



Graz, September 12 - 14, 2017

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

**Graz, Austria
12/09/2017**

1. Welcome to participants/Opening formalities

The plenary of the 5th *Management Committee Meeting* of COST Action CA15104 (IRACON) was chaired by Prof. Claude Oestges, Chair of the Action, who opened the meeting at 5.45 pm. He verified the quorum, i.e. two-thirds of the Participating COST Countries, was present: 28 out of 35 countries participating in the Action were represented in the meeting. Prof. Oestges welcomed the audience.

2. Adoption of the Agenda

The Chair reviewed the agenda of the meeting. The agenda for the 5th *MCM* was adopted without modifications (Annex 1).

3. Approval of minutes and matters arising of last meeting (MCM4, Lund)

The Chair reminded to sign the attendance official list and the attendance list for each WG/EWG attended. He also reminded the Newsletter meeting on September 13 at 5:40 pm for all WG Chairs and SUB-WG Chairs.

The Chair stated that the minutes of the 4th MCM in Lund were distributed electronically and posted on the IRACON website under the section “Meetings & Events”, “Meetings”, “4rd MC meeting and 4rd technical meeting”, “Documents”, “[Minutes](#) (and [attachments](#))”. The Chair asked if there were any comments or corrections. A motion for acceptance of the minutes was passed with no objections.

4. Status of the Action

The Chair announced that the approval First Year Report was arrived an hour ago. The result was that the implementation is sufficient (= top mark) with no others comments or remarks.

Prof. Oestges provided general information about the meeting schedule (Annex 2):



Day One	Day Two			Day Three		
	Room HS-17	Room HS-15	Room HS-16	Room HS-17	Room HS-15	Room HS-16
Time slot	9.00 - 10.30			9.00 - 10.30		
Sessions	WG1			LT	WG3	
TD number	Models			Location	Spectrum	
TD number	26			24	1	
TD number	42			18	36	
TD number	44			49	48	
TD number	12			22	DISC (WG3)	
TD number	DISC (WG1)			DISC (LT) ctd.		
Coffee Break	10.30-11.00			10.30-11.00		
Time slot	11.00 - 12.30			11.00 - 12.30		
Sessions	WG1	WG2	WG3	WG1+RA	Health	IoT
TD number	Indoor / Trains	Coding	Optimisation	Spatial corr.	Models	Architecture
TD number	30	4	33	35	8	9
TD number	10	29	53	39	13	41
TD number	7	38	52	DISC (WG1) ctd.	54	47
TD number	5	32	16		DISC (Health)	DISC (IoT)
TD number	17					
Lunch	12.30 - 13.30			12.30 - 13.30		
Time slot	13.30 - 15.00			13.30 - 15.00		
Sessions	WG1	WG2	WG3	PLenary MCM (room HS-17)		
TD number	Scattering	Implement.	SON, VRAN			
TD number	34	37	20			
TD number	40	25	3			
TD number	50	14	11			
TD number	2	DISC (WG2)	6			
TD number			43			
Coffee Break	15.00 - 15.30			15.00 - 15.30		
Time slot	15.30 - 17.00			15.30 - 16.30		
Sessions	OTA + RA	Health +LT	IoT	PLenary MCM (room HS-17)		
TD number	Meas.	eHealth+LT	Harvesting			
TD number	45	15	DISC (IoT)			
TD number	46	23				
TD number	19	27	21			
TD number	31	DISC (LT)	28			
TD number	DISC(OTA)			16:30 End of Meeting		
Time slot	17.30 - 18.00			17.30 - 18.00		
Sessions	Opening PLENARY			PLenary MCM (room HS-17)		
TD number	PLenary MCM (room HS-17)			18:00		

The Chair underlined that in order to schedule the TDs, if a participant has any problem, the Core Group needs to know it in advance.

The Chair thanked all WG Chairs for reviews, the Keynote Speakers, the Local Organizers for the organization of the meeting and welcomed the new IPC members. Prof. Albert Lysko gave a brief presentation of the Council for Scientific and Industrial Research (South Africa).

