

# DATEX II

## DATEX II FORUM 2018

23 AND 24 MAY 2018, UTRECHT, THE NETHERLANDS



### HIGHLIGHTS

- DATEX II Version 3 available now!
- The DATEX II community is growing rapidly
- Declaration of Utrecht shows great promise for future of DATEX II

Date: 9<sup>th</sup> of July, 2018

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## DATEX II VERSION 3 IS AVAILABLE NOW!

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This 5<sup>th</sup> DATEX II Forum was dedicated to the launch of DATEX II version 3. One of the major enhancements of DATEX II Version 3 is that it is now possible to make a profile that is completely tailored to a use case. Whether the profile is small or extended, it will just contain the elements that you need. Version 3 also ensures that different profiles are compatible and interoperable. Thanks to a technology update (UML2, XMI2.1), Version 3 is now faster and more user friendly compared to its predecessor. Other features and novelties include the Modular Approach (packaging structures, namespaces, ...) allowing you to do parking without having to worry about travel times, the possibility to extend enumerations, a new web version of the fast schema generation tool, a new, second experimental transfer syntax (JSON Schema) and many non-backward compatible model improvements based on input from the community collected of the years. Of course, the data model was improved as well and received a number of new or modified elements or a new structure based on user requirements. The methodology behind DATEX was also updated.

A more elaborate report on the sessions introducing Version 3 can be found in Annex 2 of this report.

### 1.1 DATEX II LIGHT

DATEX II also showcased the new D2Light app at the Forum. D2Light is an alternative for road operators to open up their data to app developers in order to achieve maximum usability of their data in the Open Data domain.

If you want to get a taste of what D2Light can be used like, download the app or find out more on the DATEX II website.

### 1.2 COMMON MINIMUM PROFILES

The participants of the Forum are convinced of the value to have a big overall information model that guarantees the interoperability of services avoiding ambiguity. The implementation of core use cases, such as safety related traffic information, will be accelerated by providing recommended common minimum profiles. At the Forum, DATEX II announced that these will be developed in cooperation with the stakeholder community. The SRTI minimum common profile will be available before summer 2018!

### 1.3 DOCUMENTATION PORTAL

The DATEX II organization will be launching an update of the DATEX II website at the beginning of July. Here you will also find access to our new documentation portal where we will store all downloads, documentation and other support materials like tutorials on Version 3.

## THE DATEX II COMMUNITY IS GROWING RAPIDLY

At the Forum, we welcomed 143 participants from 20 countries. Participants were both new and experienced ITS system users, policy and decision makers, software developers, information architects as well as ITS consultants. Various domains were represented, such as road authorities (motorway, urban, interurban), service providers, map makers, the ITS industry, C-ITS as well as knowledge institutes.

To serve this wide range of attendees, the programme included many different sessions in parallel using both the interactive working methods and environments offered at the LEF Future Meeting Centre. At LEF, the aim is to break old habits by employing a wide variety of diverse working environments and professional guidance. This results in new ideas and insights for all and allowed for a lot interaction between participants.

To kick-start interactions between attendees after the opening session, everyone was invited to form 'platoons': groups of 6-8 people that were asked to answer together – in the course of the Forum – one question concerning DATEX II. Not only did this allow for new networking opportunities, it also gave the DATEX II organisation valuable input from the community on the following strategic issues:

- How to build a strong DATEX II community?
- What should DATEX II do to increase your willingness to use it?
- What does DATEX II need to be future proof?
- How to connect new domains to DATEX II?

Recommendations included the need to put more effort on communication by sharing aims, objectives, achievements and examples of implementations. The need for common minimum profiles was also suggested by most platoons to be able to guarantee a minimum harmonized quality level and to contribute to make DATEX II future-proof. Lastly, the platoons recommended the DATEX II organization to continue reaching out to stakeholders and new domains adjacent to the scope of DATEX II to ensure that future requirements are identified at the appropriate time.

