

CONNECTED & AUTONOMOUS CARS

tens of millions of Lines of Code



Egil Juliussen, IHS



Laurent Meillaud, journalist



Roger Lanctot, Strategy Analytics

How will automotive industry overcome the challenge ?

Open Source
Software

Standardization

Ecosystem

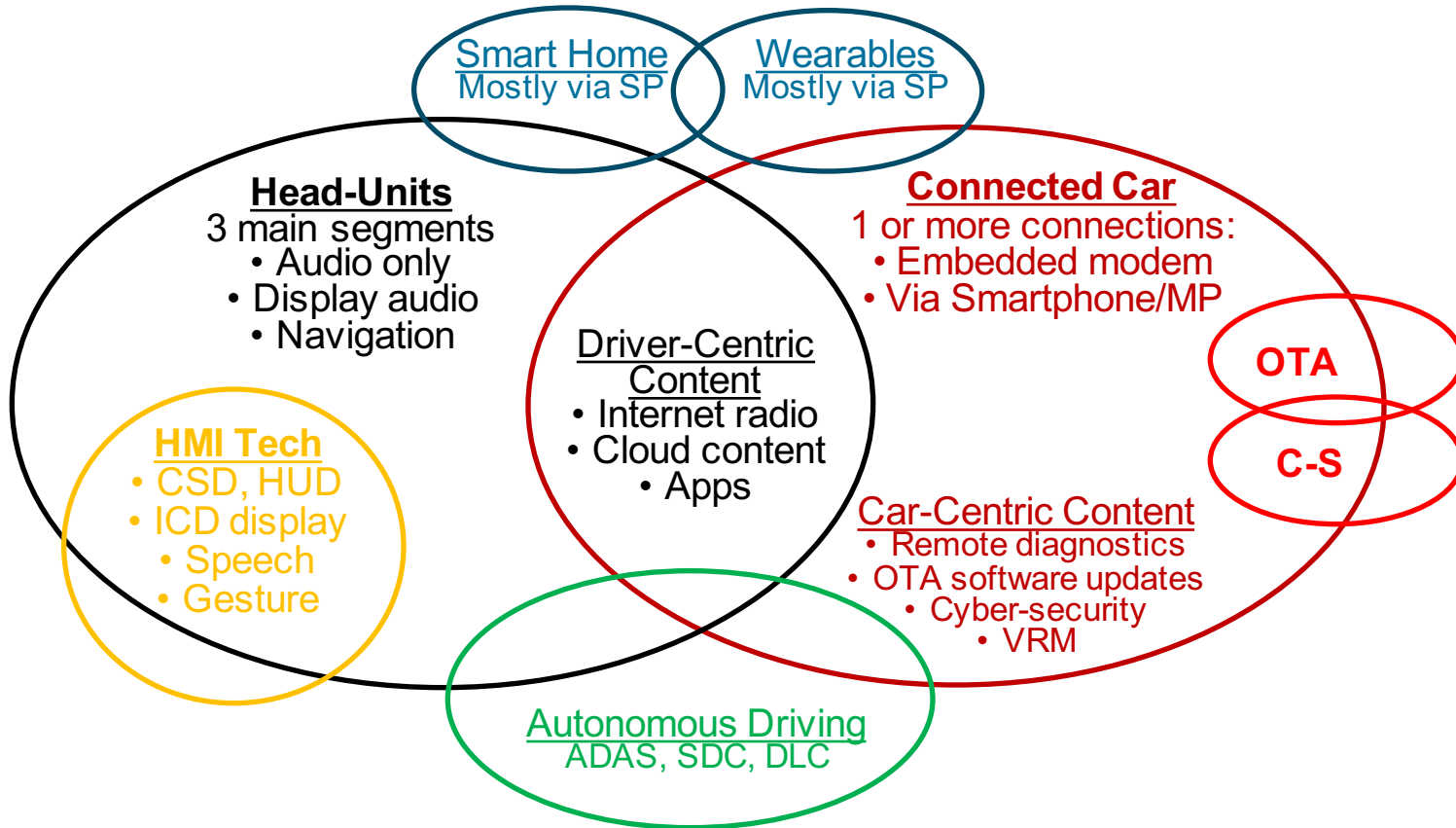
...