Prof. Oestges launched a call for proposals to attract more people and partners in the Action.

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Since the Action started the de-registration process, Prof. Oestges reminded the COST Action CA15104 (IRACON) rules that have to be fulfilled for registration:

- **Partners (1)**
 - COST Country institutions
 - Commitment to have contributions (TD, tutorial, etc.) at least at ONE meeting/training school per year
 - Deregistration from the internal website access if not fulfilled
 - Near Neighbour Country institutions
 - Commitment to have contributions (TD, tutorial, etc.)
 - At least at ONE meeting/training school per year
 - Deregistration from the internal website access if not fulfilled
- **Partners (2)**
 - International Partner Country Institutions
 - When should we accept applications from NCIs?



- . COST rules: mutual benefit
- . Other criteria: scientific excellence (Universities) role in industrial context (Industries) technical topics and WGs addressed geographic balance
- Commitment to have contributions (TDs, tutorial, etc.) at TWO meetings/training schools per year
- Deregistration from the internal website access if not fulfilled

The Chair introduced the new pending approvals:

- **Northeastern University (USA)**
Representative: Prof. Pau Closas
Status: approved by IRACON MC and COST EB
- **Huawei (CN)**
Representative: Dr Wu Xingfeng
Status: approved by IRACON MC, needs COST EB approval
- **YK State University of Grodno (Belarus, NNC)**
Representative: Prof Boris Assanovich
Status: MC decision needed

Prof. Oestges suggested to take a decision about the YK State University of Grodno (Belarus, NNC). Before the meeting starting, the Chair sent the full application file to the MCMs. Prof. Oestges showed the motivation letter and gave the floor as up to MCMs. He asked for comments, oppositions or abstainences, but there were not. The YK State University of Grodno (Belarus, NNC) was unanimously approved during the 5th MCM.

The Chair explained the deregistration process: partners that were not active in the last Grant Period (about 30) will be contacted and deregistered from the website i.e. the Action revocates the access to internal documents (access is regained through any activity). Since some inactive parties are MCMs, IRACON will invite them to be more active. The Chair asked if there were any comments. There were no negative feedback expressed by the audience.

The Chair presented the submitted PR1 report and the feedback from COST office received on September 12, 2017 at 16:52 and asked for comments.

The Chair reported on events have occurred since the start of the 2nd Grant Period:

- **May 2017: 4th MCM (Lund, 29-31 May 2017)**
 - 85 TDs
 - 2 Invited Speakers
 - Tutorial on massive MIMO (F. Tufvesson) on 1 June 2017 (33 attendants). Prof. Fredrik Tufvesson said a few words about the Tutorial
- **June 2017: 2nd IRACON Training School**
 - 20 participants
 - 8 IRACON grants



- **September 2017: 2nd workshop and 5th MCM (Graz, 12-14 Sep 2017)**
- 15 workshop papers and 53 TDs -> 68 presentations
- 2 Invited Speakers

Prof. Oesteges emphasized the success of the 2nd Workshop in Graz.

- **September 2017: COST Connect Forum on Next Generation Internet (Brussels, 12-13 Sep 2017)**
- IRACON to be represented by Laurent Schumacher (MC substitute for Belgium) IRACON invited speakers: Jean Herveg and Jean-Marc Van Gyseghem (CRIDS, Belgium)
- Decentralized internet governance scenarios
- Human rights and the surveillance society
- Social and Health care and the digital welfare state
- Education and the development of critical minds

The Chair asked for comments on these activities and for any other events to be mentioned.

The Chair reminded Members the Reimbursement Eligibility rules, Deadlines and Procedures, e-Mailing and Acknowledgment:

- **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*)
- **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 set to enable the StC to prepare the meeting schedule. For Graz, 1



TD was rejected as it was submitted after the deadline. The author(s) constraints need to be submitted during the TD submission.

