CAR 2 CAR -Newsletter-

Issue 14 / March 2015

CAR 2 CAR
COMMUNICATION CONSORTIUM

In the 14th Issue

C2C-CC organisationally gears to imminent C-ITS deployment

by Sonja Eickmann, CAR 2 CAR Communication Consortium

2014 has again been an eventful year for the CAR 2 CAR Communication Consortium. Day One deployment of cooperative Intelligent Transport Systems and Services closes in and final preparations are amplified to keep within the planning of a concerted roll-out across Europe.

By setting-up the C-ITS deployment platform, the European Commission has established a new organ for solving outstanding issues for near-term deployment, being of legal, organisational or administrative nature, having technical character or being related to standardisation and implementation. Many CAR 2 CAR members are highly active in the working groups of this platform and bring in their expertise in harmonising views and perspectives on deployment issues between the wide range of stakeholders represented there.

Meanwhile, as you will learn from the present Newsletter, the Consortium itself gears to imminent C-ITS deployment on organisational level. The working groups have been reorganised to a two-track architecture with the working group Deployment focusing on Day One and the working group Road Map addressing deployment beyond Day One. All other working groups contribute their expertise to both super-ordinated working groups. Moreover, the Consortium professionalises the release and change management with support of AUTOSAR for finding a suitable process for improving existing specifications by fitting the criterion of consistent stakeholder agreement.

Going forward, the C2C-CC foresees to grant access to released documents not only to active C2C members, but also to external parties subscribing for a basic membership. Therefore, a Released Documents list has been added to the secured area of the CAR 2 CAR Website which is visible after log-in (https://www.car-2-car.org/index.php?id=255).

With all these activities, the CAR 2 CAR Communication Consortium takes the initiative of successfully transforming the C2C standards and specifications into series production and to consequently carry on the strenuous efforts for realising cooperative road traffic.

We invite you to gain inside into these activities, to recall the CAR 2 CAR Forum 2014, to get to know the new Consortium members, and to read news of the project environment in the present CAR 2 CAR Newsletter.

CAR 2 CAR Forum 2014 in Braunschweig:
Conference and exhibition complemented by a C2X driving demonstration
by Sonja Eickmann, CAR 2 CAR Communication Consortium

**8th
CAR 2 CAR Forum**
*21 and 22 October 2014
Stadthalle, Braunschweig*

Once again almost 200 active and basic CAR 2 CAR members met for the CAR 2 CAR Forum, the annual conference of the Consortium. It is traditionally destined for jointly recalling the latest activities and progress achieved by the working groups. The 8th Forum took place in Braunschweig, Germany, where the administrator ITS Niedersachsen is settled. The two-days-conference was organised in the Stadthalle and as is usual accompanied by the technical exhibition of 22 members companies. As feature of the 8th Forum, the conference was moreover complemented by a driving demonstration, organised by the resident CAR 2 CAR members German Aerospace Centre and IAV.

Consistent to the 2013 event in Munich, the Forum was well accepted by CAR 2 CAR members and invited guests from all over Europe. It was the first time for the General Manager Niels Peter Skov Andersen to welcome the participants, chair the plenary session and guide through the General Assembly for the active CAR 2 CAR members.

The plenary sessions on the first day addressed the framework and status of C-ITS deployment, outstanding issues and challenges for initial deployment as well as stages beyond Day One. Representing the European Commission, Alain van Gaever introduced the C-ITS deployment platform just set-up as one of the main drivers in the political framework for C-ITS deployment in the oncoming years. The second presentation gave a special inside into the deployment issues of two-wheelers from the perspective of ACEM – The motorcycle industry in Europe. Guests from the US Department of Transportation furthermore outlined the V2I and I2V activities in the United States.

Similarly the status of C-ITS deployment initiatives was enlightened from different perspectives: The motorway operator's view was outlined in the presentation by Manfred Harrer from ASFINAG, the cities' perspective in the presentation by Josef Kaltwasser from the Open Traffic Systems City Association. Moreover Tanja Kessel form EICT illustrated the results of DRIVE C2X, one of the main European projects having analysed and evaluated the benefits of C-ITS.

As open issues for C-ITS deployment, the third plenary session addressed spectrum issues, security and privacy aspects as well as the root CA, and compliance assessment. The fourth session glanced at later deployment phases with special focus on visions and needs of road operators and authorities as well as next day profiles. In the following General Assembly,
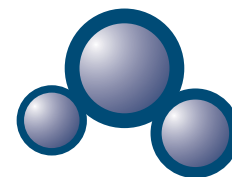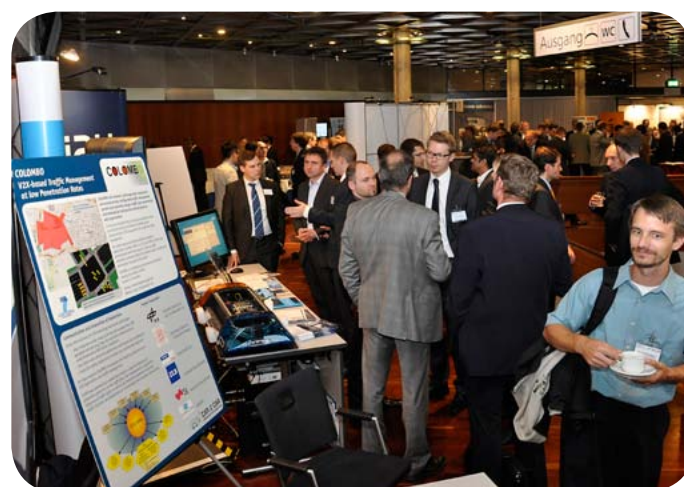
especially the reorganisation of the CAR 2 CAR Communication Consortium to gear to near-term deployment was explained and discussed (see article on p. 5 of this newsletter).

On the second day of the CAR 2 CAR Forum, the working groups presented their latest activities and achievements. Under the topic 'Amendments to the profile', the WG profile outlined the work on the DEMN-based road works warning profile, probe vehicle data as addtional infrastructure application, channel usage for Day One, the C2C-CC protection profile and wireless performance. The second workshop 'Day One Deployment' exemplified organisational details and their motivation with respect to the joint task force Autosar/C2C-CC, the task force deployment, the change management tool demonstration and the task force special vehicle.