Egil Juliussen

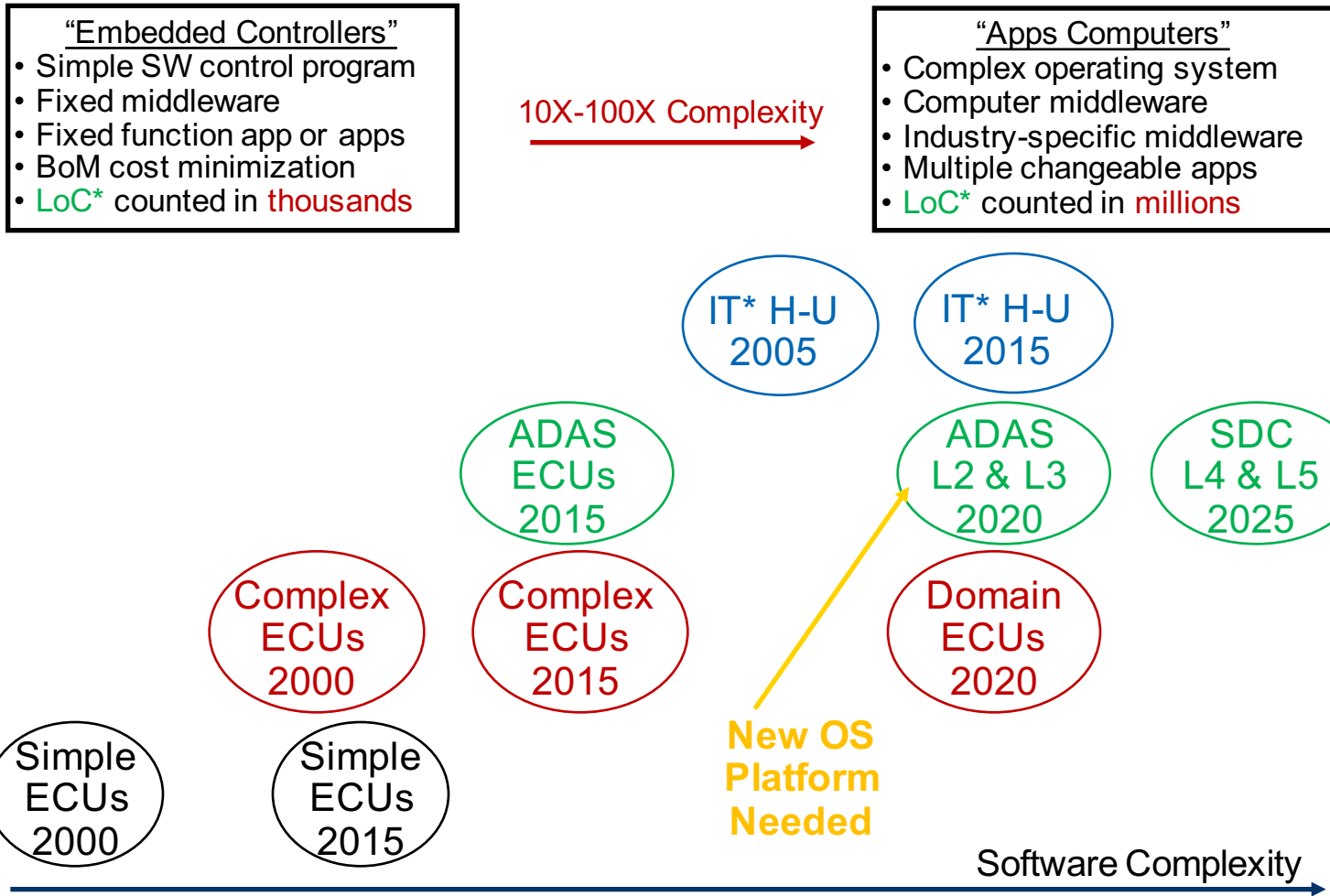
BACKUP SLIDES

Infotainment: Connected Car vs. Head-Unit



MP=Mobile Phone; SP=Smartphone; VRM=Vehicle Relationship Management; SDC=Self-Driving Car; DLC=Driverless Car; OTA=Over-the-Air; C-S=Cyber-Security

Auto Software Complexity Path



High-Tech Impact Evolution

H-T as
DLC CaaS
Competitor

DLC CaaS Fleets
 • Mobility services
 • Anyone & Everything

H-T as
T1-OEM
Competitor

Connected Car
 • Smartphone Apps
 • Content via CP-AA

Connected DLC
 • Content consumption
 • Content for work

Battery EV
 • Luxury BEV: Tesla
 • More start-ups

SDC & DLC BEV
 • CaaS business model
 • Ownership model

H-T as
T1-OEM
Supplier

ECU Software
 • Operating System
 • Middleware & apps
 • Navigation maps

ECU Software
 • Remote SW update
 • Cyber-security
 • ADAS & DL apps

ECU Software
 • SDC & DLC SW
 • Cyber-security & OTA
 • HD maps & DL apps

ECU Chips
 • MPUs & memory
 • Sensors & more

ECU Chips
 • MCUs & SoC
 • ADAS sensors

ECU Chips
 • Multi-core SoC
 • SDC-DLC sensors



CP=CarPlay; AA=Android Auto; DL=Deep Learning; CaaS=Car-as-a-Service; SDC=Self-Driving Car; DLC=Driverless Car; OTA=Over The Air; SoC=System on Chip