ALLSEEN ALLIANCE

Technical Steering Meeting

November 25, 2014

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Reminder:

This call is being recorded

Agenda

1. Approve minutes from previous meeting
2. Core 14.12 Release Update
3. Proposals up for vote
   - Current committer roster
   - Security Sub-Committee
   - Interface Review Board
   - Home Appliances & Entertainment (HAE) Service Framework

Core 14.12 Release Update

Overall Status

- Complete
  - All feature development is complete
  - All feature testing on branches complete
  - All feature branches are merged into master
  - Release branches created for 14.12
    - Includes both Standard Client Library (SCL) & Thin Client Library (TCL)
- Remaining
  - Complete feature testing
  - Complete regression testing
  - Complete system testing
  - Close out all remaining priority 1 & 2 JIRA tickets
    - Dashboard in JIRA https://jira.allseenalliance.org/secure/Dashboard.jspa?selectPageId=10601
- Planned release date
  - 12/17/14

Main Code contributions

- Microsoft
  - ASACORE-1079 Enable Windows app-to-app isolation
  - ASACORE-1014 Named pipes support for Windows
  - ASACORE-1013 C Language Binding for About Service
  - ASACORE-935 Router Nodes can allow open communication between subnets (Network Isolation)
  - Various bug fixes.
- QCE
  - ASACORE-776 UDP feature fully integrated
  - ASACORE-775 About feature fully integrated
  - ASACORE-953 Add an implementation for About Client with Announce processing and handler registration
  - ASACORE-905 Remove dependency on NameOwnerChanged signals from TCL
  - ASACORE-830 Add support in AllJoyn Thin Client to blacklist routing nodes
  - ASACORE-151 Implement a heartbeat message between routing and non-routing nodes
  - ASACORE-47 Need to move PropertyChanged from BusListener to ProxyBusObject
  - Additional fixes to address stability:
    - Slow reader fix (ASACORE-793), SLS retry algorithm change (ASACORE-755),
- Technicolor
  - ASACORE-915 NGNS does not notify when last interesting object is removed from peer.
  - ASACORE-47 Need to move PropertyChanged from BusListener to ProxyBusObject
  - ASACORE-916 Enable self-join (let BusAttachments join a session they themselves host)
  - ASACORE-917 a standardized mechanism for subscription to and delivery of signals.
  - ASACORE-918 Create a component that handles presence detection (Ping) automatically

Proposals up for vote

- Current committer roster
- Security Sub-Committee
- Interface Review Board
- Home Appliances & Entertainment (HAE) Service Framework

Current committer roster

- TSC charter calls for TSC approval of working group committer selections
- One wiki page will now be used to track all project committers: https://wiki.allseenalliance.org/tsc/committers
- To add new committers, vote amongst the existing committers and then bring the results to the TSC for approval
- Remember: Committers are the code review approvers and project owners. Projects may have many active contributors who are not "committers"!
- TSC Vote

Security Sub-Committee Proposal

- Overview
  - As workgroups release “high visibility” releases, mistakes on security can damage confidence in and credibility / image of the AllSeen/AllJoyn Alliance/Project as a whole.
  - It’s not clear how projects are thinking about security.
  - More security due-diligence is needed in architectural design review (early in project, defining interfaces) and implementation/code-review
  - Proactive detection of architectural flaws at design can save a ton of work and save re-work.
  - The process and security policy both need to avoid being too heavy.
  - The process needs to be automated where possible.
  - Manual labor (like adding extra Code Reviews for each contribution) is extremely difficult to staff
- TSC Vote

Interface Review Board Proposal

- Overview
  - A committee that oversees the various interfaces that are designed in the Working Groups
  - First (important!) job: lay down the ground rules and conventions for interface design
  - Assists WGs in defining their interfaces, and in evolving them over time
    - to be involved from early on in the WG process
  - Must have a deciding vote in whether an interface definition is ready for standardisation.
- TSC Vote

Home Appliances & Entertainment (HAE) Service Framework Proposal

- Overview
  - Scope of devices under this project
    - Will be limited to only Home Appliances and Entertainment devices
    - Version 1.0 will include Air Conditioner, Air Cleaner, Air Quality Monitor, Oven, Refrigerator, Robot Vacuum, Washer and TV.
  - For each HAE device, a minimum set of common operations and parameters across devices from different vendors will be specified
    - Vendor-specific extensions will be allowed without raising any interoperability issue
  - Standard AllJoyn interfaces will be developed for each HAE device
    - Some interfaces can be commonly used for various HAE devices
  - The project will deliver a common implementation for HAE service framework into the open source
- TSC Vote

Thank You

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Backup

Security Proposal

What should the Security Sub-Committee (TSC/SSC) do and/or “not” do? (1 of 2)

- CANNOT let it be a few security “gurus” dictating policy from on high.
- Instead, could be a council chosen from the “security” champions from each project
  - (Security Guru’s can offer advice / opinions, but only the appointees from respective projects vote.)
- CANNOT be allowed to become a weighty process that slows things down.
- Could be a “checkpoint” going from “incubation” to “official project”
  - Maybe also a checkpoint before spending marketing resources / PR to publicize any release.
  - NOTE: process for "How a Project Goes from Incubation to Full Project" is still undefined from the TSC.
- Should reach out to Linux Foundation to see how other open-source bodies manage security.
- Should provide the AllSeen community guidance on expected best practices, baseline security policies, and
- Needs to catch both architectural / model / assumption level mistakes, as well as unsafe coding practices. (“Checkpoints” could be a good time for a security architectural review.)