- **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

- **Usage of global reflector**
 - The global reflector (all_ca15104@iracon.org, moderated) should not be used to advertise events (outside those of the Action itself) and it is moderated
 - Ask the GH Manager (lucia.vitiello@unibo.it) to include your announcement on the IRACON Web Page

- **WG reflectors have been created**

- **Acknowledge COST CA15104 IRACON on all joint publications**
 - This work was carried out in the framework of COST Action CA15104 IRACON

The Chair reminded the audience to send the list of joint publications to be posted online.

The Chair moved to dissemination actions.

- **Special Sessions**
 - **EuCAP 2018, London, April 9-13, 2018, 4 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
 - Paper submission deadline: Oct 13, 2017

EuCAP 2018 Local Organizers asked the Chair to decide which one will be labelled as IRACON. There was a discussion, but, at the end, they accepted 4 CA15104 Special Sessions. One of them is joint with another COST Action.



➤ Workshops

- **IRACON Workshop on Dependable Wireless Communications and Localization for the IoT**, Graz, 12 Sep 2017
- **IoT-Health 2018: IRACON Workshop on IoT Enabling Technologies in Healthcare**, IEEE EuCNC 2018, Barcelona, 15 April 2018
- Workshop organizers: Kamran Sayrafian, Hamed Ahmadi, Konstantinos Katzis, Slawomir J. Ambroziak
- Deadline for paper submission: 1 Nov 2017

The Chair really encouraged the audience to submit paper for EuCNC 2018. Prof. Konstantinos Katzis said a few words about the Workshop. Prof. Narcis Cardona, Chair of the conference, explained that the workshop proposals were a lot and the committee accepted only a few submissions.

Prof. Oestges thanked the IRACON WG-Chairs. Prof. Carles Anton-Haro said a few words about the Special Session.

➤ List of research groups and doctoral schools

- List of research groups with activity in the area of the Action (name of the group and contact person/email)
- List of doctoral schools (i.e., universities awarding a Ph.D. degree) in Europe with activity in the area of the Action (name of the university/school and contact person/email)

The Chair explained the importance of collecting these lists and pointed out that were sent many reminders in past months. He asked the audience to collaborate.

➤ Blog

- To launch discussions and/or express views on matters dealt with within the Action
- Possible blog posts include, but are not limited to: a short survey, a technical overview, a small tutorial, etc.
 - Schedule ensuring (at least) a bi-monthly contribution
 - Contributors: members of Steering Committee
 - If you have an interesting contribution for the blog, contact Luis M. Correia

The Chair encouraged the audience to contact Prof. Luis M. Correia to start blogging and share opinions.

5. Review of action deliverables

Prof. Oestges reported the deliverables schedule for the first two years:

- **Deliverable 1** (M14, May 2017): Working Groups first year term annual report summarising the achievements of every WG (all WGs) -> Submitted in June 2017
- **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)
- **Deliverable 5** (M26, May 2018): Working Groups second year term annual report summarising the achievements of every WG (all WGs)
- **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)

The Chair talked about the Deliverable 2 to be delivered in November:

- **Edition**
 - WG3 and WG-RA chairs are the editors
- **Content**
 - IRACON Reference Scenarios (WG3)
 - Assessment of 5G radio access techniques through experimental platforms (WG-RA)
 - Scientific results and dissemination activities (no equations !)
- **Schedule**
 - Draft version by Nov 1, 2017
 - Review by Chair/Vice-Chair by Nov 15, 2017
 - Delivery by Nov 31, 2017

The Chair explained that the goal is to have the draft version by November in order to review it with the Vice-Chair. The WG-Chairs were working on it and they organized a meeting to discuss about it.

