

The Vienna Office

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Introduction

IEEE Technology Centre GmbH, Vienna – current staff

- ▶ Dr. Clara Neppel, Senior Director for European Business Operations
 - Responsible for IEEE's operations and presence in Europe
 - From the European Patent Office
- ▶ Dr. Hermann Brand, European Standards Affairs Director
 - Lead the regional efforts of the IEEE Standards Association (IEEE-SA) in Europe
 - From the European Telecommunications Standards Institute (ETSI)



Global Solutions to Global Challenges

One of worldwide IEEE offices



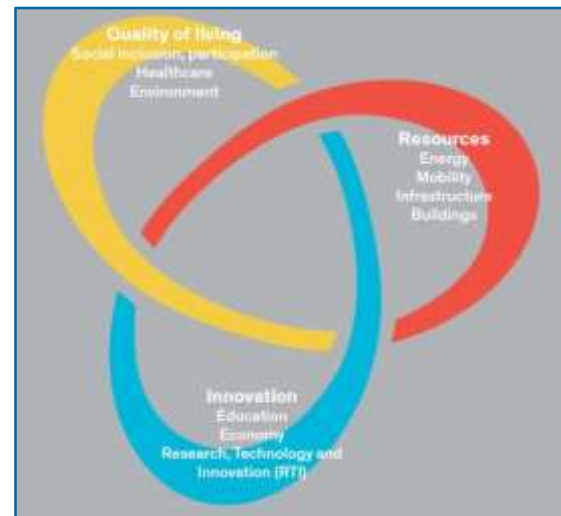
 = IEEE Office



Why Vienna?

A truly global city for a global organization

- ▶ The easternmost city of Western Europe and the westernmost city of Eastern Europe
- ▶ Seat of numerous international organizations: UN, OSCE, IAEA
- ▶ Smart City: ranks highest for quality of living 8th year in a row
- ▶ Home to multiple science and technology parks, research facilities, and robust university technology transfer programs
- ▶ And, practically speaking, reasonable operational costs compared to other major European cities



IEEE Technology Centre in Vienna

Goals

► What:

- Advance IEEE's position as a global organization
- Facilitate global relations
- Expand IEEE's activities with stakeholders
- Increase presence within IEEE, both members and volunteers

► How:

- Collaboration, support and services to the technical community
- Focusing on the needs of industry, academia, and governmental institutions
- Engaging and participating in public policy by facilitating dialogue between technologists and policy makers



Hosted at the Austrian Standards Institute

Meeting facilities

- ▶ IEEE's own meeting room (8 persons) free of charge, coordination needed
- ▶ Modern meeting space available for rent in same building, includes IEEE branding
 - Booking through the building's centralized facilities management team
 - Capacity of largest room 150 theater style
 - All IEEE meetings booked at ASI will receive a 10% discount
 - Weekend availability at additional costs
- ▶ List of local hotels available



IEEE's Mission

Advancing Technology for Humanity

- ▶ **Forward-thinking technology professionals** coming together ...



to discover the next **technological innovation**,
to **form communities**,
to **share research and educate**,
to develop **global standards**,
in the spirit of **collaboration**.
IN ORDER

- ▶ Not only to foster technological advances but to take responsibility of the context and impact of technology evolution

Standardization

- ▶ Engaging with industry and SMEs
- ▶ Promoting IEEE standards and standardization work program
- ▶ Identifying needs for standardization initiatives
- ▶ Engaging with European standardization stakeholders, including standards organizations
- ▶ Engaging in European standardization related policy making
 - Multi-Stakeholder Platform for ICT Standardization (MSP)
 - Monitoring other standards-related activities and commenting/educating where relevant
- ▶ IEEE-SA holds two of its six governance meetings a year in Europe
 - In 2017, they were in Dublin and Milan



European Public Policy Initiative (EPPI) Support

- ▶ Operationalizing EPPI long-term as it continues to evolve from an IEEE New Initiative
- ▶ Conducting other complementary activities and pursue opportunities, for example:
 - Membership in Knowledge4Innovation (K4I), a platform for innovation-minded Members of European Parliament (MEP) and organizations
 - Sponsor of the MEP Award for Digital Single Market
 - Sponsor of MEP Magazine supplement edition on a topic of relevance
 - Participation in European Innovation Summit in the European Parliament



Topics of Interest

- ▶ Digital transformation
- ▶ Interdisciplinary cross-sector innovation
- ▶ Public policy implications of technology