Compliance assessment has explicitly been approached in the third workshop, focusing in detail on wireless performance, message formats and protocols, data quality and event detection, C2C-CC related ETSI-Standards, test system and test fest as well as positioning and timing. The last workshop addressed road maps for Day Two and beyond, explaining among others the new role of WG Road Map, the approaches to a technology, infrastructure and application roadmaps (see article on p. 7 of this Newsletter) as well as required activities.

The General Manager of the CAR 2 CAR Communication Consortium Niels Peter Skov Andersen.

The Forum participants were invited to take part in the driving demonstration organised by IAV GmbH and the German Aerospace Centre.

The exhibition in the Foyers of the Stadthalle Braunschweig was featured by 22 active and basic member compnanies of the CAR 2 CAR Communication Consortium and was well frequented during the breaks of the conference programme.

During both conference days, the CAR 2 CAR members and guests had the chance to participate in a driving demonstration of selected C2X applications. It has been organised by the resident CAR 2 CAR members IAV GmbH Ingenieurgesellschaft für Auto und Verkehr and the German Aerospace Centre. The German Aerospace Centre operates the Application Platform Intelligent Mobility (AIM), a large-scale traffic laboratory in the city and region of Braunschweig. In this framework it has established a C2X reference track around the city ring where intersections are equipped with advanced sensor and cooperative technology.

The driving demonstration in vehicles provided by the IAV used parts of this reference track as well as the parking area of the Stadthalle Braunschweig to visualise the applications road works warning, broken down vehicle warning and digital traffic light assisted driving.
The participants could additionally gain important background information on the demonstration in the technical lectures ‚AIM Braunschweig – a new testbed for intelligent mobility' (German Aerospace Center) and ‚Scene-based function development for V2X' (IAV GmbH).

New CAR 2 CAR Members

by Sonja Eickmann, CAR 2 CAR Communication Consortium

Atmel Corporation

Type of Member: Associate Member
Type of Business: Atmel Corporation is one of the worldwide leading designers and manufacturers of microcontrollers, capacitive touch solutions, embedded security, advanced logic, mixed-signal, nonvolatile memory and radio frequency (RF) components. Atmel provides the electronics industry and automotive markets with complete system solutions.

Kostal Group

Type of Member: Associate Member
Type of Business: The globally active family group Kostal with headquarter in Germany develops and manufactures technologically advanced electronic and electromechanical (mechatronic) products, among others in the business division Automotive Electrical Systems.

LG Electronics

Type of Member: Associate Member
Type of Business: LG Electronics is one of the global leaders in consumer electronics, wireless telecommunications and home electronics. Since 2013, LG's vehicle components company acts as innovative partner of the automotive industry as it markets eco-friendly automotive components like for example in-car infotainment systems.

u-blox

Type of Member: Associate Member
Type of Business: u-blox is one of the leading providers of wireless and positioning semiconductors and modules for the automotive, industrial and consumer markets. It holds a broad portfolio of chips, modules and software solutions enabling e.g. vehicles to locate their exact position and to communicate wirelessly.

Maintenance and further development of the CAR 2 CAR Specification:
C2C-CC applies proven processes for Release- and Change Management

by Thomas Biehle, Volkswagen, Mario Friedrich, Release Management CAR 2 CAR Communication Consortium, and Dr. Marcel Wille, AUTOSAR

CAR 2 CAR standard is moving towards deployment with the clear goal to enter series production. Thus, its specifications need to meet the quality requirements of series production.

These requirements typically comprise that the specifications are detailed and stable. The release needs to be supported and agreed by all partners. If we take a long-term perspective, also the release planning must be dependable:

- clear schedule
- well-defined scope
- consistent content

Mario Friedrich:

„My team at Carmeq and I are glad to get the opportunity to support the CAR 2 CAR Communication Consortium on its way into series projects"...

Currently, the CAR 2 CAR Communication Consortium (C2C-CC) has still a need for a well-defined development, maintenance and release management processes for its specifications. Therefore the C2C-CC has been looking to other standard organisation to improve its performance in the delivery of its product.

Discussions were held with AUTOSAR, which is very successful in the standardisation of automotive basic software since AUTOSAR is:

- **international –**
  the organisation has almost 100 companies contributing to the development of the standard

- **comprehensive –**
  the standard comprises 19.000 pages of specification

- **active –** 1-2 releases per year

- **dependable –**
  releases are on time and comprise the planned scope

- **end-user friendly –**
  each release comes with a backward-compatibility statement

AUTOSAR and the C2C-CC have come to an agreement that in a first step blueprint of the AUTOSAR processes are used and adapted by the C2C-CC to its needs. To realise a smooth knowledge transfer between AUTOSAR and the C2C-CC, Carmeq's AUTOSAR Specification Management Team around

Mario Friedrich has been subcontracted to tailor and operate these processes for the Consortium in 2015.

The main purpose of the processes is to ensure that changes to existing specifications only happen if all stakeholders agree that the change improves the specification. Furthermore, the processes make sure that the incorporation of changes leads to a new consistent version of the standard. The work has started at beginning of February with an analysis of the current situation (state and processes of specification work) and getting to know the Chairs of the WGs.

All efforts focus on the establishment of a Change Management Process and the agreement of release targets. This happens in close cooperation of all experts on one side and the steering committee on the other.

The processes will be piloted with a smaller group motivated through the Compliance Assessment work and are planned to be rolled-out by mid of 2015 to all WGs.

