



SET, Smart Equipment Technology, Leading Semiconductor Supplier, Joins IRT Nanoelec 3D Integration Program

Will Work with Leti, STMicroelectronics and Mentor Graphics to Develop Advanced 3D Die-to-wafer Stacking Technologies Using Direct Cu-Cu Bonding

SAINT-JEOIRE, France – Jan. 15, 2016 – SET, Smart Equipment Technology, the leading supplier in high accuracy die-to-die and die-to-wafer bonders, today announced its participation in the 3D integration consortium of IRT Nanoelec, which is headed by CEA-Leti. SET joins Leti, STMicroelectronics and Mentor Graphics to develop advanced 3D die-to-wafer stacking technologies, using direct copper-to-copper bonding.

Based in Grenoble, France, IRT Nanoelec is an R&D center focused on information and communication technologies (ICT) using micro- and nanoelectronics. 3D integration is one of its core programs.

The 3D integration program was launched in 2012. It brings together, under a single roof, expertise and equipment addressing the entire 3D integration value chain: technology, circuit architecture, EDA tools, packaging and test. Mentor Graphics (EDA), ST (foundry) and Leti are the founding members of the consortium.

“All SET employees, and in particular the team involved in the 3D project, are proud and enthusiastic to join IRT Nanoelec,” said Pascal Metzger, CEO of SET. “Our integration in this program is a logical continuation of the collaboration initiated with CEA teams 35 years ago on different bonding projects, including laboratory high-precision bonder for Cu-Cu direct bonding. One of the key factors for SET joining this consortium is the opportunity to meet and discuss with experts from different specialties.”

“Maintaining high accuracy for components assembly as well as good control of the parameters, while increasing dramatically the throughput, is a real challenge, but we are eager to start the daily work together with IRT teams to reach our mutual goals,” said Nicolas Raynaud, project manager at SET.

Séverine Chéramy, director of IRT Nanoelec’s 3D integration program, said the objective is to offer designers 3D die-to-wafer stacking at an aggressive pitch – less than 10µm – at high speed, at room temperature and without pressure or underfill.

“I’m particularly proud to welcome SET, a French SME, to the program, because it shows the complementarity of the scope of work,” she said. “The collaboration with SET on die-to-wafer bonding, using copper-to-copper bonding at very high accuracy and high speed, is really exciting and challenging. The consortium’s knowledge of such bonding techniques, combined with expertise on high-accuracy SET equipment, offers many opportunities for heterogeneous 3D integration that address a wide range of potential applications. These include imaging, sensors, logic and photonics.”

About IRT-Nanoelec Research Technological Institute (IRT)

Nanoelec Research Technological Institute (IRT), headed by CEA-Leti conducts research and development in the field of information and communication technologies (ICT) and, specifically, micro- and nanoelectronics. Based in Grenoble, France, IRT Nanoelec



leverages the area's proven innovation ecosystem to create the technologies that will power the nanoelectronics of tomorrow, drive new product development and inspire new applications – like the Internet of Things – for existing technologies. The R&D conducted at IRT Nanoelec provides early insight into how emerging technologies such as 3D integration and silicon photonics will affect integrated circuits. Visit www.irtnanoelec.fr.

About SET

SET, Smart Equipment Technology, a French company located in the northern part of the Alps, has designed, assembled and commercialized equipment for the microelectronics and semiconductor markets since 1975. Its core activity is high-end flip-chip bonders, with sub-micron accuracy, proposed with various options (force, temperature, ultrasonic, UV curing, sizes of components...) and configurations (C2C, C2W...). Addressed applications are 3D integration, optoelectronics, memories stacking, sensors or MOEMS. Website: www.set-sas.fr/en/

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