IEEE 5G Initiative

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Quick Facts

- More than 421,000 members in more than 160 countries
- More than 114,000 Student members
- 334 Sections in ten geographic Regions worldwide
- 2,116 Chapters that unite local members with similar technical interest
- 2,806 student branches at colleges and universities in over 100 countri
- 1,159 student branch chapters of IEEE technical societies
- 459 affinity groups; IEEE affinity groups are non-technical sub-units of one or more Sections or a Council. The affinity group patent entities are tl IEEE-USA Consultants' Network, Young Professionals (YP), Women in Engineering (WIE), and Life Members (LM)
- Has 39 Societies and seven technical councils representing the wide range of IEEE technical interests
- Has nearly 4 million documents in the IEEE Xplore® Digital Library, with more than 8 million downloads each month
- Has over 1,100 active standards and more than 500 standards under development
- Publishes approximately 180 transactions, journals, and magazines
- Sponsors more than 1,800 conferences in 95 countries

IEEE Future Directions Initiatives

IEEE 5G

IEEE brain

IEEE DigitalSenses

IEEE rebooting COMPUTING

IEEE SOFTWARE DEFINED NETWORKS

IEEE BigData

IEEE GREENICT

IEEE CYBER SECURITY

IEEE Internet of Things

IEEE Smart Cities

SMART MATERIALS

Symbiotic Autonomous Systems

Incubation

Phase 3

Maturity Level

ieee.org/futuredirections

IEEE

- Foster collaboration and connect technical & business communities to IEEE 5G experts and resources
- Be the catalyst for IEEE cross-society activities on 5G
- Establish IEEE as a **Thought Leader** and essential to the 5G community
- To be recognized as the go-to resource for engineering and technology professionals in industry, academia and government working on 5G
- Develop and promote valued programs, products and services for the 5G community
- Present a single IEEE face/voice to the 5G marketplace
- Be a true global 5G initiative capturing the needs of all global regions
- Create a neutral platform/forum where those interested in 5G can engage and collaborate

IEEE

Recent Background

- Convened Kick-Off Workshop in Princeton, NJ on 29-30 August 2016
  - Participation by over 30 volunteers and IEEE staff representing 17 Societies/OUs

- Communications
- Computer
- Solid States Circuits
- Signal Processing
- Vehicular Technology
- Technology and Engineering Management
- Antenna Propagation Society
- Instrumentation & Measurement
- Power and Energy Society
- Electromagnetic Compatibility Society
- Intelligent Transportation
- Microwave Theory and Techniques
- Standards Association
- Educational Activities
- Future Directions
- Consumer Electronics
- Council on Radio Frequency Identification
- Aerospace and Electronic System Society

- Identified Working Groups and Projects for 2016/2017

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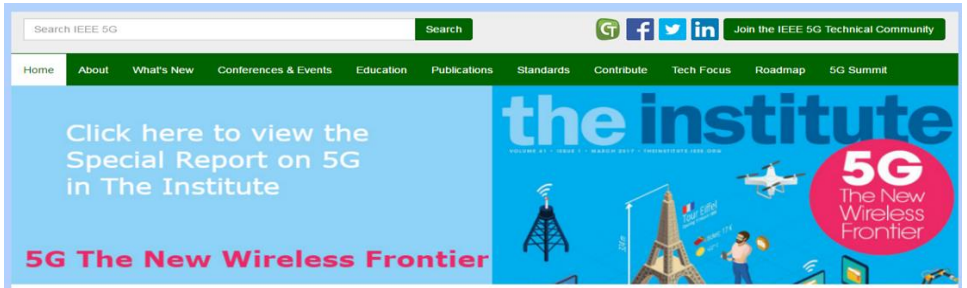
Connecting Minds. Exchanging Ideas.
2017 INTERNATIONAL MICROWAVE SYMPOSIUM
4 – 9 JUNE 2017 HONOLULU, HAWAI'I
IEEE MTT-S and IEEE ComSoc
are offering a special joint
5G Summit at IMS2017.
June 5-6 2017, Honolulu, Hawai'i
IEEE 5G
Click to learn more!
What's New
Live Online Course
New!
Beyond LTE: LTE Advanced, LTE Advanced Pro and 5G
Feature Article
How 5G Could Bring Internet Access to Remote Areas
Technology Spotlight
Collaboration
Collaboration is Critical for 5G Network Slicing
Useful Links
Join the IEEE 5G Initiative Team - Call for Volunteers
IEEE 5G Summit
IEEE Talks 5G: Read Q&A Interviews with IEEE experts
Infographic: On the Road to 5G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IEEE International 5G Summit
5G Summits in 2017
Lisbon, Portugal Thursday, January 19, 2017
Kolkata, India Friday, March 17, 2017
Reston, Virginia August 19, 2017
Casablanca, Morocco Thursday, May 11, 2017
Bhubaneswar, India July 27, 2017
Dallas, Texas June 8, 2017
Trivandrum, India July 1, 2017
Honolulu, Hawaii Monday June 5- Tuesday 6, 2017
Istanbul, Turkey June 5, 2017
Thessaloniki, Greece July 11, 2017
Shanghai, China July 27,28, 2017
Kingston, Jamaica July , 2017
Taipei, Taiwan September 12-13, 2017
Helsinki, Finland Monday,September 18, 2017
Dresden, Germany Tuesday, September 19, 2017
Tokyo, Japan Friday, September 22, 2017
Montreal, Canada Monday, October 9, 2017
Nanjing, China Saturday, October 14, 2017
New York, NY November, 2017
San Antonio, Texas Fall 2017
Pretoria, South Africa Wednesday, May 3, 2017