What should the Security Sub-Committee (TSC/SSC) do and/or “not” do? (2 of 2)

- CANNOT review every line of code, but should help projects identify security critical code for more careful review (ECC, certificate validation, security manager, etc.)
- Could be sure that automated code review continues and improves over time. Specifically, should define a process to track 3rd party code, particularly in light of OpenSSL vulnerabilities.
- Should work with Certification & Compliance Workgroup to define security compliance requirements, including automated and independent manual code review.
- Should define a process of what needs to be done when exploits are found in AllSeen code.

- *Other ideas, suggestions, constraints, and/or concerns?*

Interface Review Board Proposal

Many practicalities to be decided.

- Who will man this committee?
  Calling for volunteers!
- How large will it be?
  Let’s start with 5 or 6 people.
- Voting procedures?
  Proposal:
  - At least 2 members of the IRB must review an interface and approve.
  - Having more reviewers is optional.
  - In case of contention, majority vote decides.
- Service guarantees
  Proposal: Interface review phase comes before C&C test spec review, feedback guaranteed within 2 weeks.

Going forward

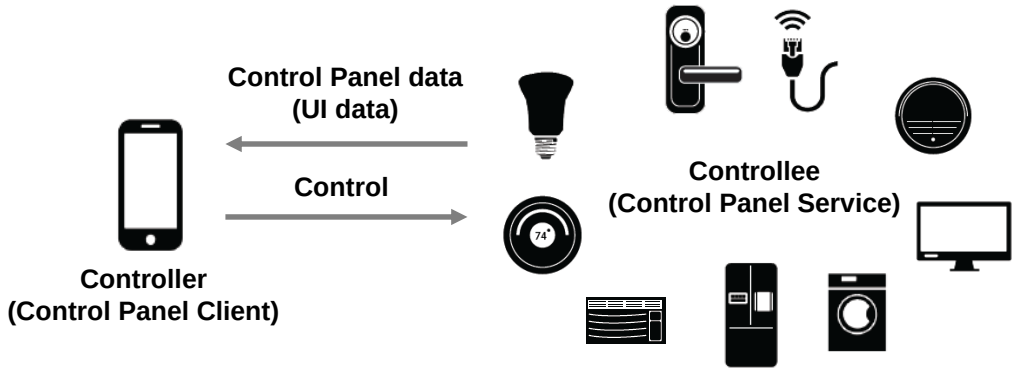
- Volunteer solicitation phase starts now. Announce your candidacy on the TSC mailing list.
- Next week, final vote on the formation of the IRB
  - Names of the IRB volunteers will be presented prior to vote.
- IRB will draft interface guidelines by year's end
  - To be presented and voted upon by the TSC
  - Interface guidelines will be updated as needed, following technical evolutions (interface versioning, extensions to Introspection XML format, …)
- From 2015 onward, interface standardisation is governed by the IRB.

Home Appliances & Entertainment (HAE) Service Framework Proposal

Haier and LG Electronics

Motivation

- Control Panel Service Framework
  - Controllee exposes its UI using the framework
  - Controller renders the UI and control the controllee based on UI input by a user
  - Similar to Web Server ↔ Browser concept
  - Very generic and extensible framework !



- But, it has some limitations
  - Control & monitoring is only possible when a user see the controller screen
  - Exposed functionalities for the same type of device may differ by vendors
  - Not easy to accommodate a variety of controller screens with a single control panel UI data (Smart Watch/Phone/Tablet/Laptop and TV, etc)

HAE* Service Framework

* Home Appliances and Entertainment (devices)

Why is it important ?

Purpose

- Develop standard AllJoyn interfaces for controlling and monitoring Home Appliances and Entertainment devices
- On top of this, build creative and innovative IoT services by combining other existing or to be defined AllJoyn service frameworks.
  (Notifications, event/action, smart home service framework, gateway agent service framework, lighting service framework, living scenario, etc)

