



**ALLSEEN  
ALLIANCE**

# **Technical Steering Meeting**

**March 21, 2016**

The contents of this document, and the interfaces described, and all the information herein, are the result of collaborative discussions by the Core Working Group. This summary documents the final consensus of the team.



**Reminder:  
This call is being  
recorded**

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# Agenda

1. Approve minutes from previous meeting
2. Vote on [Common Interfaces Project](#)
3. Ambassador Program Applicant
4. Complete Gateway roadmap review
5. Core Priorities/Roadmap overview
6. Release Request Template



# **AllJoyn Ambassador Program: New Applicant**

# AllJoyn Ambassadors Program:

[www.meetup.com/pro/alljoyn](http://www.meetup.com/pro/alljoyn)



## AllJoyn User Group Meetups

We are **406** members across **10** Meetups

A Meetup group to discuss the AllJoyn Open Source Project and it's ecosystem.

AllJoyn® is a collaborative open-source software framework that makes it easy for devices and apps to discover and communicate with each other. It supports many language bindings and can be easily integrated into platforms small and large. The AllJoyn framework defines a common way for devices and apps to communicate with one another ushering a new wave of interoperable devices to make the Internet of Things a reality.

# Applicant: AllJoyn Ambassador Program

**1. Name:** Sergey Grebnov

**2. Email:** [sergei.grebnov@gmail.com](mailto:sergei.grebnov@gmail.com)

**3. Member Company:** Sponsored Member - Individual

**4. Where do you live?** (There are certain countries where we're seeing a lot of interest so it helps to know where you're located): Russian Federation

**5. Why are you applying to be an AllJoyn Ambassador?**

I have found AllJoyn to be very interesting and useful myself and want to share my passion and involve more people. Goals:

1. Get more people familiar w/ AllJoyn (tech talks, code samples)
2. Enable AllJoyn for cross plat /hybrid apps
3. Primary focus on Russia (Moscow) audience

My background and interests:

- Worked on AllJoyn as part of @openAtMicrosoft team
- Apache Cordova PMC. One particular thing I'm personally interested in is using AllJoyn in hybrid apps

**6. How have you participated in the AllJoyn community to-date?**

Contributions:

- A few contributions to AllJoyn codebase as part of @openAtMicrosoft team
- Implemented Apache Cordova plugin and sample apps demonstrated on WinHEC (AllJoyn Core Lib, <https://github.com/Microsoft/cordova-plugin-alljoyn>)
- Contributing bugfixes to another AllJoyn plugin (AllJoyn Thin Client, <https://github.com/AllJoyn-Cordova/cordova-plugin-alljoyn/pull/58>, <https://github.com/AllJoyn-Cordova/cordova-plugin-alljoyn/pull/57>)

Talks:

Getting started w/ AllJoyn on WindowsCamp 2015 (<https://events.techdays.ru/WindowsCamp/2015-09/>)

# Applicant: AllJoyn Ambassador Program

Post:

<https://www.linkedin.com/pulse/windows-10-alljoyn-make-your-iot-devices-apps-speak-sergei-grebnov-1>

<https://habrahabr.ru/company/microsoft/blog/261515/>

<https://community.lifx.com/t/windows10-alljoyn-integration-sample-for-lifx-bulb/393>

## 7. What ideas do you have for your community that you wish you had time or resources to implement?

AllJoyn Russia meetup group plus as an Individual Contributor

1. AllJoyn tech talks on Major Russia IoT conferences (example is <http://www.msdevcon.ru/> - will be talking about AllJoyn; biggest IT event in Russia)
2. Implement Apache Cordova plugin for AllJoyn lightning framework (<https://github.com/sgrebnov/cordova-plugin-LSF>) and demo app
3. Tech articles

## 8. How will you work with others to achieve your goals?

1. Will work with lead IoT companies (Microsoft, Intel, etc) to organize first AllJoyn meetup in Moscow.
2. Most likely meetups will be hosted as part of bigger IoT events/hackathons

## 9. LinkedIn profile page (if available): <https://www.linkedin.com/in/sergeigrebnov>

## 10. Twitter handle (if available): <http://twitter.com/sgrebnov>



# Applicant 2: AllJoyn Ambassador Program

**1. Name:** Ian Lee

**2. Email:** [ian@houseoflees.net](mailto:ian@houseoflees.net)

**3. Member Company:** Sponsored Member - Individual

**4. Where do you live?** (There are certain countries where we're seeing a lot of interest so it helps to know where you're located): USA (Tennessee)

**5. Why are you applying to be an AllJoyn Ambassador?**

I have been giving talks about AllJoyn at developer conferences. I'm also a local microcontroller users' group leader. Since I'm working with AllJoyn as a hobbyist already, it makes sense to become more active in building a local AllJoyn community.

**6. How have you participated in the AllJoyn community to-date?**

I have been promoting the use of AllJoyn primarily within the realm of Windows. Today I'm primarily helping people get started with AllJoyn on Windows IoT Core but I am also an enthusiast of .NET Micro Framework and .NET Gadgeteer and look forward to AllJoyn being available on those platforms. I've been developing hardware demos and software that I use in my talks

**7. What ideas do you have for your community that you wish you had time or resources to implement?**

Aside from the regular short meetings where we discuss a topic, I would love to host a weekend long hackathon based around AllJoyn where we would build an automated office or workshop or maybe even a game where different groups take on a piece of hardware within the topic and at the end of the event we show how the devices all can orchestrate despite being developed independently.