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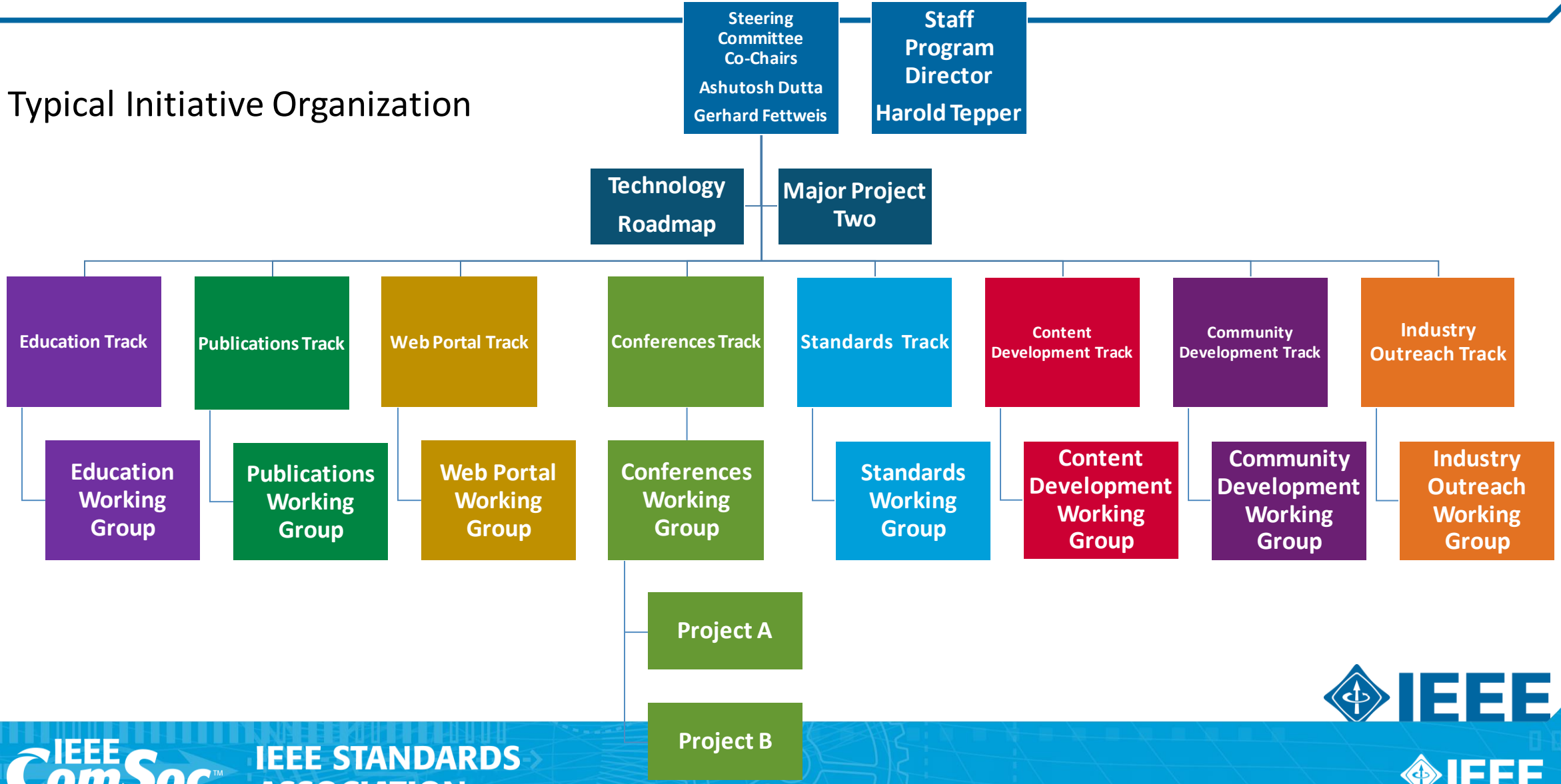
5G Initiative Structure

