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Workshop Proposal

This document contains a template for all the information relevant to each Workshop to be organised within EuCNC 2020. The guidelines for organising and attending Workshops, as well as the items for the evaluation of proposals, are available at the conference website, under "Authors / Call for Workshops" (http://www.eucnc.eu/call-for-workshops). If the proposal is accepted, this text (the public information in it) will be used to advertise the Workshop in the conference website.

The proposal should be submitted by the deadline, Feb. 7th, 2020, to workshops-eucnc2020@inov.pt. The name of the file should be the Workshop title (abbreviated, if necessary).

Proposer's Name	Antonio de la Oliva, Marcelo Bagnulo, Kim Haesik, Uwe Herzog, Edward Mutafungwa, Samer Talat
Proposer's Institution	University Carlos III of Madrid, VTT Technical Research Centre of Finland, ITRI, Aalto University, Eurescom
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Proposer's CV (text up to 300 words)	**Dr. Antonio de la Oliva** received a Telecommunication Engineering degree in 2004, and a PhD in Telematics in 2008, both from the Universidad Carlos III de Madrid, where he worked as a research and teaching assistant from 2006 to 2008 and, since then, has worked as a Visiting Professor. He has authored over 40 publications in peer-reviewed journals and conferences. He has been involved in IEEE 802 activities since 2007, contributing to several groups such as IEEE 802.11, IEEE 802.19.1, IEEE 802.21 and IEEE 802.1cf. He has also held several official positions, working as IEEE 802.21b vice-chair and currently as IEEE 802.21d Technical Editor. Regarding previous experience in European projects, he has 12 years of experience working in several research projects funded by the European Commission, such as Daidalos II, Onelab, CARMEN, MEDIEVAL, CROWD, and 5G-Crosshaul where he served as WP leader and deputy Coordinator. In addition, he has participated as conference organizer for the IEEE OnlineGreenComm, he has edited a special issue on Extremely Dense Networks for the IEEE Communications Magazine and he is currently serving as Area Editor of Elsevier Computer Communications and Wiley Wireless Communications and Mobile Computing. He is currently coordinating the EU/TW phase 2 H2020 5G-DIVE project and has coordinated the EU/TW phase 1 H2020 5G-CORAL project. **Dr. Haesik Kim** (IEEE Senior Member) is Senior Scientist of 5G and beyond network team in VTT Technical Research Centre of Finland. He received the M.Sc and Ph.D. degree from Korea Advanced Institute of Science and Technology (KAIST) South Korea, in 2000 and Lancaster University UK, in 2009, respectively. He was a visiting PhD student in University of Bergen, Norway and a visiting researcher in National Institute of Information and Communications (NICT) Japan. From 2002 to 2006, he was with Samsung Advanced Institute of Technology (SAIT) where he focused on physical layer system design and standardisation in 3G, SDR and UWB project. From 2008 to 2009, he was with NEC UK where he was involved in 4G WiMAX system design and standardisation. He joined in VTT Technical Research Centre of Finland in 2010 and is currently focusing on advanced PHY and MAC layer system design. He made significant contributions to wireless communication area. (Ex. the world fastest UWB chipset development, a major contributor to WiMedia standard, dozens of patents holder deriving from his research, journal and conference papers in wireless communication area, etc.) He is an author of two books "Wireless Communications Systems Design (Wiley)" and "Design and Optimization for 5G Wireless Communications (Wiley)". He is a vice-chair of 5G PPP steering board. He is a series editor of IEEE Communications Magazine: Design and Implementation of Devices, Circuits and Systems and also an associate technical editor of IEEE Communications Magazine. He served as a conference chair, a session chair and a TPC member of major international journals (IEEE JSAC, etc.) and conferences (ICC, Globecom, VTC, PIMRC, etc.). He is the recipient of the International Conference on Wireless Communications and Signal Processing (WCSP) Best Paper Award in 2010. He as a coordinator, project manager and principle investigator has been involved in many research projects: EU, ESA, Finnish national

