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ITEA 3 is a EUREKA strategic ICT cluster programme

Data sheets

Project number and name

Project details

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Name: EMBEDDED VIDEO ANALYTICS		
Input(s):	Main feature(s)	Output(s):
 Input of the analytic unit is a video stream from the camera 	 3D tracking of persons embedded on a low power platform available as a service Build semantic services on top: Counting Wrong direction detection 	 results of the video analysis: number of persons, wrong direction alert, etc.
Unique Selling Proposition(s):	 Easy to integrate with other applications 	
Integration constraint(s):	Low power processor to be inserted back to th	e camera
Intended user(s):	Video-protection system integrators	
Provider:	Thales	
Condition(s) for reuse:	Commercial licence	



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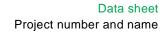
	Name: smartEngine solution	
Input(s):	Main feature(s)	Output(s):
 Dedicated input plugins, as for example: Industry: web services, DPWS, modbus, KNX, profibus, QRCode reader, Geolocation: GPS coordinates, RFID tag, Automation: Zigbee HA, Xbee, USB, IRDA, wifi, ZWave (door opening, presence detection) Multimedia: camera, microphone, Kinect, UPnP, DLNA devices, LeapMotion, mouse, keyboard Automotive: OBDII bus, CAN, Health: HL7 (Continua) Security: HTTP, TCP, UDP, frame sniffers/filters Reactive to external websites: Twitter thread, RSS, Direct sensor management : accelerometer, compass, presence, gaz, radiation, 	 A versatile generic engine to manage and process Internet of Things /M2M data and events. Heterogeneous sources of data, events and services (client's ecosystem of devices) are data are collected and unified with smartEngine dedicated plugins. 	 Dedicated output smartengine plugins allowing unified data/event/services passed through smartEngine core to be processed, exported or filtered. Examples of output plugins: Communication protocols: MQTT, AMQP, XMPP, stomp, HTTP, FTP, Web services, Web sites and social networks: twitter, facebook, foursquare, instagram, Google map databases: mySQL, mariaDB, Cloud : IBM IoT Foundation, Amazon web services, Microsoft windows Azure Image processing: Face detection, image plate detection, crowd motion detection Multimedia sites: deezer, soundcloud, Youtube Backends / IoT data: eObject, Sen.se, Thingspeak

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Name: smartEngine solution	
Unique Selling Proposition(s):	 Break the protocols silos and allow your own ecosystem of devices to access to a new level of interoperability and communication. Get a unified vision of your whole ecosystem of devices, and provide a unified view of data, events and services from your devices. Pilot embedded services, connect your ecosystem to the cloud, social networks, or other business domains in few days.
Integration constraint(s):	 Use smartEngine core and adequate plugins to allow your ecosystem of devices to be recognized and used.
Intended user(s):	 System integrators, end users, customers, …
Provider:	SOGETI HighTech
Condition(s) for reuse:	 Commercial License to be negotiated.

Name: CEREBRO REASONING PLATFORM		
Input(s):	Main feature(s)	Output(s):
 Events from Sensors, Humans and Systems 	 Hybrid platform that combines high- level causal and temporal reasoning with multi-modal probabilistic inference for detecting and reacting to complex and uncertain situations Domain Semantic Description defined in a micro ontology Built-in Reasoning model on context and human activities Built-in Reasoning model for monitoring actions execution Gateway to IoT environments through Ubistruct Middleware (JMS and XMPP Agents to control a variety of stationary and mobile devices Builtin Agents for RFID, Phydgets, 6LowPAN and Zigbee Devices. Platform's architecture is modular to enable the experimentation with a multitude of reasoning approaches at different levels. 	 Inference of High Level Knowledge on Events and Contexts Decision and Automatic Triggering of Reactive Actions

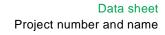




Name: CEREBRO REASONING PLATFORM	
Unique Selling Proposition(s):	 Sensors, Actuators and Events are described in Abstract Way through an Ontology Monitoring and Decision Logic is formalized in the Discrete Event Calculus Logical Reasoning can be interleaved with Bayesian Decision Process To handle Uncertainty
Integration constraint(s):	 Requires an XMPP or JMS Active MQ Requires Java 1.7 Requires a Domain Ontology
Intended user(s):	Research engineers in the area of IoT and Ambient Intelligence
Provider:	University Paris East, LISSI Laboratory
Condition(s) for reuse:	Free and Open Source for Academia and Research Organisations

Name: DPWSim (DPWS Simulator)		
Input(s):	Main feature(s)	Output(s):
Device DescriptionGraphics	 DPWS Protocols Simulation Graphical User Interface (GUI) Platform Independence Flexibility 	DPWS DevicesDPWS Spaces
Unique Selling Proposition(s):	The only DPWS Simulation in the marketEasy to test DPWS communication	
Integration constraint(s):	 DPWS standard compatible 	
Intended user(s):	 DPWS developers, designers 	
Provider:	 Institut Mines-Telecom, Telecom SudParis 	3
Condition(s) for reuse:	Open-sourceGPLv3	