6. Report from the Grant Holder (incl. budget amendment)

Prof. Oestges reported the expenditures that the Action had during the 1st Grant Period:



Budget for Y1

Networking Tool	Description	Budget	Actual expenditures
Meetings	2 MCMs, 1 TM, 1 workshop	97 910.00 EUR	92 173.63 EUR
Training Schools	1 TS	12 500.00 EUR	11 164.00 EUR
STSMs	6 STSMs	7 200.00 EUR	7 851.59 EUR
Dissemination	1 (website set-up)	4 500.00 EUR	4 500.00 EUR
Other Expenses Related to Scientific Activities	Bank fees	498.65 EUR	562.80 EUR
Total Science Expenditure		122 608.65 EUR	116 252.02 EUR
Financial and Scientific Administration and Coordination (MAX. 15%)	15 %	18 391.30 EUR	17 437.80 EUR
Total Grant		140 999.95 EUR	133 689.82 EUR

The Chair recalled the main reason for underspending: the Action had not enough money for a third MCM during the first Grant Period.

The Chair announced that COST Office increased and re-allocated the second Work and Budget plan by 13.770,53 EUR for the total grant.

The Chair asked the audience if they agreed to modify the allocation and proposed the following budget plan:

New Work and Budget Plan for Y2

Increased budget compared to our Lisbon decision + new networking tool

Networking Tool	Description	Budget
Meetings	3 MCMs	126 000.00 EUR
Training Schools	2 TS	15 000.00 EUR
STSMs	At least 10 STSMs	12 700.00 EUR
ITC Conference Grants	-	6020.00 EUR
Other Expenses Related to Scientific Activities	Bank fees	930.03 EUR
Total Science Expenditure		160 670.03 EUR
Financial and Scientific Administration and Coordination (MAX. 15%)	15 %	24 100.50 EUR
Total Grant		184 770.03 EUR

The Chair explained the proposal:

- OERSA: the Action still has to pay some bank fees for the first Grant Period
- STSMs: the Action have already allocated 6 STSMs. It would be good to have others 4 or 5 STSMs by next April
- Training Schools: the Action used only 3.200 EUR in Louvain-Le-Nouve as it was a joint event.



The MC Members were asked to approve the new Work and Budget Plane. It was unanimously approved with no objections or abstentions. The Chair undertook to send an email to CA15104 COST Officer.

The Chair announced that COST Office also provided the Action with a new networking tool for ICT Conference Grant and he explained it:

- **New networking tool: [ITC conference grants](#)**
 - **What?** Grant to partially cover expenses for attending a conference (preferably in Europe) related to IRACON
 - **Whom?** ECIs from Inclusiveness Target Countries* presenting a paper/poster
 - **How?** Apply on e-cost at least 45 days before the conference but after the paper is accepted (as a proof of acceptance is needed)
 - **Criteria** (evaluated by Action Chair and ECI Rep)
 - IRACON special sessions and workshops at international conferences
 - Other flagship international conferences related to IRACON objectives
 - CV and IRACON involvement of the applicant
 - Quality of the paper

* Bosnia-Herzegovina, Bulgaria, Cyprus, Czech Republic, Estonia, Croatia, Hungary, Lithuania, Latvia, Luxembourg, Malta, Montenegro, Poland, Portugal, Romania, Slovenia, Slovakia, the former Yugoslav Republic of Macedonia, Republic of Serbia and Turkey

The COST Office estimated 4 grants. The missions have to be completed before the end of the Grant Period (for Y2 by April 30, 2018).

Prof. Narcis Cardona proposed to send an email via IRACON reflector asking if there are some participant intentioned to submit the application immediately after the meeting for conferences taking place before the end of April 2018. The MC Members were asked to comment. It was unanimously approved.

The Chair explained that per the new COST Vademecum rules, the GH Manager cannot be reimbursed by COST CA15104 to attend the meetings.

