Mastering the Diversity in Smart Homes
A Practical Approach

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How Standards Proliferate:
(See: A/C chargers, character encodings, instant messaging, etc.)

Situation: There are 14 competing standards.

14?! Ridiculous! We need to develop one universal standard that covers everyone's use cases.

Yeah!

Soon:

Situation: There are 15 competing standards.

http://imgs.xkcd.com/comics/standards.png
INTRANET OF THINGS
DEVICE DIVERSITY
LEVELS OF ABSTRACTION

- USE CASE
- FUNCTIONS
- TYPE / CATEGORY
- PRODUCT / MODEL
- CONCRETE DEVICE
OUR REQUIREMENTS

1. Describe configurable / discoverable unit
2. Generic user interface for its configuration
3. Abstract its basic functionality
THINGS

BRIDGE

THING

CHANNEL

CHANNEL

CHANNEL GROUP

CHANNEL

CHANNEL

CHANNEL

CHANNEL

CHANNEL GROUP

CHANNEL

CHANNEL
THINGS

THING

CHANNEL

CHANNEL

THING HANDLER

META-DATA

CODE
VORTO AT A GLANCE

Vorto

IoT Tool Set

Meta Information Model

Information Model

Repository

Device Manufacturer

Solution Developer

Platform Vendor

VORTO AT A GLANCE

Device

is described by

describes

Device Manufacturer

is described by

is described by

Solution Developer

integrates

invokes

uses

Java

C++

...
THE VORTO COMPONENTS

Create representations for different ecosystems

Create information models

Standardize the structure of information models

Manage and provide information models
VORTO CODE GENERATORS

IoT Tool Set

Code Generator Extension Point

Eclipse Smart Home
Eclipse Kura
Bosch M2M

Information Model Repository

Info Model

Bosch M2M
Invented for life

Kura
Integration

Eclipse smarthome
Binding XMLs
THANK YOU!

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