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ITEA 3 is a EUREKA strategic ICT cluster programme

Exploitable Results by Third Parties

15018 - CitiSim

Project details

Project leader:	Carlos Jiménez Barranco (Abalia)
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Name: Multimedia platform with mixed reality		
Input(s):	Main feature(s)	Output(s):
▪ Multimedia content ▪ Sensor data ▪ Emergency model data	▪ Sensor data monitoring ▪ Controlling of actuators ▪ Visualization of multimedia content ▪ Representation of emergencies in the target building	▪ Access to the multimedia content ▪ Evolution of sensor data ▪ Events in the actuators

Unique Selling Proposition(s):	▪ For the construction sector: It is an easy to use platform for simulation based on mixed reality able to optimize the management procedure during a construction. ▪ For the education sector: A learning process based on simulation and training which provides trainees with safe (virtual) exposure to complex and potentially dangerous equipment and scenarios. Furthermore, it is possible for supervisors to review video recordings of training sessions to monitor progress and tailor lessons to specific employee needs. ▪ For the industrial sector: Reduce the learning curve of non-specialist staff. Reduce costs in training, documentation and personnel, through the creation of a single communication interface based on Augmented Reality. Increase flexibility and efficiency in the execution of maintenance and assistance tasks in the industrial environment.
Integration constraint(s):	▪ Integration of remote actuators ▪ Integration of the 3D building model ▪ HoloLens device ▪ Internet connection
Intended user(s):	▪ Companies dedicated to construction, education and in the industrial sector.
Provider:	▪ Answare-Tech S.L.
Contact point:	▪ Tonny Velin: tvelin@answare-tech.com
Condition(s) for reuse:	▪ Commercial licence to be negotiated; ▪ A free licence can be provided for research purposes.

Latest update: 11/11/2019

Name: Visual Wiki		
Input(s):	Main feature(s)	Output(s):
▪ Multimedia content	▪ Visualization of multimedia content	▪ Access to the multimedia content

Unique Selling Proposition(s):	▪ It can store any kind of data: text, 2D, 3D and 4D and serve it easily.
Integration constraint(s):	▪ Users need to be registered in the platform ▪ Internet connection
Intended user(s):	▪ Application developers
Provider:	▪ Answare-Tech S.L.
Contact point:	▪ Tonny Velin: tvelin@answare-tech.com
Condition(s) for reuse:	▪ Commercial licence to be negotiated; ▪ A free licence can be provided for research purposes.

Latest update: 11/11/2019

Name: HoloLens mixed reality application		
Input(s):	Main feature(s)	Output(s):
▪ Sensor data ▪ Emergency model data	▪ Sensor data monitoring ▪ Controlling of actuators ▪ Representation of emergencies in the target building	▪ Evolution of sensor data ▪ Events in the actuators

Unique Selling Proposition(s):	▪ Our HoloLens application is able to manage emergencies in a controlled environment like a smart building. ▪ This application can integrate any kind of external data coming from sensors or any other source.
Integration constraint(s):	▪ Integration of remote actuators ▪ Integration of the 3D building model ▪ HoloLens device ▪ Internet connection
Intended user(s):	▪ End-users
Provider:	▪ Answare-Tech S.L.
Contact point:	▪ Tonny Velin: tvelin@answare-tech.com
Condition(s) for reuse:	▪ Commercial licence to be negotiated; ▪ A free licence can be provided for research purposes.

Latest update: 11/11/2019

Name: Energy Management Platform		
Input(s):	Main feature(s)	Output(s):
▪ Sensors data ▪ User data	▪ Near-real time monitoring of energy consumption / production and environmental ▪ Custom dashboards ▪ Alarms / notifications ▪ Possibility to export data in various formats for data analysis ▪ Can be used following a cost-center approach, to monitor and compare multiple locations	▪ Energy data ▪ Environmental data ▪ Notifications / alerts ▪ Data files
Unique Selling Proposition(s):	▪ Easily customizable in terms of design and features ▪ Low price point ▪ Low deployment time (<1 week) ▪ Easy integration of third party IoT	
Integration constraint(s):	▪ Web browser: Google Chrome, Safari, Mozilla Firefox, Microsoft Edge ▪ Stable Internet connection	
Intended user(s):	▪ SMEs, office buildings, ESCOs, energy audit companies	
Provider:	▪ BEIA CONSULT INTERNATIONAL	
Contact point:	▪ George Suciu: george@beia.ro	
Condition(s) for reuse:	▪ Licensing	
	Latest update: 12/11/2019	

