



Get It On The Road, Get It In the Car.

Large Scale Deployment of Cooperative Systems:

- Will provide Europe-wide real-time communication between infrastructure and vehicles supported by road authorities, infrastructure managers and the car industry.
- Aim to improve traffic safety, security, efficiency and reliability for vehicles, their drivers and other road users.



Long-Term Road Works

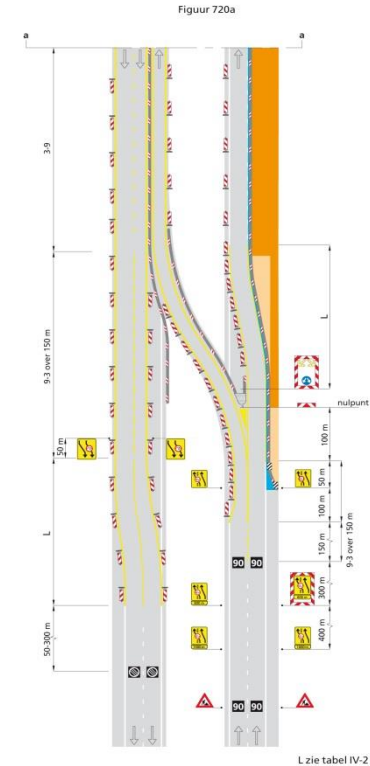
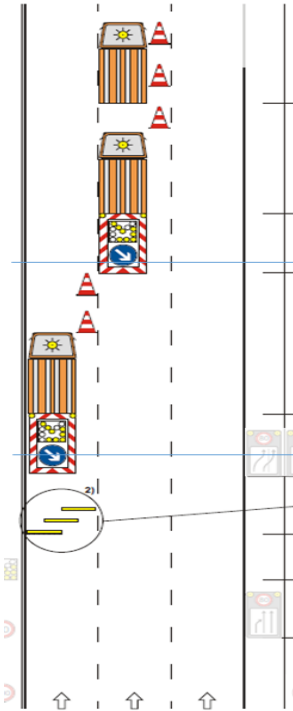
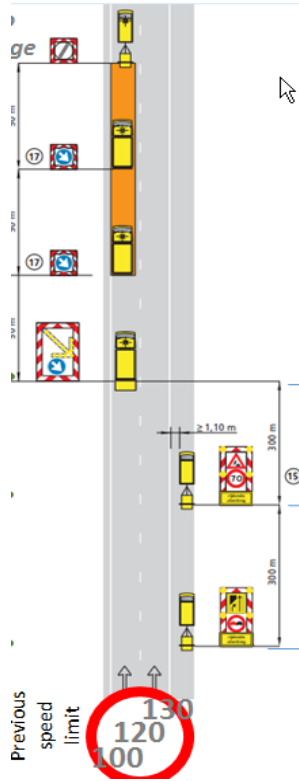
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"C-ITS Deployment is underway!" Part II
26 april 2016, Amsterdam



Get It On The Road, Get It In the Car.

Background: road work types



- Short-time mobile
- DENM

- Stationary short-term
- DENM

- Stationary Long-term
- ??

Process

- Task force Long-Term Road Works Warning: KO September '15
- October '15: meeting road authorities and consultants
 - LT-RWW layouts, data requirements, potential message sets
- January '16: OEM workshop (15 participants)
 - Assessment of DENM, IVI and MAP, complementarity, roadmap
- Revision of “Message Set and Triggering Conditions for RWW service”

Usage of DENM for LT-RWW

- A day one Road Works Warning service can rely on DENM.
 - DENM is not able to transmit all information available for RWW but it can transmit enough information for a basic save service.
- Complex temporary road layouts require more information
 - In order to supply this data, it is foreseen that additional message sets are needed;
 - IVI and MAP are obvious message sets that can be used additionally.

Message sets

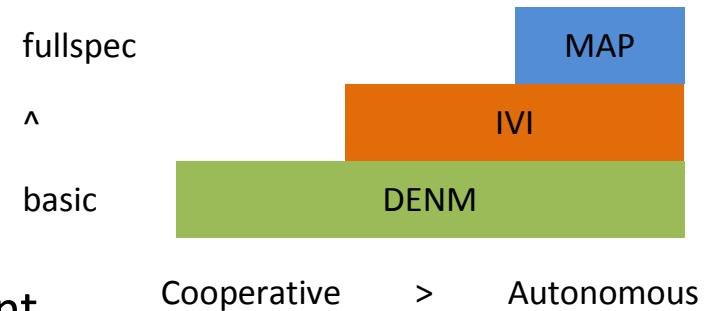
- Application to example layout
 - Use case implementation
 - Use of Data Elements
 - Shortcomings message sets
 - Required clarifications
- Constructive!

	DENM	IVI	MAP
RWW type	Y	N	N
Position	Y	Y*	Y*
Speed limits (per lane)	Y	Y	Y
Lane closures	Y	Y	Y
Hard shoulder usage	Y	Y	Y
Sharp curve warning	Y	Y	Y
Slow or stationary vehicles	Y	N	N
Work related / environmental warnings	Y	Y	N
End of queue	Y	N	N
Length of work	Y*	N	Y
Width restrictions	N	Y*	Y
Lane topology, deviations, counterflow	N	N	Y
Lane geometry and restrictions	N	Y*	Y
Route choice advise	N	Y*	N
Full closure and deviations	N	Y*	Y*
Short entry/exit ramps	N	Y	Y
Right of way signs	N	Y	N
Prohibition signs	N	Y	N
Direction signs or changes to these	N	Y	N

On The Road

Outcome - *preliminary results*

- Layered approach
- Introducing new questions
 - Handling contradicting message content



- DENM for near-future deployment
- Revision of “Message Set and Triggering Conditions for RWW service”
- Propose Work plan for elaboration of IVI and MAP

Proposed work plan

- Detail complementarity of DENM, IVI and MAP, also in relation to the incremental complexity of in-vehicle systems
- In-depth focus group workshops:
 - (1) technical / standardisation perspective (interpretation of standards)
 - (2) road operator / contractor perspective (organisational, procedural)
 - (3) OEM perspective (roadmap use case implementation, message use)
- Development of information architecture
- Amsterdam Group LT RWW Workshop to report progress and results
- Revision of “Message Set and Triggering Conditions for RWW service” to include IVI, MAP and information architecture.

Long-Term Road Works

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