Name: IoTSpark HOME/BUILDING AUTOMATION SYSTEM		
Input(s):	Main feature(s)	Output(s):



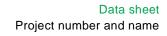


Name: IoTSpark HOME/BUILDING AUTOMATION SYSTEM		
 User interactions mobile App configuring t system and issuing commands of requesting of Connections the AC controller, lig controller ov IPv6 via the or coap protocols us well-defined URI's. 	for thelighting controllers, presence sensors, gateway, and mobile app for the end-user.Commands to the Air- Conditioner Unit: ON/OFF, Set Temperature, Set Fan Speed, Set Mode (Cold, Hot, Fan Only).or lata.Can be used to control any type of home Air-Conditioner if the infra- red codes are provided.Set Fan Speed, Set Mode (Cold, Hot, Fan Only).oht rer hothAppears to the Air-Conditioner Unit as a regular remote control.Appropriate voltage level for the lamp to adjust its dimming level.	
Unique Selling Proposition(s):	 Compatible with Samsung/Google sponsored Thread Group Connected Home Products evolving standard. Gateway allows user to access the system from anywhere over the cloud. Uses the cloud for connection only. User-data is privately kept in the gateway and never exposed to third-party. The AC and lighting control nodes can be independently sold and integrated with third party applications as they offer their services via well- defined URI's. Fully integrated system with reasonable cost. 	
Integration constraint(s):	 The nodes are wirelessly connected over IEEE 802.15.4/6LowPAN. Can be ported to work over Bluetooth Low Energy or WiFi upon request. 	
Intended user(s):	 End-users: any home dwelling or office space with interest in energy saving. AC manufacturers, lighting control manufacturers or KNX/other building automation controllers' manufacturers OEM's in the home/building automation business. 	
Provider:	 Cairo University/IoTSpark (a spin-off from Cairo University for commercializing the product). 	
Condition(s) for reuse:	 Commercial licence to be negotiated. 	



Name: ClimaCon		
Input(s):	Main feature(s)	Output(s):
 Temperature Humidity Air Quality Occupancy 	 Climate Control with Integrated Air Quality Monitoring. Comfort Enhancement (up to 30%) Energy Saving (up to 60%) 	 Satisfaction Index Energy Saved Air Quality Index
Unique Selling Proposition(s):	High return on investment Enhances Comfort (satisfaction) with integrity among users. Designed for Expandability (multiple zones)	
Integration constraint(s):	 Developed for Variable Air Volume (VAV) t Need to reconfigure or design for other typ 	•••
Intended user(s):	HVAC ManufacturersCommercial Buildings Owners	
Provider:	 NMATec (wael.farag@nmatec.com) 	
Condition(s) for reuse:	 Commercial License to be negotiated. 	

Name: Mote Placement Optimization Tool (MPOT)		
Input(s):	Main feature(s)	Output(s):
 Mote properties and possibly number. Building Layout. Optimization criteria. Furniture layout and material. Channel models. 	 Calculates the optimum mote position according to several criteria such as maximum connectivity, maximum coverage, minimum cost, Uses different optimization algorithms such as simulated annealing, fuzzy logic, genetic algorithm, Takes into consideration the building layout, the furniture layout, and the channel models. 	 Optimum placement of the Motes that satisfy the constraints and follow the models. Results such as connectivity map, coverage percentage, power consumption,





Name: Mote Placement Optimization Tool (MPOT)	
Unique Selling Proposition(s):	 Unique product not available in the market Designers usually place motes in the buildings using best practices and ad-hoc placement First product to integrate different constraints and different requirements and targets optimizing the Mote placement Will decrease the deployment price by minimizing the number of nodes needed to achieve certain coverage
Integration constraint(s):	Linux platformJava virtual machine
Intended user(s):	 Sensor node deployment providers in buildings, such as home and office automation providers. Can be extended to other application such deploying motes in forests, factories, Academics who would like to study the sensor deployment algorithms and build on what's provided by MPOT.
Provider:	 Smartec-Group, an Egyptian company
Condition(s) for reuse:	 Commercial licence to be negotiated; a free licence can be provided for research purposes.

Name: UPM WoO Platform		
Input(s):	Main feature(s)	Output(s):
 For the sensors, readings from the environment. For the fire detector, the readings from available temperature sensors. Incoming messages from a deployed wireless sensor network. Incoming messages from the Internet as web requests. 	 Sensors provide temperature and presence services. Fire detection sensor use aggregation from the temperature sensors and use as a reference the operational specifications recommended by the European Normative EN 54-5:2000. The Gateway provides a virtual representation of a sensor service as a web service. The Devices and Services Registry stores information about available devices and services from a semantic source. The Event Manager acts as a broker to the Internet for events in the Wireless Sensor Network. 	 Information gathered from the sensors. Events detected or generated by aggregation. Virtual representations of sensor services as REST resources. Events notification through REST callbacks.