Name: Business Intelligence Platform		
Input(s):	Main feature(s)	Output(s):
▪ Sensors data ▪ User input	▪ Monitoring of energy consumption in near-real time ▪ Simulation of KPIs associated with investments in “green” energy production ▪ Comparison between two scenarios	▪ KPIs describing the economic viability of the project ▪ Energy consumption data

Unique Selling Proposition(s):	▪ Combination of energy data with economic data, providing valuable data to energy managers ▪ Easy to use and to adjust, on demand, to specific user needs ▪ Easy integration of third party IoT
Integration constraint(s):	▪ Web browser: Google Chrome, Safari, Mozilla Firefox, Microsoft Edge ▪ Stable Internet connection
Intended user(s):	▪ SMEs, office buildings, ESCOs, energy audit companies
Provider:	▪ BEIA CONSULT INTERNATIONAL
Contact point:	▪ George Suciu: george@beia.ro
Condition(s) for reuse:	▪ Licensing

Latest update: 12/11/2019

Name: Environmental Motion Assistant		
Input(s):	Main feature(s)	Output(s):
▪ Mobile sensors data ▪ Fixed sensors data ▪ User input	▪ Environmental and motion parameters are continuously measured and stored for any user context; ▪ Insightful visualizations being provided through a mobile and a web application; ▪ Reporting of incidents through the mobile application.	▪ Maps and heatmaps ▪ Environmental data ▪ Movement and environmental near-real time and history data ▪ Incident reporting for citizens

Unique Selling Proposition(s):	▪ Combination between environmental data and motion data ▪ Easy integration of third party IoT devices ▪ Modular architecture, facilitating the integration and customization of custom services (e.g. smart parking, EV charging stations etc)
Integration constraint(s):	▪ Web version: Google Chrome, Safari, Mozilla Firefox or Microsoft Edge web browser ▪ Mobile version minimum requirements: Android 4.0, dual core CPU, 1GB RAM, 300MB storage, GSM, 3G, geolocation ▪ Stable Internet connection
Intended user(s):	▪ Municipalities, transportation companies and citizens
Provider:	▪ ALTFACTOR, BEIA CONSULT INTERNATIONAL
Contact point:	▪ Marius Ivanov: marius.ivanov@altfactor.ro ▪ George Suciu: george@beia.ro
Condition(s) for reuse:	▪ Licensing
	Latest update: 12/11/2019

Name: CitiSim General Adapter		
Input(s):	Main feature(s)	Output(s):
▪ JSON of a report	▪ Process the JSON to get a valid report ▪ Extract extra data from a web service with authentication ▪ Public a report on a libcitisim's topic	▪ libcitisim event

Unique Selling Proposition(s):	▪ An easy and direct implementation of integration between libcitisim and other technologies.
Integration constraint(s):	▪ Server Machine with Internet Access ▪ Docker or Python 3.6 and libcitisim
Intended user(s):	▪ Python developers ▪ Developers / Administrators of IOT Platform
Provider:	▪ Abalia. Open Source Code. ▪ Code available on: https://github.com/citisim-org/citisim-general-adapter
Contact point:	▪ Abalia - info@abalia.com
Condition(s) for reuse:	▪ GPL 3.0

Latest update: 14/11/2019

Name: CitiSim MQTT Adapter		
Input(s):	Main feature(s)	Output(s):
▪ MQTT Events ▪ CitiSim IoT Events	▪ Gateway between MQTT domain and CitiSim domain.	▪ CitiSim IoT Events ▪ MQTT Events
Unique Selling Proposition(s):	▪ An integration service with MQTT domain for smart cities	
Integration constraint(s):	▪ Configuration file ▪ python3-paho-mqtt ▪ libcitisim (which requires ZeroC ICE)	
Intended user(s):	▪ Smart service developers ▪ Developers / Administrators of IOT Platform	
Provider:	▪ Abalia and Prodevelop. Open Source Code. ▪ Code available on: https://bitbucket.org/arco_group/citisim-mqtt-adapter/src/master/	
Contact point:	▪ Abalia - info@abalia.com ▪ Prodevelop – info@prodevelop.es	
Condition(s) for reuse:	▪ GPL 3.0	
	Latest update: 14/11/2019	

