5GAA Automotive Association

Liaison report
3GPP PCG
27 September 2022

Connected mobility for people, vehicles and transport infrastructure

5GAA bridges the automotive and telecommunication industries in order to address society's connected mobility needs bringing inclusive access to smarter, safer and environmentally sustainable services and solutions, integrated into intelligent road transportation and traffic management.

AUTOMOTIVE INDUSTRY

Vehicle Platform, Hardware and Software Solutions

TELECOMMUNICATIONS

Connectivity and Networking Systems, Devices & Technologies

The content of this document is for 5GAA internal discussion only. In its current version it does not reflect any agreed 5GAA view, nor any approved 5GAA position.

© 2022 5GAA

5GAA cooperation pillars

MEMBERSHIP

- Build a representative membership & impactful partnerships
- Drive active and enriching member engagement

DEPLOYMENT

Enabling deployment

- Lift barriers
- Accelerate time-to-market

STANDARDS

Contributing to standards

- Plan pre-standardization of automotive connectivity with a multi-release perspective

ADVOCACY

Advocating to policymakers

- Pro-actively address opportunities and threats
- Position 5GAA around strategic ecosystem

INNOVATION

Supporting innovation

- Leverage innovative solutions together to advance connected mobility

The content of this document is for 5GAA internal discussion only. In its current version it does not reflect any agreed 5GAA view, nor any approved 5GAA position.

© 2022 5GAA

5GAA Organisational Structure

GENERAL ASSEMBLY

BOARD

EXECUTIVE COMMITTEE

WG1	WG2	WG3	WG4	WG5	WG6	WG7
Use Cases and Technical Requirements	System Architecture and Solution Development	Evaluation, Testbeds and Pilots	Standards and Spectrum	Business Models and Go-To-Market Strategies	Regulatory and Public Affairs WG6 US (2019) WG6 EU (2019) WG6 Japan (2020) WG6 China (2021) WG6 Korea (2021)	Security and Privacy

The content of this document is for 5GAA internal discussion only. In its current version it does not reflect any agreed 5GAA view, nor any approved 5GAA position.

New Members since Q2 2022

ferrovial

monotch
SMART MOBILITY PLATFORMS

s·e·a

AVL

General Test

ettifos
Connected-in-Motion

HYUNDAI
KIA

The content of this document is for 5GAA internal discussion only. In its current version it does not reflect any agreed 5GAA view, nor any approved 5GAA position.

© 2022 5GAA

AIRBUS
ALPS ALPINE
Capgemini engineering
AMERICAN TOWER
Anritsu envision : ensure
applied INFORMATION
ASKEY
AT&T
Audi
AUTOCRYPT
Autotalks
AVL
Baidu 百度
Bell
BMW GROUP
BOSCH
BUREAU VERITAS
中国汽研 CAERI
大唐电信科技产业集团
cetecom partner for pioneers
CHEMTRONICS Automated Driving
中国移动 China Mobile
China unicom 中国联通
CISCO
Cohda Wireless
commsignia
Continental The Future in Motion
continual
CTAG
DANLAW AUTOMOTIVE MADE SMART
DEKRA
DENSO
Deutsche Messe
T
EQUINIX
ERICSSON
中国一汽 FAW
ferrovial
遠傳 FET
FEV
flex
Ford
Fraunhofer
FUTUREWEI Technologies
gm
General Test
here
HONDA
HUAWEI
HYUNDAI MOBIS
HYUNDAI
infineon
財團法人資訊工業策進會 INSTITUTE FOR INFORMATION INDUSTRY
intel
INTERDIGITAL
JAGUAR
LAND ROVER
jember
KDDI
KEYSIGHT TECHNOLOGIES
LEAR CORPORATION
LG
LINKS
lmt
MARBEN
Mercedes-Benz
MICROSEC
Microsoft
MITSUBISHI ELECTRIC Changes for the Better
molex
monotch
muRata
mvg
NISSAN MOTOR CORPORATION
NOKIA
HEXAGON
Novatel
NSI MI AMETEK
NTT docomo
OAKLAND UNIVERSITY
OKI
orange
Panasonic
PIRELLI
qorvo
Qualcomm
QUECTEL Build a Smarter World
Renault Group
RISE
ROGERS
ROHDE&SCHWARZ
ROLLING WIRELESS
SAIC 上汽集团 SAIC MOTOR
SAMSUNG
S·E·a
SGS
嘉亭·上海国际汽车城 Anting · Shanghai International Automobile City
SiriusXM CONNECTED VEHICLE SERVICES
SKYWORKS
SoftBank
SONY
SPORTON LAB.
STELLANTIS
SUMITOMO ELECTRIC
swift NAVIGATION
SwRI
SYNTONY GNSS
TIM
Telefónica
TELUS
Tencent 腾讯
THALES
TNO
TOPCON
TÜVRheinland
ublox
Valeo
verizon
vodafone
VW
VOLVO
ZF
ZTE

