Attn Mr Albert H. Seubers
Director Martel-Innovate BV
albert.seubers@martel-innovate.com

Expression of Interest for Cloud-Edge-IoT Research

Dear Mr. Seubers,

Please find hereafter our Exaion Expression Of Interest for Cloud-Edge-IoT Research.

Exaion is a 100% spin-off of EDF, founded in 2020, and already has 40 employees. Exaion provides sustainable, secure, and sovereign cloud services such as Web3 and distributed ledgers, High-Performance (HPC) and Edge Computing, digital twin and industrial metaverse rendering.

MOTIVATION

Exaion builds key infrastructure to deploy safe, sovereign, energy efficient cloud services and data spaces. It integrates decentralization technologies such as private and public blockchains and digital ledgers, self-sovereign identity, and verifiable credentials, *cloud de confiance*.

It serves commercial and industrial clients within the EU regulated market and beyond. It operates independently from its mother company and its success depends on its ability to do business with private companies, large accounts and innovative startups looking for best in class cloud services.

Exaion is naturally motivated to participate in Cloud-Edge-IoT research in Europe as it aligns with its vision of the evolution of the cloud-edge-iot continuum. This convergence presents opportunities for new business models, and for automation and collaboration in trustless "*coopetitive"* value chains.

Europe can develop a market for competitive, sustainable, secure and privacy preserving architectures and infrastructures to support the general adoption of AI, the emergence of metaverses, and the digitization and cognitive augmentation of value chains.

Over its three years of operations, Exaion has established a successful track record delivering industrial projects around web3 (public and private blockchains and DLTs), micro highly converged datacenters, and high performance computing.

CURRENT STATUS

Exaion is one of the key web3 node-as-a-service operators in Europe of private and public blockchains, to institutional, industrial and startups clients, within EU (upcoming) regulation.

Exaion builds datacenter-as-a-service for micro datacenters based on open source and innovation in heat management in highly converged environments.

Exaion provides 3D rendering cloud services to creative industries and industrial clients for digital twins and industrial metaverse projects.

In association with EDF its mother company and a Gaia-X founder, Exaion is becoming a validator of the Pontus-X Gaia-X network, a web3 decentralized data space as a service environment supporting already many industry data spaces initiatives in manufacturing (EuproGigant (DE)) and mobility (MoveID (DE), Future Mobility (NL)) etc.

The network provides "Compute-to-Data" capability, by which processing is brought to data, and is leveraging AI for federated learning and autonomous agents, through partnerships with Felt.ai and Fetch.ai. This is a burgeoning space with real life use cases.

RESEARCH CHALLENGE

The identified challenges and opportunities related to the Cloud-Edge-IoT continuum on which Exaion is working and seeking partners in the medium term (2023-2025) are:

- Sustainable resource optimization & selection (allocation, workload, data placement)
- Maintaining security, privacy and compliance in the continuum
- Energy consumption optimization: cooling, minimal impact, power usage
- Safe, sustainable, explainable AI in a federated (infrastructure) environment (AI Act compliant)
- Decentralized and new business models for autonomous agents' operations across data spaces.
- Data to Compute to AI seamless integration – Secure decentralized computing.
- Agent cooperation with economic primitives for automated markets.
- Design secure decentralized oracles (trusted data feeding algorithms and AI).
- The upcoming adoption of Full Homomorphic Encryption (FHE) in the Cloud-Edge-IoT context.

We look forward to the opportunity to participate in further discussions and provide additional information, as required. Please find attached relevant documentation, including our company profile for your reference.

Sincerely,

Fatih Balyeli, CEO and Cofounder

EXAION

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[Attachments: Company Profile, Documentation]

04/14/23