	projects. His current research interests include PHY and MAC layer system design, advanced coding theory, advanced MIMO, multi-carrier system, interference mitigation techniques, resource allocation schemes, machine-type communications, ultra-reliable low latency communications, machine learning, etc. **Dr. Marcelo Bagnulo** received the Electrical Engineering degree and the Ph.D. in Telecommunications in 2005, from Universidad Carlos III de Madrid (UC3M), Spain. He holds a tenured associate professor position at UC3M since 2008. His research interests include Internet architecture and protocols, inter-domain routing and security. He has published more than 60 papers in the field of advanced communications in journals and congresses (including INFOCOM and IEEE/ACM Transactions on Networking) and he is the author of 20 RFCs in the Internet Engineering Task Force (IETF) including the Shim6 protocol for IPv6 multihoming and the NAT64/DNS64 tools suite for IPv6 transition. Dr. Bagnulo was a member of the Internet Architecture Board between 2009 and 2011. He is currently the coordinator of the EU/BR project 5G-RANGE and he was the coordinator of the EU funded Trilogy 2 project. **M.B.A, Msc. Uwe Herzog** has more than 20 years of professional experience in industry research. He joined Eurescom, the leading organisation for managing collaborative R&D in telecommunications, 20 years ago as programme manager, focusing on the areas of service platforms and mobile communication networks. In these areas he has managed a large number of studies and projects on topics which are of concern to the Eurescom member community of European telecom network operators. He has served as coordinator or project manager of several RTD projects under the European framework programmes. Uwe has also got experience in business and economic aspects from his MBA, from participating to innovation / spin-off activities at Deutsche Telekom and from serving as evaluator in the H2020 SME instrument focusing on Open Disruptive Innovation. He is member of the editorial board of the Eurescom mess@ge magazine and has authored numerous articles for the magazine as well as for IEEE, Wiley and e.g. Springer publications. Recent work is in the context of the NetWorld2020 (head of secretariat of NetWorld2020 ETP) and the 5G Infrastructure PPP – where Uwe participates in several projects and is the coordinator of the 5G-DRIVE and INSPIRE-5Gplus projects. Uwe holds a M.Sc. degree in electrical engineering from the University of Chemnitz, Germany, and an MBA from the University of Mannheim and ESSEC Business School Paris. **Dr. Edward Mutafungwa** is a Staff Scientist and Project Manager at the Department of Communications and Networks (COMNET) of Aalto University School of Electrical Engineering. Currently he serves as project manager for the EU-Korea PriMO-5G project, Work Package Leader in TERAWAY project and the co-manager for the Finland test site of the 5G-MOBIX project. His current research interests are on ultra-dense networks and leveraging 5G for mission-critical or underserved areas.

	Dr. Samer T. Talat (Male) obtained his Electrical Engineering and Computer Science Ph.D. degree in 2015, Communication Engineering M.S. degree in 2005 from National Chiao Tung University, Taiwan. Talat achieved his Electronic Engineering B.S. degree in 2002 from Princess Sumaya University for Technology, Jordan. He has authored several publications in the international peer-reviewed journal, patents and conferences in the areas of cognitive wireless networks scheduling, Next Generation Radio access and radio resource management. Besides Academic, he was with FRC Component Products Inc, Taiwan Branch from 2009 to 2015. Also, he was with E-Tech Systems from 2002 to 2003. Dr. Talat was engaged with several R&D Projects and have several years of experience in 3G, 4G, 5G & Data technologies. Specifically, in the areas of WiMAX, LTE, NR. In 2016, he joined the Information and Communications Research Laboratories at the Industrial Technology Research Institute. Currently, his main research interests focused on 5G-Wireless Mobile Communications including Device-to-Device Communications, Mobile Computing, High-speed networks, AI and more. In addition, he has been involved in different EU research projects such as 5G-Crosshaul project, 5G-Coral, and 5G-Dive. In addition, leading demonstrates and trials work packages involving technology integration between Taiwan and European partners. Dr. Talat is participating in 3GPP RAN2/SA2 covering V2X, ATSSS, 5WWC, EC, ProSe and positioning for 5G Radio system. Lastly, Dr. Talat has already submitted US and international patents in his field of expertise.
Project (indicate the project, if the proposal is associate to one)	- 5G-DIVE (Taiwan) - 5G-RANGE (Brazil) - 5G-Allstar (Korea) - 5G-Enhance (Japan) - 5G-DRIVE (China) - PriMO-5G (Korea) - 5G-CONNI (Taiwan) - FASTEN EU-BR (Brazil) - Thor (Japan) - EMPOWER (EC/USA CSA)
Workshop Title	Workshop on B5G key technology planning for EC collaboration with other geographical regions (B5G-COLAB)