The programme then continued to offer plenty of time to network thanks to long breaks, the interactive nature of the substantive sessions, the Implementation Arena as well as the social event. Participants of the Implementation Arena showcased their implementation of a DATEX II supporting system during lunch and coffee breaks, giving attendees the opportunity to walk around, see the different implementations, talk to the presenters and eat and drink at the same time.

The social event started with a short city walk through Utrecht, guiding attendees along a number of highlights of the old city centre. The tour finished at the dinner location for the evening, the Paushuize (Pope House Utrecht) where a guided tour was offered of the building. In the context of its 10-year anniversary, the NDW offered drinks to the participants during the social event.

Elaborated answers of the platoons can be found in Annex 5 of this report. A report on the plenary opening sessions is discussed in Annex 1 and an overview of the submissions and winners of the Implementation Arena can be found in Annex 4.

## DECLARATION OF UTRECHT SHOWS GREAT PROMISE FOR THE FUTURE OF DATEX II

The Forum concluded with the “Declaration of Utrecht”: a non-binding guidance document for the future of DATEX II. It consists of 10 statements written entirely during the Forum, derived from outcomes of the break-out sessions, answers of the platoons as well as other highlights of the program. The Declaration of Utrecht contains the concluding statements of the Forum, and shows us how DATEX II should evolve in the next years. The final statements were presented and discussed at the end of the Forum in a panel discussion with DATEX II experts and representatives of relevant stakeholders.

Conclusions from the different break-out sessions can be found in Annex 3 of this report.

### INFORMATION EXCHANGE

- DATEX II will aim towards future-proof information exchange.
- Standardized information exchange is needed to achieve interoperability and continuity of traffic and travel information services. To this end DATEX II should develop common minimum profiles.
- DATEX II calls upon road operators and other data collectors to use the DATEX II standardised SRTI messages as they contribute to increased road safety.

### STAKEHOLDERS AND OUTREACH

- DATEX II will further strengthen and expand the stakeholder community and work together.
- DATEX II should connect, cooperate and align with adjacent information and technology domains.
- DATEX II is an important backbone to enable C-ITS. Close cooperation is needed between C-ITS – DATEX II – OEMs in order to develop interoperable harmonized profiles.
- The DATEX II organization is prepared and happy to support the urban domain to improve transport and make mobility future-proof.

### OPEN DATA

- DATEX II Light will improve innovation and accelerate deployment of end-user services driven by the open data community.
- The DATEX II data dictionary should be published in a natural language.

### SUPPORT

- DATEX II should enhance operational support to developers by stronger community support.

## ANNEX 1: PLENARY OPENING SESSION

The chair of the DATEX II Steering Group, Marjolein Masclee, opened the Forum with a presentation of the new DATEX II logo. She then discussed the launch of DATEX II version 3. She explained that one of the enhancements of version 3 is that it is now possible to make a profile that is completely tailored to a use case. Whether the profile is small or extended, it will just contain the elements that you need. Version 3 also ensures that different profiles are compatible and interoperable.

Frits Brouwer, director of the Dutch National Data Warehouse, explained that standardisation is the technical reflection of the will to cooperate. With the National Data Warehouse celebrating its 10<sup>th</sup> anniversary as a National Access Point, this cooperation has proven clear added value in the Netherlands.

The European Commission represented by Pedro Barradas stated that DATEX II has achieved and has lived up to expectations. He called upon the attendants to see ourselves as ambassadors of DATEX II. In our role as ambassadors, we should know that DATEX II is about more than the exchange of data and that mobility is movement is emotions. He ended his talk by showing the DATEX II Light app on his phone, saying that this brings everything together.

DATEX II is a part of CEDR. This was clearly explained by Pat Maher, Focus Area Coordinator at CEDR. He stated that DATEX II profiles support the national road authorities in offering standardised tooling for implementation of use cases in the European transport framework. Because of this, the standardisation as well as harmonisation process is a very important element of the work of CEDR. He then emphasized that the development of profiles is of high priority to CEDR.

