MAVEN

(Managing Automated Vehicles Enhances Network)

Expert meeting

Introduction to the MAVEN transition roadmap and challenges

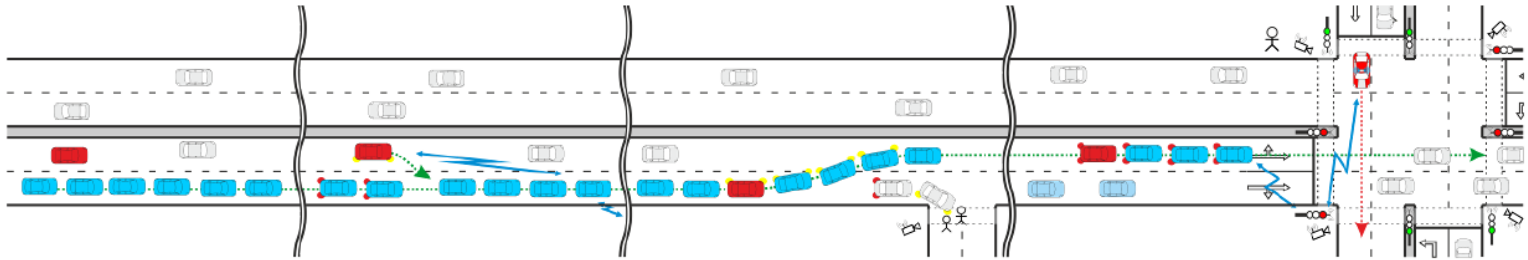23 October 2018, London

MAVEN Transition roadmap scope

MAVEN project's expert views and recommendations for the **transition of traffic management at signalised intersections along urban corridors** from the present conventional transport world into a connected, cooperative and automated world.

The Roadmap aims **to assist local authorities in determining their role and responsibilities**, giving special attention to the role of traffic management and its level of guidance at various phases of the transition.

MAVEN Transition roadmap - structure

- **The MAVEN approach and use cases**

- **Scene setting**

- **Main requirements for implementing the MAVEN approach to CAVs**
  - ✓ Infrastructure
  - ✓ Digital map
  - ✓ Transport policy: Societal, economic and environmental requirements
  - ✓ Traffic management

- **MAVEN city examples: Helmond, Greenwich, Braunschweig**
  - .....and other cities' approach

- **Conclusions and steps to be taken**

16 use cases and requirements description

Use cases cluster	Description
Platoon management	There are 6 use cases (1-6): forming a platoon; joining, travelling and leaving a platoon; platoon break-up and termination.
Speed change advisory (GLOSA)	Calculating speed advice based on signal phase and timing information.
Lane change advisory	Distributing vehicles over the available lanes to make optimal use of the road capacity.
Emergency situations	Mitigating the risks of unexpected events and to ensure traffic safety.
Signal optimisation	There are 5 use cases (10-14): balancing the priorities according to the policies set by the road operator; Queue length estimation; Local level routing; Green wave; and Signal optimisation.
Negotiation	Performing a bidirectional exchange of information for negotiations using communications from infrastructure and vehicles and back.
Detect non-cooperative road users	Detection and characterization of complementing non-cooperative road users (vulnerable road users, non-cooperative vehicles) for their inclusion in relevant use cases.

MAVEN Transition roadmap - questions

- **Identifying challanges & barriers to implementing the MAVEN use cases:**
  - ✓ From what use cases can cities start from?
  - ✓ What is the ideal enviroment for implementing the MAVEN uses cases?

- **What are the initial steps to be taken regarding:**
  - ✓ Infrastructural requirements
  - ✓ Transport policy
  - ✓ Traffic management

- **What will the role of local authorities and traffic managers be in a connected and automated future of AVs?**

Discussion topics

- What are the key dimensions to be considered in the phases of transition towards MAVEN from a city authority/traffic managers perspective? (technological, organisational, legal/liability, cultural, financial, policy, etc)

- How can authorities quantitatively assess where they are in the transition and could we derive this from them (e.g. by means of a survey)?

- What is the ideal environment for implementing the MAVEN use cases? (spatial, traffic characteristics, policy, etc)

- What are the 'low-hanging fruits', ie, technologies, use cases, governance models, requiring the least effort and showing a reasonable rate of return in the short-term?

- What are the factors external to the city authorities that will influence the transition towards MAVEN? (vehicle penetration levels, legal framework, user acceptance, etc)

- What will happen if city authorities do nothing?

Get in touch!

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