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

Prof. Laurent Clavier, CA15104 Training Manager, reported the status of the Action Training Schools:

- **Training Schools**
 - [WIBEC/IRACON - Antennas and Propagation Modeling for Body Environment Communications](#)
 - Dresden, Germany, March 1-3, 2017
 - IRACON organizers: Narcis Cardona, Luis M. Correia, Kamran Sayrafian (NIST, USA)
 - [Training School on Large-Scale Propagation \(joint with ESoA\)](#)



- Louvain-la-Neuve (BE), June 12-16, 2017
- IRACON organizer: Claude Oestges
- IRACON teachers: Vittorio Degli-Esposti, Conor Brennan, Thomas Kürner and Claude Oestges
- 8 IRACON grants

- **3 Training School proposals:**

- 1) **Joint IRACON & Met5G Training School** (Tim Brown)

- **Working Title** – Massive MIMO and Massive Interference – Identifying and Quantifying for Future 5G Networks
- **Proposed dates** – Spring 2018 – likely ideal date would be 26th-27th March 2018
- **Host** – University of Surrey, Guildford, UK. Easily accessible from London Heathrow and Gatwick Airports
 1. Massive MIMO Systems and their purpose
 2. Structural function of Massive MIMO and issues around interference including non linearity
 3. The necessity to characterise SINR in supporting future 5G systems
 4. Traceable metrology solutions for characterising/predicting SINR

- 2) **Joint IRACON & IEEE VTS Training School** (Fernando J. Velez)

- **Working Title** – Beyond 5G Networks operating in the Millimetre Wavebands enabled by Joint Analogue-digital Signal Processing
- **Proposed dates** – March 2018, provisional dates: 19th (afternoon) – 23rd March.
- **Host** – Lisbon, Portugal
 1. Development of RF and transceiver technology
 2. Development and verification of signal processing algorithms at the link-level
 3. Development and verification of signal processing and spectrum management algorithms
 4. for system-level optimization
 5. Complete analysis of the system performance and development of a Proof of Concept (PoC) of a complete solution for MAAS
 6. Analysis of the impact in the 5G and the B5G ecosystems, by using innovation management methodologies, considering regulators and standards bodies

- 3) **IRACON Training School**

- **Working Title** – Transmission of small information quantities in dense networks, from theory to practice (Jean-Marie Gorce)
- **Proposed dates** – Sep-Oct 2018
- **Host** – Lyon, France.
 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 Training Manager presented the problem on the first and the second proposals: they will take place in the same period. He proposed to discuss it during the last plenary session in Graz and he invited the audience to contact him or the Local Organizers as they were attended the event and were there to reply questions. Prof. Clavier asked for ideas, interest and comments.

Regarding the [STSMs](#), Prof. Clavier reviewed the activities performed during the first year of activity and reminded the topics:

➤ **STSMs for GP1 – a quick view**

- **Countries:** Spain (x2), Austria, Danemark (x2), Croatia, Belgium, Italy (x3), Germany (x2), France (x3), Finland (x2), Portugal, Bosnia and Herzegovina (x2)
- **Topics:**
 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) 6 accepted already, 1 rejected (Proposal not clear). Try to be clear to aims.

Prof. Clavier summarized the second Grant Period STSMs:

➤ **STSMs for GP2**

- 6 accepted already – 1 rejected
- **Countries:** Sweden (x3), Belgium, Austria, UK, Finland, Spain, Poland, Portugal, Italy, Russia
- **Topics:**
 1. Measurement and Characterization of a Real-Time Channel Emulator based on a Software Defined Radio
 2. 5th Generation (5G) Communications: Parameterizing COST2100 at 60



GHz for the establishment of simplified user scheduling for Massive MIMO

3. Characterization and design of mm-wave antennas for 5G
4. Simulations of the radio channel in off-body communications in a passenger ferry environment
5. Power-efficient and reliable mm-wave communications in dynamic environments
6. Tactile internet enabled Drone Control over LTE for Ultra-Dense Cloud Drone Networks

The Training Manager reminded that the Action still has budget for grants (no more than 1.200 EUR per grant) and invited the participants to submit applications and ask questions.

