings**

✓ Eligibility priority

1. Action Chair, invited speakers
2. WG/EWG/SWG Chairs (while budget is available\*) in combination with COST policy priorities (inclusiveness/gender)
3. Core Group members, Secretary (while budget is available\*)

➤ **Deadlines and Procedures**

- ✓ TD submission
- ✓ Request a TD number (**20 days** before the meeting)
- ✓ Send to the secretary a full TD (**10 days** before the meeting) using the cover page available on the website

These deadlines are important and must be respected, as they enable the Vice-Chair and the Local Organiser to prepare the meeting schedule and the overall logistics.

If there are any constraints, the Secretary and the Vice-Chair should be informed at the earliest. For any doubts, the participants can refer to the schedule of the previous meetings, as they are normally quite similar.

➤ **Meeting registration: two actions are required**

- ✓ Register on [IRACON website](#) (**20 days** before the meeting)
- ✓ Accept the e-cost invitation

➤ **Reimbursement (for those entitled to)**

- ✓ Accept the e-cost invitation
- ✓ Fill the e-cost and submit the claim (after the meeting)

The reimbursement procedure **MUST** take place on e-cost.

- ✓ If you cannot attend but are replaced by an eligible substitute
  - Send a request to the Chair and GH (cc: secretary) at least **20 days** prior to the event to enable the reimbursement of your official substitute



## ➤ e-Mailing and Acknowledgment

### • Usage of global reflector

- ✓ The global reflector ([all\\_ca15104@iracon.org](mailto:all_ca15104@iracon.org)) is **moderated** and should not be used to advertise events (outside those of the Action itself)
- ✓ Ask Lucia ([lucia.vitiello@unibo.it](mailto:lucia.vitiello@unibo.it)) to include your announcement on the IRACON Web Page ([NEWS](#))
- ✓ WG reflectors have been created

The Chair reminded that it is very important to acknowledge the Action, because this is one of a few metrics to show that the Action is doing well.

### • Acknowledge COST CA15104 IRACON on all joint publications

→ *This work was carried out in the framework of COST Action CA15104 IRACON*

→ *The authors acknowledge the fruitful discussions in COST Action CA15104 IRACON*

The Chair reviewed the activities performed so far and reported about the current and future activities:

### February 2018

- COST Academy Training on Using social media to communicate your research (Brussels, 6 Feb 2018)
- IRACON represented by Luis Correia

### March 2018

- 3rd IRACON Training School, jointly with IEEE VTS (Lisbon, 5-9 March 2018) Beyond 5G Networks operating in the Millimetre Wavebands enabled by Joint Analogue-digital Signal Processing

### April 2018

- COST Connect on “How to shape a Sustainable Urban Mobility for all?” (Bucharest, 25-26 April 2018)  
IRACON represented by Vasos Vassiliou (MC Cyprus)
- 4th IRACON Training School, jointly with Met5G (Guildford, Surrey, 16-17 April 2018) “Defining and Realising SINR in Future Mobile Networks”

### May 2018

- 7th MCM (Cartagena, 30 May-1 Jun 2018) organized by Jose Molina-Garcia-



# IRACON



Pardo

Training seminar on "RF Localisation Techniques" (jointly organized with ITN WIBEC)

An update followed on IRACON **Dissemination Actions**, namely:

## **IRACON SPECIAL SESSIONS**

### **EuCAP 2018, London, April 9-13, 2018**

→ 4 IRACON special sessions

- ✓ Beamforming techniques for information and power transmission – a joint COST IRACON and COST WiPE session
- ✓ COST CA15104 (IRACON): Frequency dependency modelling of radio channels
- ✓ COST CA15104 (IRACON): Measurements and simulations in channel modelling in wireless body area networks
- ✓ COST CA15104 IRACON: Mm wave and THz channel modelling

### **IEEE WCNC 2018: IRACON Special Session on Localization in Current and Emerging Networks, Barcelona, 15-18 April 2018**

Organizers: UAB, Chalmers, DLR

## **IRACON WORKSHOPS**

IEEE WCNC 2018: IRACON Workshop on IoT Enabling Technologies in Healthcare, Barcelona, 15 April 2018

- ✓ Workshop organizers: Kamran Sayrafian, Hamed Ahmadi, Konstantinos Katzis, Slawomir J. Ambroziak

