French consortium announces development of a clockless smartcard chip

Grenoble, France - April 2013 – Tiempo, expert in the design of secured clockless chips, has initiated the collaborative project "ASMART" with several added value partners to develop an innovative smartcard chip prototype. This chip will combine Tiempo secured clockless platform with CEA-Leti innovative contactless interface and Invia best-in-class security sensors. It also embeds a secured operating system developed by Gemalto, world leader in Digital Security, in order to effectively demonstrate the benefits of Tiempo unique asynchronous technology for secured contactless applications. Further on, the chip will be characterized by Presto Engineering and manufactured on the new 110 nm eFlash process developed by LFoundry Rousset.

Tiempo asynchronous circuits offer unmatched benefits for secure transactions, such as very high hardware resistance to side channel and perturbation attacks as well as a natural adaptability to the energy-constrained context of contactless smartcards, always delivering maximum processing speed under limited and variable power budget.

With the fast growth of contactless payment, transit and ID markets, the next generation of smartcard products faces the difficult compromise between improved security and faster transaction. The properties of Tiempo asynchronous logic shall allow achieving fast and secure contactless transactions, even under low or variable magnetic field intensity.

"Tiempo has already demonstrated the speed/power performance of its asynchronous platforms, as well as its high robustness to hardware attacks as proven by external labs. We are very excited to collaborate now with our partners CEA-Leti and Invia for this full chip design, with Gemalto for the software and with LFoundry and Presto Engineering for the manufacturing and characterization process." says Serge Maginot, CEO of Tiempo. *"This new type of smartcard chips will enable end-users to experience more secured and faster payment transactions for any kind of situation"*.

"CEA-Leti is proud to use his strong background in the RFID area and low power design to provide a contactless interface solution specifically optimized to use the low voltage operation capability of Tiempo's asynchronous logic", says Michel Durr, Analog & RF IC Design Program Manager, CEA-Leti.

"LFoundry is very happy to actively contribute, with its newly developed 110 nm eFlash process, to this innovative project on high-performance and high-security smartcard chips", says Jean-Pierre Delesse, Chief Marketing Officer, LFoundry Rousset. *"The project objectives are fully aligned with LFoundry development roadmap, which includes technology innovation in a security-certified manufacturing environment and competitiveness"*.

"Presto Engineering is strongly committed to bridging the gap between an innovative prototype and a production ready chip for an asynchronous contactless solution. Industrial test challenges associated with such disruptive innovation demand creativity and expertise in order to be cost effective", says Cedric Mayor, Director of R&D, Presto Engineering. *"We are very excited to support a great market opportunity by delivering the foundation of its industrial test solution"*.

Preliminary silicon prototypes are scheduled for Q2 2013 and the first complete samples for Q4 2013. These prototypes will be followed by a campaign of proper certifications.

The "ASMART" project is co-funded by the "Fonds Unique Interministériel" (FUI) and the "Fonds Européen de Développement Régional" (FEDER) and has been co-labeled by the two regional Excellence Clusters "Minalogic" and "SCS".

About CEA-Leti

Leti is an institute of CEA, a French research-and-technology organization with activities in energy, IT, healthcare, defense and security. Leti is focused on creating value and innovation through technology transfer to its industrial partners. It specializes in nanotechnologies and their applications, from wireless devices and systems, to biology, healthcare and photonics. NEMS and MEMS are at the core of its activities. An anchor of the MINATEC campus, CEA-Leti operates 8,000-m² of state-of-the-art clean room space on 200mm and 300mm wafer platforms. It employs 1,700 scientists and engineers including 240 Ph.D. students and 200 assignees from partner companies. CEA-Leti owns more than 1,880 patent families.

For more information, visit www.leti.fr.

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About Gemalto

Gemalto (Euronext NL0000400653 GTO) is the world leader in digital security with 2012 annual revenues of €2,2 billion and 12,000 employees operating out of 74 offices and 14 Research & Development centers, located in 43 countries.

Gemalto is at the heart of the rapidly evolving digital society. Billions of people worldwide increasingly want the freedom to communicate, travel, shop, bank, entertain and work – anytime, everywhere – in ways that are enjoyable and safe. Gemalto delivers on their expanding needs for personal mobile services, payment security, authenticated cloud access, identity and privacy protection, eHealthcare and eGovernment efficiency, convenient ticketing and dependable machine-to-machine (M2M) applications.

Gemalto develops secure embedded software and secure products which we design and personalize. Our platforms and services manage these secure products, the confidential data they contain and the trusted end-user services they enable. Our innovations enable our clients to offer trusted and convenient digital services to billions of individuals.

Gemalto thrives with the growing number of people using its solutions to interact with the digital and wireless world.

For more information, visit www.gemalto.com, www.justaskgemalto.com, blog.gemalto.com, or follow @gemalto on Twitter.

About Invia

Invia is a privately held company founded in 2006.

Invia provides mixed-signal secure semiconductor IP and embedded software to system integrators. Invia's customers are semiconductor vendors and OEMs addressing markets where security is a key requirement such as SIM, EMV, eUICC, PayTV, ID and secure terminals.

Invia's IP catalogue includes analog, RF and digital building blocks specifically designed for secure embedded systems. Invia's value proposition protects ICs against major security threats while minimizing the area and power overhead required by countermeasures. Common threats include IP theft, cloning, reverse-engineering, information extraction, tampering and all other sorts of cryptosystem attacks.

As an IP design house, Invia reduces both time-to-market and integration risks by taking into account the customer's design flow at the earlier design stage, providing comprehensive documentations and ensuring quality support for major EDA tools (analog design, digital simulation, synthesis, back-end).

Because security shall be addressed at each design stage, Invia's expertise goes from hardware IP to system architecture through firmware and software.

For more information, visit www.invia.fr.

About LFoundry

LFoundry is a leading analog / mixed signal and specialized silicon foundry with 200 mm manufacturing facilities in France and in Italy. LFoundry is delivering from Europe manufacturing excellence in a trustful environment, and is providing silicon technologies that exceed customer's expectations in term of performance, flexibility and innovation.

For more information, visit www.lfoundry.com.

About Presto Engineering

Presto Engineering, an ISO 9001 company, delivers comprehensive test and product engineering solutions to Integrated Device Manufacturers and fabless companies. Operating from hubs in Silicon Valley, Europe and Israel, our business is focused on helping to improve the speed and predictability of new product releases. Presto combines unique technical expertise, extensive industry experience and supply chain management, with leading edge test solutions for System on a Chip and RF, reliability, and failure analysis services to offer a complete product engineering solution designed to complement our customer's internal resources.

For more information, visit www.presto-eng.com.

About Tiempo

Tiempo develops and markets chips for secured contactless transactions that are based on its innovative secured clockless hardware platform TESIC. The chips designed by Tiempo are extremely efficient in speed/power under variable magnetic field conditions and highly secured against hardware attacks using power analysis and/or fault injections. The product portfolio developed by Tiempo targets smartcards with contactless or dual interface for banking/transport applications as well as chips for secured identification.

The company also developed and markets a complete solution – EDA and IP – for designing innovative clockless chips. Asynchronous circuits designed with Tiempo technology are very robust and efficient with energy/voltage variability and advanced process variability.

Tiempo is located in Montbonnot, near Grenoble, France.

For more information, visit www.tiempo-ic.com or contact Tiempo at +33 4 76 61 10 00 or sales@tiempo-ic.com.