

IEEE Vienna Office

*Dr. Clara Neppel
Belgrade
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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)
- ▶ Massimo Pellegrino, European Public Policy Program Manager
 - Responsible for IEEE's public policy activities in Europe
 - From EU Institutions and the United Nations
- ▶ MStats. Tania Sanchez Juarez Zugazagoitia, Executive Administrator
 - General administration of IEEE's Technology Centre
 - From industry (Dell EMC, Kofax) and German Academic Exchange Service (DAAD)



Vienna Office helps achieve IEEE goals

By supporting local and global initiatives

- ▶ Collaboration, support, and services to the European technical community, including IEEE members
- ▶ Focused on the needs of governmental institutions, industry, and academia
- ▶ Engage and participate in **public policy** by facilitating dialogue between European technologists and policy makers
- ▶ Promote IEEE model of developing globally applicable **standards** and engage European stakeholders in standards related activities

IEEE has unique value proposition

Trusted platform of collaboration

- ▶ Human-centric technical innovation
 - In-depth expertise in many technical domains and also beyond (TechEthics)
 - Passionate and motivated volunteers
 - Leverage existing IEEE initiatives and initiate new ones
- ▶ Facilitating different forms of collaboration and building bridges between communities is our strength
 - Globally
 - Across industries
 - Interdisciplinary



Approach: 3 stages



1. Raise awareness of holistic IEEE offering
 - Events, conferences, workshops
 - Dedicated submissions and presentations
 - Outreach activities
2. Identify areas of common interest and explore engagement possibilities
 - Invitations and contributions to related events
 - Engage with related EU funded initiatives, think tanks associations and NSOs
 - Expand existing relationships on new topics
3. Impact, new engagements and collaborations
within IEEE and with external stakeholders – Examples:
 - Explicit input requested for, and citations in EU policy documents
 - Selected to HL Expert Group on AI (application from EPPC and SA)
 - Initiated new ethics certification program ECPAIS (with government agencies, cities and industry)
 - New standardization projects, e.g. on medical device metrology

