

## Press release

**Alcatel-Lucent Bell Labs, Thales and CEA-Leti join forces  
to combine unique expertise in III-V semiconductors and silicon technologies**

*Enlarged partnership in III-V Lab will target applications in telecoms, industrial control, environmental testing, defence, security and space*

Saclay, France, March 7, 2011 - Alcatel-Lucent Bell Labs, Thales and CEA-Leti today announced that CEA-Leti has joined the III-V Lab in a move to strengthen the industrial research capabilities of the R&D center, already Europe's most advanced in the field of III-V semiconductors. The new public-private partnership will combine III-V semiconductor and silicon technologies, opening up new research perspectives and dynamics. The enlarged III-V Lab will include more than 130 researchers, technicians, and doctoral candidates.

The new partnership leverages the respective expertise of the three players in silicon, microelectronics and heterogeneous integration, to bring specific benefits in:

- The integration of the incomparable speed, power and optical capabilities of III-V components on silicon CMOS integrated circuits,
- Development of smarter, smaller components with innovative features by heterogeneously integrating active III-V components (optical, microwave, high-power components) with silicon circuits and Microsystems,
- The production of III-V components on silicon substrates and in silicon microelectronic manufacturing lines to reduce costs.

CEA-Leti, a leading global research center in micro- and nanotechnologies, reinforces the capabilities of the III-V Lab. Established in 2004 by Alcatel and Thales, the III-V Lab has already enabled the rapid development of a common platform for dual-use optoelectronic and microelectronic technology for markets addressed by the two Groups such as telecom, space, defense and security. CEA-Leti will significantly broaden the scope of the lab's targeted applications by combining its IP & expertise in silicon, microelectronics and Microsystems and in heterogeneous integration.

Focusing on practical applications for the combined potential of semiconductors and silicon, the III-V Lab will focus on four primary areas of research and markets:

- Integrated photonic circuits that combine the active and passive functions of III-V and silicon for high-speed telecommunications and data transfer
- High-power and microwave GaN-based microelectronics to increase the power density, robustness, energy efficiency and compactness of telecommunication, avionics, satellite, defence, energy and transport systems
- A new generation of cost-effective, compact, ultra-sensitive, highly-selective gas sensors for use in security, industrial process control, and environmental monitoring
- Thermal and near-infrared imagery for security and defense applications. The lab will develop new types of detectors with increased resolution while reducing overall cost and speeding their adoption in the industrial-quality control, transportation and environmental markets.

“We really look forward to the new partnership with CEA-Leti as their excellence in silicon will bring some exciting collaboration opportunities for the III-V Lab,” said Gee Rittenhouse, head of Research at Alcatel-Lucent Bell Labs. “III-V semiconductors have already made a strong impact in optical telecommunications, providing several innovative breakthroughs, and the integration in a silicon microelectronic platform is on our roadmap to further improve performance, cost and energy consumption.”

“As the third partner in the III-V lab, Leti adds deep expertise and essential silicon capabilities to our existing strengths in III-V semiconductors, opening broader opportunities for innovation. Thales will be provided stronger competitive advantages through the III-V Lab, thanks to the early availability for system developments of new components with breakthrough performances” said Marko Erman, SVP Research & Technology at Thales. “Combining these complementary technologies is unique and working together with Leti, we will create a world leading center for developing these advanced devices.”

“This innovative joint venture is a unique model of partnership for joining competences, technologies and ambitions, and it will enable the partners to accomplish things they couldn’t do alone,” said Leti CEO Laurent Malier. “Each of us brings very specific and complementary expertise to our pursuit of common goals. Moreover, each partner can capitalize on the developments and transfer new technologies to our customers. The new III-V Lab will be a strong source of value creation”

III-V Lab is located south of Paris in what will become the heart of the Paris Sud Saclay project, a major science and technology park that will combine research organizations, universities, Grandes Ecoles and corporate facilities.

#### **About Alcatel-Lucent (Euronext Paris and NYSE : ALU)**

The long-trusted partner of service providers, enterprises, strategic industries and governments around the world, Alcatel-Lucent is a leader in mobile, fixed, IP and optics technologies, and a pioneer in applications and services. Alcatel-Lucent includes Bell Labs, one of the world’s foremost centres of research and innovation in communications technology.

With operations in more than 130 countries and one of the most experienced global services organizations in the industry, Alcatel-Lucent is a local partner with global reach.

The Company achieved revenues of Euro 16 billion in 2010 and is incorporated in France and headquartered in Paris. For more information, visit Alcatel-Lucent on: <http://www.alcatel-lucent.com>, read the latest posts on the Alcatel-Lucent blog <http://www.alcatel-lucent.com/blog> and follow the Company on Twitter: [http://twitter.com/Alcatel\\_Lucent](http://twitter.com/Alcatel_Lucent).

#### **About Thales**

Thales is a global technology leader for the Defence & Security and the Aerospace & Transport markets. In 2010, the company generated revenues of €13.1 billion with 68,000 employees in 50 countries. With its 22,500 engineers and researchers, Thales has a unique capability to design, develop and deploy equipment, systems and services that meet the most complex security requirements. Thales has an exceptional international footprint, with operations around the world working with customers as local partners.

#### **About CEA-Leti**

CEA is a French research and technology organisation, with activities in four main areas: energy, information technologies, healthcare technologies and defence and security. Within CEA, the Laboratory for Electronics & Information Technology (CEA-Leti) works with companies in order to increase their competitiveness through technological innovation and transfers. CEA-Leti is focused on micro and nanotechnologies and their applications, from wireless devices and systems, to biology and healthcare or photonics. Nanoelectronics and microsystems (MEMS) are at the core of its activities. As a major player in MINATEC campus, CEA-Leti operates 8,000-m<sup>2</sup> state-of-the-art clean rooms, on 24/7 mode, on 200mm and 300mm wafer standards. With 1,200 employees, CEA-Leti trains more than 190 Ph.D. students and hosts 200 assignees from partner companies. Strongly committed to the creation of value for the industry, CEA-Leti puts a strong emphasis on intellectual property and owns more than 1,700 patent families.

For more information, visit [www.leti.fr](http://www.leti.fr).