Name: CitiSim Library (libcitisim)		
Input(s):	Main feature(s)	Output(s):
▪ Produce/Consume CitiSim IoT events and info related.	▪ A python library for easily produce and/or consume CitiSim IoT events and get/put properties of sensors/actuators deployed.	▪ Produce/Consume CitiSim IoT events and info related.

Unique Selling Proposition(s):	▪ A python library to facilitate the development of intelligent services on a citisim platform.
Integration constraint(s):	▪ A CitiSim instance running.
Intended user(s):	▪ Python developers ▪ Developers / Administrators of smart services
Provider:	▪ Abalia
Contact point:	▪ Abalia - info@abalia.com
Condition(s) for reuse:	▪ Commercial and Open Source options to be consulted

Latest update: 18/11/2019

Name: CitiSim core		
Input(s):	Main feature(s)	Output(s):
▪ IoT events from a City	▪ Data distribution ▪ Data persistence ▪ Dashboard of service/sensor provision	▪ IoT event distribution ▪ CitiSim Infrastructure software monitoring

Unique Selling Proposition(s):	▪ An IoT infrastructure for smart/buildings
Integration constraint(s):	▪ Debian package distribution ▪ Datamodel of CitiSim
Intended user(s):	▪ Smart city/building ICT managers and developers
Provider:	▪ Abalia
Contact point:	▪ Abalia - info@abalia.com
Condition(s) for reuse:	▪ Commercial license (SaaS)
	Latest update: 18/11/2019

Name: Smart Energy Service		
Input(s):	Main feature(s)	Output(s):
▪ JSON messages from Energy sensors	▪ Energy monitoring ▪ Energy usage forecasting ▪ Dashboard for data visualization using different widgets	▪ Metrics of multiple Energy-related variables

Unique Selling Proposition(s):	▪ Unified platform for Energy monitoring and forecasting integrating sensors regardless brand and model and other platforms ▪ Easily customizable in terms of design and features ▪ Low deployment time
Integration constraint(s):	▪ CitiSim library (libcitisim) or adapters in case of integration with other third-parties ▪ Development of specific forecasting algorithms involves additional effort ▪ Web browser ▪ Stable Internet connection
Intended user(s):	▪ Energy suppliers ▪ Energy auditors ▪ Developers of Energy solutions aiming for data analytics ▪ Smart City/Building ICT managers
Provider:	▪ Abalia
Contact point:	▪ Abalia - info@abalia.com
Condition(s) for reuse:	▪ Commercial license (SaaS)
	Latest update: 18/11/2019

Name: Citisim-to-Kafka adapter		
Input(s):	Main feature(s)	Output(s):
▪ Events in native CitiSim format	▪ Process CitiSim format by subscribing to a CitiSim broker ▪ Select helper by CitiSim topic type ▪ Serializing and publishing to Kafka broker	▪ JSON in Kafka topic
Unique Selling Proposition(s):	▪ Direct integration between Citisim technology and Wizzie Data Platform solution based on Apache/Kafka technology	
Integration constraint(s):	▪ Server Machine with internet access ▪ Docker and docker-compose v1.17+	
Intended user(s):	▪ Administrators of IoT platforms ▪ SmartCity service providers	
Provider:	▪ Wizzie Analytics and Abalia ▪ Code available at: https://github.com/citisim-org/citisim-kafka-adapter	
Contact point:	▪ Abalia - info@abalia.com ▪ Wizzie Analytics: info@wizzie.io	
Condition(s) for reuse:	▪ Apache 2.0 license	
	Latest update: 25/11/2019	