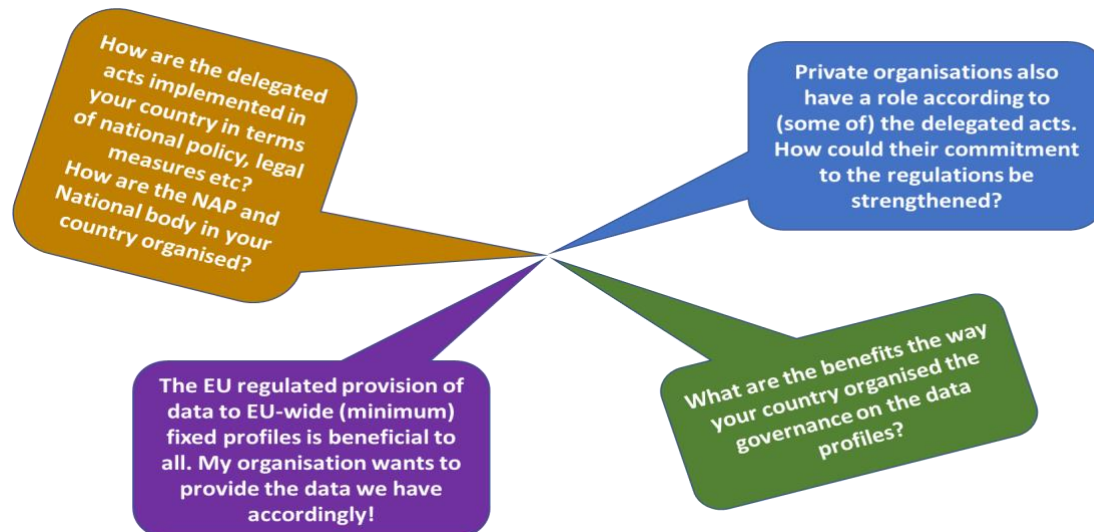
Carlos Costa, director of Armis (Portugal) explained that DATEX II is important for them to employ solutions in the ITS world. Armis was contracted by the Portuguese Institute for Mobility and Transport to make the key performance indicators of the concessionaires measurable and reportable. They started with DATEX II and amended those functions that were not part of the standard. This enabled the small start-up that Armis was at that time to develop mature ITS products with open digital interfaces to the outside world. Now they support road operators from Brasilia to Russia with sophisticated ITS solutions.

## ANNEX 2: INTRODUCING VERSION 3

Bard de Vries, chair of the DATEX II Technical Management Group (TMG), and Josef Kaltwasser, deputy chair of the DATEX II TMG, presented Version 3.0 at the Forum in two separate sessions. One focused on the impact of Version 3.0 from the managerial perspective, while the other focused on introducing Version 3.0 from a technical perspective.

Information in the ITS value chains needs to be consistent and reliable. Standardization is needed to deal with this challenge. Bard emphasized that DATEX II is not a goal in itself, it comes from the will to cooperate and understand each other. Standardization is the technical reflection of the will to cooperate.

Bard explained where DATEX II comes from and how the new operational environments in which DATEX II is beneficial are supported with version 3.0. With the rapidly accelerating digitalisation and automation of the ITS domain, the urgency to ensure the consistency on the information level becomes more and more obvious. The more or less linear world of ITS is transforming into a world in which all actors exchange information with each other, because the roles of data collectors, data processors and information providers are increasingly being combined for each actor in the value chain. The development of interoperable profiles in the different stakeholder and technology domains will be key for the success of the hybrid phase. After the introduction, participants were asked to discuss the following four questions/statements.



The working groups came to the following conclusions:

- A clear statement from an OEM: The Delegated Acts are also important to the private sector: it gives direction and a framework, and they will comply. The delegated acts will ensure that organisations and people take action.
- Most countries have national access points (France, Belgium for example), whereas others have a lot of data, but no access point in the formal way of the delegated acts ((like Norway). This is not a real problem, as long as the data is findable and provided in DATEX II.

- A minimum profile is needed to ensure that everyone has the same basis to cooperate. However, it was recognised that authorities are not always ready to state what they want in sufficient detail, and apart from that, other political driven agendas could jeopardize the objectives of the Delegated Acts. It is commonly agreed that minimum common profiles are easier to manage, develop and implement to provide data.

