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Flexible smart metering for multiple energy vectors with active prosumers			
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First Press Release

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1 Introduction

This deliverable contains the press release produced during this first project period, as well as some information about the target journals where it has been sent. The press release is targeted to European web journals in the field of embedded computing. It contains both technical information and description of the impact of the project. The press release will be issues by each partner separately and autonomously. In the first project periodic report we will provide information about the feedback we will get from the channels where the press release has been sent.

2 Press Release Content

FLEXIBLE SMART METERING FOR MULTIPLE ENERGY VECTORS WITH ACTIVE PROSUMERS

FLEXMETER

Key innovation

The introduction of the electricity market, the widespread diffusion of distributed generation from renewable and non-programmable energy sources and the need for storage are quickly changing the problems that Transmission and Distribution system operators have to face in their activity and are requiring a ***smarter grid***. A first step in this direction is the development and installation of a flexible smart metering architecture for multiple energy vectors. Up to now the smart meters that in some countries are being installed at the users are nearly only devoted to billing improvements. The new metering systems must go much further to provide their contribution to various objectives such as end-user affordability of electricity, energy and market efficiency improvement, CO2 emissions and pollutants reduction. In the FLEXMETER project a flexible, multi-utility, multi-service metering architecture will be designed and deployed in two demonstrators. Simple off-the-shelf meters will be placed at the users for electric, thermal and gas metering; they will communicate with a building concentrator, where the "smartness" of the metering system will reside. A central ***cloud*** system will collect data from the building concentrators and from MV/LV ***substation meters***. Data collection, fusion and mining algorithms will be adopted. The proposed architecture will allow for innovative services for the ***prosumers*** (e.g. analysis of the energy consumption), for the Distribution System Operators (DSOs) (e.g. fault detection, network balancing and storage integration) and for the retail market. Also demand-side management devices could be plugged into the system. In the FLEXMETER project two pilot applications in two different countries (Italy and Sweden), on real systems, with the involvement of the local DSOs and volunteer prosumers will be demonstrated. The results on the demonstrators will then be scaled up to the size of the cities in order to evaluate the advantages on a real scale.

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Project website

www.flexmeter.polito.it

Community contribution to the project

3.2 M Euro

Project start date

01 01 2015

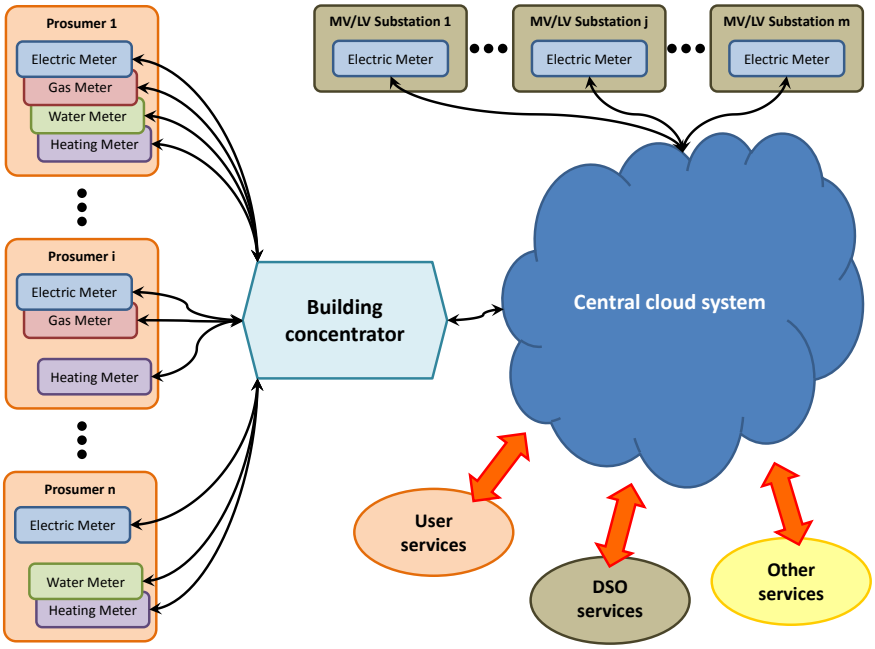
Duration

36 months

Technical approach

In the FLEXMETER project a flexible, multi-utility, multi-service metering architecture will be designed and deployed in two demonstrators. In order to reach this ambitious objective:

- ✓ Simple off-the-shelf meters will be placed at the users for electric, ,water, thermal and gas metering;
- ✓ A building concentrator, where the "smartness" of the metering system will reside, will be installed;
- ✓ Every building concentrator will communicate on one side with 10 to 20 user meters, and on the other side with a central system;
- ✓ Simple off-the-shelf meters will be placed also in MV/LV substations;
- ✓ The central cloud system will collect data from the building concentrators and from MV/LV substation meters;
- ✓ Data collection, fusion and mining algorithms will be adopted.



The proposed architecture will allow for innovative services for the prosumers, for example:

- ✓ Accessible data and historical records of the consumption;
- ✓ Analysis of the electric consumption with saving suggestions;

Together with innovative services for the DSOs, for example:

- ✓ Fault detection;
- ✓ Detection of energy thefts;
- ✓ Network balancing;
- ✓ Storage integration.