Name: Citizen Sensor Search		
Input(s):	Main feature(s)	Output(s):
▪ Sensors events reports metadata (Temperatures, altitude, …)	▪ Semantic Searching Platform exploitable by other platforms. ▪ Altering service (e.g. temperature is very high, an email is sent).	▪ Different formats available (N3 triples, CSV, TSV, etc.)
Unique Selling Proposition(s):	▪ **Interoperability** and **scalability** (due the use of semantic technologies such as ontologies and dictionaries). ▪ Possibility to take advantage of **linked data**, enabling to search linked information stored in linked repositories (DBpedia, etc.). ▪ **Scalability**, due the use of highly scalable components, such as NoSql db, etc.	
Integration constraint(s):	▪ Subscription to sensors events.	
Intended user(s):	▪ Knowledge Engineers. ▪ Data science Engineers. ▪ Energy companies ▪ Government and municipalities	
Provider:	▪ TAIGER ESPAÑA S.L. (https://taiger.com/)	
Contact point:	▪ Ivan Martinez: ivan.martinez@taiger.com ▪ Ricardo Melero: ricardo.melero@taiger.com ▪ Raffaele Perini: raffaele.perini@taiger.com	
Condition(s) for reuse:	▪ Licensing	
	Latest update: 25/11/2019	

Name: Citizen Reporting Service		
Input(s):	Main feature(s)	Output(s):
▪ Form (text + image) ▪ Image ▪ PDF	▪ Report accidents or irregularities related to the city in general (streetlights problems, architectural damage, cleaning in public spaces, etc). ▪ Image description service (image location and captioning). ▪ Heatmap of the reports.	▪ Report, with all the input information. ▪ Description of the image. ▪ Heatmap.

Unique Selling Proposition(s):	▪ State-of-the-art image location and capturing models. ▪ Heatmap. By providing data on the most interesting areas of these so visually and easily understood, they allow decisions to be made quickly and to implement the relevant decisions.
Integration constraint(s):	▪ Models need to be trained. Training requires high computational resources and it may involve a large amount of time.
Intended user(s):	▪ Citizens ▪ Government and municipalities ▪ Data science Engineers ▪ NLP engineers
Provider:	▪ TAIGER ESPAÑA S.L. (https://taiger.com/)
Contact point:	▪ Ivan Martinez: ivan.martinez@taiger.com ▪ Ricardo Melero: ricardo.melero@taiger.com ▪ Raffaele Perini: raffaele.perini@taiger.com
Condition(s) for reuse:	▪ Licensing

Latest update: 25/11/2019

Name: 3D Viewer		
Input(s):	Main feature(s)	Output(s):
▪ 3D models ▪ Devices data ▪ Services data	▪ Visualizes 3D models with real-time information coming from sensors regardless brand and model and other services	▪ 3D Geographical Information System ▪ Real-time data showed in a 3D Map
Unique Selling Proposition(s):	▪ Real time 3D Viewer with notifications ▪ BIM integration ▪ Digital Twin	
Integration constraint(s):	▪ 3D models should be created in a specific format ▪ Devices and services data should be acquired in a specific protocol and format	
Intended user(s):	▪ Municipalities, transportation companies and citizens	
Provider:	▪ Prodevelop	
Contact point:	▪ Ismael Torres: itorres@prodevelop.es	
Condition(s) for reuse:	▪ Licensing	
	Latest update: 25/11/2019	

Name: Complex Event Processor		
Input(s):	Main feature(s)	Output(s):
▪ Devices data ▪ Services data	▪ Advanced Event detector ▪ Processes streams of data (including historical data), looking for some pattern within those streams. ▪ Rule engine processor	▪ Notification message/system
Unique Selling Proposition(s):	▪ Able to detect complex events analyzing historical streams of data. ▪ Able to process information coming from different sources and services. ▪ Different notification capabilities ▪ Native integration with 2D and 3D Viewers	
Integration constraint(s):	▪ Devices and services should publish information in a specific data broker.	
Intended user(s):	▪ Municipalities, citizens and emergency teams	
Provider:	▪ Prodevelop	
Contact point:	▪ Ismael Torres: itorres@prodevelop.es	
Condition(s) for reuse:	▪ Licensing	
	Latest update: 25/11/2019	