Raising awareness of holistic IEEE offering

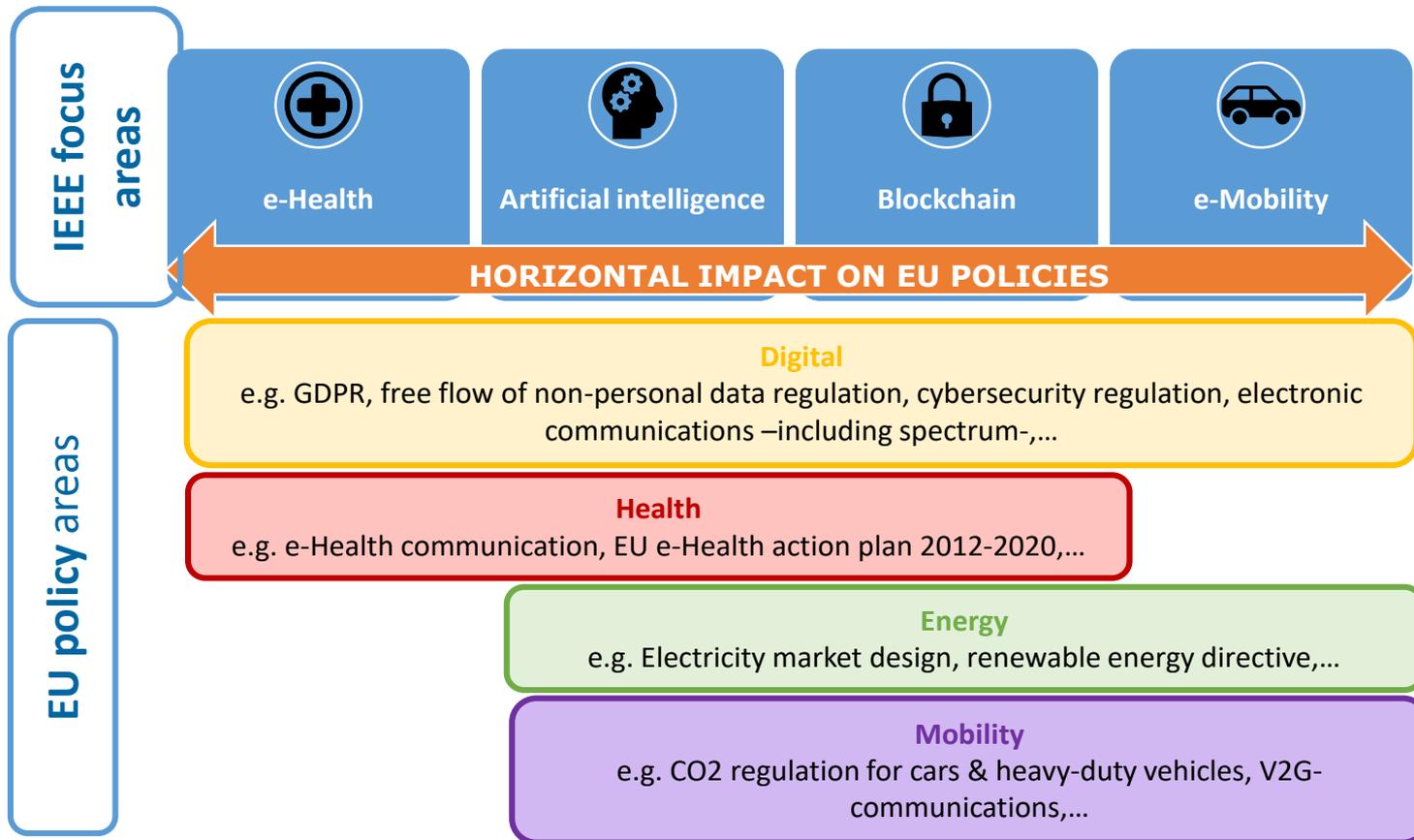
Outreach/Events Examples

- OECD conference “AI: Intelligent Machines, Smart Policies”
- IEEE Summit on Technology for Health
- Mobile World Congress
- POLITICO AI Summit: Innovation & Governance
- Bruegel Workshop: Future of Manufacturing
- Workshops on Innovation around Automotive, Digitisation
- Ongoing IEEE-SA Governance meetings in Europe with accompanying events
- CEN-CENELEC Stakeholder Workshop on 'Trustworthy Artificial Intelligence'
- Responsible Research and Innovation
- My Data Conference
- Ministerial AI Forum
- ...
- European Innovation Week, November 2018, Brussels (EPPC, Blockchain, N3XT)
- ICT Day, DG CNECT, December 2018, Vienna
- Industry workshop on mobility. December 2018 Munich



Areas of common interest

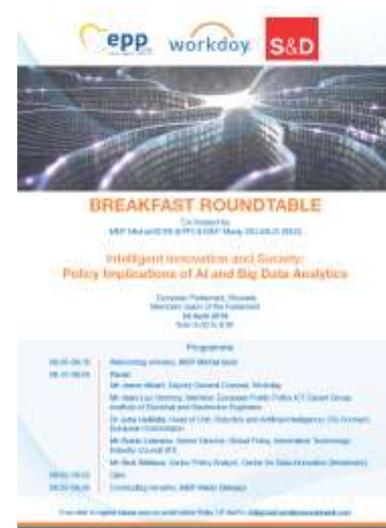
Focus public policy, examples



Invitations to debates organized by MEPs

Intelligent Innovation and Society: Policy Implications of AI and Big Data Analytics

- ▶ IEEE represented by Jean-Luc Dormoy from the IEEE European Public Policy ICT WG
- ▶ Invitation from MEP Michel Boni (Poland) and Mady Delvaux (Luxembourg), 24 April 2018



Engagements with European Parliament

Further examples

- ▶ Intercontinental Blockchain conference
 - Invitation from MEP Atanas Gouga (Lithuania) for the panel on the future of blockchain, AI and IoT
 - More than 400 decision makers, influencers and blockchain companies from Europe, Canada, Australia, USA, Japan attended
- ▶ DATA DRIVEN INNOVATION & AI: ePrivacy, Free Data Flow and High Performing Computing
 - Invitation by MEP Brando Benifei (Italy)
 - Discussion with consumers' associations, industry representatives, European Commission officials and MEPs
- ▶ EP's Science and Technology Options Assessment group visited IEEE's NY headquarter
 - Exchange of information on current initiatives in the domain of human-centric innovation, quantum technology etc



MEP Awards

- ▶ Members of the European Parliament who strive to connect Europe digitally
- ▶ In 2018 sponsored the Digital Single Market Award



