Development of OTA service based on Adaptive AUTOSAR

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Attention

Before creating a PowerPoint presentation, please have a look into the AUTOSAR Guideline to ensure a consistent look & feel through all AUTOSAR presentations

https://svn.autosar.org/repos/work/02_ProjectOrganization/06_Templates/AUTOSAR_TMPL_Presentation_Guideline.pptx
Agenda

- Adaptive AUTOSAR(AP) development process
- OTA service development
- Summary
- Q&A
Agenda

- Adaptive AUTOSAR (AP) development process
- OTA service development
- Summary
- Q&A
1. Adaptive AUTOSAR development process
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New requirements lead to new architecture—Adaptive AUTOSAR
1. Adaptive AUTOSAR development process

AP development process
- Modeling -> Coding -> Deployment
1. Adaptive AUTOSAR development process

AP development process

- Modeling
  - How to modeling
  - What generated
1. Adaptive AUTOSAR development process

AP development process

- ARA communication architecture
Agenda

- Adaptive AUTOSAR (AP) development process
- OTA service development
- Summary
- Q&A
2. OTA service development
2. OTA service development

Architecture

- Development of vehicle OTA service based on AP
- Vehicle-Cloud communication based on MQTT\(^1\) and HTTPS
  - Level 3 (Arial, 14)

\(^1\) MQTT (Message Queuing Telemetry Transport)
2. OTA service development

Development of vehicle OTA service based on AP

- Control interaction -> SOME/IP protocol
- Firmware transportation -> HTTPS protocol
2. OTA service development

Vehicle OTA service development
- Request OTA on vehicle
- Request / Response
2. OTA service development

Vehicle OTA service development
- New firmware push on cloud
  - subscribe / publish
  - event driven

Diagram showing the sequence of events from actor to TSP, T-BOX, DCU, and ECU with actions like MQTT subscribe, event notification, request of download, allow to download, get firmware URL, etc.
2. OTA service development

Vehicle OTA service development

- Modeling
  - Request / Response
    - SOME/IP Method
  - subscribe / pulish
    - SOME/IP Event
    - SOME/IP Field
2. OTA service development

Development of vehicle OTA service based on AP

- HTTPS server: httpd daemon
- HTTPS client: OTAAApp_cm_client
- OTA Master: ECU FOTA
2. OTA service development

Development of vehicle OTA service based on AP

- Deployment

![Diagram showing T-BOX and DCU with IP addresses and control interactions]
2. OTA service development
2. OTA service development
Agenda

- Adaptive AUTOSAR (AP) development process
- OTA service development
- Summary
- Q&A
3. Summary
3. Summary

- Briefly describe the AP application development process

- Taking OTA service development as a case, briefly describe how to develop AP applications
Agenda

› Adaptive AUTOSAR (AP) development process
› OTA service development
› Summary
› Q&A
4. Q&A
Headline

Level 1 (Arial, 16)
  - Level 2 (Arial, 14)
    - Level 3 (Arial, 14)

Please do NOT use font sizes smaller that 14 points for continuous text!
Color palette

R:  46  G:  63  B:  85
R: 150  G: 159  B: 170
R: 192  G: 197  B: 204
R: 234  G: 235  B: 238
R: 236  G:   28 B:   35

R: 252  G:  71  B:  14
R: 250  G: 146  B:   0
R: 135  G: 136  B: 137
R: 135  G: 174  B: 218
R: 153  G: 147  B: 255
R:  32  G: 207  B: 153
R: 252  G: 119  B: 128