The session lead by Josef focused on the content and technicalities of DATEX II version 3.0. After a first introduction of the methodology and architectural concepts, Josef explained how these were reflected in the model. The response of the audience was cheerful. The enhancements are perceived as really useful and helpful to ease the effort of implementing DATEX II.

One of the major enhancements of DATEX II Version 3 is that it is now possible to make a profile that is completely tailored to a use case. Whether the profile is small or extended, it will just contain the elements that you need. Version 3 also ensures that different profiles are compatible and interoperable. Thanks to a technology update (UML2, XMI2.1), Version 3 is now faster and more user friendly compared to its predecessor. Other features and novelties include the Modular Approach (packaging structures, namespaces, ...) allowing you to do parking without having to worry about travel times, the possibility to extend enumerations, a new web version of the fast schema generation tool, a new, second experimental transfer syntax (JSON Schema) and many non-backward compatible model improvements based on input from the community collected of the years. Of course, the data model was improved as well and received a number of new or modified elements or a new structure based on user requirements.

Ian Cornwell, Jonas Jäderberg and Jörg Freudenstein, members of the DATEX II TMG, explained the new DATEX II model and the available tools in more detail. The audience felt informed at the end of the session, a few citing enthusiasm about particular features such as the modularity and JSON mapping. The view on the time frame for how long two versions can be run in parallel was also discussed. A request was made for having mappings available on the DATEX II website.

A question was also raised on the location referencing methods – the implication was that with the addition of OpenLR and GML constructs there are too many optional methods, which makes it easy for suppliers but harder for consumers – we therefore discussed how profiles should be agreed to limit the work that a consumer has to undertake.

Day 2 of the Forum started with two hands-on sessions in parallel to explore DATEX II version 3 further. In the hands-on session “Model walkthrough” by Jörg Freudenstein, basics on the DATEX II data model were shown to the audience as well as the changes made in this new version. It was then possible to download the brand-new data model of version 3.0. It should be noted that due to CEN standardization issues, some of the models (RoadTrafficData, Parking and VMS) are still deployed in their 2.3 structure, as their migration to 3.0 will follow in time.

In the second hands-on session “Profiles and extensions” by Jonas Jäderberg, it was explained how to create two profiles: one with extensions and one without. For the extension the group extended both a class with attribute and relations and they also extended an enumeration. Then the group profiled and generated XML schemas with the windows tool and also with the web-based tool.

## ANNEX 3: BREAK-OUT SESSIONS

### Break-out session 1, Zone 1: Best Practices RTTI

- The Blue Wave Connects and bridge openings in DATEX II (Tony Meeuwssen end Martijn van Hengstum, NDW and Rijkswaterstaat, NL)
- Providing road works for in car information (Christian Leitzke, Hessen Mobil, DE)
- Providing real-time road works information in Spain (Gema Leiro García, DGT, ES)
- Making our DATEX II profiles slim (Petr Bureš/Jan Vlčinsky, Tam Tam Research, CZ)

In this session best practices in the field of RTTI were exchanged with the DATEX II community.

Participants found that DATEX II can be used in a number of ways, not only targeting road operators but also drivers. Participants also state it is important to reduce the complexity of DATEX II in relation to the desired goal.

### Break-out session 1, Zone 2: DATEX II for dummies

- Bard de Vries, DATEX II TMG Chair, NL

In this session, participants were given an introduction to the basics of DATEX II.

DATEX II is one unique language for exchanging traffic and travel information, offering flexibility and adaptability through its profiles. It is easy to start with and it allows you to collect more harmonized data and therefore increases the number of information exchanges. The exchange of harmonized information is welcome and seen as an important instrument towards traffic management services / systems improvement.

### Break-out session 1, Zone 3: Urban dreams

- EV charging points (Kjersti Leiren Boag, NPRA, NO)
- Parking data harmonization – The Alliance, Progress and DATEX II (Jonathan Harrod Booth, Harrod Booth Consulting, UK)
- Implementing automated vehicles in urban public transportation (Anna Antonakopoulou, ICCS, GR)

In this session, participants discussed the challenges and opportunities for cities to standardize their traffic management systems and the collection of urban requirements.