Typical Initiative Organization



IEEE ComSoc IEEE Communications Society
IEEE STANDARDS ASSOCIATION
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5G Initiative Working Groups

Working Group Scope

Education Track (R. Ting, R. Annaswamy)	Publications Track (C-L. I, G. Li)	Web Portal Track (J. Irvine Alex Wyglinski)	Conferences Track (A. Dutta, L. Ladid)
Define, develop and manage portfolio of offerings/activities including: • eLearning Modules • Tutorials • Webinars • Podcasts • Google Hangouts	**Define, develop and manage portfolio of offerings/activities including:** • eNewsletter • Journal, Transactions • Magazine • Supplements to other publications • Special issues in other publications	**Determine, source and manage content placed on portal** **Ensure that portal is refreshed on a continuous basis**	**Manage Initiative events** • Conferences • Workshops **Determine and manage participation in other events** • Patron • Exhibitor • Panelist • Keynote

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5G Initiative Working Groups

Working Group Scope

Standards Track (A. Gelman, P. Nikolich)	Content Development Track (B.Das)	Community Development Track (J. Irvine, A. Wyglinski)	Industry Outreach Track (M. Lu, M. Condry)
Manage portfolio of activities including: • New projects • Workshops for needs definition and connection with technology developers • Roundtable program for industry leaders • Engagement with SDOs and other external organizations	**Develop and source content for posting / publication including:** • By-lined articles • Q&As • Expert Interviews • Whitepapers • Scenarios/Use Cases • Media Interviews • Analyst Briefings	**Establish and grow a broad IEEE 5G Community including:** • IEEE Technical Community • Collabratec • Twitter • LinkedIn • Facebook • FlipBoard	**Drive engagement with industry including:** • Partnerships • Training • Career Development

