SUNSHINE

Deliverable D1.2

PROJECT REQUIREMENTS

Annex I

WP 1 – Pilot preparatory activities

Revision: [Final]

Dissemination level	PU (public)	
Contributor(s)	GRAPHITECH	Federico Prandi, Stefano Piffer, Umberto Di Staso
	CEIT	Patrick Krejci, Linda Dörrzapf
	EPS	Alkis Astyakopoulos
	GL	Ivo Zancarli
	GSYS	
	HEPESCO	Tomislav Stašić, Miroslav Kovačec, Sandra Magajne
	INFOTN	Valentina Ferrari
	SET	Francesco Faccioli, Alberto Bertaso
	SGIS	Luigi Zanella, Stefano Pezzi, Luca Giovannini, Tomaso Bertoli
	TNET	Massimo Zatelli, Paolo Bertolini
Reviewer(s)	HEPESCO, GRAPHITECH	
Editor(s)	Tomislav Stašić (HEP ESCO), Miroslav Kovačec (HEP ESCO), Federico Prandi (GRAPHITECH)	
Partner in charge(s)	HEP ESCO	
Due date	25th June 2013	
Submission Date	31th July 2013	

REVISION HISTORY AND STATEMENT OF ORIGINALITY

Task 1.2 – Users and training requirements

Revision	Date	Author	Description
V1.1	26th July 2013	Tomislav Stašić (HEP ESCO), Miroslav Kovačec (HEP ESCO)	Second Revision

Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

Moreover, this deliverable reflects only the author's views. The European Community is not liable for any use that might be made of the information contained herein.

Table of contents

Acronyms

AMI	Automatic Measurement System
AMR	Automatic Meter Reading
CEIT	CEIT ALANOVA Gemeinnützige GmbH, Austria
EPS	Epsilon International SA, Greece
GIS	Geographical Information System
GL	Grafica Light, Italy
GRAPHITECH	Fondazione Graphitech, Italy
GSYS	GeoSYS Limited, Malta
HEPESCO	HEPESCO ESCO d.o.o., Croatia
INFOTN	Informatica Trentina, Italy
LP	Light Pole
NOC	Network Operation Centre
POP	Point of Presence
RTU	Remote Terminal Unit
SCADA	Supervisory Control and Data Aquisition
SET	SET Distribuzione SpA, Italy
SGIS	Sinergis, Italy
SUNSHINE	Smart UrbaN ServIces for Higher eNergy Efficiency
T	Task
TNET	Trentino Network, Italy

1 Update on standards for meter data management service

During the effort to identify a correct and fitting standard for the meter data gathering operation, we found out about the so called "Green Button" specifications. These specifications come from the United States project to build a smart grid for electricity delivery[1]. In particular they fulfilled one of the Priority Action Plans that compose the project: the so called "Energy Use Information". The specifications were designed to achieve a very concrete and simple goal, that is, allowing every citizen to see and download his/her data about energy consumption.

Since the principal objective of this Action Plan was so direct and urgent, a big attempt towards simplicity was put into these specifications. Moreover, a lot of tools have been built to facilitate the implementation of the specifications: interactive examples, an SDK, software libraries, sample datasets and so on. The aim was to attract as many operators as possible into offering this service and in a very short time. To be more precise "Green Button" is the name of the entire project, while the specific name of the underlying standard is "ESPI" (Energy Service Provider Interface[2]).

On the other hand, we have found the international standard IEC 61968-9 to be much more complicated and less supported, not strictly in terms of documentation (obviously it's a standard and must be well documented), but in terms of practical examples and software tools[3]. So we decided to adopt the ESPI – Green Button approach instead.

Green Button is not only a schema for encoding data about meters reading (ESPI), it also identifies a layered stack of open standards on which to build a practical way to publish the data. In fact, the encoding of the meter readings is only the payload of an open protocol for creating and consuming open data: the OData protocol. This protocol was initially created by Microsoft, but now has been standardized by OASIS; it is based on an HTTP and REST paradigm. It supports different formats and specifically Atom, the one that is relevant for Green Button. For the sake of truth we also have to mention AtomPub (Atom Publishing Protocol or APP) that is a protocol for publishing web resources by means of HTTP transfer of Atom-formatted representations. Both Atom and APP are IETF standards and their use is well understood and wide spread.

Last but not least, another Priority Action Plan has been added recently to evolve Green Button specifications: among the goals of this Action Plan is the internationalization of the standard. The ESPI standard can be in effect considered a profile and extension of the IEC 61968 standard. As such, it is desirable for the Green Button initiative to find a **means to cross-publish the ESPI** standard under international auspices.

---

[1] http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/PriorityActionPlans

[2] http://www.naesb.org/ESPI_standards.asp

[3] http://www.openespi.org/

1.1 Notes

Green Button heavily deals with security and privacy of data published because it aims to deliver information to each single customer. In Sunshine it's not the same scenario since the communication is between two well defined actors (the pilot and the Sunshine platform) and security can be reached with a simpler solution (enabling communication towards a specific IP, for instace).

Green Button takes into account two scenarios and three actors: the Retail Customer, the Data Custodian and a Third Party. The first scenario is when the Retail Customer directly access to his/her own information published by the Data Custodian; the second scenario the third actor is involved: a Third Party to whom the Retail Customer may grant the access to the information hold by the Data Custodian. The Sunshine scenario is more like the latter: the Data Custodian publish the information towards the Sunshine platform that plays the role of the Third Party; the Retail Customers (our pilots) can then access their own data through the services offered by the Sunshine platform.