

IDEMIA Secure Transactions and Seven Other French Cybersecurity Leaders Unite to Develop Large-Scale Quantum Security Solutions

Gathering eight recognized members of the cybersecurity sector, the Hyperform consortium, funded by France 2030 and the European Union, is dedicated to developing quantum-safe solutions capable of protecting sensitive data from potential attacks from quantum computers.

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As the cybersecurity landscape evolves with the looming threat of quantum computing, industry leaders are joining forces to develop robust solutions. The Hyperform consortium unites several leading players in cybersecurity and post-quantum: **IDEMIA Secure Transactions**, project coordinator and a leading provider of secure solutions, **CryptoNext**, a provider of post quantum cryptography remediation solutions, **Atempo**, a provider of data protection solutions, **Prim'X**, a software publisher of encryption solutions, **Synactiv**, an offensive security company and licensed testing laboratory (CESTI), **CEA Leti**, a global leader in miniaturization technologies enabling smart, energy-efficient and secure solutions for industry, **INRIA**, the French national institute for digital science and technology, with world-class researchers in cryptography and secure implementation, and the **French cybersecurity agency (ANSSI)**, who will supervise the security and performance assessment of the solution.

Funded by the French government investment plan France 2030, and credits from the European Union, the consortium is a key element in the development of European sovereignty in post-quantum cryptography.

A sovereign quantum-safe offering at the forefront of global industrial research

The arrival of the quantum computer will jeopardize the security of sensitive data. The objective of Hyperform is to design quantum-safe solution that will protect government, enterprise and citizen data from the threat of quantum computer. The consortium will set up a complete demonstrator for cloud data storage, documents archiving and online collaboration, based on sovereign encryption software used to protect the most critical information.

With more than 7.5 million euros invested by the consortium, France 2030 and the European Union, and 29 experts recruited, the Hyperform consortium has very strong ambitions. Over the next three years, the Hyperform consortium will work to develop quantum-safe components so that service providers – including banks, governments, and software companies – can ensure unrivalled data security for their end-user services. The first end-to-end solutions will have the potential to set the standard for the whole industry.

As part of this project, the consortium will develop a next generation quantum-safe chip and create post-quantum cryptographic libraries, enhancing payment transactions as well as identity document reading.

In order to facilitate the transition to these advanced security measures, existing cybersecurity software will be modified. The performance and security of these new solutions will be assessed under the supervision of the ANSSI security agency.

True to our commitment to provide service providers with state-of-the-art security services, we are very proud to lead the Hyperform consortium. This collaborative project highlights our shared expertise in post-quantum technologies and our joint commitment to crafting solutions that meet industry demands. By working hand-in-hand with the ecosystem, we will be able to develop a robust quantum-safe framework, driving co-innovation and industry-wide progress.

Marc BERTIN, Chief Technology Officer at IDEMIA Secure Transactions

With a global team of 800 experts in research and development, IDEMIA Secure Transactions stands at the forefront of technology, particularly in post-quantum cryptography, as a world-leading authority. The company has been a trailblazer in the advancement of post-quantum algorithms and notably, in 2022, achieved a milestone by introducing the first quantum-resistant 5G SIM. The Division recently unveiled the first crypto-agility solution that will enable service providers of secure products to future-proof the security of their products in the post-quantum era.

About IDEMIA Group- IDEMIA Group unlocks simpler and safer ways to pay, connect, access, identify, travel and protect public places. With its long-standing expertise in biometrics and cryptography, IDEMIA develops technologies of excellence with an impactful, ethical, and socially responsible approach. Every day, IDEMIA secures billions of interactions in the physical and digital worlds.

IDEMIA Group brings together three market-leading businesses that enable mission-critical solutions:

- **IDEMIA Secure Transactions** is the leading technology provider who unlocks safer and easier ways to pay and connect.
- **IDEMIA Public Security** is a leading global provider of biometric solutions that unlock convenient and secure travel, access, and protection.
- **IDEMIA Smart Identity** leverages the power of cryptographic and biometric technologies to unlock a single trusted identity for all.

With a global team of nearly 15,000 employees, IDEMIA Group is trusted by over 600 governmental organizations and more than 2,400 enterprises in over 180 countries. For more information, visit www.idemia.com and follow @IDEMIAGroup on X.

About CryptoNext Security - CryptoNext Security, based in Paris, founded in 2019 after more than 20 years of academic research. CryptoNext Security is a software vendor specializing in Post Quantum Cryptography (PQC).

CryptoNext offers its leading C-QSR Quantum Safe Remediation software suite including its world reference library Quantum Safe Library (C-QSL) with the latest updates of US NIST standard and EU recommended PQC algorithms optimized implementation and extended security modules as well as full set of upper-layer crypto-agile, full PQC hybridization-ready integration tools, application plugins, for end-user enterprises and integrators, to support them in their post-quantum migration roadmap for long-term efficiency.

About Atempo - Atempo is a leading independent European-based software vendor with an established global

presence in providing data protection and management solutions.

With over 30 years' experience, Atempo offers a complete range of proven solutions for both physical and virtual server backups, laptop and desktop protection, and migration between different storages of very large data volumes.

About PRIM'X Technologies - PRIM'X Technologies is an independent French software company that develops and commercializes encryption solutions to ensure the confidentiality of stored data and manage the Right to Know.

PRIM'X solutions protect computer disks, folders and files, network shares, emails and Cloud environments. The level of protection is Common Criteria EAL3+ certified, Qualified by the French State and other European States, approved for protection of EU and NATO Restricted information.

For more information: www.primx.eu/en

About Synacktiv - Founded in 2012 by two cybersecurity experts, Synacktiv's main areas of expertise are penetration testing, security audits, reverse engineering, vulnerability scanning and incident response. It develops numerous offensive security tools as part of its activities.

Synacktiv is approved PASSI RGS and LPM (Information Systems Security Audit Service Provider) & CESTI (Information Technology Security Assessment Center) by ANSSI. It is also labeled Cybersecurity Made In Europe by the Alliance for Digital Confidence (ACN) and a certifying body authorized by the National Gaming Authority (ANJ). Its 170 experts operate mainly from offices in Paris, Toulouse, Lyon, Lille and Rennes and operate in France, Europe and internationally. On a national or international scale, Synacktiv's involvement within the cyber community is reflected by participation in numerous events (conferences, challenges, CTF) as well as the regular publication of security alerts or articles. To find out more www.synacktiv.com

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

About Inria - Inria is the French national research institute for digital science and technology and since January 2024 has been responsible for the Agence de programmes dans le numérique (Digital Programs Agency), designed to strengthen the collective dynamics of higher education and research.

World-class research, technological innovation and entrepreneurial risk are its DNA. In 215 project teams, most of which are shared with major research universities, more than 3,900 researchers and engineers explore new paths, often in an interdisciplinary manner and in collaboration with industrial partners to meet ambitious challenges.

As a technological institute, Inria supports the diversity of innovation pathways: from open source software publishing to the creation of technological startups (Deeptech).



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