Issues Around Digital Transformation

- ▶ Information/Communication Technologies (ICT) drive innovation in all sectors (Smart Transportation, Smart Grid, Smart Factory, Smart City ...)
- ▶ Convergence of ICT and Operational Technologies into learning Autonomous Systems



Technology
Industry 4.0



Economics
Digital Single Market



Policy
GDPR

Smart Transportation

Advancing the Technologies for Connected Vehicles through Consensus Building

Transportation Electrification
IEEE 2030™ and its related standards are the first all-encompassing standards series providing alternative approaches and best practices for achieving smart grid interoperability.
IEEE 1547™ Series
A series of standards for distributed power to maximize the benefits of interconnection.
IEEE P1562™
Standard for array and battery sizing.
IEEE 1501™ Series
Standards relating to broadband connectivity over electric power lines.

Intelligent Transportation Systems
IEEE 1609™
A family of standards defining the architecture, services and standard interfaces for secure vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) wireless communications.
IEEE 1616™
Standards for motor vehicle event data recorders.
IEEE 802.11™
WLAN to support communication between vehicles and the roadside and between vehicles while operating at speeds up to a minimum of 250 km/h for communication ranges up to 3000 meters.

Traffic Safety
IEEE 1512™
Multiple standards for traffic safety and emergency communication.

Smart Rail
A wide range of standards relating to electric rail operation including IEEE 11-2000, IEEE 16-2004™, IEEE P1653.1™, IEEE P1791™, IEEE P1833™, IEEE P1883™, IEEE P1884™, IEEE P1887™, IEEE P1896™, IEEE P2408™, IEEE 16361™, IEEE 1658™, IEEE 1660™, IEEE 1670™, IEEE 16281™, IEEE 1629™, IEEE 1630™, IEEE 1653™ series, and IEEE 1698™. As well as a series of standards relating to communication for rail transit systems, including IEEE 1473™, IEEE 1474™, IEEE 1475™, IEEE 1476™, IEEE 1477™, IEEE 1482.1™, and IEEE 1483™.

Connectivity
IEEE 802.3
Defining the physical layer and data link layer's media access control of wired Ethernet, in local area networks and wide area network applications.
IEEE 802.15™
Wireless personal area networks allows the use of wearable and other short-range wireless devices (such as health monitors).
IEEE 802.20™ Series
Communications standards for connecting vehicles to 802 systems.

And more...
IEEE Standards Coordinating Committee on Transportation (SCC42) leads the coordination of IEEE standardization activities for technologies related to transportation.

Smart Healthcare



Ethically Aligned Design

A Vision for Prioritizing Human Wellbeing with Artificial Intelligence and Autonomous Systems

► Version 2

- Launching toward end of 2017 as a Creative Commons doc/RFI for second round of public input
- Created by 250+ Global AI/Ethics experts in a bottom up, transparent, open, and increasingly globally inclusive process
- Will incorporate 200+ pages of feedback from public RFI and new Working Groups from Brazil, China, Japan, and Korea
- 13 Committees/Sections
- Will contain 120+ key Issues and Candidate Recommendations
- Designed as the “go-to” resource to help technologists and policy makers prioritize ethical considerations in AI/AS



Cover Design TBD



Initial Engagements



► Standardization

- IEEE 802 Plenary: 9-14 July 2017, Berlin
- P7000 WG meeting: 25 September 2017, Vienna
- Global Standards Coordination: 26-27 September 2017, Vienna
- Multi Stakeholder Platform: 28 September 2017
- IEEE 802 Plenary: 10-15 March 2019, Vienna

► Public Policy

- IEEE-SA European Advisory Council: 5 July 2017, Vienna
- EPPI WG Energy meeting: 28 September 2017, Torino
- K4I Innovation Week: 27-30 November 2017, Brussels
- IEEE Summit Technology for Health: 5 December 2017, Brussels



Takeaways - Vienna Office

- ▶ Part of the **global platform for collaboration** for **Advancing Technology for Humanity**
- ▶ **Serves as a platform** for forward thinking technology professionals:
 - Global initiatives foster local engagement
 - Local initiatives foster global engagement
- ▶ Initial focus: **standardization** and **public policy initiatives**
- ▶ Facilitates **interdisciplinary cross-sector collaboration** to master **Digital Transformation**
- ▶ Contributes to IEEE's mission of taking **social responsibility** for contexts of technology evolution



