Common Interfaces

Common Frameworks Project Proposal

Motivation

- AllJoyn is currently behind other standards when it comes to device interfaces and this makes interoperability and certification hard.
- HAE has made great progress with interfaces but only in the Home Appliance and Electronics vertical.
- AllJoyn device interfaces whilst more RPC based should draw inspiration from REST based schemas such as Weave, OCF and HomeKit to enable future interoperability to be more easily achieved.
- Common Interfaces combined with a refocused Home Controller will allow AllJoyn to support very compelling use cases and keep us relevant against competing standards and ecosystems.

Scope of Project

- Work with the HAE group to figure out how to sensibly share code since a lot of it will be relevant and reusable.
- Initial scope of devices under this project:
  - Light, Lock, Switch, Door Sensor, Window Sensor, Smart Plug, Speaker, Water Sensor, Smoke Detector, Motion Sensor.
- Find a suitable champion company for each device that can help define the interface and initially support it in a shipping device.
- Provide a device simulator for each supported device.
- Device Interfaces will be submitted for standardization by the Interface Review Board.
- There will be easy to consume code interfaces, samples and documentation for each of our supported platforms/languages.

Dependencies, Project Name, Working Group

- **Dependencies**
  - AllJoyn Core
- **Proposed Project Name**
  - Proposed name for the project: “Common Interfaces”
  - Proposed name for the git repository: “services/common_interfaces
- **Proposed Working Group**
  - Common Frameworks

Committers and Contributors

- **Maintainer**
  - Aaron Vernon (Higgns)
- **Committers**
  - Simon Collins (Two Bulls)
  - Jarrod Moldrich (Two Bulls)
- **Contributors**
  - Mirko Lindner (Vodafone)
  - John Cameron (LIFX)

Project Plan

- Initial code and project structure setup: July 2016
- Light, Lock, Switch interfaces ready for review: August 2016
- Plug, Speaker, Smoke Detector ready for review: September 2016
- Door, Window, Motion and Water Sensors ready for review: October 2016
- Code freeze and QA phase begins: October 2016
- First official release: part of 16.10 in November 2016

We will be taking a depth first approach so for each device the device interface, code interface, samples and simulator will all be developed at the same time. In this way we ensure that even if we slip at least there is still a set of completely supported device interfaces ready.

Future Work

- The device simulators could be extended into a generic device simulator for AllJoyn.
- Support further device interfaces.
- Use the Common Interfaces as a basis for doing further development of Control Panel in Base Services.