Instrument Cluster EG
4th F2F

5/08/2019
If ASIL-B is the target for the Cluster AGL system, it is difficult to achieve by only AGL. Achieve ASIL by installing a safety mechanism in AGL (Non-Safety). What should be done to share functions between Non-Safety and Safety?
Functional layout

Non-Safety (AGL)

Automotive Services
- Camera
- Configuration Services
- Tuner Services
- Multimedia
- Smartphone Link
- PIM
- Vehicle Bus
- Diagnostics
- Speech services
- Telematics
- Navigation Service

Platform Services
- Bluetooth
- Persistent storage
- WiFi
- Telephony
- IPC
- Window System
- Graph
- Network Services
- Location Services
- Health Monitoring
- Resource Management
- Error Management
- Lifecycle Management
- Power Management

App FW
- Application Manager
- Sound Manager
- Window Manager
- Input Manager
- User Manager
- Policy Manager

Safety
- Rendering
- CAN
- Illumination control
- Power status control

EG target
### Functional layout

#### Non-Safety (AGL)
- **Platform Services**
  - Bluetooth
  - Persistent storage
  - Wii
  - Telephony
  - IPC
  - Window System
  - Graphics
  - Network Services
  - Location Services
  - Health Monitoring
  - Resource Management
  - Error Management
  - Lifecycle Management
  - Power Management

#### Automotive Services
- Camera
- Configuration Services
- Tuner Services
- Multimedia
- Smartphone Link
- PIM
- Vehicle Bus
- Diagnostics
- Speech services
- Telematics
- Navigation Service

#### App FW
- Application Manager
- Sound Manager
- Window Manager
- Input Manager
- User Manager
- Policy Manager

#### Safety
- Rendering
  - CAN
  - Illumination control
  - Power status control

#### ASIL telltale
- Except ASIL telltale

#### EG target
- e.g.

---

*Note: The image contains a diagram with various services and components labeled.*
How to proceed with architecture design

- Define functional layout for AGL
- Design architecture based on container technology.
  --> We will proceed with the design separately so that the next AGL F2F can be previewed.
- Creating an easy-to-develop environment such as IC service
  --> Continue discussions at a small WG centered on Cluster Tier1.

Is it necessary to define the Secure side? Each company has different implementation methods.

e.g.) When rendering all in AGL (including ASIL telltales), in this case, the Secure side needs to monitor the output of rendering.

Is it necessary to define a specific example of monitoring?
Working image

- Architecture blueprint
- Target performance
- Requirement spec (Spec EG)
- Reference hardware (R-Car E3)
- Reference design

Develop code including community based on the above information

Source code
## Schedule

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th></th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jun.</td>
<td>EG F2F</td>
<td>Jul.</td>
<td>ALS (F2F)</td>
</tr>
<tr>
<td>Aug.</td>
<td>F2F</td>
<td>Aug.</td>
<td>F2F</td>
</tr>
<tr>
<td>Sep.</td>
<td>AGL F2F</td>
<td>Sep.</td>
<td>AMM</td>
</tr>
<tr>
<td>Nov.</td>
<td></td>
<td>Dec.</td>
<td></td>
</tr>
<tr>
<td>Dec.</td>
<td></td>
<td>Jan.</td>
<td>CES</td>
</tr>
<tr>
<td>Mar.</td>
<td></td>
<td>Apr.</td>
<td></td>
</tr>
<tr>
<td>Apr.</td>
<td></td>
<td>May</td>
<td></td>
</tr>
<tr>
<td>May</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **New architecture release**
- **Spec release**
- **Target spec release**
- **Review**
- **Sample code release**
- **Code release based on new architecture**