EuCNC 2018: Joint IRACON-Clear5G-5Gcar Workshop on Vertical Industries & Applications for 5G (VIA5G), Ljubljana, 18 June 2018

- ✓ Workshop organizers: Haibin Zhang, Klaus Moessner, Woon Hau Chin, Erik Ström, Chiara Buratti

PIMRC 2018: Joint IRACON-5GIC Workshop on Millimetre Wave Communications, Bologna, 9-12 Sep 2018

- ✓ Workshop organizers: Reiner Thomä, Harris Pervaiz

The Action also took part in a few special sessions organised by COST:

## **COST-ORGANIZED SPECIAL SESSIONS**

5th European Conference on Sustainable Urban Mobility Plans - Planning for



Multimodal Cities, Nicosia, May 14, 2018

- ✓ COST special session (organized by Mickaël Pero)
- ✓ IRACON represented by Vasos Vassiliou (MC Cyprus)

EucNC 2018, Ljubljana, June 18-21

- ✓ COST special session (organized by Ralph Stübner)
- ✓ IRACON represented by Gordana Gardašević (MC Bosnia-Herzegovina)

With no further comments from the Audience, Part 4 on the Status of the Action was officially approved.

## 5. Review of action deliverables

Regarding the publications to be uploaded on the IRACON website, it was decided to include only Joint Publications with a DOI code and some joint projects (i.e. 34 products in total), as it would be quite time consuming to include them all.

The Chair then showed the status of the technical deliverables (in green the Deliverables already provided):

### Technical deliverables for the first two years

#### Completed:

- **Deliverable 1** (M14, May 2017): Working Groups first year term annual report summarising the achievements of every WG  
→ all WGs
- **Deliverable 2** (M20, November 2017): Overview of IRACON Reference Scenarios and assessment of 5G radio access techniques through experimental platforms  
→ WG3, EWG-RA
- **Deliverable 3** (M24, March 2018): Submission to international bodies of contributions about concerted 5G radio channel models  
→ WG1
- **Deliverable 4** (M24, March 2018): Collaborative white paper on new localization techniques suitable for 5G and the Internet of Things  
→ EWG-LT+IoT

#### To be finalized:

- **Deliverable 5** (M26, May 2018): Working Groups second year term annual report summarising the achievements of every WG  
→ all WGs

More details were provided on the ongoing Deliverable 5, including the suggestion to postpone it by approximately 1 month with respect to the original schedule:



## Edition

- WG chairs are the contributors
- Chair and Vice-Chair are the editors

## Content

- 1 page per WG/meeting
- Scientific results and dissemination activities (no equations!)
- Will be published on IRACON website

## Schedule: delayed

- Draft version by April 22, 2018 → **June 8, 2018**
- Review by Chair/Vice-Chair by May 1, 2018 → **June 20, 2018**
- Delivery by May 31, 2018 → **June 30, 2018**

## ➤ Technical deliverables for the last two years

- **Deliverable 6** (M36, March 2019): Collaborative white paper on future architecture and protocols for the Internet of Things  
→ **EWG-IoT**
- **Deliverable 7** (M38, May 2019) : Working Group third year term annual report summarising the achievements of every WG  
→ **all WGs**
- **Deliverable 8** (M42, September 2019): Technical inputs and liaison statements to Standardisation Groups on metrics for Over the Air (OTA) testing  
→ **EWG-OTA**
- **Deliverable 9** (M42, September 2019): IRACON concerted radio channel models for 5G and beyond (draft book chapter)  
→ **WG1**
- **Deliverable 10** (M26, May 2018): Working Group final report summarising the achievements of every WG in the overall Action (draft book)  
→ **all WGs**



## 6. Financial Report from the Grant Holder

The Chair informed the audience that COST offered a budget increase for IRACON, because the action is performing very well. The extra budget was allocated on EuCAP 2018, ITC-CGs and, STSMs. There was an overall surplus of around 700 euro, since some eligible EuCAP participants did not claim a reimbursement. More than expected was spent on STSMs (11 in total), which is a very good result. There were more bank fees than expected.

The Chair asked if there were any questions or different opinions on this issue.

He also reminded that there is an open call for STSMs and ITC-CGs.

Those who are interested in ITC-CGs should refer to the specific online guideline for the rules (e.g. they can be used for any conference, by ECIs and Inclusive target countries, and a specific mention to IRACON must always be included).

