



Agenda

- ▶ Welcome & Introduction
- ▶ Highlights of the ICC 2018 Meeting
- ▶ History of the TI-TC
- ▶ Discussion on new activities
- ▶ Report on standards activities
- ▶ Report on conferences
- ▶ Report on publications
- ▶ Any other Business

Highlights of the ICC 2018 Meeting

- ▶ More publicity is requested
- ▶ Report of activities:
 - Workshops organized at ICC, WCNC, and Globecom
 - New Tactile Internet track at IEEE Globecom 2018 + 2019 SAC Symposium
 - Special issue in JSAC – to be published soon
 - Special issue in Proceedings of IEEE – to be published Q1 2019
 - Standardization activities
 - New projects on TI globally!

Highlights of the ICC 2018 Meeting

- ▶ Election of the chair of the TC: Meryem Simsek
- ▶ Election of the vice chair of the TC: Falko Dressler
- ▶ Election of the secretary of the TC: Oliver Holland
- ▶ The website still requires some polishing
- ▶ P&Ps to be prepared (postponed due to planned general TC-board meeting)

Highlights of the ICC 2018 Meeting



Tactile Internet Emerging Technical Subcommittee

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Welcome to Tactile Internet Emerging Technologies Subcommittee



To be updated!

Recently, the Tactile Internet has been defined by the IEEE P1918.1 Tactile Internet ad-hoc definition group as "A network or network of networks for remotely accessing, perceiving, manipulating or controlling real or virtual objects in real time by humans or machines."

The Tactile Internet (TI) Technical Sub-committee will focus on exploring and elucidating all facets of the next generation "Tactile Internet" technology, business and societal gaps and challenges.

Extremely low latency in combination with high availability, reliability and security will define the character of TI. It will have a marked impact on business and society, introducing numerous new opportunities for emerging technology markets and the delivery of essential public services.

Prof. Dr.-Ing. Dr. h.c Gerhard Fettweis (Technical University Dresden, Germany) describes the tactile internet as "It is nothing less than a new level of the digital revolution". He presented the tactile internet in various organizations, e.g., in Steinbeis-Europa-Zentrum, which is a center for research and industrial collaboration in Europe: http://download.steinbeis-europa.de/2013-10-29-30_CPS/29102013-cps-fettweis-vodafone.pdf or in the wireless world research forum: http://www.wwf30.ch/tl_files/Themes/wwf30/wwf30_documents/Gerhard%20Fettweis%20WRF%202013%2004%2024.pdf

The objectives of the TI Sub-committee are to facilitate the worldwide harmonization of research, pre-standardisation and best practices for deployment user scenarios of the global TI ecosystem, to design the built-in security and privacy and to explore ways the tactile technology can be realized in different segments such as in engineering, automobile, transport and logistics, health service, and public. The TI Sub-committee will target the understanding of the tactile

History of the TI-TC

- ▶ Proposed at ICC`15 as a technical initiative/sub-committee and directly accepted
- ▶ More than 10 workshops and tutorials organized since then in IEEE ComSoc flagship conferences
- ▶ Started the standardization working group IEEE P1918.1 in 2016
- ▶ Two special issues in IEEE JSAC and Proceedings of IEEE
- ▶ Starting in 2018, a new TI track in Globecom SAC
- ▶ A technical committee since Globecom 2017

Discussion on New Activities

- ▶ Proposition paper to distinguish from IoT and 5G
 - Upcoming editorial in Proceedings of IEEE
 - Upcoming article in Proceeding of IEEE
 - Any other paper required?
- ▶ Special interest groups
 - Architecture
 - Applications
 - Edge intelligence

Report on Standards Activities

- ▶ Standardization activities:
- ▶ ETSI: Work item on IPv6 based Tactile Internet within the ISG IPv6
 - Lead by Meryem Simsek
 - Supported Toshiba Research Europe
 - Completed
- ▶ IEEE:
 - IEEE P1918.1 working group on the Tactile Internet continues activities
 - IEEE P1918.1.1 Haptic Codecs group has defined the requirements for haptic codecs and continues its activities

Report on Conferences

- IEEE ICC 2015: Workshop on "[5G & Beyond – Enabling Technologies and Applications](#)"
- IEEE Globecom 2015: Workshop on "[Ultra-Low Latency and Ultra-High Reliability in Wireless Communications](#)"
- IEEE WCNC 2016: Workshop on "[IEEE International Workshop on 5G & Beyond – Enabling Technologies and Application with focus on the Tactile Internet & Vertical Industry](#)" ([workshop program](#))
- IEEE Globecom 2016: Workshop on "[Ultra-Reliable and Low-Latency Communications in Wireless Networks \(URLLC\)](#)"
- IEEE Globecom 2016: Workshop on "[Wireless Networking, Control and Positioning for Unmanned Autonomous Vehicles](#)"
- IEEE WCNC 2017: Workshop on "[5G & Beyond – Enabling Technologies and Applications with focus on the 5G Tactile Internet \(5G TACNET\)](#)"
- IEEE Globecom 2017: Workshop on "[Ultra-Reliable and Low-Latency Communications in Wireless Networks \(URLLC\)](#)"
- IEEE ICC 2018: Workshop on "[5G & Beyond – Enabling Technologies and Applications with focus on the 5G Tactile Internet \(5G TACNET\)](#)"
- IEEE Globecom 2018: Workshop on "[Ultra-Reliable and Low-Latency Communications in Wireless Networks \(URLLC\)](#)"
- IEEE Globecom 2018: TI track in Selected Areas of Communications (SAC) Symposium
- IEEE Globecom 2019: TI track in Selected Areas of Communications (SAC) Symposium

Report on Publications

- ▶ Special issue in JSAC <https://www.comsoc.org/jsac/cfp/emerging-technologies-tactile-internet-and-backhaulfronthaul-networks>
- ▶ Special issue in Proceedings of IEEE
<http://proceedingsoftheieee.ieee.org/upcoming-issues/tactile-internet/>

P&Ps

- Required for all TCs
- Topics to be captured:
 - Membership
 - Officers
 - Nomination and Election Procedures
 - TC Meetings
 - Finances
 - Special Interest Groups
 - Liaisons
 - Awards

Other Business

- ▶ Total number of subscribers to the mailing list: 157 (It was 136 in May`18!)
- ▶ Website administration
- ▶ P&Ps
- ▶ Suggestions for improvements?
- ▶ Further ideas?