The key process will be the Change Management process (see figure 1). It will be applied to all documents (deliverables) which have been released at least once. All changes to such documents will be handled via the issue tracking system Bugzilla. In the system every CAR 2 CAR member can state Request for Change (RfCs).
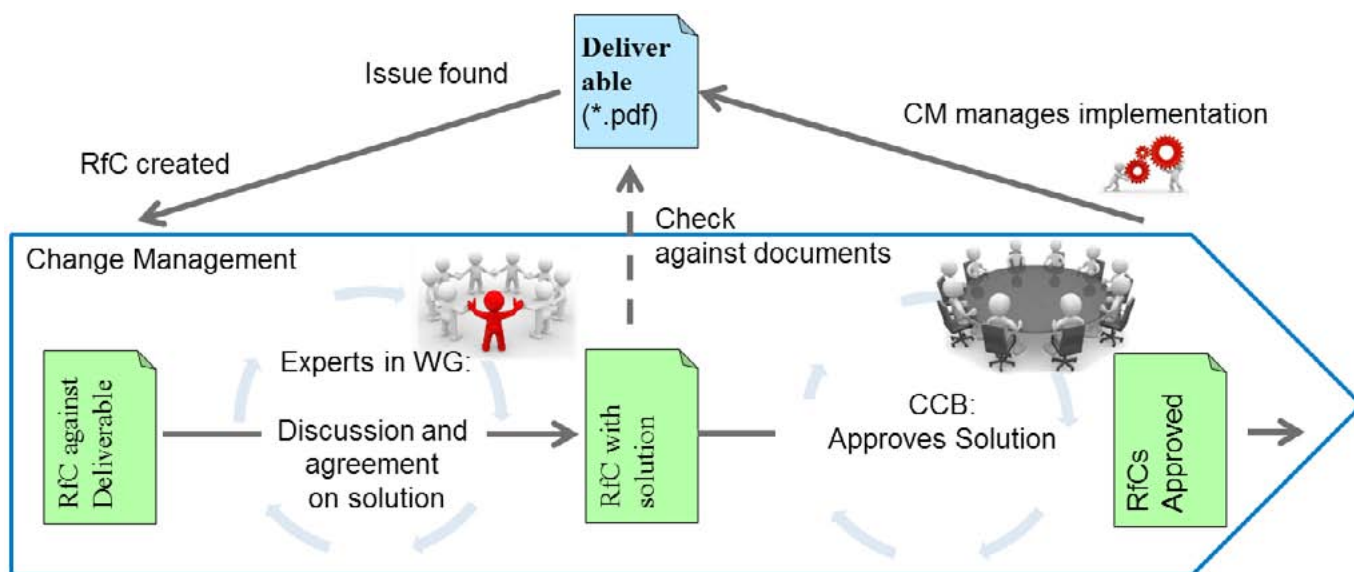

Figure 1: CAR 2 CAR Change Management process.

Each RfC is than discussed among the technical experts until a solution has been agreed. Afterwards the Change Control Boards (CCB) approves (accepted/rejected) the incorporation of every single issue:

- The **control board** consists of representatives of all CAR 2 CAR OEMs and all Working Groups (the Chairs) as well as interested supplier.

- The **Steering Committee** is informed on the outcome of the CCB approvals and might be used as escalation body.

Based on experience in AUTOSAR, a directory structure will be established to ease the daily work and to support the roll-out of the processes. Furthermore, a list of documents will be set up to register all documents with their classes (Specification, Triggering condition, White Paper etc.) and responsible person (document owner) for each document.

We are looking forward to work together with you and make CAR 2 CAR a success!

Please contact in case of questions and hints:

- Mail to cm@car-2-car.org

- Mario Friedrich +49 172 4014648

To get a Bugzilla account:

- To get a Bugzilla account (http://bugzilla.car-2-car.org) to state RfCs please send a mail to Karl-Oskar.Proskawetz@its-nds.de

- He will update the C2C-Member-List and inform us to setup your account (see figure 2).
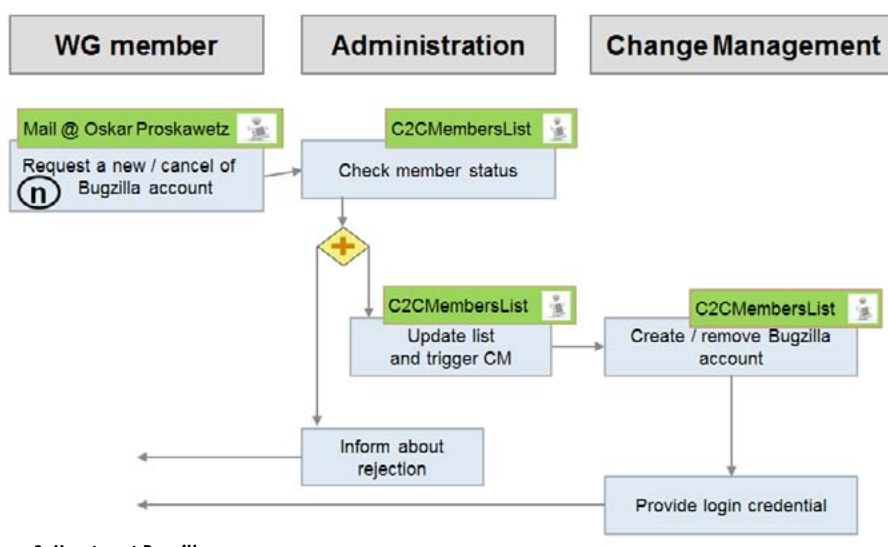

Figure 2: How to get Bugzilla access.

CAR 2 CAR Communication Consortium: Transformation towards a two-track organisation

by Dr. Karl-Oskar Proskwetz, CAR 2 CAR Communication Consortium

During the past, the CAR 2 CAR Communication Consortium concentrated on frequency allocation, Research & Development, field operational tests, demonstrations, European standardisation, international harmonisation and initial deployment preparation of cooperative vehicles based on ITS G5 communication.

In January 2014, the Basic System Profile was agreed within the Consortium laying the foundation for interoperability of cooperative vehicles in the Day One deployment phase.

While detailing series development, it became evident that the quality of the Basic System Profile needs to be further improved and several issues turned out which need to be solved. During 2014 the working group Compliance Assessment (see article on p. 6 in this Newsletter) started its operation and takes care for revising the Basic System Profile. In addition the consortium also agreed to start dealing with the future deployment phases beyond Day One (see article on p.7 in this Newsletter).

As a consequence, the CAR 2 CAR Communication Consortium changed from a one-track to a two-track organisation (see also figure on the following page):

- **1st track:**
  The working group Deployment takes care for all issues related to initial Car2X deployment of the Day One phase.

