

ITU Workshop on Vehicular Multimedia Implementation Aspects

Opening & Introduction

Online workshop 27 April 2022

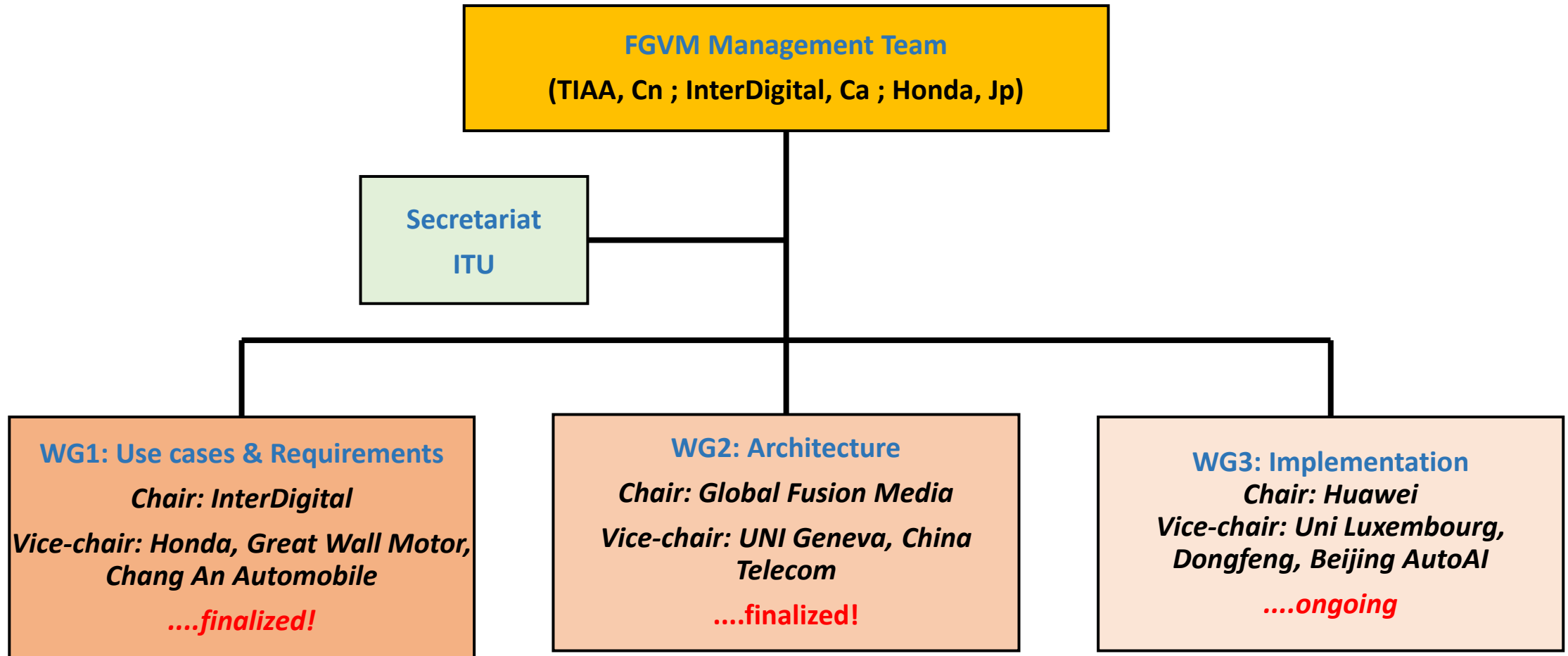
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Francois Fischer
(FG-VM/WG3 Chair)

HUAWEI TECHNOLOGIES CO., LTD.



