New consortium to develop a 5G and beyond strategic roadmap for future European connectivity systems and components

The "COREnect" (European Core Technologies for future connectivity systems and components) consortium is glad to announce that its project has been selected by the European Commission in the frame of the Horizon 2020 Research & Innovation programme.

During this 2-year Coordination and Support Action project starting on 1st July 2020, European industry and R&D leaders from both the microelectronics and telecommunications sectors will jointly **develop a high-level strategic roadmap of core technologies for future connectivity systems and components**, targeting the next generation telecommunications networks and services.

This roadmap will provide the **foundations for a sustainable European technology sovereignty in 5G and beyond.** It will promote innovation and business opportunities, including for small and medium-sized enterprises (SMEs), and **contribute to build or reinforce European leadership** in these areas. It will cover the full 5G value chain including materials, components, subsystem integration, connectivity platforms and will address vertical industry sectors in areas such as health, energy, manufacturing, automotive and smart cities, among others.

Over the next ten years, 5G and then 6G are expected to connect billions of devices, digitise industries, and bring social and economic advances in many vertical sectors. **Developing the necessary core technologies is crucial for Europe** to decrease its dependence on non-European technologies.

By bringing together the microelectronics industry (electronic chip makers) and the telecommunications industry, COREnect will support the necessary coordinated and concrete actions to be taken in Europe.

The COREnect consortium involves prominent European industrial and academia players from the telecommunications sector (Ericsson, III-V Lab / Nokia, and Technische Universität Dresden/ Barkhausen Institut), from the microelectronics sector (Infineon, NXP, STMicroelectronics, imec and CEA), industrial associations representing the Smart Networks and Services and Key Digital Technologies communities (5G IA and AENEAS), a leading industry player in one of the vertical markets for 5G (Bosch), and one of the major promoters of the European SME ICT community (AUSTRALO).

COREnect has the potential to significantly impact European research and innovation (R&I) and the industry landscape of future connectivity systems, **strengthening Europe's position in the global digital scene.** Among its activities, the COREnect project will conduct a comprehensive landscape and impact analysis, encompassing the whole value chain from microelectronics ecosystems to the design of future connectivity platforms at system level and vertical applications. The definition of the strategic roadmap will involve three expert groups, supported by COREnect workshops and community building, ensuring coordination among industry and academia actors.

In addition, the consortium will reach out to communities in related fields such as High-Performance Computing, Artificial Intelligence, Photonics, Internet of Things and Cloud Computing. The overall vision and strategy will be published on the COREnect website, and the project will communicate extensively with national and international target groups throughout industry and wider society.

About Technische Universität Dresden/Barkhausen Institut

The Technische Universität Dresden (TUD) is the project coordinator and one of the largest "Technische Universitäten" in Germany. It is also one of the leading and most dynamic universities in Germany. As a full-curriculum university with 18 faculties in five schools it offers a broad variety of 121 disciplines and covers a wide research spectrum. Its focuses Health Sciences, Biomedicine & Bioengineering, Information Technology & Microelectronics, Smart Materials & Structures, Energy, Mobility & Environment as well as Culture & Societal Change are considered exemplary in Germany and throughout Europe. In the area of mobile communications, TUD is a global research leader and has been continuously working on pioneer research and contributing to the development and evolutions of mobile networks in the past 20 years. It founded 5G++Lab Germany in 2014 that enjoys international reputations and an extensive research and industry network around the world. In 2019, TUD founded an independent research institute Barkhausen Institut gGmbH (BI) that is focusing on the development of break-through technology to increase the availability, integrity and privacy of IoT systems.

More at: https://tu-dresden.de/; https://www.vodafone-chair.org/; https://www.barkhauseninstitut.org/
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About 5G IA

The 5G Public Private Partnership (5G PPP) is the 5G collaborative research program that is organized as part of the European Commission's Horizon 2020 program – The European Union Program for Research and Innovation. It is aimed at fostering industry-driven research, monitored by business-related, technological performance and societal KPIs. The 5G PPP will deliver solutions, architectures, technologies and standards for ubiquitous next-generation communication infrastructure over the coming decade.