- **2nd track:**
  The working group Deployment is complemented by the working group Road Map, which addresses the definition of the deployment phases beyond Day One and develops related road maps.

The other technical working groups like Application, Communication, Security, Architecture and Simulation cooperate closely with both working groups Deployment and Roadmap.

For handling temporary tasks and specific issues, the Steering Committee agreed to setting up several Taskforces. Depending on the scope, each Taskforce is clearly allocated to one of the working groups.

This new organisational structure is very flexible and powerful. It enables the parallel working of the consortium experts on issues related to Day One deployment and on issues related to the future developments beyond Day One for making C-ITS happen.
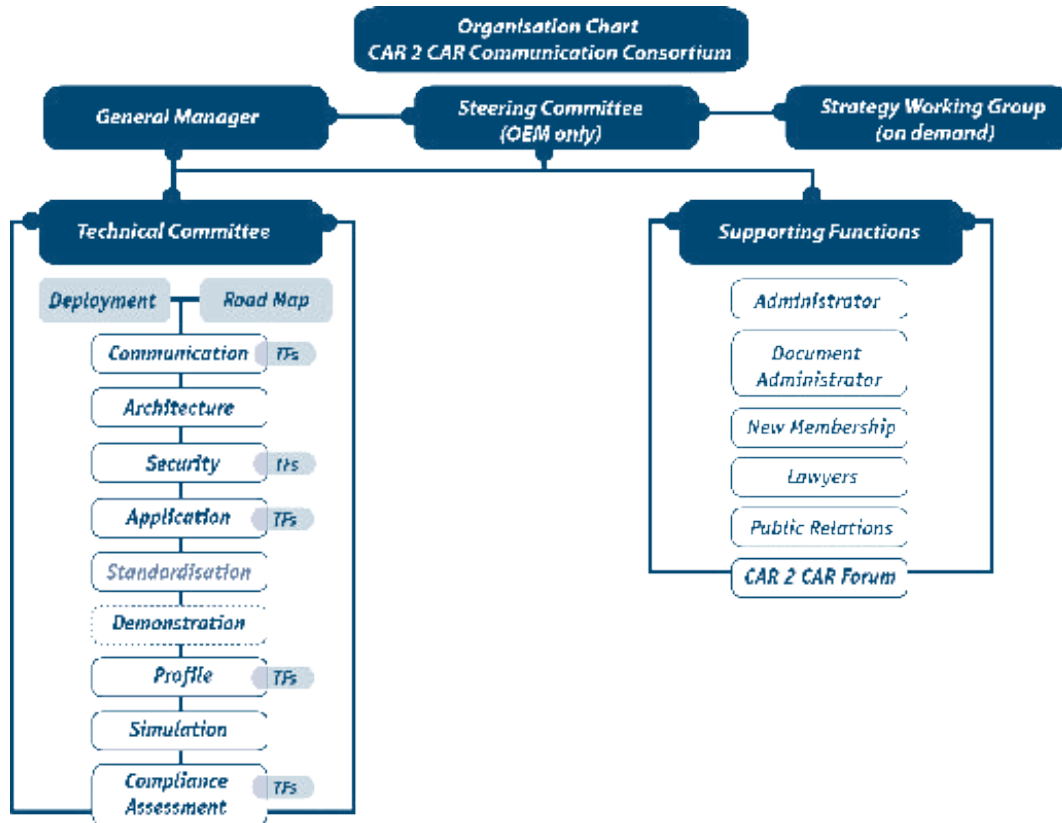
C2C-CC WG-CA Status Report: Six sub-groups process test cases and validated test systems

by Ingolf Koch, Continental

In the original, the working group Compliance Assessment (WG-CA, previously TF-CA) has been started as a task force, to focus on supporting the Day One deployment only. After first activities which ended mainly by mid of 2012 with a white paper definition, the taskforce was reactivated in April 2014 to develop test cases and validated test systems to support a well defined certification range. To create a tool range, certification entrance criteria to walk through, requirement analysis and test case templates have been developed. Since C2C system technology covers a wide range of subject matters, it was necessary to split the activities in six sub-groups and competencies. Those are headed by chairs, which are working with active members on work packages. The group is organised in the following sub-groups: wireless performance, message formats & protocols, data quality & event detection, system check, security (linked to WG Security) and test systems.

The selection of requirements for Compliance Assessment and the link to certified test cases were performed to ensure a minimum basic functionality and interoperability between the stations and to avoid that ITS stations do harm to C2X networks. Tests are defined on black box level only, focusing on data/signal transmitting (sending) and planned on self certification level. Since the review of requirements is not finalised, it could be possible that receiving performance might be requested, too.

As a requirement analysis provides information to create test cases, the Basic System Standard Profile (V1.0.4 31.01.2014), referenced specifications and the six use case specifications (V3.0) have been reviewed. Currently, more than 700 requirements have been checked and more than 500 test cases are planned for certification. Test integrations are planned on component, ITS station laboratory and vehicle level. The high number might surprise, but a bigger part is linked to the six Day One C2C use cases and the facility service tests.

C2C Protocol Test session with Marben and CETECOM.

Results of the requirement review showed a high number of new requirements and change proposals. Those are now controlled in the new C2C-CC change management process, which has been released by the C2C-CC Steering Committee by the beginning of this year. Wireless performance requirements are now the first ones to undergo the new process. Others will follow now step by step to target on a new and stable BSSP version, which is planned for the mid of this year (V1.0.5). An exception is related to security and protection profile requirements, where a stable basis for a Compliance Assessment analysis is planned for May 2015. This activity is driven by the WG Security and considers, beside black box, also white box tests and review levels for the certification.

In summary, all those activities are targeting to finalise the requirements

on a maximum quality level. The WG-CA is now in the phase of creating well defined C2C test cases and validating those, when there is a lack of experience regarding the behavior of the system under test in combination with its test methods, the test bed and test systems. This is done in so called test fests.