An overview of the financial report of Year 2 was shown:

<b>Financial report for Y2</b>			
<b>Networking Tool</b>	<b>Description</b>	<b>Budget</b>	<b>Actual expenditures</b>
Meetings	2 MCMs, 1 TM, 1 workshop + SS	132 521.20 EUR	132.259.79 EUR
Training Schools	3 TS	15 000.00 EUR	13 083.95 EUR
STSMs	11 STSMs	12 700.00 EUR	13 000.00 EUR
ITC Conference Grants		3500.00 EUR	3500.00 EUR
Other Expenses Related to Scientific Activities	Bank fees	930.03 EUR	1 629.35 EUR
<b>Total Science Expenditure</b>		<b>164 148.24 EUR</b>	<b>163 473.09 EUR</b>
Financial and Scientific Administration and Coordination (MAX. 15%)	15 %	24 622.24 EUR	24 520.96 EUR
<b>Total Grant</b>		<b>188 770.48 EUR</b>	<b>187 994.05 EUR</b>

As well as the updated Work and Budget Plan for Year 3

<b>Updated Work and Budget Plan for Y3 (roughly, + 6 kEUR)</b>		
<b>Networking Tool</b>	<b>Description</b>	<b>Budget</b>
Meetings	3 MCMs	131 350.00 EUR
Training Schools	2 TS	19 960.00 EUR
STSMs	At least 12 STSMs	14 400.00 EUR
ITC Conference Grants	Conference grants	4600.00 EUR
Other Expenses Related to Scientific Activities	Bank fees	976.50 EUR
<b>Total Science Expenditure</b>		<b>171 286.50 EUR</b>
Financial and Scientific Administration and Coordination (MAX. 15%)	15 %	25 692.98 EUR
<b>Total Grant</b>		<b>196 979.48 EUR</b>





Since the Grant Holder, Prof. Roberto Verdone, could not attend, he presented his slides via Skype.

The GH addressed an important issue related to clause 5.7 on the Action Grant Agreement, i.e.:

*5.7 The payment of the instalments is subject to the availability of funds under the applicable SGA.*

This means that the GH anticipates the final payments of a financial year, without the certainty to be refunded afterwards. Furthermore, these projects cannot count on indirect costs either, to reduce possible financial risks.

The GH explained that he contacted the COST Association to suggest that said clause should be modified in order to provide his institute with some sort of assurance.

However, since COST did not agree with the suggestion, the GH announced to the audience his possible resignation by the end of 2018. This would also imply that IRACON will no longer be able to avail of a Secretary and of EURACON support.

Before an actual resignation, the GH intends to take the following actions:

- Contact the other COST Actions (about 200) to ask if they also believe that clause 5.7 should be removed from the AGA. In this respect, the GH asked if he should act alone (just for his institution) or on behalf of the whole MC.
- Finalise all the steps related to both Cartagena and Podgorica meeting (where EURACON is also involved).
- Submit the Intermediate Financial Report of Year 3 and resign afterwards.

The GH announced that he will not resign in December if one of the following solutions is found viable:

1. Clause 5.7 is removed from the AGA
2. The Final Financial Report is accepted with accruals, as it used to be
3. The MC finds a way to be financially liable, together with the GH. For example, by anticipating about 30 kEUR throughout the Action, as an insurance in case the COST Association doesn't pay the final instalment.

The GH then asked if there were any other suggestions or questions from the attendees.

The Vice-Chair shared his concern about a possible GH resignation in the middle of Y3. The GH ensured that all the regular procedures will in any case be finalised.

More details on this issue will be provided to the MC in the coming weeks.



## 7. Election of ECI representative (ECIs only)

Before the election of the new ECI, the Chair reviewed the definition of this acronym: an Early Career Investigator, who is maximum 8 years after the PhD (in this case no PhD degree after June 1, 2010).

The role of an ECI representative in the core group (one-year mandate) is to:

- Participate in the core group discussions and preparation of the MC meetings
- Be responsible for the Action Newsletter and Blog

The previous ECIs were: Margot Deruyck (BE) for Y1 and Luca Feltrin (IT) for Y2.

Then the following two ECI applicants were presented and voted by show of hands:

- Conchi Garcia Pardo (ES)
- Piotr Rajchowski (PL)

The result is that Conchi Garcia Pardo was elected as the next ECI Representative. Claude thanked both of them and reminded that the duration is of 1 year.