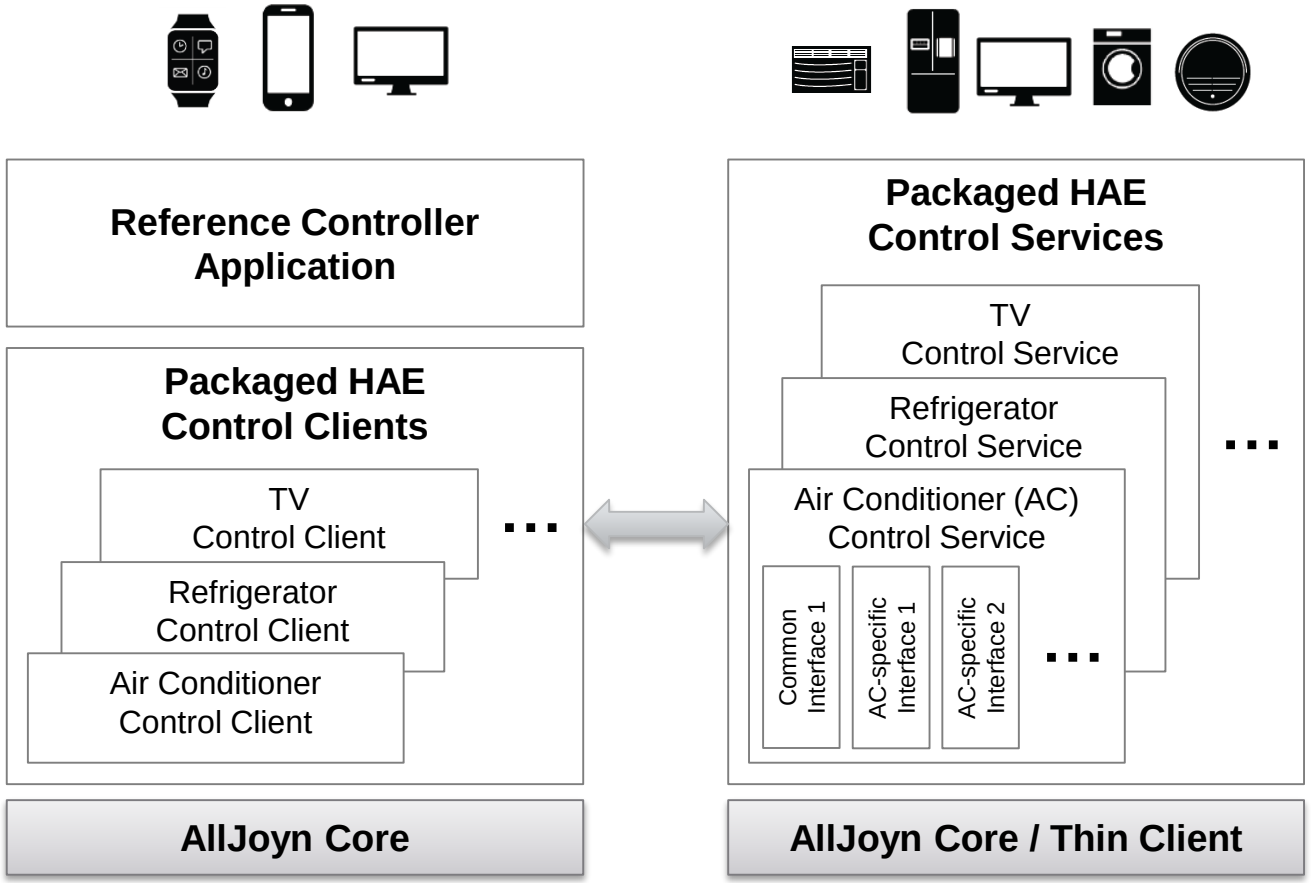
Benefit

- Cross-vendor interoperability
- Background control & monitoring
- Identical user experience across devices from different vendors thanks to the identically exposed device capability
- Tailor-made UI for each controller screen

HAE* Service Framework

* Home Appliances and Entertainment (devices)

Overall Architecture



- One control service / client pair per HAE device
- Provide packaged HAE control services / clients
- For each HAE device, only the corresponding control service will be implemented by using a build option
- For controller applications, controllable devices are up to developers' choice

Dependencies, Project Name, Working Group

- Dependencies
  - AllJoyn Core and Base services such as About interface
- Proposed Project Name
  - Proposed name for the project : “HAE Service Framework”
  - Proposed name for the git repository : “device_services/hae”
- Proposed Working Group
  - For future extensibility, formation of a new working group called “Device Services” is proposed
  - Starting with HAE service framework as an initial project, new categories of devices can be added by proposing new projects under the same working group

Committers and Contributors

- Maintainer
  - TBD
- Committers
  - Haier, LGE[1)], BUPT[2)] teams
  - Open to any interested party
- Contributors
  - Haier, LGE, BUPT teams
  - Open to any interested party

▶ After project approval, team formation and detailed project planning will follow soon.

1) LG Electronics
2) Beijing University of Posts and Telecommunications

Initial Contribution & Project Plan

- Initial Contribution
  - Device model for Haier air-related appliances
  - Example AllJoyn interface specifications for LG HAE devices
- Project Plan
  - High-level system description document : December 2014
  - AllJoyn interface specifications : February 2015
  - High-level design (HLD) documents for foundational components : March 2015
  - Foundational component implementations for Linux : June 2015
  - Certification test suite : August 2015
  - Reference controller applications for Android & iOS : September 2015
  - First official release : September 2015