As a first validation, DCC functionality tests have been performed at Rohde&Schwarz by the end of last year with three chip vendors (Autotalks, Cohda and Renesas) as one of the challenges of the sub-group wireless performance. The tests were done successfully and based on the results, the team is defining now the test parameters. In addition, an even bigger challenge is now the next test fest to test the antenna performance and considering it on vehicle level. Plannings are now under discussion.

The sub-group message formats & protocols is focusing on C2C specific facility service (CAM & DENM) and geo networking test cases in an automated HIL test environment, which is supported by CETECOM. Those tests are planned for the end of March at TASS / Helmond in a C2C-CC plug test, which is combined with the ETSI tests to have logistic benefits. Based on those results, it is expected to define a certification range proposal in April 2015.

As well, TASS has offered also C2C Position &Timing tests (planned during the plug test). Test track position/timing data were recorded in December/January by TASS to cover different environment and dynamic conditions in accordance to the BSSP specification. The data are a replay basis for a HIL tester in combination with an ITS-station, which are sourced by TASS and Continental. Both companies are working now in a pre-validation on a successful test setup functionality during March. Further achievements are testing the position confidence values in autumn 2015 with black box vendors, because current ones are on initial level only and must be verified and confirmed with latest ITS-station technology levels. The quality & event detection sub- group, which is taking care about the application requirement analysis, is on the way to finalise the test cases until mid of this year. The decision has been made to do the certification tests on a vehicle ITS station level only, and a validation of the test cases is scheduled for the second half of 2015. The system check sub-group is focusing now on requirement analysis inputs of the other CA sub-groups and test case definitions, for those ones which were not dedicated to one specific sub-group. A first teleconference is planned in March to plan further actions.
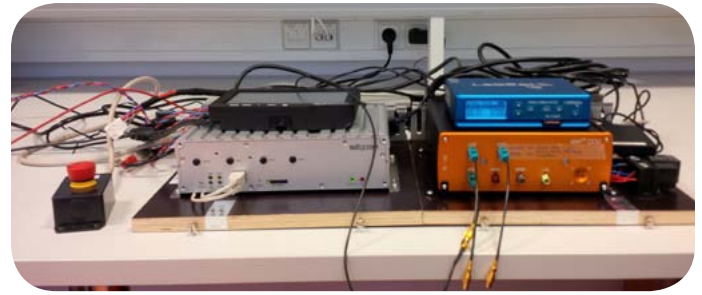
The TASS PoTi HIL test setup with the Continental sim^{TD} CCU.

By targeting a finalisation of all those tasks until the end of 2015 the following challenges are still in planning:

- update of the CA white paper
- description of validated test suites
- how to validate further test suites
- what is the minimum number of vendors during a validation?
- documentation for a successful test suite validation,
- document design for successful certification and
- what are the pass criteria?

The certification range of the Compliance Assessment group is a basis for the planned C2C-CC certification process and legal entity definition, which is planned for end of 2015.

Beside the Day One related challenges, the CA group looks also now on the upcoming tasks with regard to future deployments in accordance with the existing C2C-CC roadmap. This activity is linked to the other working groups. To start this activity, first discussions have been done with the WG Communication (COM) & WG Architecture (ARCH) by the beginning of February 2015.

In a summary, it must be honored that the WG-CA community is on a high motivation level with very active members who supported a remarkable result in a short time period. Therefore, the outlook to reach the goals by the end of 2015 is realistic. The WG-CA is any time open for new active members to support the further planning.

WG Road Map: Starting Day 2 - 3 - 4 related activities and roadmap development

by Teodor Buburuzan, Volkswagen AG

Considering the ongoing deployment activities inside the other CAR 2 CAR Communication Consortium's working groups, the WG Road Map (RD) started working on various Day 2 - 3 - 4 related activities last summer.

In the beginning we started defining a list of use cases the C2C-CC should focus on when looking beyond ongoing Day One activities.

However, it became clear that only looking at use cases and leaving the technology requirements out is not the best way forward. That is why two types of roadmaps were started and developed in parallel during the past months.

The first one is called the Application Roadmap and it tries to structure the future V2X application deployment and put it on a possible timeline. The second one is called the Technology Roadmap and it shows the various enablers the applications will require in order to provide them with the necessary information in a timely and secure manner.

Both roadmaps can be seen below and were also introduced, in a preliminary version, during the CAR 2 CAR Forum in Brauschweig last October.

In the discussion we had during and after the Forum, the need for an architecture roadmap was identified, a task that we are currently following with the other C2C-CC working groups. This is needed in order to ensure a smooth transition from a Day One system towards a Day 2-3-4 one and make sure that all forwards and backwards compatibility issues are addressed.

The plan is to have these three roadmaps ready and synchronised by the end of the year, and then go into discussions with the other technical C2C-CC working groups and see what requirements they will pose on applications, communication, security and the V2X architecture.

During this year we also plan on closely synchronising these roadmaps with our partners inside the Amsterdam Group and eventually enhance them with future infrastructure based applications, and their technology enablers.