Participants find that urban decision makers would like to have a decisive role in the DATEX II organization if they are asked to start using DATEX II. Furthermore, participants recommend that the DATEX II organization explores how to 'integrate' rather than 'expand to' the urban domain.



The need for incentives (e.g. free tolling/parking) when it comes to the deployment of electric vehicles was also discussed, as well as challenges arising from the unwillingness of private parking operators to share their data or adopt other standards.

## **Break-out session 1, Zone 4: Help us to improve DATEX II**

- DATEX II feeds for applications – D2Light (Bo Bjerkeholt, Trafikverket, SW)
- Standardized DATEX II translations (Ian Cornwell, Highways England, UK)
- DATEX II as an Open Data specification (Pieter Colpaert, Smart Flanders, BE)

Participants brought forward and discussed recommendations on how to improve DATEX II, based on the topics introduced by the speakers.

Participants agreed that there is a need to register existing translations between standards. A lot of feedback was also gathered towards the further development of DATEX II Light, focussing on how to continue to flatten the DATEX II model used in this application. Participants also unanimously agreed on the need for a Linked Open Data Dictionary of DATEX II, stating that it could be used for single definition. Participants also advise the DATEX II organization to make sure that there is a clear meaning of everything that is exchanged in any DATEX II application, and the right technology is used for the purpose of the application.

## **Break-out session 2, Zone 1: Best Practices SRTI**

- Managing road incidents in winter conditions (Rocío Lopez, Tekia Ingenieros S.A., ES)
- eCall integration with DATEX II (Jorge Lopes, BRISA / APCAP, PT)

In this session best practices in the field of SRTI were exchanged with the DATEX II community.

Participants conclude that DATEX II contributes to increased traffic safety for drivers through the provision of information on SRTI incidents.

A highlight from the presentations is the realization that eCall can be integrated with DATEX II and that the Portuguese system can be offered to other countries to prevent organizations from reinventing the wheel.

## **Break-out session 2, Zone 2: How to get started with DATEX II**

- Best practice NAP setup (Jean-Philippe Mechin, CEREMA, FR)
- Delegated regulations, minimum profiles and RAV Test Center (Michael Zangl, AustriaTech, AT)
- Who is who in DATEX II – URIs (Petr Bureš/Jan Vlčinsky, Tam Tam Research, CZ)
- Information lifecycles (Ricardo Coelho, ARMIS, PT)
- Roadmap for DATEX II deployment in Greece (Anna Antonakopoulou, ICCS, GR)

This session was aimed towards participants who do not yet have a broad experience with DATEX II and want to learn about the different aspects that help their organization to develop successful and sustainable ITS system infrastructure.

Participants agree that a common language is needed to speak to one another and a common protocol is needed to facilitate the exchange of information. Thinking ahead about how to implement DATEX II will help to implement it and to let it evolve in the right way. The participants find that they all face the same problems but try to solve them in different ways. Having more opportunities to discuss and exchange opinions about the different topics would be helpful in this regard.

### **Break-out session 2, Zone 3: DATEX II and C-ITS**

- DATEX II Ontology (Niklas Petersen, Fraunhofer IAIS, DE)
- C-ITS and HYBRID approach (Gottfried Allmer, ASFINAG, AT)
- The use of DATEX II in C-ITS reference architecture (Erwin Vermassen, ERTICO, BE)
- Enhanced road works in DATEX II and DENM (Emilie Petit, CEREMA, FR)

In this session participants discussed how DATEX II can best support C-ITS.

Participants conclude that DATEX II is an important backbone to enable C-ITS services. To ensure that DATEX II is supporting C-ITS service provision in an optimal way, a close cooperation is needed between DATEX II and the C-ITS domain, more specifically between DATEX II and OEMs, C-ITS projects as well as the C-Roads platform.

Furthermore, DATEX II can support C-ITS use cases, on motorways as well as urban, to support interoperability and harmonization among all Member States. Profiles in the areas of C-ITS should be harmonized all over Europe.