IEEE recognized as thought leader on AI ethics



- ▶ IEEE positively mentioned in two important EC policy documents
 - “The Age of Artificial Intelligence” from the European Political Strategy Centre
 - “Statement on Artificial Intelligence, Robotics and ‘Autonomous’ Systems” from the European Group on Ethics in Science and New Technologies
- ▶ IEEE application to the High Level Expert Group on Artificial Intelligence successful
 - Raja Chatila selected as IEEE representative
 - More than 600 applications for 52 places
 - Tasks include
 - Steering the European AI Alliance
 - Advising the EC on AI-related challenges and opportunities
 - Support the Commission on further engagement and outreach mechanisms
 - Propose to the Commission AI ethics guidelines

Parliament Magazine and European Innovation Summit 2018

Collaboration within and beyond OUs

- ▶ The Parliament Magazine, in collaboration with IEEE European Public Policy Committee, has published five special supplements on technology and sustainable development. 2018 is our 6th year.
- ▶ The theme of the 2018 Supplement is around “De-Mystifying BlockChain,” in parallel with the theme of the IEEE European Innovation Summit Dinner Debate in European Parliament
 - With **EPPC** and **Blockchain initiative**, and **policymakers, industry associations**
- ▶ We will also participate at the EU Top50 startup competition
 - With **IEEE Entrepreneurship, SA and R8** !



Engaging with IEEE members through other channels

Example Region 8 News

VIENNA CALLING!

From policy to standards: a holistic view

IEEE set up a European Technology Centre in Vienna, Austria, last September. So what does it do? Senior director **Clara Nappell** explains.

region news



Put simply, the Vienna office provides collaboration support for the technical community across academic, industry and governmental institutions. To this end, our two focus areas at the moment are public policy and standardisation.

Input into EU public policy

Until this year, IEEE ran a European Public Policy Initiative; now we have a full European Public Policy Committee, chaired by Marko Delmar with the active involvement of Region 8 leaders, which reports to IEEE's Board of Directors with support from the Vienna Office.

This operates two working groups - ICT and Energy - to which all members from the EU and EFTA countries can apply. In the last call we received more than 200 applications. The groups meet virtually and in person to develop public policy, documents and white papers, and have the opportunity of engaging with policy makers. Secretarial and program support is handled by Vienna and IEEE corporate staff.

Members in Europe probably know they can engage in public policy already but you don't achieve the same visibility or impact that you would have through an international organisation such as IEEE. Sections and Chapters are encouraged to provide input for public policy statements, a recent example being one on artificial intelligence, which was very well received and provided plenty of opportunity to engage with policy makers.

We also participate in the MEP Awards, organised by the *The Parliament Magazine*, a magazine for EU

policy makers, and therefore recognised by Members of the European Parliament. We even contribute a supplement to the magazine once a year on technology policy.

Information about the European Public Policy Committee, both working groups, position statements, news publications and more can be read online at ieee.org/about/ieee-europe



IEEE took to the stage at Mobile World Congress held in Barcelona, Spain, from 26 February to 1 March, participating in the session entitled 'AI Everywhere: Ethics and Responsibility'. The photo above shows Clara Nappell with Aurelia Pels, a volunteer from Spain engaged in the IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems, discussing aspects of the initiative as well as the related P7000 standard series. About 230 people attended the panel session.

Promoting ethical standards

This is all about engaging with industry, SMEs and startups. It's about exploring new standards and standardisation opportunities, and engaging with other standardisation organisations such as ETSI, ISO, IEC and other bodies. We contribute to EU standardisation policies and initiatives.

IEEE standards cover so many technical areas that they can be used like a toolbox. We provide base standards, such as for Wi-Fi and LAN, that can be used across industries, and also a lot of specific standards, such as in healthcare, automotive and so on, drawn up in collaboration with Societies.

Unique to IEEE, though, is that we propose not just technical but ethical standards. Our initiative on Ethically Aligned Design which started two years ago, for example, is about the context of technology. IEEE was pioneering in that sense and now we have input from all over the world. Already 13 standards have been approved that deal with related issues such as incorporating ethical values in system design and how to measure the impact of technology beyond its economic value.

Almost half of participants in these initiatives are women, with a lot of participation from Africa as well as Europe. It opens doors as it involves a lot of collaboration with a lot of other players.

Incidentally, last December, Region 8 was the first to initiate a standard through the Vienna office, relating to medical device memory (see page 8).

Single contact for all of IEEE

Our mission is to provide a holistic view of IEEE which covers both research and communication in many technical fields as well as the related societal and economic challenges.