# Applicant 2: AllJoyn Ambassador Program

## 8. How will you work with others to achieve your goals?

Since 2012, I have been the founder & President of the NashMicro users' group in Nashville, TN. We meet monthly to discuss various microcontroller and electronics topics & projects. I will extend this user group to include more AllJoyn content and as interest grows we will likely branch out into a separate subunit that will have its own meetings and events. The initial plan will be to replace a "NashMicro" meeting with an "AllJoyn" meeting every six months. I know of at least one other company in town, Initial State, that is an Allseen Alliance member. They are also NashMicro members. Upon approval, I will be contacting them to see how they want to get involved. I've worked with them quite a bit on some other workshops and I expect they'll be eager to help.

## 9. LinkedIn profile page (if available): <http://www.linkedin.com/in/rianlee>

## 10. Twitter handle (if available): @ianlee74



Interested in representing the AllSeen  
Alliance as an AllJoyn Ambassador?

Apply now!

[info@allseenalliance.org](mailto:info@allseenalliance.org)



# **Gateway Working Group Roadmap**

March 14, 2016

Art Lancaster, Chair (Affinegy)

# Gateway Working Group – Roadmap for 2016

Project	Description	Contributors	Roadmap Planning
Gateway Agent	A manageable AllJoyn routing node for external networks and services	Affinegy, Qualcomm	<ul style="list-style-type: none"> <li>For 16.04 add Security 2.0 full support</li> <li>For 16.10 we will propose integrating with Core Standard Router library and moving to core</li> </ul>
AllJoyn XMPP Connector	Extending AllJoyn anywhere via XMPP	Affinegy	<ul style="list-style-type: none"> <li>16.04 first release includes Security 2.0, and full remoting of all AllJoyn standard interfaces</li> <li>For 16.10 will propose deeper XMPP integration to Core as we add IPv6 support. This is also a trend in other IOT standards organizations.</li> </ul>
Device System Bridge	Bring non-AllJoyn devices to AllJoyn as virtual devices on the AllJoyn network	Microsoft	<ul style="list-style-type: none"> <li>16.04 release and support for Security 2.0 – schedule needed from MS</li> <li>Linux port completion and added protocol adapters needed. CableLabs leading Linux port see <a href="https://github.com/cablelabs/portabledsb">https://github.com/cablelabs/portabledsb</a></li> <li>Add other protocols for Portable version <ul style="list-style-type: none"> <li>ZigBee</li> <li>Bluetooth mesh</li> <li>Thread (note IPv6 for 6LoWPAN is needed in Core)</li> </ul> </li> </ul>
Update Service Project	Provide an AllJoyn standard update service.	Seeking supporters	<ul style="list-style-type: none"> <li>This project remains in back burner mode. Looking for others to join. Schedule dependent on interest.</li> </ul>
AllJoyn Multi-protocol Gateway Service	New project proposal.	Affinegy	<ul style="list-style-type: none"> <li>Extends the DSB concept to a platform portable and fully bi-directional multi-protocol gateway service with AllJoyn</li> <li>See next slide</li> </ul>

# AllJoyn Multi-protocol Gateway Service

- This will be proposed by Affinegy by the TSC F2F meeting
- Extends the DSB concept to a cross platform and fully bi-directional and secure multi-protocol gateway service with AllJoyn
- Borrows AllJoyn interface concepts from DSB and from XMPP connector projects
- Extensible protocol conversion through the use of NoSQL database technology for the mapping between protocols
  - Data modeling of interfaces to convert each protocol's unique interfaces into one common interface language
  - Target protocols include: ZigBee, Thread, Z-wave, Bluetooth mesh, UPNP, EnOcean, REST, OCF/OIC, etc.
  - Some mappings would only be available to licensees of protocols which include restrictions
  - Plan to support an API to add, update and remove protocol mappings
- Interdependence on other projects
  - New standard controller proposal project – this proposal intersects with the database storage features for controllers, and with the use of data models for AllJoyn interfaces being mapped with other data models of other protocols
  - AllJoyn Core – protocols like Thread and OCF require IPv6 support which needs prioritization
- Target schedule for Q4 2016



# **Core WG Priorities/ Proposed Roadmap**

Marcello Lioy (Core WG Chair)

# Proposed prioritized features for roadmap

1. Make Security 2.0 product ready
  - Including better Sample code
2. Diagnosability improvements
3. Key store redesign
  - Some work being done to improve stability in 16.04, redesign may happen in 16.10
4. Sample code development
5. Code sanity improvements – e.g. [ASACORE-2235](#), static analysis, etc.
6. IPv6 support
7. Beef up to be able to replace SCL
  - Layer to make API more dynamic (i.e. create AJ objects on the fly)
  - Make the Library re-entrant, this would likely include ability to handle multiple messages
8. Refactor SCL
  - Assuming 7 this would be shimming SCL APIs on top of 7
  - Set of changes from Steve K: [refactoring/code hygiene](#) effort

Router work in blue  
TCL work in orange  
both in green



# Proposed prioritized features for roadmap (II)

9. Optimize discovery+connect time

10. mDNS protocol compliance

11. Use performance study to identify goals for scalability

- Way has made changes to address some of the issues that were seen in the scalability testing.
- These changes have made a change of about 4x
- Sounds like there are issues with UDP when there are > 10s of devices

12. Make mDNS packet assembly less fragile

13. Refactor interaction of ARDP with data path

14. Get router out of the data path

Router work in blue  
TCL work in orange  
both in green



# Release Request Template

Marcello Lioy

# Approval request for project XXX release YY.MM

Item	Done	By whom	Date
IRB review and approval?			
C&C Committee review and approval?			
Security Sub-committee review and approval?			
Committers/Dev lead approval?			
QA lead approval?			



# Thank You

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# 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.