### **Break-out session 2, Zone 4: Programmers desk**

- Filtering of messages (Paal Aaserud, NPRA, NO)
- DATEX II transport mechanisms (Ian Cornwell, Highways England, UK)
- OpenLR implementation in DATEX II (Ed Ooms, NDW, NL)
- How to simplify running V2 and V3 in parallel (Jonas Jäderberg, Trafikverket, SW)

In this session, participants could start a one-on-one conversation with DATEX II experts, discussing their technical and detailed questions.

Participants concluded the following main findings:

- Filtering of messages is easy with open-source-frameworks.
- Java has got a number of configuring options, but it is easy to generate code for DATEX II.
- OpenLR is currently being implemented in Dutch data structures.

- It can be useful to keep older versions running / in parallel. XSLT-mappings are useful, to be provided by DATEX II.

### **Break-out session 3, Zone 1: Management of Electronic Traffic Regulations (METR)**

- DATEX II METR publication (Josef Kaltwasser, Albrecht Consult, DE)
- Connected and Automated Vehicles – Exchanging of Traffic Regulations – METR (Jonathan Harrod Booth, Harrod Booth Consulting, UK)
- Urban Vehicle Access Regulations (UVAR) – (Pedro Barradas, DG Move, EU)

In this session, participants discussed the digitalisation of traffic regulations and the best way to enhance the support by DATEX II of exchanging very detailed information stemming from electronic transport regulations.

The speakers discussed the complexity of regulation and signs and also discussed the most important needs. The participants conclude a lot of development is needed on different levels. DATEX II has a role to play but it must be in close cooperation with other stakeholders.

### **Break-out session 3, Zone 2: How can DATEX II support your ITS eco-system?**

- TN-ITS – Bringing fresher map data to intelligent transport services (Stephen T'Siobbel, ERTICO / TomTom, BE)
- CROCODILE II – Implementing international traffic exchange (Petr Bureš/Jan Vlčinsky, Tam Tam Research, CZ)
- Socrates 2.0 (Edwin Mein, Technolution, NL)
- URSA MAJOR (Henk Jansma, Rijkswaterstaat, NL)

In this session, participants from different backgrounds and domains discussed the current state of the ITS eco-system and how their organization relates to DATEX II. Participants then brought forward their needs and requirements and discussed how DATEX II can help their organization.

Participants find that DATEX II is used in a number of unexpected domains, like eCall and National Access Points. Other domains also appear to be looking into using DATEX II, like TN-ITS and TM2.0. Participants recommend that DATEX II extends to also cover the domains of TN-ITS and TM2.0 (latter already partly happened with extension). There is a need for dissemination of DATEX II that is easy to understand.

**Break-out session 3, Zone 3: Urban dreams**

- DATEX II model for status and faults (Jörg Freudenstein, Albrecht Consult, DE)
- Use of DATEX II for urban traffic light control (Rudi Tegenbos, Thauron, BE)
- DATEX II as a source for displaying travel times on VMS (Kjersti Leiren Boag, NPRA, NO)
- UTMC extension model for traffic signal status (Ian Cornwell, Highways England, UK)
- Urban Vehicle Access Regulations – UVAR (Pedro Barradas, DG Move, PT)

In this session, participants discussed the challenges and opportunities for cities to standardize their traffic management systems and the collection of urban requirements.

Participants conclude that collaboration is essential in urban traffic management, keeping in mind its complexity due to the high diversity of traffic management in the urban domain. DATEX II can support this by offering standardised center-to-center communication. DATEX II can also provide support in the future relating to digitisation of traffic regulations / traffic management. It was clear to the participants that the DATEX II organization is prepared and happy to support the urban domain to improve transport and make mobility future-proof. Participants recommend that DATEX II acts as an umbrella standard to harmonise data exchange.

**Break-out session 3, Zone 4: Running cross (any) border Traffic Management Plans**

- On the fly VMS messages setting among TCCs (Matteo Buganini, Autostrade Tech, IT)
- Use of DATEX II for crisis management between road operators (Olivier Perichon, DIRIF, FR)

In this session, participants discussed the challenges and opportunities of running cross (any) border Traffic Management Plans and their expectations about such functionalities.

