E-GROUP
SOFTWARE & BEYOND

General information

E-Group ICT Software Co. (www.egroup.hu)

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Area of interest	Choose Y or N
○ Functional encryption and reduction of leakage (e.g., anonymization or obfuscation)	Y
○ Ultra-lightweight cryptology and ultra-high-speed cryptographic algorithms including quantum cryptography	N
○ Physical cryptanalysis, including tampering, side channel, faults injection attacks, and security of tools for good software implementation and validation practices	N
○ Authenticated encrypted token research for mobile payment solution	Y
○ Innovative cryptographic primitives and complementary non-cryptographic privacy-preserving mechanisms to enforce privacy	N
○ New techniques, such as quantum safe cryptography, which are secure from quantum computers	Y
○ Quantum key distribution	N
○ Automated proof techniques for cryptographic protocols	N

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Competencies

- *Management owned since 1993, founder & CEO: Antal KUTHY*
- *SW development, security focus, not resellers*
- *Professional team (SW architects, developers, consultants)*
- *Relevant products and competencies: Transacting, eID & PKI*
- *Clients: Financial/Banking/Payment, Government, Energy/Utilities*
- *International sales: SW project experience in 10+ countries*
- *East-West partnerships: www.fisglobal.com, www.unionpay.com*
- *Existing SW stacks: Coriba internet banking, Abaqoos payment, National eID (eIDAS)*
- *In-house technology lab: implementing X.509 certificates for post quantum crypto, Java card blockchain wallet*
- *Innovation labs & partnering with universities, research groups*
- *Several national (HU) and European R+D+I projects*
- *Member in EIT Digital & EIT Health*

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Project idea

- *Possible fields of E-Group contribution*

- *Tokenized payment:*
  - **Extend payment (credit card data) tokenization and tokenization service infrastructure to sensitive consumer data at retailers and e-commerce service providers**

- *Quantum safe crypto:*
  - **How to manage change to post-quantum crypto algorithms in the present real life X.509 based technology stacks**
  - **How eIDAS and GDPR regulation and implementation are affected by post-quantum crypto**