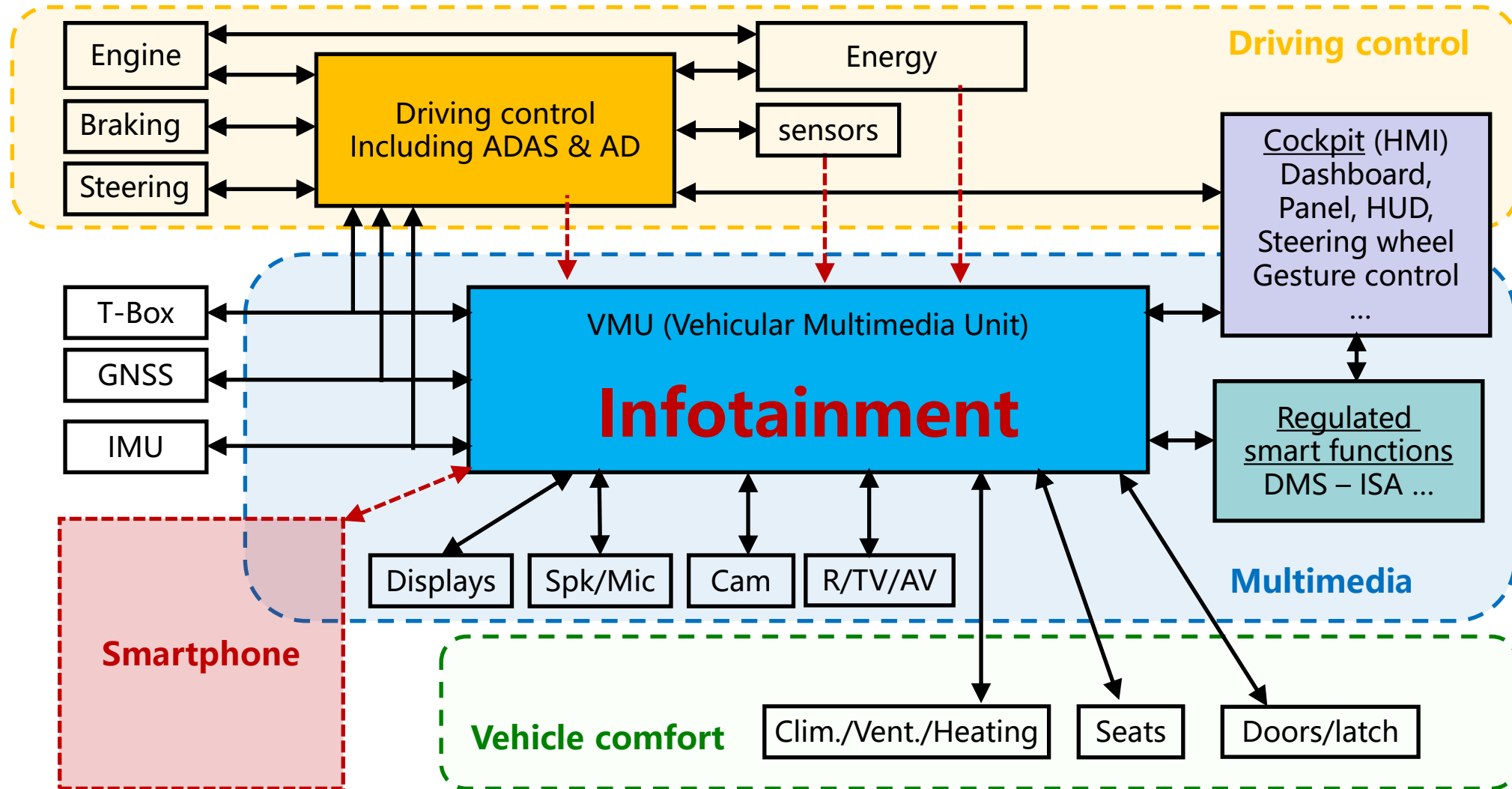
Focus Group Vehicular Multimedia structure