In the 5G PPP, the 5G Infrastructure Association (5G IA) represents the private side and the European Commission the public side. The 5G IA is committed to the advancement of 5G in Europe and to building global consensus on 5G. To this aim, the Association brings together a global industry community of telecoms & digital actors, such as operators, manufacturers, research institutes, universities, verticals and SMEs. The 5G IA carries out a wide range of activities in strategic areas including standardization, frequency spectrum, R&D projects, technology skills, collaboration with key vertical industry sectors, notably for the development of trials, and international cooperation.

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About III-V Lab / Nokia

III-V Lab is an industrial research laboratory created in 2004 by Nokia and Thales and was extended to CEA Leti in 2010. III-V Lab in CORENECT project represents its mother company Nokia.

About Nokia

We create the technology to connect the world. Only Nokia offers a comprehensive portfolio of network equipment, software, services and licensing opportunities across the globe. With our commitment to innovation, driven by the award-winning Nokia Bell Labs, we are a leader in the development and deployment of 5G networks.

Our communications service provider customers support more than 6.4 billion subscriptions with our radio networks, and our enterprise customers have deployed over 1,300 industrial networks worldwide. Adhering to the highest ethical standards, we transform how people live, work and communicate.

Nokia Bell Labs is the world-renowned industrial research arm of Nokia. Over its more than 90-year history, Bell Labs has invented many of the foundational technologies that underpin information and communications networks and all digital devices and systems. This research has resulted in 9 Nobel Prizes, three Turing Awards, three Japan Prizes, a plethora of National Medals of Science and Engineering, as well as three Emmys, two Grammys and an Oscar for technical innovations.

More at: www.bell-labs.com, www.nokia.com
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About AENEAS

AENEAS is an Industry Association, established in 2006. The purpose of the association is to promote Research, Development and Innovation (RD&I) in order to strengthen the competitiveness of European industry across the complete Electronics Components and Systems (ECS) value chain. AENEAS provides unparalleled networking opportunities, policy influence & supported access to funding to all types of RD&I participants in the field of micro and nanoelectronics enabled components and systems, and its applications. Member of ECSEL JU, AENEAS is also operating the EUREKA funded programme PENTA, and has a long track record in operating CATRENE programme with 51 labelled projects.

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About AUSTRALO

AUSTRALO is a marketing company to thrive in the Lab-to-Market leap. Our mission is to funnel the transformation potential of cutting-edge Research & Innovation into its real-life application, creating, communicating, delivering, and exchanging value streams among target groups. We work with communities, thought leaders, researchers, and entrepreneurs to draw leads, advocating for a trustworthy, fair and sustainable data-driven economy. Our value proposition:

- Open Networks. We broaden the synergies and influence of your community. AUSTRALO generates leads with target groups in academia, industry, SMEs, entrepreneurship and social ecosystems, identifying and creating relationships with key global players.
- Marketing Communication. Gain an outstanding visibility and market position, making your innovation attractive to a critical mass. AUSTRALO holds broad experience leading and implementing marketing promotional strategies to increase awareness and engagement.
- Go-to-Market. We empower new business ideas to thrive, increasing competitiveness, market assessment and capacity to access customers. We capture the business potential of Research & Innovation ideas, providing the tools and strategies to transfer it into exploitable assets.

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About Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 400,000 associates worldwide (as of December 31, 2019). The company generated sales of 77.7 billion euros in 2019. Its operations are

divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT provider, Bosch offers innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch pursuing a vision of mobility that is sustainable, safe, and exciting. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to facilitate connected living with products and solutions that either contain artificial intelligence (AI) or have been developed or manufactured with its help. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life."

More at: www.bosch.com, www.iot.bosch.com, www.bosch-press.com
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About CEA-Leti
Leti, a technology research institute at CEA, is a global leader in miniaturization technologies enabling smart, energy-efficient and secure solutions for industry. Founded in 1967, Leti pioneers micro-& nanotechnologies, tailoring differentiating applicative solutions for global companies, SMEs and startups. Leti tackles critical challenges in healthcare, energy and digital migration. From sensors to data processing and computing solutions, CEA-Leti's multidisciplinary teams deliver solid expertise, leveraging world-class pre-industrialization facilities. With a staff of more than 1,900, a portfolio of 2,700 patents, 10,000 sq meters of cleanroom space and a clear IP policy, the institute is based in Grenoble, France, and has offices in Silicon Valley and Tokyo. CEA-Leti has launched 65+ startups and is a member of the Carnot Institutes network.