FLEXMETER partners	Country
POLITECNICO DI TORINO (coordinator)	IT
IREN ENERGIA SPA	IT
STMICRELECTRONICS SRL	IT
TELECOM ITALIA	IT
RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN	DE
INSTITUT POLYTECHNIQUE DE GRENOBLE	FR
UNIVERSITATEA POLITEHNICA DIN BUCURESTI	RO
SIVECO ROMANIA SA	RO
ALMA MATER STUDIORUM – UNIVERSITA' DI BOLOGNA	IT
E.ON SVERIGE AB	SE

Demonstration and Use

The FLEXMETER project focus is the development and demonstration of a flexible smart metering architecture, based on cheap and already available components, that can be implemented in a plug and play way, combining metering of different services (electricity, water, gas, district heating), providing advanced services to the users, to the DSOs and to the other utilities, and enhancing the possibilities of the retail market. The FLEXMETER infrastructure will be designed such that the appropriate level of security and privacy for data accesses will be fulfilled.

In the FLEXMETER project two pilot applications in two different countries (Italy and Sweden), on real distribution systems, with the involvement of the local DSOs and volunteer prosumers will be demonstrated. The results on the demonstrators will then be scaled up to the size of the cities in order to evaluate the advantages on a real scale.

Scientific, Economic and societal Impact

Although some of the features are already offered by the utilities companies (online available user profiles, online consumption data, suggestions for consumption optimization, basic predictions for future consumption) the automatic data acquisition and processing in the front-end part is missing (smart meters, gateways). Also, the data presented currently to the user is not real-time (but monthly data). Therefore the impact will be important both on the provider and consumer side, in particular by reducing costs for the utility company for reading the data, real-time services to the user, fault detection and network load balancing being the most important.

The development of a "second generation electric energy smart meters" interconnected to other public utility services, thanks to a common data-exchange platform, will foster the spreading of innovative services both at consumer and DSO level. Open, real-time data systems will play a fundamental role in the future of smart grid. The multi-service approach should also allow to reduce costs of the whole system.

Social impacts will be strictly related to real-time data availability even at consumer level. The knowledge of each own consumptions (electrical but also others, like water, LPG for heating and cooking,..) is the starting point for other more integrated and innovative services (house remote control systems) that will change people behaviours (active demand). ICT based services and tools must be simple, intuitive and always available (apps for smartphones or tablets) in order to reach users of all kinds (young, old, skilled and educated or not).

3 Targets of the Press Release

The following European channels have been selected:

- Euranet
- Europanews
- http://www.europeanenergyreview.eu
- http://www.europeanenergyinnovation.eu/

The Italian channels for which POLITO has agreement with are summarized in the following Table:

NEWSPAPERS	RADIO	TELEVISIONS	OTHER	AGENCIES	SPECIALISTIC
CAMPUS	Radio3 scienza	GRP	FOCUS	TM News (APCom)	RUOTECLASSICHE
CITY	RAI	PRIMANTENNA	AFFARI & FINANZA (LA REPUBBLICA)	ADNKRONOS TO	GENTE MOTORI
CORRIERE DELLA SERA	OndeQuadre	QUARTARETE	L' ESPRESSO	Agenzia GR	AF DIGITALE
CRONACA QUI	Radio italia 1	RAI	NOVA 24 (IL SOLE 24 ORE)	AGI	LED-IN
FUTURA	Giornale radio RAI	RAI TGR - LEONARDO	AGENZIA RCD	ANSA TO	A&V ELETTRONICA
IL CORRIERE DELLA SERA	Radio24	RAI TRE - ULISSE	CHANNEL CITY MAGAZINE	ANSA Roma - tecnologia	AUTO & DESIGN
IL GIORNALE		RAI UNO	THE DAILY BIT	LaPresse	PC PROFESSIONALE
IL GIORNALE DEL PIEMONTE		RAI UNO - SUPERQUARK	REPUBBLICA.IT	Piemontepress	AUTOMOBILE CLUB
IL GIORNALE dell'INGEGNERE		RAITRE - GR Regione		Thomson reuters	PANORAMAUTO
IL GIORNALE dell'ARCHITETTURA		RETE 7		Asca	QUATTRORUOTE
IL MANIFESTO		SUPERSIX		AREA agenzia radiofonica	WIRED
IL MATTINO		TELECITY/ITALIA7GOLD		Dow Jones	ONBOARD TECHNOLOGY
IL MONDO		TELECUPOLE		Alinews	CHIP
IL SOLE 24 ORE NOVA		TELESUBALPINA		COMUNE DI TORINO - UFFICIO STAMPA	CORRIERE DELLE COMUNICAZIONI
ITALIA OGGI		VIDEOGRUPPO		Comune Torino	PROGETTARE
LA REPUBBLICA				Regione Piemonte	ILLUSTRATO
LA STAMPA				NEXA	
LEGGO				Università di Torino	
METRO				Torino Wireless	
				Reteconomy	

Additional channels will include, besides project partners websites, specific events and additional websites as follows:

- Intranet Telecom Italia in the Community à Smart Home space (online)
- At the national event "*Energy@home University Day: un convegno per fare sistema fra industria e Università*" in Turin at TI premises, on Wednesday April 14th
- www.comunicatedepresa.ro
- www.comunicatemedia.ro
- www.ecomunicate.ro
- www.stirievenimente.ro
- www.webpr.ro
- www.comunicatedeafaceri.ro
- www.comunicarepublica.ro
- www.livepr.ro
- www.centruldepresa.ro
- www.comunicate-online.com
- www.aries.ro
- http://www.nuova-energia.com/

Statistics and reporting about the feedback about the press release will be reported in the first project periodic report.

4 Concluding remarks

We reported the first FLEXMETER press release that has been issued during the first three months of the project. We plan to issue a final press release by M36 (D7.5). During the project periodic report statistics about accesses to the website and the feedback about the press-release will be reported.