APPENDIX

Steps to consider function allocation

1. Break down to functions
2. List up allocation candidates
3. Filter functions
4. Consider composition

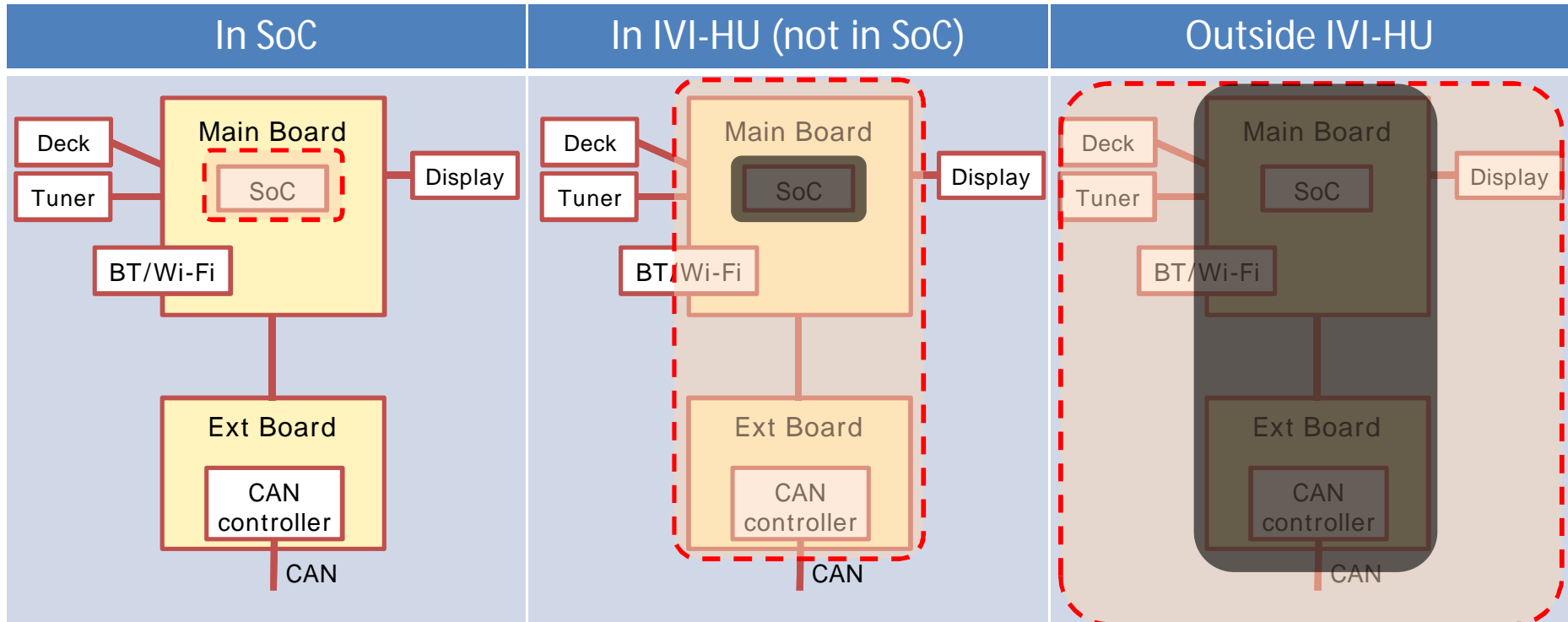Goal: Define scope of SoC (AGL PF) and Reference Hardware

Step1. Break down to functions

Usecase		Function
Camera	Surround view camera, Rear view camera	Image taking
		Image processing(distortion correction, etc.)
		image generation (guideline, etc.)
		image superimposing (guideline, etc.)