Communication in crisis situations is essential, and in this context a common language is an undeniable asset. Organizational common commitment is also needed as numerous actors need to be able to coordinate effectively and efficiently. Road authorities should be involved in the TMP design phase to define scenarios and measures in order to adopt TMPs to exchange VMS messages.

The DATEX II Traffic Management Plan Extension is seen as a powerful tool for on-the-fly VMS publishing proposals, however, participants raise concerns about political and organizational difficulties that may originate from its use.

## ANNEX 4: IMPLEMENTATION ARENA

In the Implementation Arena participants showed attendees their implementation of a DATEX II supporting system. The Implementation Arena was open on the first day of the Forum during lunch and coffee breaks, giving attendees the opportunity to walk around, see the different implementations, talk to the presenters and eat and drink at the same time. Attendees were also encouraged to vote for the implementation that they believed deserved the coveted DATEX II Implementation Arena award.

The following Implementation Arena submissions were present at the Forum:

- Reduce traffic impact by sharing accurate work zone information (*Rainer Klockmann, GEWI Europe, Germany*)
- Legacy TCC and TIC Integration in Autostrade (*Matteo Buganini, Autostrade Tech, Italy*)
- DATEX Node in Sweden (*Helena Svan & Rickard Karlms, Viati, Sweden*)
- D2Light test api in the cloud (*Jonas Jäderberg, Trafikverket, Sweden*)
- From ASFINAG Profiles to Austria Profiles – EVIS (*Martin Nemec, ASFINAG, Austria*)
- Traffic Data Management Tool based on DATEX II (*Michael Tremmel, XEBRIS Solutions, Austria*)
- Asset management & Contract regulation supervision (*Ricardo Coelho, ARMIS, Portugal*)
- Demo of end-user filtering through open GIS-standards (*Paal Aaserud, NPRA, Norway*)
- Czech National Access Point and data sources provided by NDIC (*Petr Bureš, Tam Tam Research, Czech Republic*)
- DATEX II in French SCOOP project (*Emilie Petit, CEREMA, France*)
- DATEX II CIS implementation in CHARM (*Ian Cornwell, Highways England, United Kingdom*)
- FlisVis application (*Edgar van Wilgenburg, NDW, the Netherlands*)
- Roadstatus in the Netherlands (*Peter van der Veen, 2ways, the Netherlands*)

The award for the overall most interesting and attractive DATEX II implementation went to Carlos Costa and Ricardo Coelho from ARMIS. The award for the most interesting and attractive Dutch DATEX II implementation went to Peter van der Veen from 2ways.

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## ANNEX 5: PLATOONS

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### Question 1: How to build a strong DATEX II community?

The platoons all advised us to put effort on communication. To share the aims, objectives, achievements and examples of implementations, via newsletters, the DATEX II website, an active online collaboration platform, an online forum. At this moment, the current webform does not fulfil this role and information is often too technical. It was advised to also involve private companies to get the business view.

### Question 2: What should DATEX II do to increase your willingness to use it?

The answers to this question all boiled down to: provide us with common minimum profiles. This guarantees a minimum harmonized quality level and also contributes to make DATEX II future proof. Guaranteeing that DATEX II is future proof increases the willingness to use it.

The relation with neighbouring standards (such as NETEX and TN-ITS) is also an element in here.

### Question 3: What does DATEX II need to be future-proof?

DATEX II should ensure that future requirements are identified in the right time so that future changes remain relevant to customers. A strong community is needed to achieve this. Also, the cooperation with other standards and managing any possible overlap was mentioned as an important issue. The third element that was suggested here was to promote DATEX II as an open standard.

### Question 4: How to connect new domains to DATEX II?

The platoons started with the warning that DATEX II should have a clear scope and should not aim to include all domains. Start with easy domains/standardization communities and show added value. Show how we can connect with other existing standards. In doing this, combine information to have less data (smart data instead of more data), making it easier to use.