### Cartagena, Spain 01/06/2018

The Management Committee Meeting resumed on Friday at 11:15 am.

The MC was asked to vote on the GH issue (AGA clause 5.7) presented on May 30<sup>th</sup>, in particular they were asked if the GH should act alone or on their behalf.

The vote was unanimous in favour of supporting the GH.

Some solutions were also discussed to provide the GH with some insurance:

1. Envisage and extra contribution (up to 5-10 EUR) for each meeting, which would distribute the risk among many people, with a very limited personal investment.
2. Each institution pays 300 EUR to create a fund. However this could be difficult to justify legally and it does not grant that every institute will actually pay.

The MC was asked to share other possible solutions and to vote on the GH first suggestion via email by June 15<sup>th</sup>.

The Chair recommended the GH not to resign in the middle of a Grant Period, since the contract has already been signed, but rather at the end of the 3rd Grant Period, to facilitate the Action.

On the issue of the GH resignation, the vote was the following:  
3 abstentions, 0 against, 63 approved.



## 8. Presentation and Discussion of Technical Documents

The Chair announced that 74 TDs will be presented at this meeting and presented the schedule.

# of TDs submitted		74			Room		PB.1 PB.3 PB.4			Room		PB.1 PB.3 PB.4			
# of TDs not to be presented		0			Room		PB.1 PB.3 PB.4			Room		PB.1 PB.3 PB.4			
# of TDs to be scheduled		0			Room		PB.1 PB.3 PB.4			Room		PB.1 PB.3 PB.4			
# of TDs scheduled already		74			Room		PB.1 PB.3 PB.4			Room		PB.1 PB.3 PB.4			
Start time															
Hours		M19:00 - 10:45			M19:00 - 10:45		M19:00 - 10:45			M19:00 - 10:45		M19:00 - 10:45			
Sessions		D1M1S#			D2M1S#		D2M1S#			D3M1S#		D3M1S#			
TD number or other		MC Plenary (Room Salon de Grados 1st floor)			WG1		WG3			OTA (+WG1)		IoT-H IoT (+3)			
TD number or other					Vehicular		Wireless			OTA-vehic		medical IoT			
TD number or other					29		18			51		41 39			
TD number or other					36		33			8		61 44			
TD number or other					55		74			48		DISC 52			
TD number or other					57		DISC			DISC		3			
TD number or other					38							DISC			
Coffee Break															
Hours		10:45-11:15 ((+ ECI Representative Election))			10:45-11:15		10:45-11:15			10:45-11:15		10:45-11:15			
Sessions		D1M2S#			D2M2S#		D2M2S#			D3M2S#		D3M2S#			
TD number or other		WG1 WG2 WG3			WG1		IoT-H (+1) LT			MC Plenary (Room Salon de Grados 1st floor)					
TD number or other		mmW			Meas.		IoT-H LT								
TD number or other		6 25 17			43		42 4								
TD number or other		22 71 34			49		63 13								
TD number or other		40 45 64			54		24 15								
TD number or other		68 DISC 67			58		DISC 27								
TD number or other		69			DISC		30								
Lunch															
Hours		13:00-14:00			13:00-14:00		13:00-14:00			13:00-14:00		13:00-14:00			
Sessions		D1A1S#			D2A1S#		D2A1S#			End of Meeting					
TD number or other		WG1			WG1+OTA		IoT (+3) LT								
TD number or other		models			mmW		Cellular IoT LT								
TD number or other		56			37		7 28								
TD number or other		21			9		62 59								
TD number or other		32			16		60 73								
TD number or other		46 DISC			50		65 DISC								
TD number or other		47			DISC		5								
Coffee Break															
Hours		15:30 - 16:00			15:30 - 16:00		15:30 - 16:00			15:30 - 16:00		15:30 - 16:00			
Sessions		D1A2S#			D2A2S#		D2A2S#			D2A2S#			D2A2S#		
TD number or other		WG1 RA (+2+3)			WG1+WG2		IoT-H								
TD number or other		models Access			MMIMO		models								
TD number or other		70 11			10		1								
TD number or other		72 19			66		2								
TD number or other		53 35			23		14								
TD number or other		DISC DISC			DISC		26								
TD number or other															
End time															
End time		17:30													

He also suggested a few topics to be included in the Working Groups discussions:

- Next deliverables
- Training School proposals/topics for 2019 and beyond
- Joint activities with H2020 projects
- Tutorial offers for upcoming meetings
- Final book chapter sections
- Joint activities (experiments, papers, etc.)
- Short Term Scientific Missions among participant institutions
- Any other idea to foster the dissemination of the Action?