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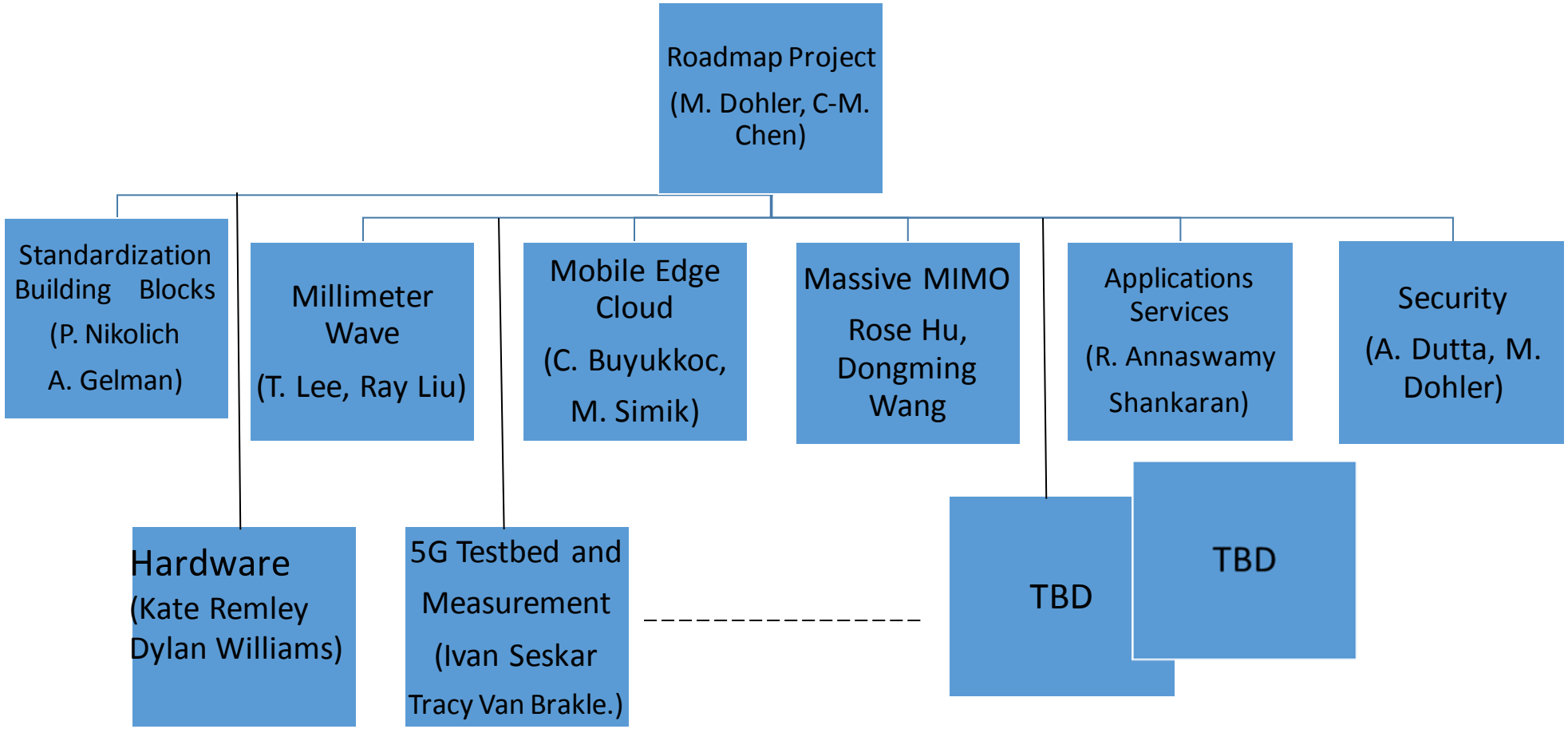
Roadmap Project
(M. Dohler, C-M. Chen)
Standardization Building Blocks
(P. Nikolich
A. Gelman)
Millimeter Wave
(T. Lee, Ray Liu)
Mobile Edge Cloud
(C. Buyukkoc,
M. Simik)
Massive MIMO
Rose Hu, Dongming Wang
Applications Services
(R. Annaswamy Shankaran)
Security
(A. Dutta, M. Dohler)
Hardware
(Kate Remley
Dylan Williams)
5G Testbed and Measurement
(Ivan Seskar
Tracy Van Brakle.)
TBD
TBD

2016 Milestones

- **Initiative Launch**
  - Convened 2 day kick-off workshop in late Aug.
  - Attended by over 30 volunteers/staff representing 16 societies/councils/OUs
  - Steering Committee Meeting Nov 17, 2016
- **Working Group Formation**
  - Established volunteer led Working Groups to drive activity including: Web Portal, Content Development, Community Development, Standards, Education, Publications, Branding, Roadmap, Events and Industry Engagement
- **5G Summits**
  - Conducted 8 summits across the world: US, China, Germany, India, and Denmark
- **Roadmap (Workshop at Globecom)**
  - Launched Technical Working Groups including Standardization Building Blocks, Mobile Edge Cloud, Massive MIMO and Millimeter Wave
- **IEEE 5G Web Portal**
  - Launched new portal on 6 October 2016
- **IEEE 5G Newsletter**
  - Named Editor-in-Chief, Managing Editor and Assistant Managing Editor

2017 Plans

- **Roadmap & Workshops**
  - Develop an IEEE 5G Roadmap Whitepaper and Roadmap modeled after the ITRS Roadmap, OMEC Workshop, ICC 2017
- **5G Summits (www.5gsummit.org)**
  - Continue to conduct summits on a global basis, 18 more planned during 2017
- **Standards**
  - Inventory, update and track 5G related standards activity across industries
- **Publications**
  - Launch an IEEE 5G Tech Focus publication with original content focused on a broad audience,
- **Web Portal/Content Development**
  - Refresh the portal on a regular basis with original content including written Q&As, interviews, opinion pieces and podcasts
- **Community Development**
  - Establish and build a global, engaged IEEE 5G Community through channels including Collabratec, Twitter and LinkedIn
- **Education**
  - Introduce a series of webinars and tutorials
- **Conferences**
  - Planning for a WF-5G Conference in July 2018

- Seeking Contributors
  - Broad range of opportunities
    - Technical Areas – Massive MIMO, mmWave, Mobile Edge Cloud, Security, Applications, Testbed……
    - Functional Areas – Publications, Standards, Education, Roadmap, Content/Community Development….
- Contact Us
  - Go to the Web Portal - 5g.ieee.org to:
    - Join the 5G Technical Community
    - Indicate your interest in contributing
    - http://5g.ieee.org/contribute

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