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About Ericsson AB
Ericsson is a global leader in delivering ICT solutions. In fact, 40% of the world's mobile traffic is carried over Ericsson networks. Ericsson has customers in over 180 countries and comprehensive industry solutions ranging from cloud services and mobile broadband to network design and optimization. Our services, software and infrastructure - especially in mobility, broadband, and the cloud - are enabling the communications industry and other sectors to do better business, increase efficiency, improve user experience and capture new opportunities. Ericsson has one of the industry's strongest patent portfolios with a total count of over 42,000. R&D is at the heart of our business and approximately 24,000 employees are dedicated to our R&D activities.

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About imec
Imec is a world-leading research and innovation hub in nanoelectronics and digital technologies. The combination of our widely acclaimed leadership in microchip technology and profound software and ICT expertise is what makes us unique. By leveraging our world-class infrastructure and local and global ecosystem of partners across a multitude of industries, we create groundbreaking innovation in application domains such as healthcare, smart cities and mobility, logistics and manufacturing, energy and education.

As a trusted partner for companies, start-ups and universities we bring together more than 4,000 brilliant minds from almost 100 nationalities. Imec is headquartered in Leuven, Belgium and has distributed R&D groups at a number of Flemish universities, in the Netherlands, Taiwan, USA, and offices in China, India and Japan. In 2019, imec's revenue (P&L) totaled 640 million euro.

Imec is a registered trademark for the activities of IMEC International (a legal entity set up under Belgian law as a "stichting van openbaar nut"), imec Belgium (IMEC vzw supported by the Government of Flanders), imec the Netherlands (Stichting IMEC Nederland, part of Holst Centre and OnePlanet, supported by the Dutch Government), imec Taiwan (IMEC Taiwan Co.), imec China (IMEC Microelectronics (Shanghai) Co. Ltd.), imec India (Imec India Private Limited) and imec Florida (IMEC USA nanoelectronics design center).

More at: www.imec-int.com
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About Infineon Technologies AG
Infineon is a world leader in semiconductors. Combining entrepreneurial success with responsible action, at Infineon we make the world easier, safer, and greener. Barely visible, semiconductors have become an indispensable part of our daily lives. Thus, our semiconductors enable smart mobility, efficient energy management, and the secure capture and transfer of data. In the 2019 fiscal year (ending 30 September), the Company reported sales of €8.0 billion with about 41,400 employees worldwide. Infineon is listed on the Frankfurt Stock Exchange (ticker symbol: IFX) and in the USA on the over-the-counter market OTCQX International Premier (ticker symbol: IFNNY). With worldwide operation at 37 R&D and 17 manufacturing locations, Infineon is playing a key role in shaping a better future – with microelectronics that link the real and the digital world.

Infineon designs, develops, manufactures, and markets a broad range of semiconductors and system solutions. The focus of its activities is on automotive electronics, industrial electronics, communication and information technologies, and hardware-based security. The product range comprises standard components, customer-specific solutions for devices and systems, as well as specific components for digital, analog, and mixed-signal applications. Over 60 percent of Infineon's revenue is generated by power semiconductors, almost 20 percent by embedded control products (microcontrollers for automotive, industrial as well as security applications), and the remainder by radio-frequency components and sensors.

More at: www.infineon.com, www.infineon.com/press
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About NXP Semiconductors Netherlands BV
NXP Semiconductors N.V. (NASDAQ: NXPI) enables secure connections for a smarter world, advancing solutions that make lives easier, better, and safer. As the world leader in secure connectivity solutions for embedded applications, NXP is driving innovation in the automotive, industrial & IoT, mobile, and communication infrastructure markets. Built on more than 60 years of combined experience and expertise, the company has approximately 29,000 employees in more than 30 countries and posted revenue of $8.88 billion in 2019.

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About STMicroelectronics

ST is a global semiconductor leader delivering intelligent and energy-efficient products and solutions that power the electronics at the heart of everyday life. ST's products are found everywhere today, and together with our customers, we are enabling smarter driving and smarter factories, cities and homes, along with the next generation of mobile and Internet of Things devices.

By getting more from technology to get more from life, ST stands for life.augmented.

In 2019, the Company's net revenues were $9.56 billion, serving more than 100,000 customers worldwide.

More at: www.st.com