AGL Layer Planning Meeting

May 19 – 20, 2015
## Attendees

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Tuesday</th>
<th>Wednesday</th>
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<tbody>
<tr>
<td>Rudi Streif</td>
<td>Jaguar Land Rover</td>
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<tr>
<td>John Lehmann</td>
<td>Jaguar Land Rover</td>
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<tr>
<td>Matt Porter</td>
<td>Konsulko</td>
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<tr>
<td>Artemi Ivanov</td>
<td>Cogent Embedded</td>
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<td>Pete Popov</td>
<td>Konsulko</td>
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<tr>
<td>Walt Miner</td>
<td>Linux Foundation</td>
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<tr>
<td>Dan Cauchy</td>
<td>Linux Foundation</td>
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<tr>
<td>Noriaki Fukuyasu</td>
<td>Linux Foundation</td>
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<tr>
<td>Taddeo Tanikawa</td>
<td>Panasonic</td>
<td>x</td>
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<tr>
<td>Hisao Munakata</td>
<td>Renesas Electronics</td>
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<tr>
<td>Jayan John</td>
<td>Symphony Teleca</td>
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<td>x</td>
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<tr>
<td>Ned Miljevic</td>
<td>Wind River</td>
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Input for Apps/ Priorities for 2015

- Toyota
  - Native apps
  - Vehicle information (HVAC, BCM status, temperature, etc.)
  - Media browser and player for local content
  - Navigation
- JLR
  - Crosswalk integration with AGL platform (OE Core)
  - Qt5 and Crosswalk coexistence
  - Port existing Crosswalk apps to native app framework
- Others
  - Best Freakin’ Home Screen Ever
  - Boot time to Home Screen under 10 sec
  - Renesas Porter board & Minnowboard Max (or VTC)
  - Settings
Summary of 2015 Goals

- AGL Goal is Home Screen, Media Player, and HVAC for CES
- Native and Crosswalk versions of the apps available
- POC for Qt5 and Crosswalk coexistence
Phases

• Phase 1 goals
  • Create an AGL Distro
  • Replacement for Tizen IVI, provide the same infrastructure that Tizen IVI provided
  • Unify as much as possible AGL, Tizen IVI and GENIVI
  • Design the layers such that the base distro can be used for IVI, Cluster, Telematics
  • Create the recipes and layers
  • Create test framework
  • App framework and demo is out of scope for Phase 1
  • Support ARM and x86 (Minnowboard or VTC 1010)
  • Release phase 1 by end of August
Phases

• Phase 2 goals
  • Identify release cadence and support going forward (bug fixing, security updates, frequency of releases)
  • App framework(s)
  • Demo applications (Home Screen, Media browser/player, Vehicle data, Settings)
  • Option for Native vs HTML5 apps
  • Support for QEMU or virtualized emulator?
  • Release Phase 2 by end of 2015

• Phase 3 goals
  • SDK
  • Profiles for Cluster, HUD, Telematics
Decisions (End of Day 1)

- Decided on high level goals for phases 1-3
- Poky not Debian
- Create new meta-agl layer
  - Migrate from meta-tizen to meta-agl
  - Identify Tizen components to be adopted or deprecated
  - Leverage meta-ivi for GENIVI components
  - Include AGL components in meta-ivi after WR proposal
- Support for native and non-native app frameworks
Decisions and Actions (End of Day 2)

- Set AGL Goal of having a demo of Home Screen, Media Player, and HVAC for CES using the AGL distro
- Decision to build meta-agl using meta-oe as starting point instead of using meta-tizen and removing components
- Decision to use LF infrastructure instead of GitHub and GerritHub
- Decision to investigate the security framework rather than choosing Tizen SMACK approach
- Created task list for phase 1 and phase 2 of the distribution project to be refined prior to ALS
- Completed the ALS meeting agenda
Infrastructure

• Jira server up and running for issue tracking
• Host on Github and Gerrithub vs. dedicated LF servers
• Jenkins on LF servers
Meta-agl – Build up from scratch versus tear down Tizen

**Build Up from Poky**

- **Pro**
  - Unencumbered by existing baggage
  - Architecturally purer
  - Yocto/OE BSP architecture comes with it
  - Can easily revisit the security
  - Can revisit policy manager
  - Easier to leverage other layer such as meta-ivi for GENIVI