V2X Applications Roadmap

Take-over of the driving functions
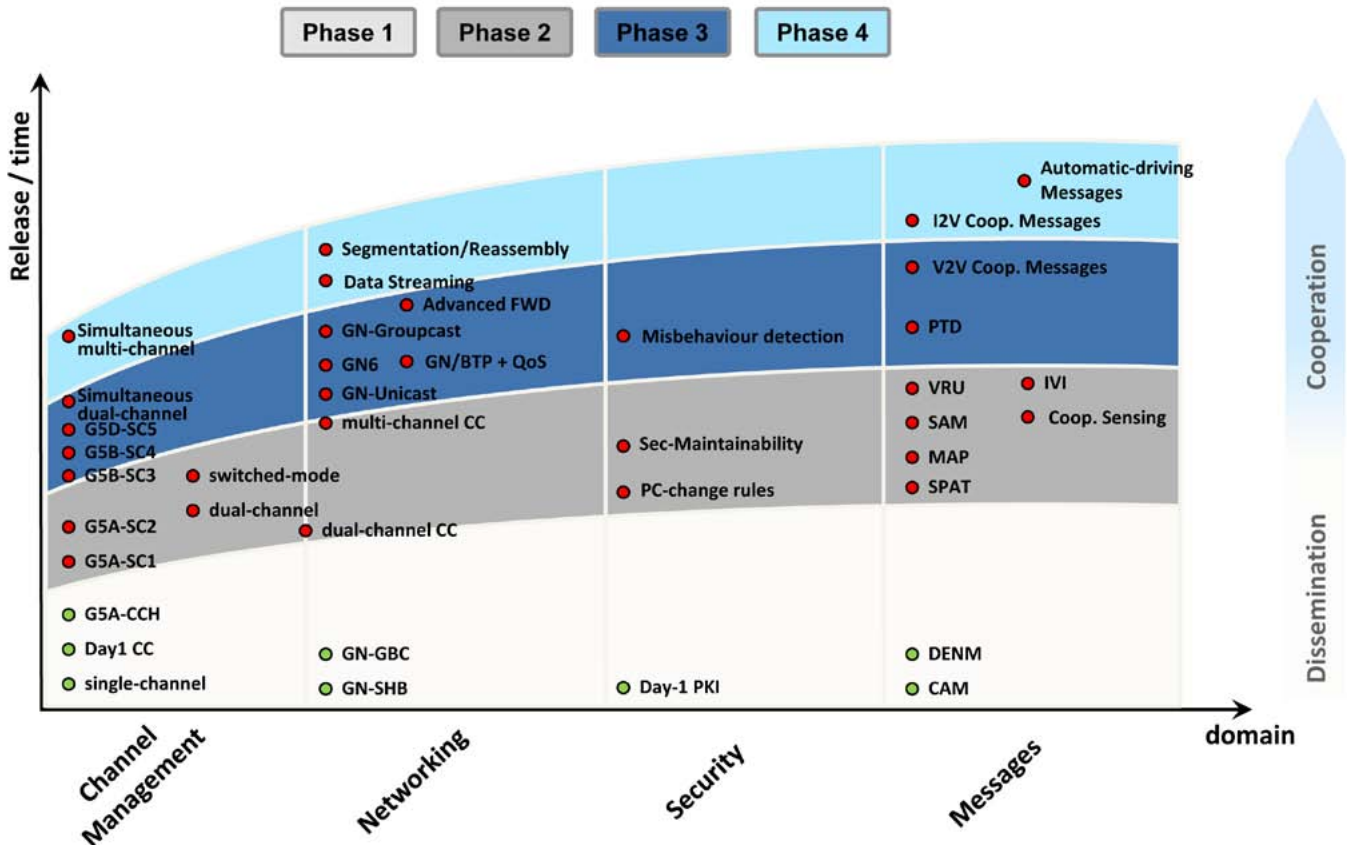- Fully Automated Driving
- Optimal Traffic Flow

Coordination Data
- Cooperative Merging
- Overtaking Assistance
- Intersection Assistance
- Dynamic Platooning
- VRU Assistance
- ...

Intention Data
- GLOSA 2.0
- Roadworks 3.0
- Lane-Merge Assistance
- Area Reservation
- Cooperative ACC
- VRU Warning
- Platooning
- Probe Traffic Data

Sensor Data
- GLOSA 1.0
- In-Vehicle Information
- Roadworks 2.0
- Connected ACC
- Intersection Collision W
- ...

Status Data
- Emergency Vehicle W
- Dangerous Situation W
- Stationary Vehicle W
- Traffic-Jam W
- Pre-/Post-Crash W
- Hazardous Location W
- Adverse Weather W
- Roadworks 1.0

- 100% installation of new vehicle sales
- 100% installation of new vehicle plattforms
- 10 year ramp-up to 100% installation of new vehicles
- Installation on select new vehicle type of luxury and upper middle class vehicles

| Phase 1 Awareness Driving | Phase 2 Sensing Driving | Phase 3 Cooperative Driving | Phase 4 Synchronized Cooperative Driving | Phase 5 Accident-free Driving |

Dissemination — Cooperation

V2X Technology Roadmap

Phase 1 Phase 2 Phase 3 Phase 4

Release / time

- Simultaneous multi-channel
- Simultaneous dual-channel
- G5D-SC5
- G5B-SC4
- G5B-SC3
- G5A-SC2
- switched-mode
- G5A-SC1
- dual-channel
- G5A-CCH
- Day1 CC
- single-channel

- Segmentation/Reassembly
- Data Streaming
- Advanced FWD
- GN-Groupcast
- GN6 — GN/BTP + QoS
- GN-Unicast
- multi-channel CC
- dual-channel CC
- GN-GBC
- GN-SHB

- Misbehaviour detection
- Sec-Maintainability
- PC-change rules
- Day-1 PKI

- Automatic-driving Messages
- I2V Coop. Messages
- V2V Coop. Messages
- PTD
- VRU — IVI
- SAM — Coop. Sensing
- MAP
- SPAT
- DENM
- CAM

Cooperation / Dissemination

domain: Channel Management — Networking — Security — Messages

ECo-AT (European Corridor – Austrian Testbed for Cooperative Systems)

by Manfred Harrer and Marko Jandrisits, ASFINAG

ECO-AT is the Austria co-funded project (as part of the international corridor) to create harmonised and standardised cooperative ITS applications jointly with partners in Germany and the Netherlands. The project is led by the Austrian motorway operator ASFINAG and the consortium consists of Kapsch TrafficCom AG, Siemens AG Österreich, IPTE – Schalk & Schalk OG, SWARCO AG, High Tech Marketing, Volvo Technology AB, FTW, ITS Vienna Region, and BASt (Bundesanstalt für Straßenwesen).

ECo-AT is fundamentally designed in two Phases. Both Phases are funded by the Austrian Climate & Energyfund (KLiEN) in Austria.

- *Phase 1*
  The result of Phase 1 will be a full systems specification for C-ITS which has been tested and verified by the ECo-AT industry partners and by third parties (until 12/2015)

- *Phase 2*
  In Phase 2 ASFINAG will be the only partner of the ECo-AT project and will perform the tendering of the C-ITS system

In ECo-AT Phase 1 all project partners will cooperate on the development of system architecture specifications. These system architecture specifications will iteratively be developed in four releases and each release will be published for public consultation.

