Retrieve status of smart devices

Link to explanations, examples and the selection list for indicated fields, please refer to document "Use Case Description draft ver0.55"

<http://www.cen.eu/cen/Sectors/Sectors/UtilitiesAndEnergy/SmartGrids/Pages/default.aspx>

Version of Template: 0.55, Sept 2011

# Description of the Use Case

* + *General*
  + *Name of Use Case*

|  |  |  |  |
| --- | --- | --- | --- |
| ***ID*** | ***Domain*** | ***Name of Use Case*** | ***Level of Depth***  *Cluster, High Level Use Case, Detailed Use Case* |
| WGSP-2114 | Smart Home/Commercial/Industrial/DR-Customer EMS | Primary use case - Retrieve status of smart devices | Detailed Use Case |

* + *Version Management*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Changes / Version*** | ***Date*** | ***Name  Author(s) or Committee*** | ***Domain Expert*** | ***Area of Expertise / Domain / Role*** | ***Title*** | ***Approval Status***  *draft, for comments, for voting, final* |
| 0.4 | 30/07/2012 | ESMIG - Willem Strabbing &Tim Sablon | Primary | AMI | - | Proposed |
| 0.5 | 12/11/2012 | ESMIG - Willem Strabbing &Tim Sablon | Primary | AMI | - | Validated |

* + *Basic Information to Use Case*

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| --- | --- | --- |
| ***Source(s) / Literature*** | ***Link*** | ***Conditions (limitations) of Use*** |
| - | - | - |

|  |  |
| --- | --- |
| ***Relation to Higher Level Use Case*** | |
| ***Cluster*** | ***Higher Level Use Case*** |
| - | - |

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| ***Maturity of Use Case*** *- in business operation, realized in demonstration project, realised in R&D, in preparation, visionary* |
| - |
| ***Prioritisation*** |
| - |
| ***Generic, Regional or National Relation*** |
| Generic |
| ***View*** *- Technical / Business* |
| Technical |
| ***Further Keywords for Classification*** |
| - |

* + *Scope and Objectives of Use Case*

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| ***Scope and Objectives of Function*** |
| See WGSP 2110 |

* + *Narrative of Use Case*

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| ***Narrative of Use Case*** |
| ***Short description*** *- max 3 sentences* |
| See WGSP 2110 |
| ***Complete description*** |
| This use case describes how an external actor retrieves the state of a smart device directly from the CEM. This real time information may be retrieved by an external actor who has a business relationship to the customer, having guaranteed that some of his smart devices are (exclusively) controlled by the external actor.  Another alternative is that the customer himself retrieves the state of smart devices via the display, in which case the information is not necessarily sent to actor A or B. |

* + *Actors: People, Systems, Applications, Databases, the Power System, and Other Stakeholders*

|  |  |  |
| --- | --- | --- |
| ***Actor Name*** | ***Actor Type*** | ***Actor Description*** |
| - | - | - |

* + *Issues: Legal Contracts, Legal Regulations, Constraints and others*

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| --- | --- | --- |
| ***Issue -*** ***here specific ones*** | ***Impact of Issue on Use Case*** | ***Reference -*** *law, standard, others* |
| - | - | - |

* + *Preconditions, Assumptions, Post condition, Events*

|  |  |  |  |
| --- | --- | --- | --- |
| ***Actor/System/Information/Contract*** | ***Triggering Event*** | ***Pre-conditions*** | ***Assumption*** |
| ***-*** | - | - | - |

* + *Referenced Standards and / or Standardization Committees (if available)*

|  |  |  |
| --- | --- | --- |
| ***Relevant Standardization Committees*** | ***Standards supporting the Use Case*** | ***Standard Status*** |
| - | - | - |

* + *General Remarks*

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| ***General Remarks*** |
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# Drawing or Diagram of Use Case

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| ***Drawing or Diagram of Use Case*** ***- recommended "context diagram" and "sequence diagram" in UML*** |
| http://www.lupiupload.de/images/2012/08/22/8cfd7efc82495338d26d58febbabee9a5198cb84.jpg |

# Step by Step Analysis of Use Case

| **S.No** | **Primary Actor** | **Triggering Event** | **Pre-Condition** | **Post-Condition** |
| --- | --- | --- | --- | --- |
| Retrieve status of smart devices | Actor A or actor B | Actor A or Actor B want to retrieve the state of a smart device | The external actor is authorized to retrieve the state of the selected smart device(s) | The external actor received the requested information |

* + ***Steps - Normal Scenario***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Scenario*** ***Name:*** | | ***Retrieve status of smart devices*** | | | | |
| ***Step No.*** | ***Event*** | ***Description of Process/Activity*** | ***Information Producer*** | ***Information Receiver*** | ***Information Exchanged*** | ***Technical Require-ments ID***  *see* *Annex A Selection List* |
| 1 | Actor A wants to retrieve the state of a smart device (Alternative) | Actor A sends a device state request to the energy management gateway | Actor A (external actor) | Energy management gateway | Device state request |  |
| 2 | Actor B wants to retrieve the state of a smart device (Alternative) | Actor B sends a device state request to the Smart Metering Gateway (LNAP) (via metering channel) | Actor B (external actor) | Smart Metering gateway (LNAP) | Device state request |  |
| 3 | Smart Metering Gateway (LNAP) receives device state request | Smart Metering Gateway (LNAP) forwards device state request to Energy management gateway | Smart Metering gateway (LNAP) | Energy management gateway | Device state request |  |
| 4 | Energy management gateway receives device state request | Energy management gateway forwards device state request to CEM | Energy management gateway | Customer Energy Manager (CEM) | Device state request |  |
| 5 | CEM receives device state request | The CEM retrieves the device state from its memory and sends it to the energy managent gateway Optionally,the CEM may interrogate the relevant appliances on their current status | Customer Energy Manager (CEM) | Energy management gateway | Device status |  |
| 6 | Energy management gateway receives device status | Energy management gateway forwards device status to Actor A (Alternative) | Energy management gateway | Actor A (external actor) | Device status |  |
| 7 | Energy management gateway receives device status | Energy management gateway forwards device status to A Smart Metering Gateway (LNAP) (Alternative) | Energy management gateway | Smart Metering gateway (LNAP) | Device status |  |
| 8 | Smart Metering Gateway (LNAP) receives device status | Smart Metering Gateway (LNAP) forwards device status to Actor B (via metering channel) | Smart Metering gateway (LNAP) | Actor B (external actor) | Device status |  |