<table>
<thead>
<tr>
<th>Year</th>
<th>Jan-Mar</th>
<th>Apr-Jun</th>
<th>Jul-Sep</th>
<th>Oct-Dec</th>
<th>Jan-Jun</th>
<th>Jul-Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>ALS</td>
<td>AMM</td>
<td>CES</td>
<td>AMM</td>
<td>ALS</td>
<td>CES</td>
</tr>
<tr>
<td>2018</td>
<td>MM</td>
<td>RC1</td>
<td>Spec 1.0</td>
<td>FF</td>
<td>RC1</td>
<td>CES</td>
</tr>
<tr>
<td>2019</td>
<td>EE</td>
<td>FF</td>
<td>GG</td>
<td>GG?</td>
<td>App</td>
<td>Demo</td>
</tr>
</tbody>
</table>

**First Draft**
- kickoff
- publish Wiki
- Requirements Elicitation
- System Architectural Design
- recruiting
- Tier1/SoC vendor

**Ver 1.0**
- Spec 1.0
- System Architectural Design
- Ref-HW Development
- SW(BSP) for Ref-HW Development
- FF(GG?) porting
- App Development
- Demo System

**Timeline**
- CES
- AMM
- ALS
Next Step (Aug 2017)

- Towards Open Draft 【OEM】
  - Complete the list of peripheral devices & function allocation.
  - Clarification of the functional scope in AGL.
  - RSE
  - Cluster / HUD
  - Emergency call
Next Step (Sep 2017)

- **Towards Open Draft【OEM】**
  - Define the hardware specification draft
  - Rough block diagram of Ref-HW
  - 3 kinds Ref-HW? (Luxury/Middle/Low)
  - Special requirements
  - Adopt at least 2 kinds of SoC
  - 2 boards constitution: Main board + Extension board
    - Main and Ext boards can be combined freely with COMMON I/F.
  - Define the software specification draft
    - AGL specification to operate on various IVI system configurations (Selector, Vehicle Data Abstraction etc.)
    - Additional function to AGL platform (in-deck decode etc.)

→ Summarize and announce it as "Reference Hardware Open Draft" now in progress
Future Plan (Oct-Dec 2017)

- Towards Ver1.0 specification【OEM+Tier1/SoC】
  - Recruit Tier1 and/or SoC vendors
  - Define the hardware specification
    - Physical design of Ref-HW (HW block layout, communication I/F, ...)
  - Define the software specification
    - SW design to operate Ref-HW

Some of EGs already started discussion related with this topic.

ex. “Selector” has a close relationship with Audio Management Arch.
(under discussion in UI & Graphics EG)

→ Summarize and announce it as “Reference Hardware Specification 1.0”
Future Plan (2018)

■ Towards Ref-HW development【OEM+Tier1/SoC】
- Reference Hardware development
- Board development (Luxury/Middle/Low) by Tier1 or SoC vendor
- 3 kinds of demo systems?
- at least 2 kinds of Main Board

- AGL Software development
- Device driver / HAL layer (BSP) by Tier1 or SoC vendor
- AGL UCB (for FF*) by Community
  * AGL 6.0.0: Funky Flounder
- Application (if required)...

→ Construct Demo System for CES 2019.
Show AGL UCB(FF) is running on Ref-HW boards (Luxury/Middle/Low)
(1) Two boards constitution: Main board + Extension board

- Main Board (SoC-Board) ... AGL common feature
- Extension Board ... OEM specific feature

(2) Interchangeable Main Boards
Covering various SoC grades / various SoC vendors

(3) Interchangeable Extension Boards
Covering various types of cars / various OEMs
Replaceable with OEM specific boards
Define Reference Hardware

Ref HW 1 (Luxury) | Ref HW 2 (Middle)

<table>
<thead>
<tr>
<th>Main Board</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Board (High)</td>
<td>high spec SoC</td>
<td>Main Board (Low)</td>
</tr>
</tbody>
</table>

Main Board and Ext Board are connected by Common I/F. Therefore, different Main Boards can be connected with the same Ext Board.

Common I/F set

<table>
<thead>
<tr>
<th>Ext Board</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USB/SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BT/Wi-Fi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camera</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deck</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub Disp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle network</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ext Board is the same one. Connected Peripherals are different.

Partially disabled because of SoC capability.
Define Reference Hardware

Freely combined Ref HWs

<table>
<thead>
<tr>
<th>Main Board</th>
<th>Ext Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Board (High)</td>
<td>Ext Board (High)</td>
</tr>
<tr>
<td>high spec SoC</td>
<td>Vehicle network</td>
</tr>
<tr>
<td>Different Ext Boards can be connected with the same Main Board.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main Board (Low)</th>
<th>Ext Board (Low)</th>
</tr>
</thead>
<tbody>
<tr>
<td>low spec SoC</td>
<td>Vehicle network</td>
</tr>
</tbody>
</table>

- USB/SD
- BT/Wi-Fi
- Camera
- Deck
- Tuner
- Display
- Sub Disp
- RSE
- HUD

Realizing POLICY (3).
It can reduce the GAP between Ref HW and product HW.

Future Plan
In case of “Luxury” System, the signal lines of Video & Audio I/O are more than “Middle” System.
Example: Reference Hardware (Luxury+)

Main Board (High)

SoC (High spec)

Common I/F set

Video in

Video out

Audio in/out

Data com

Ctrl

Pwr

Extension Board (High)

AV Control Processor

μcom /HUB?

ETC/DSRC

DVD Drive (w/ decode func)

Tuner

AM/FM radio

Digital TV

NFC

SD slot

USB connector

Audio Amplifier

Future Plan

Newly developed Ext Board which reduce the GAP between ref HW and product HW.