- **Con**
  - Potentially longer time to demonstrate
  - Value in apps
  - AGL must support new Yocto layer
  - No application framework
  - New design for security (or rework Smack)
  - New design for Policy manager (or rework Murphy)

**Tear out from Tizen**

- **Pro**
  - Tizen works today
  - Smack security built-in
  - Murphy policy management built-in

- **Con**
  - Too many dependencies to remove undesired parts cleanly
  - Rework of Tizen Yocto to enable ARM and be better Yocto citizens
  - No native app support
  - Long term commitment to maintain
  - Not everyone wants Smack and Murphy
  - Difficult to maintain Smack due to patches not upstreamed
  - Lifecycle management not compatible with GENIVI
  - EFL needs to be removed
  - Concerns on long term governance

**Decision**: we will go with the “Build Up” option, and if we are not making enough rapid progress, we will revisit
## Infrastructure – GitHub vs LF Hosted

<table>
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<tr>
<th>GitHub w/ GerritHub</th>
<th>LF Hosted Git/Gerrit</th>
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<tbody>
<tr>
<td><strong>Pro</strong></td>
<td><strong>Pro</strong></td>
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<tr>
<td>Easier user management</td>
<td>Already have most of the infrastructure working with LDAP single sign-on support</td>
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<tr>
<td>No LF IT required</td>
<td>PR advantage, perception of AGL “owning” the project, URL points to AGL website</td>
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<tr>
<td><strong>Con</strong></td>
<td><strong>Con</strong></td>
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<tr>
<td>Only free for open projects</td>
<td>More control over Git/Gerrit versions</td>
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<tr>
<td>Some companies may not be allowed to access GitHub</td>
<td>Better for member recruitment</td>
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<td>Perception that project is “hosted at LF”</td>
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**Decision**: we will go with the “LF hosted” option, LF will investigate what remains to be done to get this up and running.
ALS Meeting Agenda

• Expected attendees
  • Walt, Dan, Nori, Pete, SAT members from Japan

• Agenda
  • Review output from Ned on package comparison
  • Project plan review (work breakdown with finer detail)
  • Update on LF infrastructure
  • AGL Spec Release and plan for next revision
OTHER NOTES FROM MEETING
• Yocto Dizzy build has ~5140 packages
• Current TIZEN IVI/ Common distro Yocto layers have ~330 recipes and GENIVI Yocto layer has ~38 recipes
• TIZEN provided layers:
  • meta-qt5
  • meta-selftest
  • meta-skeleton
• Tizen specific
  • meta-tizen
  • GENIVI specific layers:
  • meta-ivi
  • meta-ivi-bsp
  • meta-ivi-demo
• TIZEN has ~11 build targets and GENIVI has ~2 build targets
• Yocto supports handling of multiple versions of packages as well as duplicates.
OPTION 2 -> MAINTAIN EXISTING LAYERS

STEP 1 – AGL SPECIFIC LAYER
- Start with Yocto Dizzy code base
- Create agl layer recipes and update bblayers conf
- Create dummy package groups for AGL distro

STEP 2 – TIZEN RECIPES
- Populate AGL package groups

STEP 3 – GENIVI RECIPES
- Populate AGL package groups

STEP 4 – AGL TARGET IMAGES
- Identify packages that are required by AGL that do not exist
- Create and populate AGL target image recipes
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- Create and populate AGL target image recipes
Notes

- Key characteristics of an Automotive Distribution
  - Published Roadmap
  - Expandable from IVI to Cluster, Telematics, and automotive networking hub
  - SDK available for app developers
  - Ability to create BSPs by semis
  - Test framework and test cases
Output phase 1

• Distribution
  • Built on Poky
  • Yocto 1.7

• Starting point
  • Tizen IVI – (not needed stuff)
  • Poky for R-CAR H2 and Intel + stuff
Wind River

• Proposal
  • Include meta-ivi in AGL
  • WR will include several AGL packages in meta-ivi and maintain them (list TBD inside WR) in next few weeks
  • WR will take care of having these components work together with the rest of the meta-ivi layer

• Discussion
  • Open governance? Yes with some limitations due to WR business interests
  • Meta-ivi limited to the packages required for GENIVI compliance
Communications

• Use AGL Discussions mail list for day to day technical work of the team
• Can split off to new mail list if traffic from a particular topic overwhelms the list
• Use existing weekly SAT meeting for architecture topics and set up special meetings of this group for distro topics