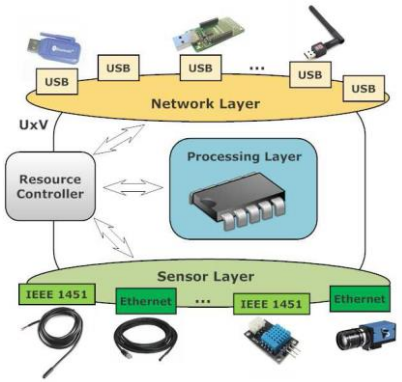
<Reference No.>	R.A.W.F.I.E.: ROAD-, AIR- AND WATER-BASED FUTURE INTERNET EXPERIMENTATION							
Name of legal entity	Country	Contract value (€)	% carried out by Epsilon	No of staff provided	Client	Origin of funding	Date (start/end)	Consortium Members
Epsilon avionTEK	Greece	6 995 733	EpsBG: 2,5%: 177 813 AvionTek: 1,5%: 100 625	EpsBG: 23pm AvionTek: 11 pm (total:594pm)	European Commission	European Commission	01/01/2015 - ongoing (Estimated duration: 48 months)	UOA, CSEM, IES SOLUTIONS, Fraunhofer, Epsilon BG, H.A.I. SA, Pegase, CERTH, MST, HES-SO, ROBOTNIK, AVIONTEK,

Description of the project (www.rawfie.eu)

The purpose of the RAWFIE initiative is to create a federation of different network testbeds that will work together to make their resources available under a common framework. Specifically, it aims at delivering a unique, mixed experimentation environment across the space and technology dimensions. RAWFIE will integrate numerous testbeds for experimenting in vehicular (road), aerial and maritime environments. A Vehicular Testbed (VT) will deal with Unmanned Ground Vehicles (UGVs) while an Aerial Testbed (AT) and a Maritime Testbed (MT) will deal with Unmanned Aerial Vehicles (UAVs) and Unmanned Surface Vehicles (USVs) respectively. The RAWFIE consortium includes all the possible actors of this highly challenging experimentation domain, from technology creators to integrators and facility owners. The basic idea behind the RAWFIE effort is the automated, remote operation of many robotic devices (UGVs, UAVs, USVs) for the purpose of assessing the performance of different technologies in the networking, sensing and mobile/autonomic application domains. RAWFIE will feature a significant number of UxV nodes for exposing to the experimenter a vast test infrastructure. All these items will be managed by a central controlling entity which will be programmed per case and fully overview/drive the operation of the respective mechanisms (e.g., auto-pilots, remote controlled ground vehicles). Internet connectivity will be extended to the mobile units to enable the remote programming (over-the-air), control and data collection. Support software for experiment management, data collection and post-analysis will be virtualized to enable experimentation from everywhere in the world. The vision of Experimentation-as-a-Service (EaaS) will be promoted through RAWFIE. The IoT paradigm will be fully adopted and further refined for support of highly dynamic node architectures.



Type & scope of services provided

- **Project Management**:
  Project control activities: participation in (i) project management procedures, (ii) reporting schemes, (iii) financial and controlling transactions, (iv) contractual issues, (v) project document / presentation templates, (vi) audit procedures.
  Risk Management: risk analysis on the project, identification of risks and suggestion of mitigation strategies. EPSILON will record possible dangers related to the design and implementation of GIS.
- **Implementation and Prototype Development:**
  Middleware and Experimenter Tools Implementation: development of all the software components that lie on the Front End and the Middle tiers of RAWFIE architecture. EPSILON will be responsible for the development of a rather powerful (i.e., in terms of parallel processing and 3D presentation capabilities) Visualization Engine at the Middle tier that will provide its results to the experimenter through the Visualization tool of Experimentation Suite in the Front End tier.
- **Platform Deployment and Evaluation**:
  Prototype Integration, Testing and Customization: integration of all developed components, testing and customization.
- **Training, Dissemination, Liaison**:
  Community Building: building a community of RAWFIE members, experimenters, testbed operators, UxV manufacturers, and other interested parties.

Key words: FIRE, Future Internet Research and Experimentation, UxV Testbeds, Federation of Network Testbeds, IoT Paradigm, Cloud Computing

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