0 What: Standard Meter Data Profiles (6.2.5)

0.1 Abstract:

NIST should work with NEMA to utilize ANSI C12.19-2008 data models to represent one or more meter profiles with distinct information locations and formats to simplify client access to commonly shared information (**6.2.5**).

NOTE: “data models”: Section 5, Annex H, Annex J, Annex K, Annex L

0.2 Description:

ANSI C12.19-2008 contains four default fallback profiles, known in its nomenclature as “DEFAULT_SET_USED” in Section 9.1.1, Table 00:

> **DEFAULT_SET_USED** Indicates which, if any, default sets are used.
> See Annex C, “Default Sets for Decade Tables”, for the default set definitions.
> 0 Default sets are not used. See Section 4.1, “Standard Tables”, Figure 4.1, conditions C through H for more detail.
> 1 Default set #1, Simple Meter Register, in use.
> 2 Default set #2, Simple Demand Meter, in use.
> 3 Default set #3, Simple TOU Meter, in use.
> 4 Default set #4, Simple Profile Recorder, in use.
> 5..255 Reserved.

The values for the “default sets” are contained in the referenced Annex C.

Despite these definitions, there may be misconceptions about the “default sets” as well as a misalignment of those sets with utility requirements. It is possible to define and publish new device classes (in simple terms, a “tag” that identifies a specific data model).

0.3 Objectives

- Develop strong stakeholder team to define utility requirements. [OB1]
- Express AEIC Guidelines v2.0 in terms of one or more additional Device Classes (ANSI C12.19-2008 Annex J XML Form, see Section 3.41 and I.1). [OB2]
- Deliver the additional Device Classes for (freely downloadable and in the public domain) publication on the OID website (www.naedra.org) and to ANSI C12 SC17 WG2 an amendment to ANSI C12.19-2008 containing requested changes in Standard Form in a “contribution”.[OB3]
- Minimize variations in data types (down to one) transported from End Devices. Note: this may be a profile of data types for a specific use case.[OB4]
- Socialize existence of Tables in ANSI C12.21-2006 and ANSI C12.22-2008. [OB5]
- Socialize existence and application of existing and definition of new default sets, Device Classes, and “profiles”. [OB6]
- Proactive ‘marketing’ plan. [OB7]

0.4 Why:

The Smart Grid recognizes that several clients may require local access to meter data and these may be on the same order of complexity as the meter itself. Such potential clients might range from thermostats to building automation systems. Other potential clients will exist inside and outside of the customer premises.

0.5 Where:

Meter interface with: Metering System (28 – Operations Domain), Customer EMS (32 – Customer), Submeter (37 – Customer), Workforce Tool (39 – Distribution), Field Devices (41 – Distribution); Semantics layer

0.6 How:

1. Formulate team
2. Find an entity willing to provide the four default set definitions in EDL form and publish
3. Create and publish a “how to develop” guide with respect to this topic.
4. Develop a strategy to publish and maintain EDL default sets via an SDO and/or user’s groups.
5. Identify sets of meter attributes that should be able to be acquired simply based on known meter profile adoption, i.e. new “default set” definitions.
6. Implement the description in EDL Form the “default sets”.
7. Investigate potential integration challenges (e.g., with MultiSpeak and IEC 61968-9) and create roadmap to minimize or eliminate those challenges.
8. Produce descriptions and example messaging scenarios to illustrate how meters can be read by simple clients to obtain commonly requested information.
9. Identify and Socialize a “recipe” for getting a candidate set of meter information that is not part of a default set.

0.6.1 Task Descriptions

- Map utility requirements expressed via AEIC Guidelines v2.0 to device class(es) [OB1]. AEIC AMITIT, Dependent upon completion of AEIC Guidelines v2.0. 1/2010
- Express AEIC Guidelines in terms of one or more additional Device Classes (XML Form). [OB2] [OB3] AEIC AMITIT 5/2010
- Complete AEIC Guidelines v2.0, AEIC Ad hoc WG via AEIC AMITIT, 12/2009
- Minimize the variations in data types (down to one) transported from End Devices. Note: this may be a profile of data types for a specific use case. [OB4], AEIC+Other Stakeholders, AEIC AMITIT, 12/2009
- Plan for socializing existence of Tables within ANSI C12.21-2006 and ANSI C12.22-2008. [OB5] NIST, Q4-2009.

- Socialize existence and application of existing and definition of new default sets, Device Classes, and “profiles” via web conferences, NIST, [OB6] Q4-2009, Q1-2010
- Socialize existence of Tables within ANSI C12.21-2006 and ANSI C12.22-2008. [OB5] NIST, NIST Knowledge Base, Q4-2009, Q1-2010.
- Develop proactive marketing plan. [OB7] NEMA and NIST, Q3-2009

0.6.2 Deliverables

To be developed.

0.7 Who:

Project Team
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Stakeholder Leads:David Haynes – Technical Expert, ANSI/IEC/MultiSpeak →Software Vendor (Customer EMS)?? →Software Vendor (MDMS) – representative from AMI-MDM?

0.8 When:

Task Description	Completion Date
Task 1: Map utility requirements expressed via AEIC Guidelines v2.0 to Device Classes.	01/2010

Task 2: Express AEIC Guidelines v2.0 in terms of one or more additional Device Classes	05/2010
Task 3: Complete AEIC Guidelines v2.0.	12/2009
Task 4: Minimize the variations in data types (down to one ?) transported from end devices. Note: this might be a profile of data types for a specific use case.	12/2009
Task 5: Socialize the existence of additional Tables within ANSI C12.21-2006 and C12.22-2008	Q1-2010
Task 6: Socialize the existence and application of existing and the definition of new default sets, Device Classes, and profiles via web conferences.	Q1-2010