IEEE European Public Policy Web Portal

► Features links to:

- IEEE European Public Policy Committee
- IEEE EPP Working Group on Energy
- IEEE EPP Working Group on ICT
- **Call for new members!**
- News
- Publications
- Events
- Webinars

www.ieee.org/eppc



IEEE EPP Summits



IEEE Summit on Technology for Health: Transforming Healthcare and Wellbeing
5 December 2017
Brussels, Belgium

The Summit brought together policymakers, leaders in the healthcare, medical technology and electronics industries as well as expert patients in order to facilitate a dialogue on healthcare enabled by connected technologies, including smart wearables, biosensors and implantable technologies. The Summit tackled the issue of innovation in healthcare, addressed the resulting ethical concerns and behavioural challenges linked to these transformations, as well as conditions for bringing about a benefit.

Read more about the summit [here](#).

Public policy position statements

Heating and Cooling Future of Europe and Interaction with Electricity - 16 January 2018 (PDF: 300 KB)



About 50% of the final energy consumption in Europe is used for the heating of buildings, factories, hot water production, and heating in industrial processes. In addition, much of this supply comes from fossil fuels, meaning significant greenhouse gas emissions, as the heating sector alone covers about 30% of the overall EU emissions. Besides heating, in the last decade cooling has become a major factor in the share of energy consumption too, creating challenges for the sectors' goal. Therefore, addressing the heating and cooling sectors is key to achieving the European climate goals, as well as increasing concerns with regards to security of supply. The IEEE European Public Policy (EPP) would like to look at the voices in the Artificial Intelligence: Calling on Policy Makers to Take a Leading Role in Setting a Long-Term AI Strategy - 13 October 2017 (PDF: 300 KB)

Read more about the Smart Grid [here](#).



of its kind, the Summit was a landmark event for the IEEE European Public Policy (EPP) community. The IEEE European Public Policy (EPP) would like to look at the voices in the Artificial Intelligence: Calling on Policy Makers to Take a Leading Role in Setting a Long-Term AI Strategy - 13 October 2017 (PDF: 300 KB)

Artificial intelligence (AI) is quickly finding its way into the lives of people all across the world, thanks to the innovative work of scientists and technologists, many of whom are IEEE members. As AI becomes a greater part of our everyday lives, it raises the discussion about managing risks and rewards. As more applications of AI are developed, IEEE members are leading the debate on how to build trust, prevent abuse, follow, and integrate ethical considerations into the design of AI technologies. The IEEE European Public Policy (EPP) supports the vision that the

Standardization



Technology

- Link to research (e.g. H2020)
- **Outreach to Sections, YP**
- Outreach to universities
- Follow trends according to technology lifecycles
- 5G, IoT, AI, etc.



Economics

- Automation
- Services based on products (e.g. mobility),
- Data economy, etc.



Politics/Society

- EU Standardization legislation,
- Standardization policy,
- Multi-Stakeholder Platform (MSP)

Focus domains and first results

- ▶ Focus on automotive, manufacturing, healthcare
 - Map industry roadmaps and IEEE standardization projects
 - Build around strengths e.g. TSN
 - **Workshops on Digitization and Automotive (with Austria Sections)**
- ▶ New Study Group on 802.11p evolution (SG NGV)
 - Engaging European stakeholders and organizing contributions
 - Car-to-Car Communication Consortium (C2C-CC)
- ▶ A new Working Group MDMF – ‘Medical Devices with Measuring Functions’
- ▶ **Industry Workshop on Mobility (Munich, December 2018)**

Successful applications for the EC's ICT Day

Vienna, 4-6 December 2018

- ▶ “Imagine AI: Using Storytelling to Create a Vision of Our Flourishing Future” (Networking Session)
- ▶ “Standardization - a Pathway to your Success on the Market” (Networking Session)
- ▶ "Digital Citizen“ (Presentation)



Concrete example of 3-phase approach

Ethical Considerations for Autonomous Systems



- ▶ Raise awareness, e.g. MWC, POLITICO event
- ▶ Invitations to high level meetings and consultations
- ▶ Reputation gain, expert group, influence
- ▶ Open up new opportunities:
 - With industry, cities
 - Ethics certification program (ECPAIS, originated in Finland)
 - With individuals interested in the same topic
 - Engage members / enlarge membership

How can we work together?