Focus Group work programme

WG1	<p>Use cases and requirements for vehicular multimedia networks</p> <p>Endorsed by ITU-T SG16 as F.749.3 recommendation</p>	<p>Describes use-cases and requirements for vehicular multimedia networks (VMNs), taking into account the autonomous levels defined by [SAE J3016] and used in conjunction with Advanced Driver Assistance System (ADAS), automatic driving technologies, maps, voice command or natural language processing.</p>
WG2	<p>Architecture of vehicular multimedia systems</p> <p>Endorsed by ITU-T SG16 as H.551 recommendation</p>	<p>Defines the features and configurations of vehicle multimedia systems (VMSs) and the reference model of VMS architecture. The reference model of vehicular multimedia service platform, the reference protocol stack for convergence transmission, and the reference receiver model of in-vehicle devices for VMS multimedia applications are also defined. VMS security issues and personally identifiable information protection and privacy issues are described as well.</p>
WG3	<p>Technical Report on implementation aspects of Vehicular Multimedia</p>	<p>To provide a description of different aspects relevant for the implementation of Vehicular Multimedia System (VMS) functionalities in vehicles. The implementation aspects include a range of applicable requirements or guidelines addressing different topics: connectivity, HW/SW integration, HMI, user experience, cybersecurity, privacy protection To include references to relevant specifications, regulations, test procedures and certification schemes and to raise identified gaps and propose mitigations, like for instance updating or creating new standards.</p> <p>The aim of the document is to serve as an overall specification for implementing VMS, referring to the existing standards, regulation or guidelines and to recommend best practices for VMS implementation as well as to identify standardisation gaps and propose new standards..</p>

VM Scope and boundaries



WG3 – implementation aspects TR - ToC

6 VEHICULAR MULTIMEDIA FUNCTIONAL SCOPE

7 VMS IMPLEMENTATION ASPECTS

7.1 CONNECTIVITY

7.1.1 Broadcast communication, 7.1.2 Short range connectivity, 7.1.3 In-vehicle networks, 7.1.4 Network slicing, 7.1.5 IPv6, 7.1.6 Opportunities and requirements with evolved and emerging connectivity technologies

7.2 HMI

7.2.1 Voice Recognition Control, 7.2.2 Gesture Recognition Control, 7.2.3 Eye-Movement Recognition Control, 7.2.4 Augmented reality, 7.2.5 3D displays, 7.2.6 Haptic, 7.2.7 Motion sickness free

7.3 MEDIA FORMAT BASIC SET

7.3.1 2D Video Format Basic Set, 7.3.2 3D Format Basic Set, 7.3.3 Audio Format Basic Set, 7.3.4 Voice Format basic Set, 7.3.5 GAP

7.4 CYBER-SECURITY

7.4.1 The vehicle cyber-security eco-system, 7.4.2 Cyber security risk management for road vehicles, 7.4.3 Cyber-security by design, 7.4.4 Gaps and proposed mitigations

7.5 PRIVACY PROTECTION

7.6 DRIVER AND USER EXPERIENCE

7.6.1 Driving safety, 7.6.2 Driver ergonomics aspects, 7.6.3 Driver and user experience

7.7 DRIVER ASSISTANCE AND SAFETY

7.8 IN-VEHICLE INTEGRATION 17

7.8.1 HW and SW architecture, 7.8.2 Virtualisation, 7.8.3 Functional safety, 7.8.4 Emerging integration technologies

8 REGULATION ASPECTS → to be developed in the relevant topic section

9 TESTING AND CERTIFICATION



Agenda

09:00 - 09:05 - Welcome Remarks

Jun Harry Li, Chair FG-VM, TIAA

09:05 - 09:20 - "Introduction to the FG-VM WG3"

Francois Fischer, Chair FG-VM WG3, Huawei

09:20 - 09:40 - "VMU contribution for the cockpit synthesis and vehicle feature HM"

Stéphane Feron, Stellantis

09:40 - 10:00 - "HMI aspects for VM and experiences as content provider"

Renaud Di Francesco, Sony

10:00 - 10:20 - "Eye gaze tracking for Automotive HMI"

Pradipta Biswas, Indian Institute of Science (IISc)

10:20 - 10:30 - Coffee Break

10:30 - 10:50 - "VM content minimizing distraction and maximizing user experience"

Yannick Ostad, IKA

10:50 - 11:10 - "Evolving Vehicular Multimedia HW & SW Architecture"

Srinivasagan Ayyappan, Aston Martin

11:10 - 11:30 - "Intelligent cockpit implementation scheme"

Frank Han, Changan

11:30 - 11:50 - "SparkLink short range connectivity for intelligent vehicles"

Shen Yan, Huawei Technologies

11:50 - 12:00 - Conclusion and plans for the following day (official FG-VM meeting)

Thank you