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Name: UPM WoO Platform		
Unique Selling Proposition(s):	 The sensors are easily exploitable as smart sensor nodes. The fire detection is usable for composing a fire detection service where compatible temperature sensors are available and already deployed, and is also interesting for exploring the possibilities of composing services in a constrained device. The Devices and Services Registry offers integration with other WoO platforms. The Gateway and the Event Manager exposes services and events as REST resources, and are exploitable on large scale areas where a wireless sensor network is required to have a virtual representation in the Internet. 	
Integration constraint(s):	 Sensor devices are SunSPOT from Oracle. Requires a FuseESB Enterprise 7.1 enterprise service bus. Requires a MySQL database for the registry. Tested on an Ubuntu 12.04 Linux operating system. 	
Intended user(s):	 Research engineers in the area of the wireless sensor networks for the Internet of Things. 	
Provider:	Universidad Politécnica de Madrid (UPM)	
Condition(s) for reuse:	• GPLv3	

Name: Geolocation-based house interaction		
Input(s):	Main feature(s)	Output(s):
 Location ser on mobile device (smartphone tablet, etc.) User profile location rule 	 profile-based Services on home objects Location rules and user profile edition 	 Action request to WoO objects (lights, heating,) through open request to URI
Unique Selling Proposition(s):	 Integrated to GLOO platform. Smart Object discovery (via WoO registry Smart Object APIs (REST pattern) Mobile interface (and User Profile) Ad-hoc and "on-the-fly" interaction (heteror) 	



Name: Geolocation-based house interaction		
Integration constraint(s):	 Android app (APK) WoO objects through REST API WoO registry and WoO semantic description 	
Intended user(s):	 System integrators for domotic systems 	
Provider:	PRODEVELOP, S.L.	
Condition(s) for reuse:	 Commercial licence to be negotiated 	

Name: Smart Video Analytics		
Input(s):	Main feature(s)	Output(s):
 Input of the analytic unit is an image/video streaming of th incorporated camera; 	-	 results of the video analysis: licence plate, number of people, the queue size, etc.
Unique Selling Proposition(s):	 Advanced artificial vision algorithms for image and video processing High reliability services thanks to the collaboration of several objects for image and video analysis Easy to install and use Easy to integrate with other applications (Web APIs) 	
Integration constraint(s):	Depending on the service required, it may be necessary to install our hardware at the facilities to be monitored To obtain information from these services it is just necessary to have Internet connection and use a Web Browser, or to develop a client, in any environment or device, capable of sending POST/GET requests to a REST API	
Intended user(s):	 system integrators for video-surveillance a developers, end-users from the Retail Mar 	
Provider:	Visual Tools	
Condition(s) for reuse:	 Commercial licence to be negotiated 	



Name: ThingsGate		
Input(s):	Main feature(s)	Output(s):
 Profile and Data of Different Sensor types: Zigbee Receiver Messages with both devices and the upper service management functions WiFi-AP including micro WoO platform on embedded Linux environments Gadgets Actuators 	 Micro instance hosting (JavaScript based Virtual Object) of multiple types of objects Generate individual IoT nodes into a virtual object, and manage their instances on a wireless Access Point Service function composition through multiple types of objects Mashup service between VOs 	 Status Report, as well as different Controls commands on services for: Smart Gate Smart Humidifier Smart Boiler Smart Indoor Service Router
Unique Selling Proposition(s):	 services. Further applications for commercial product by collaboration with network devices manufacturers dynamically. 	
Integration constraint(s):	 Need to comply with Virtual Object Profile Schema Adapting Sensors' Network Interfaces (zigbee, z-wave, etc,.) 	
Intended user(s):		
Provider:	KAIST	
Condition(s) for reuse:	Commercial licence to be negotiated Under the confirmation	e prior consultation and



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Name: Smart Camera Analysis		
Input(s):	Main feature(s)	Output(s):
 Video streami of the smart camera 	 g 3D tracking based services for the automatic extraction of information from videos such as: Person tracking People Counting Motion analysis Integration on embedded device (ARM processor) Available through web service interface 	 Results of the video analysis: number of people in the field of view of the camera, localization of each person, trajectory analysis of each of them, etc.
Unique Selling Proposition(s):	 Advanced visual tracking algorithms Easy to deploy on large scale CCTV network of cameras) with no additional computati Easy to integrate with other applications 	on unit required
Integration constraint(s):	 Need camera calibration (estimated on s 	etup)
Intended user(s):	 System integrators for video-surveillance 	applications
Provider:	CEA List	
Condition(s) for reuse:	 Only through Thales/CEA List research p 	partnership