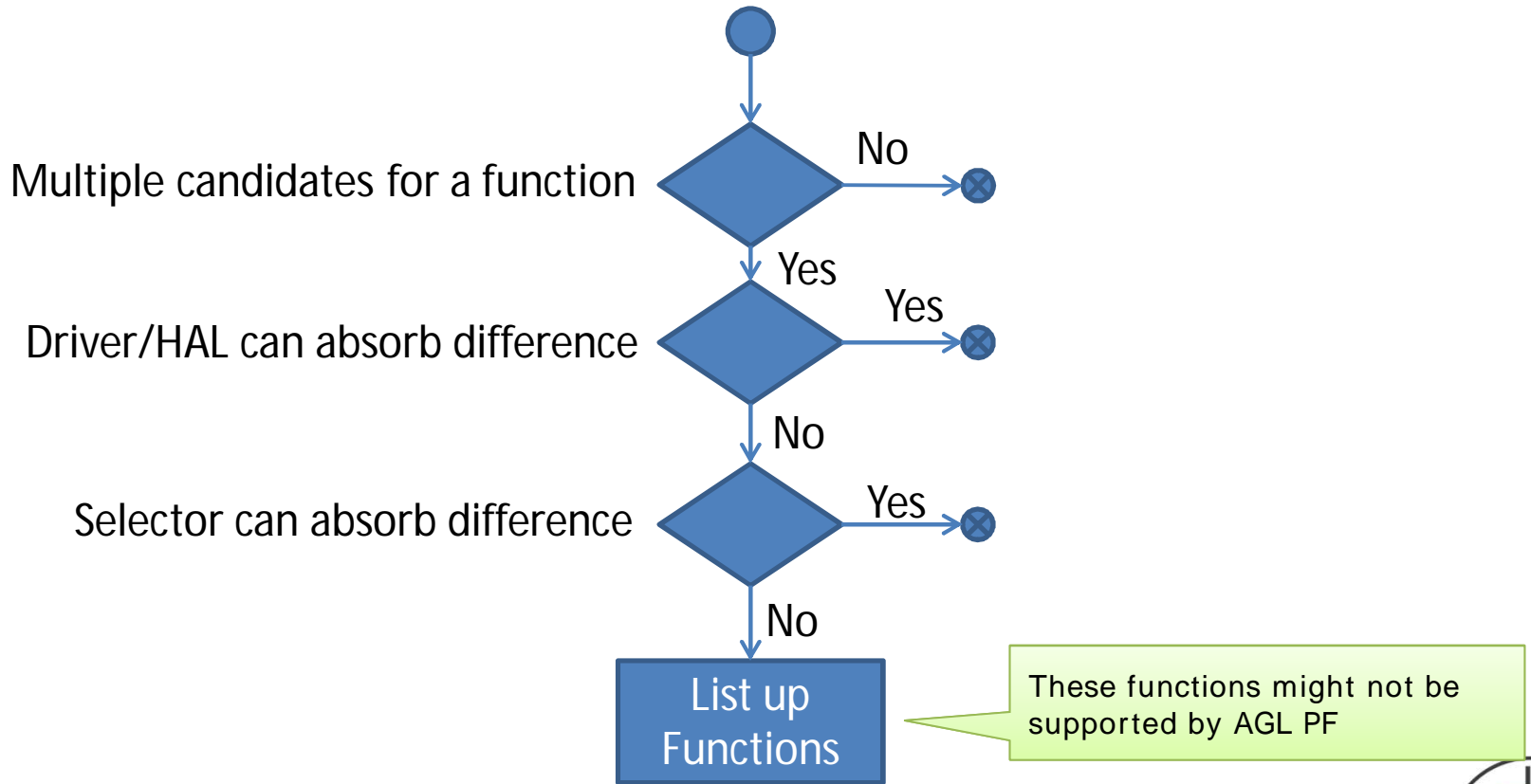# Step2. List up allocation candidates

List up candidates to decide where the functions allocate

Step2. List up allocation candidates

Function	In SoC	In IVI-HU (not in SoC)	Outside IVI-HU	
Image taking	X	X	✓Camera Unit	1 candidate
Image processing(distortion correction, etc.)	✓Service(Camera)	X	X	2 candidates
	X	X	✓Camera Unit	
image generation (guideline, etc.)	✓OS(Video Driver)	X	X	1 candidate

Step3. Filter functions

Multiple candidates for a function — No

Driver/HAL can absorb difference — Yes

Selector can absorb difference — Yes

Yes → No → No

List up Functions

These functions might not be supported by AGL PF

Step3. Filter functions

Following functions have to be considered whether AGL PF should include.

- Video/Audio Decode

- Rear Seat Entertainment

- Cluster/HUD

- Emergency call

etc.

Step4. Consider composition

We made 3 questions about function allocation to EG members and collected their answers.

Summary of OEMs' answers

Q1. Which composition of RSE is assumed?
(a) Works as external display. No input device. Controlled only from IVI-HU.
(b) Accepts simple commands such as volume change. Fully controlled from IVI-HU at front seat.
(c) Has individual GUI controlled from rear seat. IVI-HU provides and manages multiple GUI.
(d) Has individual GUI and provides all the functions but Video/Audio source. Equivalent to tablet devices.

OEM	Answer
A	(b) for basic grade. (d) for premium grade.
B	(b) or (d)
C	(b) for basic grade. (d) for premium grade.
D	(b)

Summary of OEMs' answers

Q2. Do you have any comment about the view of AGL PF related with Cluster/HUD? Expert Groups are discussing topics about protocol for sharing contents between ECUs and virtualization architecture.

OEM	Answer
A	Linux is not assumed as OS for Cluster. Sending images and contents from IVI to Cluster is needed.
B	Wayland protocol inter ECUs should be included into the scope. Virtualization (Hypervisor) is out of scope right now while we need more discussion about it.
C	Linux is not assumed as OS for Cluster. Sending contents, such as navigation maps, from IVI to Cluster is needed.
D	Cluster: send some images from IVI and draw in Cluster HUD: draw images in IVI and send them to Cluster AR HUD: send some images from IVI and draw in HUD

Summary of OEMs' answers

Q3. Which composition of Emergency call is assumed?
(a) IVI-HU takes responsibility for calling (audio input/output).
(b) It works in DCM/TCU.

OEM	Answer
A	(b) for countries under regulation, otherwise (a)
B	Assuming both possibilities
C	Assuming (b) to enable communication even if IVI HU is broken.
D	(b) for countries under regulation, otherwise (a)

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