8. Presentation and Discussion of Technical Documents

The Chair presented the [event TDs](#), papers and Keynote Speakers:

- **54 TD number requests** were requested by the deadline plus **20 papers** were **submitted** for the Workshop
- **53 TDs** have been finally submitted and the will be presented and discussed by the Working Groups during the meeting plus **15 papers** have been finally discussed during the Workshop
- **2 Keynote Speakers:**
 - Henk Wymeersch, Chalmers University, Sweden, title: “5G mmWave: a unique synergy between positioning and communication?”
 - Jean-Marie Gorce, University of Lyon, France, title: “Toward reliable, reactive and energy efficient bursty multi-user communications”

The Chair reminded the points to be discussed during the WG Sessions:

- Next deliverables
- Training School proposals/topics for 2018 and beyond
- Workshop proposals for 2018 and beyond
- Joint activities with H2020 projects
- Tutorial offers for upcoming meetings (starting from January 2018)
- Joint activities (experiments, papers, etc.)
- Short Term Scientific Missions among participant institutions
- Any other idea to foster the dissemination of the Action?

Prof. Klaus Witrisal reminded the social dinner offered by the Local Organizer.

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The Chair opened the discussion on Training School proposals issue. Since there were no comments, he suggested to both the LOs to send him and Prof. Clavier more details in order to give the Core Group the possibility to decide the best option. The proposal was approved.



9. Report from Dissemination Manager

The Chair pointed out the dissemination goals in the coming months. Since the Action needs to write the second progress report about contents in March, the Chair asked to know the lists of IRACON joint publications, joint project/events with other COST Actions and H2020 projects involved. An email will be sent by the GH Manager to collect these data before the end of October.

The Chair highlighted the importance of dissemination for the future of the Action:

- **Leaflet**
 - Goal: high-level introduction of the Action
 - Explains the key aspects of our activities
 - Updated after each meeting
 - Available at <http://www.iracon.org> under “Publications”
- **Newsletters**
 - All issues available at <http://www.iracon.org> under “Publications”
 - Next issue to be expected after this meeting
- **Blog**
 - To launch discussions and/or express views on matters dealt with within the Action
 - Possible blog posts include, but are not limited to: a short survey, a technical overview, a small tutorial, etc.
 - Schedule ensuring (at least) a bi-monthly contribution
 - Contributors: members of Steering Committee
 - If you have an interesting contribution for the blog, contact Luca Feltrin

Prof. Oestges invited the audience to contribute and Prof. Moray Rumney to write a blog about his talk during the Session. The Chair showed the website entrances of the Action.

10. Future MCMs and Workshops

The Chair reminded about the next IRACON events:

- **6th MC and technical meeting**
 - Nicosia (CY), Jan 29-31 2018
 - Organizer: Konstantinos Katsis
 - Tutorial on OTA for 5G (Wim Kotterman and Moray Rumney) on Feb 1, 2018 (half-day)
 - NI SDR training, to be confirmed (likely on Jan 31, 2018, after the closing plenary)

Prof. Konstantinos Katsis presented the venue, the Tutorial and the NI SDR training. Prof. Oestges advised the audience to book the flights in advance, very soon.

- **7th MC and technical meeting**



- Week of May 28, 2018
- Proposals from Univ. of Cartagena (ES) and from CEA-LETI Grenoble (FR)

The Chair explained that the Action received 2 proposals: Cartagena and Grenoble, but there were some problems for Grenoble. Dr. José María Molina García Pardo presented the proposal for Cartagena. Prof. Oestges proposed to confirm this meeting in Cartagena. The meeting venue has been unanimously approved.

- **8th MC and technical meeting**
 - In Sep/Oct, 2018 (TBC, depending on VTC-Fall and 3GPP)
 - Proposal from Univ. Montenegro (ME), likely in Podgorica

The full proposal will be done by Prof. Milica Djur Peanovic in Nicosia.

- **9th MC and technical meeting**
 - Jan-Feb 2019
 - No offer yet

The Chair invited everyone to propose a venue and asked for questions.

11. Reports from Working Group Chairs

The WG co-Chairs were asked to report on the activities of each WGs.