The content of this document is for 5GAA internal discussion only. In its current version it does not reflect any agreed 5GAA view, nor any approved 5GAA position.

Total: 123 members

Ecosystem Partners

SDOs

3GPP A GLOBAL INITIATIVE
ETSI
SAE CHINA
NEMA National Electrical Manufacturers Association NEW
SAE INTERNATIONAL *
ISO NEW *

Regional 5G organisations

5G IA INFRASTRUCTURE ASSOCIATION
IMT-2020
5GMF The Fifth Generation Mobile Communications Promotion Forum
5G Forum
ITS KOREA

Industry associations

GSMA
Connected Motorcycle Consortium
CONEBI
EATA European Automotive and Telecoms Alliance
ngmn the engine of broadband wireless innovation
GTI Global TD-LTE Initiative
VSAV
iATL Infrastructure Automotive Technology Laboratory *
ACEA European Automobile Manufacturers Association *
etno *
AECC *
ATSSS SAFER ROADS SAVE LIVES NEW
esa NEW *

Public administrations

bast Federal Highway Research Institute
CITTA' DI TORINO
Ministry of Infrastructure and Water Management
VAS Elektroniskie sakari
DGT Dirección General de Tráfico
MID MINISTRO PER L'INNOVAZIONE TECNOLOGICA E LA DIGITALIZZAZIONE
Joint Research Centre JRC
anas GRUPPO FS ITALIANE *
highways england *
CEPT ECC Electronic Communications Committee

Certification bodies

OMNIAIR CONSORTIUM
GCF Global Certification Forum

** Collaboration without formal agreement*

The content of this document is for 5GAA internal discussion only. In its current version it does not reflect any agreed 5GAA view, nor any approved 5GAA position.

© 2021 5GAA

*List is not exhaustive – members' input welcome!

Market developments since Q2 2022

Commsignia Central creates V2X messages from the WZDx database

source: Commsignia, June 2022

Autotalks unveils the world's first V2X chipsets which support 5G-V2X for Day 2 scenarios

source: Autotalks, May 2022

Ford C-V2X Tech Spreads In China Amid Connected Services Push

source: Ford Authority, June 2022

Seamless 5G connectivity: cars warn of road dangers across national borders

source: Ericsson and Deutsche Telekom,, June 2022

Georgia Department of Transportation Demonstrates Safer, Connected Roadways with Kia Georgia and Panasonic Smart Mobility Technology on "The Ray Highway"

source: Panasonic, May 2022

5G: connected autonomous and assisted driving vehicles on motorway between Italy-Austria and Austria-Germany

5G CARMEN

source: 5G Carmen, June 2022

5th Anniversary Report
Table of Content:

- Editorial from Christoph Voigt, 5GAA Chair
- 5GAA Main Achievements
- Interviews with founding members:
  - Friedhelm Ramme, Ericsson GmbH
  - Jim Misener, Qualcomm
  - Rainer Krumrein, Mercedes-Benz AG
  - Joachim Göthel, BMW Group
  - Thierry Klein, Nokia
  - Walter Weigel, Huawei Technologies
  - Markus Dominik Mueck, Intel
- Case Study: “The Chinese connected driving success story”
- Interviews with external stakeholders
- Vision for the Future, Maxime Flament, 5GAA CTO
- 5GAA in numbers, Our People

Connectivity for the Car of the Future Symposium

What role for non-terrestrial networks?