## 9. Report from Training Manager (STSMs, Training Schools and Tutorials)

The Training manager showed an overview of the previous training schools:

### 2017/2018

**4th** Training School: IRACON/Met5G Training School – April 16-17, 2018 Guildford, Surrey, UK

**3rd** Training School: VTS PT Chapter/COST-IRACON Joint Winter School on Beyond 5G Networks operating in the Millimetre Wavebands enabled by Joint Analogue-digital Signal Processing – March 5-9, 2018 Lisbon, Portugal

**2nd** Training School: ESoA/COST-IRACON Joint Training School on Large Scale Radio Propagation – June 12-16, 2017 Louvain-La-Neuve, Belgium



**2016/2017**

**1st Training School: WIBEC/COST-IRACON Joint Training School on Antennas and Propagation Modeling for Body Environment Communications – May 1-3, 2017 Dresden, Germany**

And then presented the upcoming training school of Grant Period 3:

**Working Title** – Transmission of small information quantities in dense networks, from theory to practice

Jean-Marie Gorce, Laurent Clavier

**Proposed dates** – around Oct/Nov 2018

**Host** – Lyon, France

**Subjects:**

1. Theoretical foundations – Inf. Theory, small packets, stochastic geometry, interference... Cooperation – Network coding
2. Connected things - Energy harvesting / RF / Hardware / OS and embedded software
3. Standardization and access networks - (802.15.4, LP-WAN, Lifi...) → SigFox/LoRa/NB-IoT
4. Experimentation - 1/2 day cortex-lab or NB-IoT; 1/2 day FIT-Senslab, MAC & NET

The STSMs of Year 1 and 2 were also reviewed.

## **STSMs for GP1**

Spain (x2), Austria, Danemark (x2), Croatia, Belgium, Italy (x3), Germany (x2), France (x3), Finland (x2), Portugal, Bosnia and Herzegovina (x2)

1. [Multi-bands MIMO dual-Pol measurements and characterization of Radio Propagation for future 5G and B5G Wireless systems](#)
2. [Spatial Consistency in 5G Radio Channel Propagation mm-wave Spectrum](#)
3. [Characterization and Modeling of the MIMO Radio channel in the W-band](#)
4. [Concealed, Chassis Integrated, Pattern Reconfigurable, Automotive Antenna](#)
5. [Over-the-air performance evaluation of massive MIMO antenna systems in anechoic chambers](#)
6. [Implementation and measurement of 5G waveform candidate using OpenAirInterface](#)
7. [Introducing Multiple UAV Trajectories in UAV-Aided B5G Networks](#)
8. [Impact of Radio Channel on the Performance of ALOHA-based Medium Access Control Schemes](#)
9. [Experimental Characterization of Joint Scheduling and Routing algorithm over 6TiSCH](#)
10. [Performance Evaluation of MCF \(minimum cost forwarding\) and SRMCF \(source routing MCF\) routing protocols over 6TiSCH \(IPv6 over the TSCH mode of IEEE 802.15.4e\)](#)



## STSMs for GP2

11 accepted – 2 rejected – 1 cancelled

Sweden (x5), Belgium, Austria (x2), UK, Finland, Spain (x3), Poland (x2), Portugal (x3), Italy, Russia, France, Germany

1. Measurement and Characterisation of a Real-Time Channel Emulator based on a Software Defined Radio
2. Characterization and design of mm-wave antennas for 5G
3. Polarised Off-body Channel Measurements with Dynamic User
4. Simulations of the radio channel in off-body communications in a passenger ferry environment
5. 5th Generation (5G) Communications: Parameterizing COST2100 at 60 GHz for the establishment of simplified user scheduling for Massive MIMO
6. Full-Duplex device-to-Device Communications
7. Implementation of Low-complexity Hybrid Analogue-digital Solutions in CAP-MIMO
8. Power-efficient and reliable mm-wave communications in dynamic environments
9. Design RF devices in millimetres with glide-symmetry structures
10. Tactile internet enabled Drone Control over LTE for Ultra-Dense Cloud Drone Networks
11. Elaboration and description of multipath propagation for mmW