- Prof. Katsuyuki Haneda reported about the activities carried out within WG1: Radio channels (**Minutes_WGs_Graz, DWG1-meeting-report_Graz**).

Prof. Haneda Some asked every WG Chairs to send Prof. Sana Salous a few lines for EuCAP 2018 proposals.

- Prof. Jan Sykora reported about the activities carried out within DWG2: PHY layer (**Minutes_WGs_Graz, DWG2-meeting-report_Graz**).

- Prof. Silvia Ruiz reported about the activities carried out within DWG3: Net layer (**Minutes_WGs_Graz, DWG3-meeting-report_Graz**).

- Dr. Wim Kotterman reported about the activities carried out within EWG-OTA: Over the air testing (**Minutes_WGs_Graz, EWG-OTA-meeting-report_Graz**).

- Prof. Erik Ström reported about the activities carried out within the new EWG-IoT: Internet-of-Things (**Minutes_WGs_Graz, EWG-IoT-meeting-report_Graz**).

- Dr. Slawomir J. Ambroziak reported about the activities carried out within the SEWG-IoT: Internet-of-Things for Health (**Minutes_WGs_Graz, EWG-IoT-Health-meeting-report_Graz**).

- Prof. Klaus Witrisal reported about the activities carried out within EWG-LT: Localisation and tracking (**Minutes_WGs_Graz, EWG-LOCmeeting-report_Graz**).



- Prof. Claude Oestges reported about the activities carried out within EWG-RA: Radio Access.

12. Liaisons with International Bodies and Projects

The following liaisons have been established so far with international bodies, standards and 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 – Narcis Cardona
- 5G initiative – Fernando Velez
- Met5G – Tim Brown
- Clear5G – Haibin Zhang

Prof. Sana Saolus reported on URSI.

Prof. Narcis Cardona reported on H2020 5G-XCAST.

Prof. Haibin Zhang reported on Clear5G.

13. AOB

The Chair reminder to:

- Book the flight and hotel early for Nicosia (CY) meeting
- Submit (those convened) to EuCAP convened sessions by October 13
- Submit to IoT-Health Workshop by November

14. Close of Meeting

The Action Points to be performed after the end of the 2nd Workshop, 5th MC and Scientific Meeting were reminded to the audience:



Action points

AP	WHAT	WHO	WHOM	WHEN
6/1	Submit reimbursement forms	Those entitled to	e-cost	Oct 15
6/2	Send Minutes of Group Meetings	Group Chairs	Chair + Secretary	Oct 15
6/3	Send STSM Applic.	Those interested	e-cost + Training Chair	Open call
6/4	Send ITC Conf. Grant Application	ITC ECIs	e-cost + Action Chair	Open call
6/5	Send list of joint publications	All	Secretary	Oct 15

The Action participants were encouraged to send ITC Conference grants and STSMs applications. Then, the Chair highlighted the importance of submit the list of joint publications.

AP	WHAT	WHO	WHOM	WHEN
6/6	Register to 6th MCM	Attendees	Website	Jan 12
6/7	Request TD number	Authors	Website	Jan 12
6/8	Submit TD	Authors	Website	Jan 19

The Chair highlighted the importance of submit the TD(s) in time: while late registrations depend on the LO, no exception for TDs will be done in order to create the schedule of the meeting.

The Chair thanked Prof. Klaus Witralsal for hosting the meeting and all the participants for attending.

Prof. Witralsal thanked all the participants for attending and the Action to support the event.



IRACON



List of attachments

List of Annexes

Annex 1- Agenda

Annex 2- TDs Schedule Graz

Annex 3- TDs list Graz

Annex 4- List of persons entitled for reimbursement

Annex 5- Attendance list Graz

Annex 6- Attendance lists WGs Graz

Minutes_WGs_Graz

DWG1 meeting report Graz

DWG2 meeting report Graz

DWG3 meeting report Graz

EWG-IoT&SEWG IoT Health meeting report Graz

EWG-LT meeting report Graz

EWG-OTA meeting report Graz