May 16, 2022 – 10 AM – 15.30 PM - Berlin

3 moderated panel discussions

Discussion points:

- Ubiquitous connectivity - a must for the future car?
- Fostering ubiquitous connectivity – the way forward
- Breaking out of silos: How can automotive, space and telco work together on R&D to address future connectivity challenges?
- Joining forces to advance connectivity solutions for the future car

With the participation of

Elodie Viau

- Director, Telecommunications and Integrated Applications Directorate, ESA

Josef Aschbacher

Video message from, Director-General, ESA

103 registrants
52 attendees
17 Speakers

Latest publications

Workprogramme timeline

F2F#23 F2F#24 F2F#25

WI ID	WI long name	End (Expected)	Q2-2022	Q3-2022	Q4-202		Q1-2023	Q2-2023	Q3-2023	Q4-2023
C-V2X RM II	C-V2X Roadmap Phase II	Jul-22	3	3						
BRIDGE	Digital Roads	Jul-22	3	3						
China V2X SP-C	V2X State of Play in China	Jul-22	1	1						
UCID II	Use cases implementation specification Phase II	Jul-22	2	2						
UCM II	Use Cases Maintenance and x-WI Convergence Phase II	Jul-22	1	1						
AVP	AVP Technology Assessment	Oct-22	3	3						
PRESA	Predictive QoS and V2X Service Adaptation	Oct-22	1	1						
MAPU	5G market pull thanks to the benefits beyond safety and AVs	Oct-22	2	2						
VRU-Pro	Accelerating VRU Protection on the road	Oct-22	2	2						
CMDB	C-V2X Market Dashboard	Dec-22	1	1						
gMEC4AUTO	MEC technology to support automotive services phase II	Dec-22	3	3						
NCAP	Global NCAP	Feb-23	2	2			2			
TPM4V2X	Trustable positioning methodology for V2X	Feb-23		2			2			
CPTW	Connected Powered Two Wheelers	Mar-23	2	2			2			
5G-V2X-EU	5.9 GHz Band for 5G-V2X deployment in Europe	Mar-23		1			1			
NR-V2X-Eval	Performance Evaluation of 3GPP NR V2X – Phase 1	Jun-23		3			3	3		
EPos	Evaluation of Radio-Based Positioning	Jul-23		2			2	2		
Robot-ITS	Incorporation of unmanned ground robots in ITS	Nov-23	1	1			1	1	1	
STiCAD II	Safety Treatment in Connected Automated Driving Functions phase II	Nov-23	2	2			2	2	2	

Newly approved Work Items

- Trustable positioning methodology for V2X (TPM4V2X)
- Evaluation of Radio-Based Positioning Enhancements for Automotive Use Cases (EPos)
- 5.9 GHz Band for 5G-V2X deployment in Europe (5G-V2X-EU)
- Non-Terrestrial Networks (NTN4V2X)
- LTE-V2X “Day 1” Deployment Guidance (USDPLOY)
- Update of J3161 family of standards in SAE (4WARD II)

2022/23 Upcoming Meeting Weeks

Date	City, Country
October 17 – 21, 2022	Málaga, Spain
February 6 – 10, 2023	The Hague, The Netherlands
May 8 – 12, 2023	Seoul, South Korea
July 10 – 14, 2023	Virtual (TBC)
October 16 – 20, 2023	USA (City TBC)

Upcoming Malaga F2F Week

live demonstrations | focus on VRU protection

Thursday, October 20 | 09:00 – 17:00 CEST

Location: DEKRA Test Track

09:00 – 12:00	Members' symposium
12:00 – 13:00	Lunch
13:00 – 17:00	Live Demos & tests

5GAA Automotive Association

Thank you!