OPENNESS ATTRACTS DEVELOPERS

THE NUMBER OF IOT DEVELOPERS 2014–2020

Source: VisionMobile estimates, 2014

Report: IoT: Breaking Free From Internet And Things | vmob.me/IoT
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Open Source enables:

• Permissionless innovation
• Innovation through integration
• Far higher levels of experimentation
ECLIPSE IOT PROJECTS
INTEROPERABILITY

A FRAMEWORK FOR IOT & SMARTHOME

INTEROPERABILITY
EMBRACE DIVERSITY.
INDEPENDENT

OPEN SOURCE, MODULAR, RUNS ON ANY PLATFORM
SHARED TOOLS & SERVICES.

DISCOVERY, SETUP & CONFIGURATION
RULE ENGINE, AUTOMATION
DATA HANDLING, REST API, PERSISTENCE
USER INTERFACES VOICE ENABLING
PHYSICAL / FUNCTIONAL

SEPARATION
- Protocol Specific Device Models
- Configuration Options
- Onboarding Support
- Physical Condition & Location

Physical
› ABSTRACT INFORMATION MODEL
› FUNCTIONAL GROUPING
› AGGREGATION & LOGIC
› SEMANTIC INFORMATION

FUNCTIONAL
<!-- LIFX Light -->
<thing-type id="colorlight">
  <label>LIFX Color Light</label>

  <channels>
    <channel id="color" typeId="color" />
    <channel id="coltemp" typeId="ct" />
  </channels>

  <config-description>
    <parameter name="deviceId" type="text" required="true">
      <label>LIFX device ID</label>
    </parameter>
  </config-description>

</thing-type>

{ "link": "http://<host>/rest/items/LivingRoom",
  "type": "GroupItem",
  "name": "LivingRoom",
  "label": "Living Room",
  "tags": [ "saref:BuildingSpace" ],
  "members": [ "LR_Reading_Lights" ],
},
{}
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  "type": "ColorItem",
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  "label": "Reading Lights",
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  "groupNames": [ "LivingRoom" ]
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<table>
<thead>
<tr>
<th>ARCHITECTURE</th>
<th>REST API</th>
<th>ONEM2M</th>
<th>3RD PARTY EMULATION</th>
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<tbody>
<tr>
<td></td>
<td>MODULES</td>
<td>TEMPLATES</td>
<td>RULE ENGINE</td>
</tr>
<tr>
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<td>TEXT-TO-SPEECH</td>
<td>SPEECH-TO-TEXT</td>
<td>VOICE ENABLING</td>
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<td>HUMAN LANGUAGE</td>
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<td>LOCAL</td>
<td>CLOUD</td>
<td>GU</td>
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<td>WIDGETS</td>
<td>ICON SETS</td>
<td>CHART ENGINE</td>
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</tbody>
</table>

**ECLIPSE SMARTHOME CORE**

**THINGS / BINDING API**

**UPNP**

**MDNS**

**MOTT**

**SERIAL**

**PROTOCOL SUPPORT**

**DISCOVERY SERVICE**

**PROTOCOL BINDING**

**PRODUCT BINDING**

**CLOUD BINDING**

**SUB-SYSTEM BINDING**

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Extension Points
SOLUTIONS
THANK YOU!

Kai Kreuzer, Deutsche Telekom AG