nexT gEnErAtion sMaRt INteRconnectEd iOt

Fact Sheet

Project Information

TERMINEt
Grant agreement ID: 957406

Status
Ongoing project

Start date
1 November 2020
End date
31 October 2023

Funded under
H2020-EU.2.1.1.

Overall budget
€ 7 998 285

EU contribution
€ 7 998 285

Coordinated by
PANEPISTIMIO DYTIKIS MAKEDONIAS
Greece

Project description

Making it simple to connect devices

Tens of billions of devices are connected to the Internet of Things (IoT), and the number of connections is growing every second. Information is being constantly sent and received from one smart device to another. Based on cutting-edge technologies such as software-defined networking (SDN), multiple-access edge computing, and virtualisation for next-generation IoT, the EU-funded TERMINET project will develop a novel next-generation reference architecture. Its main aim is to simplify the connection of a vast number of different devices through a flexible SDN-enabled middleware layer. To improve supply chain processes, the project will design an IoT-driven decentralised and distributed blockchain framework within manufacturing.
TERMINET’s approach will be tested in real-life situations such as energy, smart buildings, smart farming, healthcare and manufacturing.

**Objective**

The vision of TERMINET is to provide a novel next generation reference architecture based on cutting-edge technologies such as SDN, multiple-access edge computing, and virtualisation for next generation IoT, while introducing new, intelligent IoT devices for low-latency, market-oriented use cases. TERMINET’s primary intention is to bring (more efficient and accurate) decisions to the point of interest to better serve the final user targeting at applying distributed AI at the edge by using accelerated hardware and sophisticated software to support local AI model training using federated learning. Our solution aspires to reduce the complexity of the connecting vast number of heterogeneous devices through a flexible SDN-enabled middleware layer. It also aims to design, develop, and integrate novel, intelligent IoT devices such as smart glasses, haptic devices, energy harvesting modules, smart animal monitoring collars, AR/VR environments, and autonomous drones, to support new market-oriented use cases. Great expectation of the proposal is to foster AR/VR contextual computing by demonstrating applicable results in realistic use cases by using cutting-edge IoT-enabled AR/VR applications. By designing and implementing an IoT-driven decentralised and distributed blockchain framework within manufacturing, TERMINET aims to support maintenance and supply chain optimisation. Our solution intends to apply a vertical security by design methodology by meeting the privacy-preserving and trust requirements of the NG-IoT architecture. To foster standardisation activities for the IoT ecosystem, TERMINET will provide novel disruptive business models. For the evaluation of its wide applicability, TERMINET will validate and demonstrate six proof-of-concept, realistic use cases in compelling IoT domains such as the energy, smart buildings, smart farming, healthcare, and manufacturing.

**Field of science**

/natural sciences/computer and information sciences/internet/internet of things

**Programme(s)**

**Topic(s)**

**Call for proposal**
H2020-ICT-2020-1

Funding Scheme
RIA - Research and Innovation action

Coordinator

<table>
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<tr>
<th>Organisation</th>
<th>EU contribution</th>
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<tr>
<td>PANEPISTIMIO DYTIKIS MAKEDONIAS</td>
<td>€ 881 250</td>
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<tr>
<td>Address</td>
<td>Activity type</td>
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<td>Parko Agiou Dimitriou 1 50100 Kozani Greece</td>
<td>Higher or Secondary Education Establishments</td>
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<td>Website</td>
<td>Contact the organisation</td>
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Participants (26)

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<tr>
<td>ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS</td>
<td>€ 401 562,50</td>
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<td>Greece</td>
<td>Activity type</td>
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<td>Charilaou Thermi Road 6 Km 57001 Thermi Thessaloniki</td>
<td>Research Organisations</td>
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<td>Website</td>
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<td>KAROLINSKA INSTITUTET</td>
<td>€ 199 687,50</td>
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<td>Sweden</td>
<td>Activity type</td>
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<td>Nobels Vag 5 17177 Stockholm</td>
<td>Higher or Secondary Education Establishments</td>
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<td>Website</td>
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<td>ARISTOTELIO PANEPISTIMIO THESSALONIKIS</td>
<td>€ 239,375</td>
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<td>SCHNEIDER ELECTRIC ESPANA SA</td>
<td>€ 196,875</td>
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<td>FUTURE INTELLIGENCE LTD</td>
<td>€ 336,562.50</td>
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ERICSSON TELECOMUNICAZIONI SPA
Italy
EU contribution
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INTRASOFT INTERNATIONAL SA
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WELLNESS TELECOM SL
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- **Country**: Luxembourg
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- **Address**: 130 Route D’arlon, 8008 Strassen
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### EIGHT BELLS LTD
- **Country**: Cyprus
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- **Address**: Agias Paraskevis 23 Strovolos, 2002 Nicosia
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GEIE ERCIM

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OPTINVENT
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FUNDACIO PRIVADA I2CAT, INTERNET I INNOVACIO DIGITAL A CATALUNYA
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FONDAZIONE POLICLINICO UNIVERSITARIO AGOSTINO GEMELLI IRCCS
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Contact the organisation

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