



PRESS RELEASE

20 Years of Success: The Power of Collaboration and a Shared Vision in the Joint Lab of Thales, Nokia and CEA-Leti

Celebrating a Legacy of Collaboration, Excellence, and Recognition Across Multiple Fields, and a Role as a Key Contributor in the World of Semiconductor Production.

Palaiseau, 10/17/2024 - Devoted to the Research & Development of its parent companies in the III-V semiconductor domain, III-V Lab has demonstrated its ability to create innovations that are or will be used in Nokia and Thales systems.

A well-accomplished mission

The deep synergies between the special properties of the III-V semiconductors (such as the ability to generate light, or the ability to transport electronic signals at very high speed) and the silicon industry (a mature industry with low cost of production) make the integration of III-V on Silicon (Si) a solution for improving performances, reducing size and costs.

“Our mastery of all the stages of design and manufacture of microelectronic and optoelectronic components as well as their integration into complex devices is an undeniable major asset for our Laboratory”, says Jean-René Bois, Chairman & Managing Director of III-V Lab.

The first mission of III-V Lab is to reach the state-of-the-art in many different domains, and the second mission is to lead the utilization with industrial partners. For example, these uses are technology transfers to Lynred in 2012 (some Infrared technologies), but also to United Monolithic Semiconductors (technological bricks of microelectronics). There were also the creation of spin-offs: mirSense in 2015 and Almae Technologies in 2016.

A constant adaptation to the international semiconductor context

III-V Lab contributes to both European sovereignty, and greener systems. In particular, its research activities provide solutions to the current challenges in reducing energy consumption.

Furthermore, III-V Lab positioned itself as a key contributor and technology provider of the Pilot Lines of the Horizon Europe framework.

III-V Lab mixes Research & Development (R&D) activities and small volume production capabilities.

“III-V Lab is a good example of Thales' strategy to master its supply chain for critical and differentiating technologies through strategic partnerships”, explains Bernhard Quendt, Chief technical officer (CTO) of Thales.



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20 Years of Innovation with a Human Touch

The III-V Lab heritage, and in particular the laboratories and teams from which the company came, were created well before III-V Lab was founded in 2004. But this heritage has been producing an ever more fruitful legacy for its parent companies and its partners, thanks to the unique synergy that came along with gathering complementary skill sets and areas of interest under the III-V Lab umbrella.

“The passion, the interactive discussions between our experts are key factors of our success!” says enthusiastically Jean-René Bois.

Located in both the Paris-Saclay “Optics valley” and the Grenoble “Silicon valley”

III-V Lab operates in two strategic locations in the Paris-Saclay “Optics valley” and in the Grenoble “Silicon valley”.

“With complete 200 and 300 mm process lines and up to date foundry equipment, CEA-Leti’s cleanrooms in Grenoble take III-V Lab innovations from lab to fab environment,” says Jean-René Lèqueyepes, CTO at CEA-Leti. “With CEA-Leti, III-V Lab can rely on high-end equipment available on 200 and 300 mm for its R&D activities or to demonstrate the scalability of its innovations. CEA-Leti’s know-how in silicon technologies is also a key asset to investigate the integration of III-V semiconductors on Si”.

Peter Vetter, President of Bell Labs Core Research, Nokia, adds “Bell Labs has a rich history of researching semiconductor components, which are essential for differentiating communication systems. The state-of-the-art equipment that we share with Thales and CEA-Leti at III-V Lab has enabled our researchers to realize worldclass optical devices that have been fundamental for our bleeding edge optical network innovations for 20 years.”

About III-V Lab

III-V Lab is a joint lab between Nokia, Thales and CEA-Leti, dedicated to industrial research and development of optoelectronic and microelectronic components based on III-V semiconductors, and their integration with silicon circuits. Created in 2004, III-V Lab brings together 120 researchers in the Paris region and actively cooperates with CEA-Leti’s laboratories at Grenoble. III-V Lab has prototyping and production start-up resources to foster the emergence of high added-value component technologies which are then transferred to the industrial entities of the parent companies or their partners. www.3-5lab.fr

About Nokia

At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.



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With truly open architectures that seamlessly integrate into any ecosystem, our high-performance networks create new opportunities for monetization and scale. Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

About Thales

Thales (Euronext Paris: HO) is a global leader in advanced technologies specialized in three business domains: Defence & Security, Aeronautics & Space, and Cybersecurity & Digital Identity. It develops products and solutions that help make the world safer, greener and more inclusive.

The Group invests close to €4 billion a year in Research & Development, particularly in key innovation areas such as IA, cybersecurity, quantum technologies, cloud technologies, and 6G.

Thales has nearly 81,000 employees in 68 countries. In 2023, the Group generated sales of €18.4 billion.

About CEA-Leti (France)

CEA-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, CEA-Leti pioneers micro- & nanotechnologies, tailoring differentiating applicative solutions for global companies, SMEs and startups. CEA-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 2,000 talents, a portfolio of 3,200 patents, 11,000 sq. meters of cleanroom space and a clear IP policy, the institute is based in Grenoble, France, and has offices in Silicon Valley, Brussels and Tokyo. CEA-Leti has launched 76 startups and is a member of the Carnot Institutes network. Follow us on www.leti-cea.com and @CEA_Leti.

Technological expertise

CEA has a key role in transferring scientific knowledge and innovation from research to industry. This high-level technological research is carried out in particular in electronic and integrated systems, from microscale to nanoscale. It has a wide range of industrial applications in the fields of transport, health, safety and telecommunications, contributing to the creation of high-quality and competitive products.

For more information: www.cea.fr/english

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