Third parties (industry partners not being project partners in ECo-AT) will have access to the system specifications as soon as they are published at www.eco-at.info. Release 1 Documents were published 11/2014. Release 2 documents are currently prepared for publication and will be discussed with the CAR 2 CAR Communication Consortium as well as with European Motorway operators at specific events.

Project partners as well as third parties are invited to test against the system specification in the ECo-AT Living Lab on a voluntary basis. For this purpose, access to the Living Lab and test tools will be granted under specific terms.

At the end of Phase 1 ASFINAG will analyse the framework conditions for the implementation of C-ITS in Austria. If the decision is positive the development of tender specifications and the start of a tendering procedure for a C-ITS system will start in phase 2. This work will be based on the published final phase 1 system specification. ASFINAG will use the Living Lab for acceptance tests of C-ITS systems and components for operational use, based on test procedures and tools agreed and developed in Phase 1.

Safe the date:

20th and 21st of April
Release 2 Consultation meeting ECo-AT
with CAR 2 CAR Communication Consortium members
in Vienna
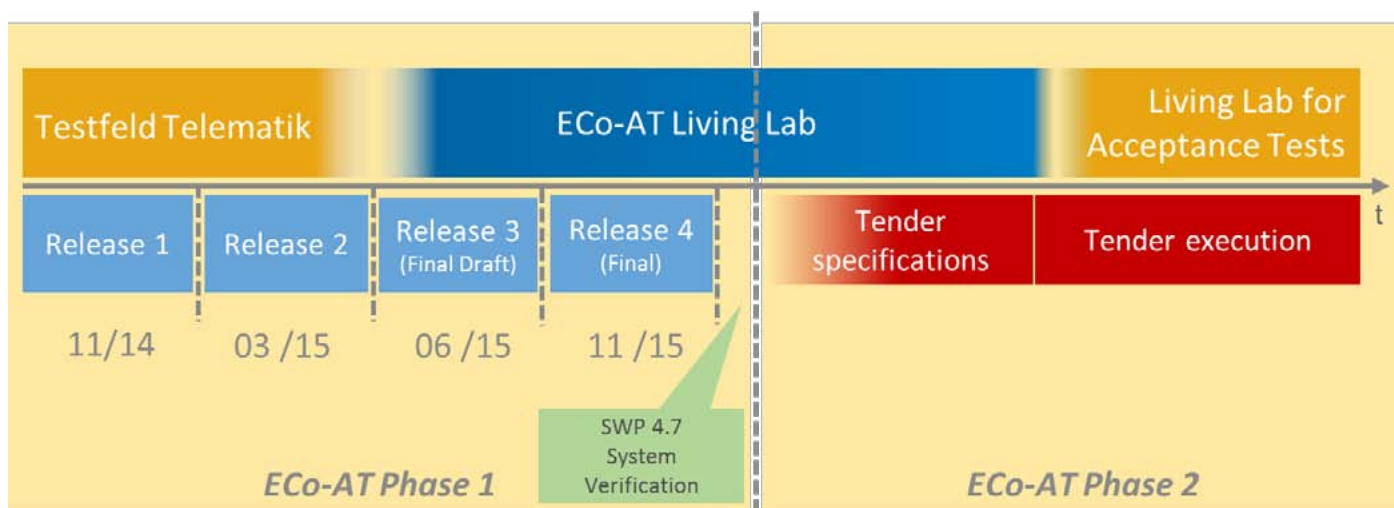
In case of further interest, please subscribe to the ECo-AT Newsletter (http://eco-at.info/newsletter.html)

Intra-urban Mobility-support for the Blind and viSually impaired: project completed
by Ronald Peters, ITS Niedersachsen GmbH, on behalf of the InMoBS Team

In December 2014 the final presentation of the research project InMoBS (Intra-urban Mobility-support for the Blind and viSually impaired) took place in Braunschweig.

Today's mobility of blind and visually impaired persons is associated with many barriers. Most trips are limited to well-trained routes. Especially crossing streets becomes a huge challenge paired with high risks. Traffic lights equipped with special guidance systems often do not meet the individual needs of affected persons. The aim of InMoBS was to improve the mobility of blind and visually impaired people. Therefore a complex system concept based on existing techniques has been developed which provides the user with a safe and continuous navigation in intra-urban road networks.

The team presented the project approach and results, but also limits and future perspectives, to the participating representatives of municipalities, scientific and economic institutions as well as associations for blind people. A blind test person equipped with the prototype InMoBS mobile device demonstrated the navigation across the urban test field (see figure 1): his smartphone with the InMoBS app led him along a pre-planned track to the waiting area at traffic lights, got the signal phase and timing as well as topographic information of the crossing directly from the Wi-Fi-equipped traffic lights and gave the signal for the safe passing of the intersection. Along the way the user can mark points of interest, for instance in order to flag important waypoints or to avoid ways which contain hurdles and difficult sections.

In a short welcoming speech the mayoress Annegret Ihbe pointed out the city of Braunschweig's efforts to help disabled persons to take part in the daily social life. The project executing organisation (TÜV Rheinland) gave an overview on the federal funding programme for door-to-door navigation to which InMoBS belonged to. The German Association for the Blinds and Visually Impaired (DBSV), which was closely involved during all project phases, explained user requirements and everyday life's constraints.

Within the accompanying exhibition the project team presented detailed aspects and specific solutions regarding the requirements analysis, the trip planning tool "InMoBS home", positioning and map aspects, the mobile device, and operator models. Technical and user-related issues were debated in a final panel discussion. Numerous representatives of the press attended the demonstration for regional and national reporting.