Motivation and Background (describe the motivation and background for the Workshop, indicating why you think that this is a good topic for a Workshop at EuCNC, up to 300 words)	The workshop is jointly organized by projects forming part of the EC collaboration with other geographical regions: i) Brazil (5G-RANGE), ii) China (5G-DRIVE), iii) Japan (5G-Enhance), iv) Korea (5G-Allstar and PriMO-5G) and v) Taiwan (5G-DIVE and 5G-CONNI). The projects involved in the geographical collaboration of the EC have to driving industry adoption of 5G by promoting and nurturing research in applications of 5G communications. All the above projects represent the coordination between the EC and the different governments on 5G development. The motivation of the workshop will be to bring together experts from both Europe and other regions to explore key topics of interest for B5G and future technological trends in the different regions. The aim of the workshop is to give the audience an idea of the key technologies that are identified on each region as critical for their development and also to discuss possible mechanisms to improve the cooperation, by analyzing the results of the current projects. The workshop targets **B5G** as a pathfinder for future actions by pursuing the following goals: • Discuss progress and priorities with participating projects. • Ensure industry views are represented, also beyond 5G PPP. • Engage in a multi-stakeholder dialogue aimed at facilitating contributions to the standards process.

Structure
(describe the format of the workshop, identifying the existence of keynote speakers, panel, invited papers, technical sessions, and so on; if available, the key people speaking at the workshop should be identified)
	The workshop will be structured as follows:
	• Keynote presentations (90 min)
	  ○ Pertti Jauhiainen (European Commission)
	  ○ Prof. Kenta Umebayashi (Japan)
	  ○ Prof. Seong-Lyun Kim (Korea)
	  ○ Dr. Alain Mourad (USA/EC Collaboration), Director InterDigital
	  ○ Dr. Li-Fung Chang (Taiwan), Director of the 5G Office
	  ○ Mr. José Gotijo, director of the Brazilian Ministry of Science, Technology, Innovation and Communication
	• Coffee break.
	• Panel/discussion table on current activities per geographical region and future plans for B5G (120 minutes). Participants representing the following projects:
	  ○ 5G-DIVE (Taiwan)
	  ○ 5G-RANGE (Brazil)
	  ○ 5G-Allstar (Korea)
	  ○ 5G-Enhance (Japan)
	  ○ 5G-DRIVE (China)
	  ○ PriMO-5G (Korea)
	  ○ 5G-CONNI (Taiwan)
	  ○ FASTEN EU-BR (Brazil)
	  ○ ThoR (Japan)
	  ○ EMPOWER (EC/USA CSA)

Duration	☐ Half-day
Workshop TPC (identification of the key people for the Workshop Technical Programme Committee)	Antonio de la Oliva (UC3M) Marcelo Bagnulo Braun (UC3M) Emilio Calvanese (CEA-LETI) Kim Haesik (VTT) Uwe Herzog (EURESCOM) Edward Mutafungwa (AALTO) Riku Jantti (AALTO) Shawkang Wu (ITRI) Bengt Ahlgren (RISE) Alain Mourad (InterDigital)
Previous Editions (in case it's not the first edition, give information on previous ones, e.g., people involved, number of participants, number of submitted and accepted papers, among other)	Although not a direct previous version, this workshop takes the token of the EuCNC 2019 Workshop on Results analysis of the European and Taiwanese Cooperation on 5G Phase I (RETCO). After the successful workshop held last year, we thought it could be a good opportunity for others to discuss the ideas on B5G that are being discussed in the different geographical regions, including all projects currently working with Asia, Brasil and USA.
Specific Promotion (provide any specific plans that may be considered for announcing the workshop)	Mailing lists (IEEE TC mailing lists, EuCNC mailing list) social media (also with invites to register for EuCNC) and professional networks, including relevant Linkedin groups. Coordination of promotion also via the 5G PPP COMMS Group **Post-workshop Dissemination:** An executive summary with the main take-away messages and next steps for each project represented, including: • Interaction with relevant SDOs to define next steps, shared in a report for TB & SC. • Promotion of the booths of the projects@EuCNC • LinkedIn blog post and social media campaigns. • Follow-up events.