ALLSEEN ALLIANCE

Technical Steering Meeting

March 02, 2015

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Reminder:

This call is being recorded

1. Approve minutes from previous meeting
2. Analytics & Telemetry WG status
3. 3rd Party Contribution
4. Compliance & Certification Policies

Analytics & Telemetry WG Status

Analytics Event Agent Project

Define AllJoyn interface that provides device manufacturers a common API for capturing, collecting and transmitting data outside the AllJoyn proximal for analysis or other purposes.

org.allseen.Analytics.AnalyticsEventAgent

- `SetVendorData` – Set configuration parameters required by the Analytics Agent.
- `SetDeviceData` –Set device information that should be associated with the events.
- `SubmitEvent` – Log an event to the analytics service.
- `RequestDelivery` – Ask the Analytics Agent to flush pending data to the analytics service.
- C&C interface definition document on the wiki.

C++ Implementation

- C++ interface definition and sample code in AllSeen git repository.
- Sample agent code uses About interface for discovery, ECDHE PSK for security, and protocol buffers for bundling events for transmission to the cloud.

Future Enhancements

- Provide way of limiting device events.
  - On/off, per event or all events.
  - Set maximum rate per event.

3rd Party Contribution

3rd Party Code Dependencies

- Concern creating dependencies on 3rd party code in particular OSS
  - For example, if a project wanted to create a dependency on GPL licensed code that might make it difficult if not impossible for some members to ship AllJoyn in their products
  - 3rd party Open Source dependencies need to be vetted to make sure it is acceptable to the membership
- Proposed
  - A proposal is put before TSC
  - Processes consists of the proposal being vetted by the TSC, then by the board

Proposal Contents

- The following questions need to be answered for the proposal:
  1. What is the project and where is the code?
     - Provide the name of the project and a link
     - Provide a link to the source
  2. What license is the software under
     - Provide a copy of the license
  3. What does the software do?
     - What is it's primary functionality? e.g. sqlite is a lightweight database
  4. What problem are you trying to solve?
  5. Why is this the right software to solve it?
  6. Is the software going to be an end user of the AllJoyn code dependency or an AllJoyn dependency?
     - Will the AJOSP code have a direct dependency on the code, or will it be included via an abstraction layer?
     - Which approach to inclusion is taken?
       - This is the result of answering questions 1-5 that follow

What Approach is to be taken? (1/2)

1. Will the software be integrated by assuming that the library and header files are available on the target platform?
   - **YES** – done
   - **NO** – continue to next question
2. Is the WG willing to support the build system automatically downloading and building the software?
   - software is not directly imported into the git repository.
   - The WG will be responsible for updating the build files when the software is updated.
   - **YES** – done
   - **NO** – continue to next question
3. Is WG willing to require downstream builders of the project to download, build, and install the software themselves?
   - **YES** – done
   - **NO** – continue to next question

What Approach is to be taken? (2/2)

4. Will the software be directly imported into the project's git repository?
   - **NO** – software is rejected
   - **YES** – continue to next question
5. Is WG willing to maintain in perpetuity the imported 3rd party code?
   - This includes monitoring upstream project for bug fixes, especially those related to security problems and re-integration when new versions are made available.
   - **NO** – software is rejected
   - **YES** – done

Proposed Approval Process

1. Are members agreeable (via TSC vote) to the proposal?
   - **NO** – software is rejected
   - **YES** – forward proposal to the Board
2. Is the proposal acceptable to the Board?
   - Need input from legal subcommittee of board
   - **NO** – software is rejected
   - **YES** – software is accepted

Compliance & Certification Policies

Certification Goals

- Create an ecosystem of certified devices in the marketplace that have a high-likelihood of interoperating with each other
- Certification is NOT an enforcement program. It is a choice based on implicit trust amongst parties involved

Certification Program SHOULD

- **Add Value**
  - Certified products benefit from the patent pledge (as described in the IP Policy) and interoperability testing. Interoperability testing significantly raises the likelihood of certified products interoperating with each other
- **Offer Reasonable Costs**
  - Cost should generally be reasonable and affordable
- **Be Practical for OEMs**
  - Be practical and not onerous. Strike a fine balance between agility (genuine need of OEMs to release products or updates quickly) and rigor (ensuring certified products are interoperable)

Certification Program SHOULD

- **Perform Best Effort testing and Limit Liability**
  - Certification testing is on a best effort basis to detect conformance and interoperability issues. It is not fool-proof and is not intended to catch all conformance or interoperability issues. AllSeen Alliance or the 3rd party lab(s) is not responsible or liable for issues with certified products
- **Enable a meaningful Revenue Model**
  - The certification program should enable a meaningful revenue model for both AllSeen Alliance (certification authority) and any 3rd party lab(s) involved

Certification Testing Types

Certification testing is composed by:

- **Conformance Testing**: Performed using the ***Conformance Test Tool*** to verify the compliance of an AllJoyn implementation with AllJoyn interface definitions.

