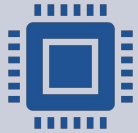# VDE ITG KT2 „Communication Networks and Systems"

9 September 2025

VDE ITG

What is VDE ITG – Information Technology Society ?

Who? Association for scientists and engineers in information technology

Purpose? Platform for exchanging scientific knowledge in ICT

Activities? Networking, guidelines, training

connecting knowledge and people (events, global societies)

education and training of young professionals

develops guidelines and recommendations, technology design, societal acceptance

VDE ITG

Working Areas: VDE ITG

Services and Applications

Media technology

Audio technology

Communication technology

- KT 1 "Information and System Theory"
- **KT 2 "Communication Networks and Systems"**
- KT 3 "Optical Communication Engineering"
- KT 4 "Communication Cable Networks"
- KT 5 "Protection and Automation Technology"
- KT 6 "Internet of Things / Industry 4.0"

Technical computer science

High-frequency technology

Micro- and nanoelectronics

VDE ITG

Who's in VDE ITG „KT 2" ?

"Communication Networks and Systems"

Members

- Chairperson
  - Prof. Dr. Tobias Hoßfeld, U Würzburg
  - Prof. Dr.-Ing. Wolfgang Kellerer, TU München
  - Dr.-Ing. Joachim Sachs, Ericsson
- Leadership team of the Technical Committee
  - About 20 members in the leadership team ("Fachausschuss") of the KT2
  - From Academia and Industry (e.g. Ericsson, Nokia, Siemens, Vodafone, Apple)
- Members of the Technical Committee
  - around 90 members from academia and industry.
  - Open for everyone to join !
  - Join our mailing list: https://www.listserv.dfn.de/sympa/info/itg-kt2

VDE ITG

How can you benefit from ITG?

VDE Discussion Paper

More resilience for power and communication networks

How do we deal with increasing interdependencies?

Executive Summary

Electric power and digital communication are known to be essential prerequisites for our daily lives today. Almost permanently available power and communication networks are crucial for the "All Electric Society", and their significance will continue to increase over the next years. It is therefore important to determine what level of resilience to disruption and failure we as a society can and want to afford in relation to these critical infrastructures. This paper specifically addresses the interdependencies between electricity and communication networks, which will increase as the energy transition progresses, and provides targeted recommendations for action.

VDE Positionspapier

NeSC – NewSpace Communications

by VDE ITG

VDE

How can you benefit from ITG?

- Experts from academia and industry
  - get in contact with experts
    - technology domain
    - scientific methodology
  - get feedback for preliminary work
  - learn about hot topics
- Questions about technology, data, methods, …
  - meet and ask the people
- Get informed: events, news, mailing list, …

- Open for everyone to join !

VDE Positioning Paper

Information Technology Vision 2035

by VDE ITG

VDE

ITG News

ITG THEMA

NACHHALTIGKEIT ALS HERAUSFORDERUNG FÜR 6G

The future Role of Transport Networks towards 6G

Architectural Requirements and Innovative Approaches

Abstract

Sustainable transport networks are crucial for future mobile networks by offering fast and reliable communication, though their importance is often overlooked. Key challenges are high data rates, massive connections, and network complexity. The article discusses the technology drivers, and architectural impacts.

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Importance of Transport Networks

ITG THEMA

ITG news   2/2025

INFORMATIONSTECHNISCHE GESELLSCHAFT IM VDE

ITG THEMA

CHIP DESIGN

Improving Chip Design Productivity with Generative AI Tools

How can AI methodologies and tools for chip design automate and optimize aspects of the design process that were previously time-consuming and required significant expertise? And how can generative AI help to bridge the talent gap by lowering entry barriers, hiding complexity, and accelerating the design cycle?

NEAR-THZ COMMUNICATION SYSTEMS

Enabling Commercial Near-THz Communication Systems Using SiGe RFIC's and Radio-on-Glass Integration

The complexity and interdependence of modern communication systems is a staggering accomplishment of engineering. Our demand for higher data-rates and instant network availability translates to the deployment of a new generation of wireless, fiber, backhaul and access networks every 5–10 years.

OPTICAL TRANSCEIVERS

Coherent Optical Transceivers for the AI Era: Which Modulator Technology Will Dominate?

With the AI Era the demand for high-speed data transmission is increasing and therefore the need for new modulator technology.

https://www.vde.com/itg-news

VDE ITG

Events (co-)organized by VDE ITG KT2

Expert Symposium: Future of Networking / Zukunft der Netze (ZdN)

- 4. September 2025, Ilmenau, co-located with NetSys 2025
- Website: https://kuvs.de/netsys/2025

WueWoWAS'25 Workshop on 6G Networks

- 6 - 8 October 2025, Würzburg
- Website: https://lsinfo3.github.io/WueWoWAS2025/

Interactive Munich'25 workshop "Bringing 6G into Application"

- 28 Mai 2025, Nokia Munich
- Website: http://sites.google.com/view/muewowas25

29. Fachtagung Mobilkommunikation

- 20 - 21 May 2025, Hochschule Osnabrück
- Website: https://www.hs-osnabrueck.de/fachtagung-mobilkommunikation/

4. KuVS Fachgespräch "Network Softwarization"

- 3 - 4 April 2025, Tübingen
- Website: https://ub01.uni-tuebingen.de/xmlui/handle/10900/163069

3. TSN (in 5G/6G) Workshop

- 11 - 12 February 2025, Berlin
- Website: https://5g.nrw/3rd-5g-tsn-workshop/

VDE ITG

VDE ITG KT 2 Expert Group "Communication Networks and Systems"

About ITG-KT2

The VDE ITG expert group KT 2 "Communication Networks and Systems" works on the key technologies and methods required for the development of future communication networks and systems. The specialist group is made up of experts from ICT companies and universities in order to promote an intensive exchange between industry and science. The specialist group welcomes researchers, doctoral candidates, postdocs, young and senior researchers, students and all interested parties to actively participate in the specialist group.

Web: VDE ITG. The Information Technology Society.

To see the collection of prior postings to the list, visit the ITG-KT2 Archive. (*The current archive is only available to the list members.*)

Using ITG-KT2

To post a message to all the list members, send email to itg-kt2@lists.uni-wuerzburg.de.

Subscribing to ITG-KT2

Subscribe to **ITG-KT2** by filling out the following form. You will be sent email requesting confirmation, to prevent others from gratuitously subscribing you. This is a hidden list, which means that the list of members is available only to the list administrator. You will be sent email requesting confirmation, to prevent others from gratuitously subscribing you. This is a hidden list, which means that the list of members is available only to the list administrator.

| Your email address: | |
| Your name (optional): | |

Subscribe

- **Open for everyone to join !**   https://www.listserv.dfn.de/sympa/info/itg-kt2
- **Just register for the mailing list.** (No costs, no membership required)

VDE ITG

Free VDE Membership for Young Professionals

- Get additional benefits by getting a VDE member

  - Free entry year at no costs

  - Access to a unique network

  - Discounted admission to nationwide VDE events

  - Acquisition of soft skills such as project management, communication skills and teamwork through participation in the VDE university groups, the specialist young talent networks or the Young Enineers Panel

  - Discounts through corporate benefits

  - …

- Open for everyone to join !
  https://www.vde.com/de/mitgliedschaft/mitgliedschaft-ueberblick/fuer-youngprofessionals

VDE ITG