## 10. Final book

The Chair reminded the attendees that the main goals of the WG discussions with regard to Final Book are the following:

- Based on the initial assumption of one chapter per WG
- Each WG elects a representative in the Book Editorial Committee (e.g. one of the WG chairs)
- During this meeting, each WG discusses about a list of sections
- After this meeting, the WG chairs finalize the discussion and propose the list of sections to the Chair
- Integration of all sections into a set of coherent chapters by the BEC
- Timeline
  - Frozen Table of Contents by Oct 2018
  - First draft by April 2019

## 11. Future MCMs and Workshops

A few updates on the next MC and WG meetings of the Action were shared with the attendees:

### Upcoming Meetings

- 8th MC and technical meeting
  - Podgorica (MT), 1-3 October 2018
  - Organizer: Milica Pejanovic-Djurisic
- 9th IRACON MC/technical meeting and first ??? workshop
  - DCU Dubin (EI), 16-18 January 2019
  - Organizer: Conor Brenan



## Future Meetings

- 10th IRACON MC/technical meeting and second ??? workshop
  - Spring 2019
  - Offers received so far from U Oulu/Keysight (FI), JCT/Tel-Aviv/Jerusalem (IL) and CTTC Barcelona (ES)
- 11th IRACON MC/technical meeting and third ??? workshop
  - Fall 2019
  - Gdansk University (PL)
- 12th (final) IRACON MC/technical meeting and 4th ??? workshop
  - Early 2020 (before March 22)
  - Offers from Belgium (UCLouvain and/or UGent)

## 12. Reports from Working Group Chairs

### DWGs

1. Sana Salous and Katsuyuki Haneda reported about the activities carried out within WG-1 (radio channels)
2. Hanna Bogucka and Jan Sykora reported about the activities carried out within WG-2 (PHY-MAC)
3. Silvia Ruiz and Hamed Ahmadi reported about the activities carried out within WG-3 (NET)

### EWGs

1. Wim Kotterman and Moray Rumney reported about the activities carried out within WG-OTA
2. Erik Ström and Chiara Buratti reported about the activities carried out within WG-IoT
  - ✓ Slawomir J. Ambroziak and Kamran Sayrafian reported about the activities carried out within SWG IoT-Health
3. Carles Anton and Klaus Witrisal reported about the activities carried out within WG-LT
4. Florian Kaltenberger and Mark Beach reported about the activities carried out within WG-RA

## 13. Liaisons with International Bodies and Projects

The Action is involved with several international bodies and other projects:

- 3GPP – Aki Hekkala
- URSI – Sana Salous
- ITU-R – Sana Salous and Belen Montenegro
- H2020 5G-XCAST – Narcis Cardona
- H2020 5G X-haul – Mark Beach
- CommNet (EPSRC network) – Mark Beach
- IEEE 1900.6 – Kostas Katzis
- EurAAP – Claude Oestges
- EURACON – Roberto Verdone



- WiBEC – Conchi Garcia
- 5G initiative – Fernando Velez
- Met5G – Tim Brown
- Clear5G – Haibin Zhang
- Wavecombe – Sana Salous/Narcis Cardona

## 14. AOB

The Chair reminded the upcoming deadlines and action points:

- The dates for Podgorica (ME) meeting are fixed  
→ Book your flight and hotel early

## 15. Close of Meeting

### Action points

AP	WHAT	WHO	WHOM	WHEN
8/1	Submit reimbursement forms	Those entitled to	e-cost	June 15
8/2	Send Minutes of Group Meetings	Group Chairs	Chair + Secretary	June 15
8/3	Send STSM Applic.	Those interested	e-cost + Training Chair	Open call
8/4	Send ITC Conf. Grant Application	ITC ECIs	e-cost + Action Chair	Open call
8/5	Send list of sections per chapter	Group Chairs	Chair	June 15
8/6	Send D5 contribution	Group chairs	Chair, Vice-Chair	June 8
8/7	Register to 8th MCM	Attendees	Website	Sep 14
8/8	Request TD number	Authors	Website	Sep 14
8/9	Submit TD	Authors	Website	Sep 21



# IRACON



## **List of Annexes**

- Annex 1- Agenda
- Annex 2- Chair's Presentation
- Annex 3- List of persons entitled for reimbursement
- Annex 4- TDs list
- Annex 5- TDs Schedule
- Annex 6- Attendance lists
- Annex 7- WGs Minutes