- **Interoperability Testing**: Performed with ***Reference Devices*** to verify that an AllJoyn implementation can interoperate with other AllJoyn devices.

Conformance Test Tool

Reference Devices

AllJoyn Implementation

Testing Laboratory Options

- **OEM Lab(s)**
  - OEMs may offer their labs for testing purposes and work with AllSeen Alliance to verify the results
- **3rd Party Lab(s)**
  - Independent ISO certified 3rd party lab(s) can be hired to perform testing and work with AllSeen Alliance to verify results
- **AllSeen Alliance Hosted Lab**
  - AllSeen Alliance may choose to set up its own test lab, perform testing, and verify results. This involves high initial investment costs to set up the lab infrastructure

Testing Laboratory Options

- **AllSeen Alliance Hosted Lab plus other OEM or 3rd Party Lab(s)**
  - This is a hybrid of the other three options. In this case, AllSeen Alliance hosted lab is the representative lab (in terms of infrastructure capabilities) and will perform the function of verifying OEM or 3rd party lab(s) for adherence to lab infrastructure requirements
  - The AllSeen Alliance hosted lab can additionally perform testing just like any other lab for a fee. The results will be verified by AllSeen Alliance.

Product Categories

- **End Product**

  A product including AllJoyn functionality intended to be sold to the final customer and subject to AllSeen certification

- **Module**

  A product with AllJoyn functionality that can be embedded in another Product Integration

  A Module can be AllSeen Certified on its own allowing Product Integrations reuse the Module certification process

- **Product Integration**

  A product that embeds an already certified Module, or another certified End Product, to create a new End Product

Certification Categories

- **New Product**

  A new product Certification is the first AllSeen certification for a product of any category

- **Product Update**

  Certification of a new release of an already certified product with a modification compared to the certified product

- **Product Variant**

  Certification of a new product with software and/or hardware set of modifications from an already certified product from which some certification testing could be reused

- **Product Re-branding**

  Certification of a product whose differences related to an already certified product affect the branding of the product, upper applications, packaging and cosmetics

Certification Recommendations

- **Uncertified Device**
  - Testing requirement: Conformance plus interoperability testing is required. The testing must be performed at an AllSeen Alliance approved laboratory facility and results must be verified by AllSeen Alliance.
- **Major Revision to a Certified Device (functional changes)**
  - Nature of change: Functional changes to hardware or software that likely might affect conformance or interoperability. Examples: Incorporating hardware modules with modified functionality, new versions of AllJoyn with modified functionality, functional changes to software components.
  - Testing requirement: Conformance plus interoperability testing is required. The testing must be performed at an AllSeen Alliance approved laboratory facility and results must be verified by AllSeen Alliance.

Certification Recommendations

- **Minor Revision to a Certified Device (limited to bug fixes only to existing features)**
  - Nature of change: Limited to bug fixes only to existing hardware or software. No new hardware features or software features or functional modifications to existing features. Examples: Incorporating replacement hardware modules containing bug fixes, maintenance revisions to software components (including AllJoyn) containing bugs fixes.
  - Testing requirement: Conformance testing is required if the revision affects AllJoyn software. Interoperability testing is strongly recommended but is optional. The testing (conformance and interoperability) must be performed at an OEM lab (self-validation) or AllSeen Alliance approved laboratory facility and results must be verified by AllSeen Alliance no later than <TBD> weeks after the release of the minor revision.

Certification Recommendations

- **Non-standalone Hardware or Software Modules (intended to be embedded in devices)**
  - Testing requirement: Conformance testing is required. OEMs may optionally choose to do interoperability testing. The testing (conformance and interoperability) must be performed at an OEM lab (self-testing) or AllSeen Alliance approved laboratory facility and results must be verified by AllSeen Alliance.
- **Non-functional changes to a Certified Device or Module**
  - Nature of change: non-functional changes (e.g. changes to color, battery, buttons)
  - Testing requirements: Testing is not required
- **Device Identification Attribute changes to a Certified Device or Module**
  - Nature of change: Changes to product name, model number, or system ID
  - Testing requirement: Testing is not required. But OEM must update the device certificate through AllSeen Alliance.

Certification Recommendations

- **Handling Violations (Breach of Trust)**
  - Revoke certificates upon repeated violations (count of 3).
  - Random auditing may be used to detect violations or suspicious cases
- **AllSeen Alliance approved Laboratory Facility**
  - To begin with, the C&C Committee recommends using a 3rd party lab. It is best to pilot the program for at least a year and learn from the experiences before opening up to more lab options.
  - The 3rd party lab is more cost effective and quick to start compared to setting up a test lab infrastructure (and personnel) operated by AllSeen Alliance
  - Consider a revenue sharing model where the 3rd party lab would share some percentage of their proceeds with AllSeen Alliance
  - The 3rd party lab contract should be limited to the first year with the option to renew if needed

Timeline (for initial roll out)

- May 2015: Conformance Test Tool
- July 2015: Certification Administration Web Tool (adjunct to Conformance Test Tool)
- September 2015: 3rd Party Lab with interop testing infrastructure

Thank You

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