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|  | | **International telecommunication union**  **Telecommunication Standardization Bureau** | |  |
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| Ref: | **TSB Circular 297**  TSB Events/DA | | **To:**  - Administrations of Member States of the Union;  - ITU-T Sector Members;  - ITU-T Associates;  - ITU Academia | |
| Contact: | **Denis ANDREEV** | |
| Tel: | +41 22 730 5780 | |
| Fax: | +41 22 730 5853 | |
| E-mail: | [tsbevents@itu.int](mailto:tsbevents@itu.int) | | **Copy to:**  - The Chairmen and Vice-Chairmen of ITU-T Study Groups;  - The Director of the Telecommunication Development Bureau;  - The Director of the Radiocommunication Bureau | |
| **Subject**: | **ITU-ETSI-IEEE** **Joint SDOs Brainstorming Workshop on Testbeds Federations for 5G & Beyond: Interoperability, Standardization, Reference Model & APIs  15-16 March 2021 (Fully Virtual Meeting)** | | | |

Dear Sir/Madam,

1 It is my pleasure to invite you to the **ITU-ETSI-IEEE Joint SDOs Brainstorming Workshop on Testbeds Federations for 5G & Beyond: Interoperability, Standardization, Reference Model & APIs.**This workshop will take place virtually on **15 and** **16 March 2021** from 14h00-17h30 CET each day.

2 Over the years, ICT Research Communities, together with the Industry, have been working on various topics on building and implementing Testbeds for various purposes, including ICT Testbeds and Testbeds for Vertical Applications (such as certain applications in the areas of transportation, finance & banking, healthcare, automotive, manufacturing, production plants, retail, entertainment & broadcasting, etc, that leverage ICT technologies and infrastructures). Today, there are many Testbeds available for Research purposes and many Testbeds continue to be built by the Research Communities and by the Industry as well.

3 There is an urgent need to build an Ecosystem for enabling Sustainable Testbeds Development, Evolutions, and Federations based on the newly required Standards for Testbeds Federations (including the required APIs (Applications Programming Interfaces) for Testbeds Federations) and Interoperability. This call by the Industry is becoming immensely louder across the whole ICT Industry and Verticals alike, especially in this era of automation and consideration of emerging impacts of pandemics like COVID-19 on products developments and lifecycle management.

4 The Research Communities and the Industry (Solutions vendors/suppliers, Communications Service Providers (CSPs), Enterprises, and Standards Development Organizations (SDOs)/Fora) all have roles to play in this desired Ecosystem that should be built now and into the future, in this era of “*Software’rization*” of ICT Networks, 5G and Beyond.

5 ITU-T, ETSI and IEEE are major SDOs working on the topic of Testbeds for 5G and Beyond. Part of the Objectives of this Workshop is to help identify and communicate the roles of the various stakeholders, moving forward.

This Workshop provides a platform for ITU-T, ETSI and IEEE to brainstorm and share ideas on Testbeds Federation Challenges, including:

* the Testbeds Federation Reference Model being jointly standardized by ITU and ETSI;
* APIs Requirements for Testbeds Federations and what may have been achieved in this area with respect to existing API implementations by Research communities and the Industry;
* how to use the Reference Model to guide Research and Industry to contribute to the development of the APIs being prescribed by the Reference Model;
* how the SDOs can potentially share the burden on APIs Standardization and on Roadmaps in a harmonized and collaborative way;
* Potential New Business Models for Testbeds Suppliers that derive from the Testbeds Federations Reference Model.

The Workshop also seeks to engage the various Stakeholders (Research Communities, Researchers on 5G and Beyond, Industry Users of Testbeds, Testbeds Suppliers for 5G Testbeds and other Testbeds, CSPs, Infrastructure Vendors/Suppliers for ICT and Verticals, Regulators, and any other interested parties) to discuss the roles the various Stakeholders can play in the desired Ecosystem to be built by the SDOs. With main focus and target being Testbeds Federations for Industry-grade Use Cases.

6 The Panel discussion will be focused on the following topics:

* Potential New Business Models for Testbeds Suppliers that derive from the Testbeds Federations Reference Model;
* Regulatory Aspects (if any) of relevance to Testbeds Federations;
* Challenges that need to be addressed as guided by the Reference Model and APIs for Testbeds Federations for 5G & Beyond being Standardized by collaborating SDOs;
* The roles that can be played by Stakeholders (e.g. SDOs/Fora, Research Communities, Researchers on 5G and Beyond, Industry Users of Testbeds, Testbeds Suppliers for 5G Testbeds and other Testbeds, CSPs (Communications Service Providers), Infrastructure Vendors/Suppliers for ICT and Verticals, Open Source & Open Hardware Projects, Regulators) in the Desired Ecosystem for Standards based Testbeds Federations and APIs Development;
* Transformation or Evolution of Existing Testbeds (Industry and Potential Research Testbeds as well) and Federation APIs to meet the Requirements of the Testbeds Federation Model being standardized;
* Messages to and from Open Source Projects & Open Hardware Projects regarding the role of Industry-applicable Open Source and Open Hardware in the desired Ecosystem for Testbeds Federations for 5G & Beyond.

7 Participation in the workshop is open for ITU Member States, Sector Members, Associates and Academic Institutions and to any individual from a country that is a member of ITU, who wishes to contribute to the work. The event is open to ETSI and IEEE members and non-members, particularly Research Communities, Researchers on 5G and Beyond, Industry Users of Testbeds, Testbeds Suppliers for 5G Testbeds and other Testbeds, CSPs, Infrastructure Vendors/Suppliers for ICT and Verticals, Regulators, and any other interested parties or stakeholders active in this field of expertise.

8 All pertinent information relating to this virtual joint workshop including the draft programme, speakers, moderators, etc. will be made available on the event website at: <https://www.itu.int/en/ITU-T/Workshops-and-Seminars/20210316/Pages/default.aspx>. This website will be updated regularly as new or modified information becomes available. Participants are requested to check periodically for new updates.

9 Registration is mandatory for all participants in order to be able to access the remote participation tool. You are invited to complete the online registration form available on the event’s web page. The remote participation details will be provided accordingly.

Yours faithfully,

Chaesub Lee  
Director of the Telecommunication  
Standardization Bureau