Engage technical community, policy makers and key stakeholders to support and expand IEEE initiatives



Technical community - expand IEEE offer

- To gain new expertise, such as on AI
- To engage on topics people are passionate about (e.g. ethics)
- To be invited to high level meetings, expert groups (exposure and exclusivity)

Policymakers – create a bridge between the technical community and policymakers

- Support the European Public Policy Committee and TPIA of SA
- Influence technology policy as an offer for members and industry, thus attracting new members
- Engage on EU as well as national level

Industry – increase engagements

- Take into account regional and sectoral dynamics to expand engagement opportunities
- Offer different forms of collaboration tailored to specific needs
- Initiatives for addressing the need to build trust in technology
- Leverage new programs and ecosystems that are currently emerging within IEEE

Benefits to European IEEE Members

- ▶ Help shape public policy in Europe for the benefit of the profession and humanity
 - Papers, consultations, & events provide critical information on technology considerations to the policy community
- ▶ Participate in peer-selected volunteer WG and policy-related events
 - Invited to respond to periodic open calls to join WGs
 - Deepen knowledge of public policy issues affecting our profession, our employers, and our families
 - Engage with community of European IEEE members interested in public policy
- ▶ Refinements rolled out in 2018, include providing opt-in mechanisms
 - To review and comment on WG output
 - To receive Brussels policy updates (email news bulletins; webinars)
 - To participate as experts in calls, consultations

IEEE's engagement in European public policy

On-going engagement with IEEE members, policy makers and key stakeholders to provide technological expertise and politically-neutral input to policies



Members

EPP Committee and WGs, position papers, webinars, stakeholder workshops, etc.



Policymakers

Dedicated outreach programs, expert groups, Summit, Parliament Supplement, debates etc.



Other stakeholders

Seek common ground for action with scientific bodies, think tanks, professional associations, consumer organizations, etc.

EPPC webinars for engaging with EFTA members

Date	Topic	Detailed outline	Impact & feedback
24 January 2018 (Q1)	“An overview of policy-making in the EU”	<ul style="list-style-type: none"> • Provide the IEEE members a complete overview of the EU institutions, their core competences and key personnel. • Explain their roles in the legislative process. 	<ol style="list-style-type: none"> 1. Out of the 30,000+ IEEE Members who received the Opt-in Notice, 500+ responded back they would like to be notified of policy webinars. 2. Out of those 500+ who were invited to the first Webinar, 100 registered and 64 attended at some point during the Webinar (we hovered around 54 consistent attendees). 3. 20 people filled out the survey and their feedback was very positive! 4. WebEx recording and slides posted to EPPC website; Between 150-200 unique visitors thereafter.
6 June 2018 (Q2)	“Case studies on EU policy-making”	<ul style="list-style-type: none"> • Provide the IEEE members with a full overview of how EU policy comes into life from A to Z, by using 2 case studies on the legislative process of law-making for the Electronic Communications Code and the Energy Performance of Buildings Directive. • Provide intelligence on the positions taken by decision-makers and stakeholders throughout the process. 	<ol style="list-style-type: none"> 1. Out of the 30,000+ IEEE Members who received the Opt-in Notice, 550+ responded back they would like to be notified of policy webinars. 2. Out of those 550+ who were invited to the second Webinar, 83 registered and 44 attended at some point during the Webinar (we hovered around 30 consistent attendees) 3. 10 people filled out the survey and their feedback was positive and not really different than the previous survey. 4. WebEx recording and slides posted to EPPC website; Between 75-150 unique visitors thereafter.
28 September 2018 (Q3)	“How is EU law implemented?”	<ul style="list-style-type: none"> • Provide the IEEE members with detailed insights on how EU law is implemented at the national level, after that the European Parliament and Member States approve a piece of EU legislation. • Explain the competences of different EU institutions overseeing the implementation of EU legislation. • Illustrate the process by providing examples from current and future EU energy policies. 	<ol style="list-style-type: none"> 1. Out of the 30,000+ IEEE Members who received the Opt-in Notice, 600+ responded back they would like to be notified of policy webinars. 2. Out of those 605 who were invited to the second Webinar, 44 registered and 27 attended at some point during the Webinar. 3. 10 people filled out the survey and their feedback was positive and not really different than the previous survey. 4. WebEx recording and slides posted to EPPC website; Between X unique visitors thereafter. 600+ responded back they would like to be notified of policy webinars.
December 2018 (Q4)	Topic to be decided	<ul style="list-style-type: none"> • To be decided 	N/A