Concluding, InMoBS demonstrated a functional prototype providing guidance and information in urban environment. However, the project identified a number of open issues for future – technical and non-technical – research including reliable positioning under demanding conditions, operational and financial responsibility, provision and maintenance of an accurate in-depth map, and standardisation of automotive Wi-Fi also for the non-motorised traffic participants such as pedestrians and cyclists.
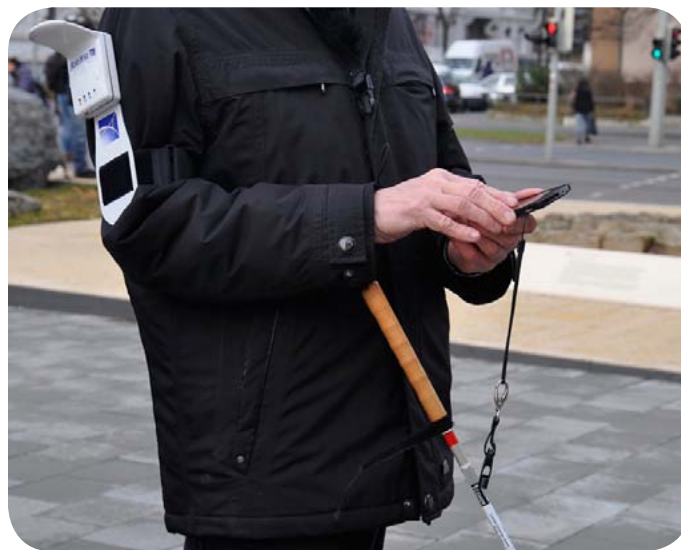

Figure 1: Live demonstration of the InMoBS prototype equipment.

ITS World Congress in Bordeaux

,Towards Intelligent Mobility – better use of space' is the headline of the ITS World Congress 2015, taking place from 5 to 9 October 2015 in Bordeaux, France. The response on the Call for Papers and Special interest sessions holds out a diversified conference programme.

It will lay a specific focus on the potentials arising from strengthening the link between space technologies and ITS services. As satellite communication, earth observation and GNSS are available all around the world, their support of the continuity and interoperability of ITS applications will be worked out under the congress topic ,Space technologies and services for ITS'. Other main topical sectors of the conference are cooperative ITS deployment challenges, multimodal transport for people and goods, urban

trends driving ITS changes, solutions for sustainable mobility, automated roads, automated management, automated driving and the question if Big Data and Open Data are the key to coincidently satisfy end user's and transport manager's needs.

Overall the International Programme Committee is now reviewing and evaluating 191 Special Interest Session Proposals and more than 900 papers submitted from Europe, Africa, Middle East, Asia-Pacific and America. The Congress will habitually be framed by the exhibition and demonstrations outside the Bordeaux-lake Convention and Exhibition Centre. The organisers from ERTICO – ITS Europe and the European Commission expect around 10.000 ITS experts to visit the 22nd ITS World Congress.

Announcements and Save the Dates
by Sonja Eickmann, CAR 2 CAR Communication Consortium

ITS Conference: A digital Strategy for Mobility: from capacity to connectivity

The Directorate General Mobility and Transport of the European Commission invites to the 5th Conference on Intelligent Transportation Systems. It takes place on 24 April 2015, 9 to 17 o'clock, in the Charlemagne Building in Brussels, Belgium. The ITS Conference will provide an overview of the state-of-play with regard to key actions and major initiatives in the context of the ITS Action Plan and the ITS Directive 2010/40/EU. Public and private ITS stakeholders are invited to meet high-level representatives of the European Commission at this Conference and to discuss with them topics such as data for digitising transport, mobility as a service, connectivity and automation.
More information on the event and registration under http://europa.eu/newsroom/calendar/events/2015/04/24_its_conference_en.htm.

3rd User Conference o Advanced Automated Testing

ETSI's Annual Conference on test automation, automated test design and test execution automation UCAAT will take place from 20 to 22 October 2015 in the science and technology centre Sophia Antipolis in Nice, France. Advanced test automation techniques, methods and tools with stay in the focus of the Conference which traditionally brings together experts from science and industry. It will comprise tutorials, training sessions, presentations, keynotes and poster sessions. The conference especially addresses the influence of the current advances in test automation on the testing world, specifically test automation in fragile environments, model-based testing in various application domains, in the context of DevOps, related to mobile applications and the standardisation efforts related to advanced test automation. The deadline for submitting proposals for conference presentations, tutorials or poster presentation is the 30th May 2015. The detailed programme will be released in July. The organisers expect over 250 experts and decision makers to take part in this Conference. Early-bird registration is feasible until 6 September 2015.
More information and details for the submission can be found on http://ucaat.etsi.org/2015/.

German Transport Ministry proclaims digital testbed on motorway A9

By end of 2014, the German Ministry for Transport and Digital Infrastructure has announced to build-up up a testbed for pioneering digital systems and technologies on a segment of the motorway A9 in south Germany. By implementing e.g. telematics infrastructure as well as advanced sensor technologies, the testing facility shall help to investigate how innovative traffic and transport technologies contribute to deal with growing traffic volumes, exploiting potentials for traffic safety and intelligent traffic management. The communication between vehicles and traffic infrastructure is herein of high priority so that the testbed might accommodate pilot projects proving ITS applications in a real traffic environment. Moreover, it has been suggested to use the testbed as trial environment for autonomously driving cars.

ESV 2015

From 8 to 11 June 2015, the 24th International Technical Conference on the Enhanced Safety of Vehicles (ESV) takes place on in Gothenburg, Sweden. The conference on vehicle safety is supported by the U.S. DOT and other governments from all over the world and is this year hosted by the Swedish Transport Administration and SAFER Vehicle and Traffic Safety Centre. According to the slogan 'Traffic Safety Through Integrated Technologies', it encompassed plenary sessions, workshops, technical session, ride & drive demonstrations as well as technical demonstrations and visits.
More information about the programme and registration on: http://esv2015.com/.

Netherlands prepare for becoming testbed for connected and self-driving vehicles

At suggestion of the Ministry of Infrastructure and the Environment, the Netherlands prepare for becoming a testbed for connected and self-driving vehicles. In January 2015, the Council of Ministers has approved the amendment of regulations which authorise the non-departmental public authority RWD to permit large-scale test drives on public roads. According to the Cabinet, the Netherlands holds suitable infrastructure and together with the knowledge of resident research and industrial partners, ideal conditions are present for testing V2X-communication-technologies, self-driving cars and lorries. Various parties have already announced their interest in using Dutch roads as testbed for e.g. evaluating the communication of vehicles among each other as well as with traffic control centres or platooning of (self-driving) vehicles and lorries for using room more efficiently.