11th ITS EUROPEAN CONGRESS
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Glasgow, Scotland | 6-9 June 2016

The city of Thessaloniki as a member of the TM 2.0 Platform

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Assessing the benefits of interactive traffic management

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The Centre for Research and Technology Hellas (CERTH)

Hellenic Institute of Transport (HIT)

Hellenic Institute of Transport (H.I.T.)

- Part of the Centre for Research and Technology Hellas (CERTH)
  - Leading research Centre in Greece and listed among the TOP-25 E.U. institutions with the highest participation in competitive research grants.
  - Legal entity governed by private law with non-profit status, supervised by the General Secretariat for Research and Technology (GSRT) of the Greek Ministry of Education, Research and Religious Affairs.

- Conduct of applied research activities in the field of transportation:
  - Transport Policy (Greek and European transport policy)
  - Transport Planning (travel forecast models)
  - Traffic Management
  - Multimodal Transport Services
  - Sustainable Mobility Services
  - Intelligent Transportation Systems (ITS)
  - Traffic Simulation
  - Freight Transport and Logistics Systems
  - Road Safety

TM 2.0 – Opportunities for Thessaloniki

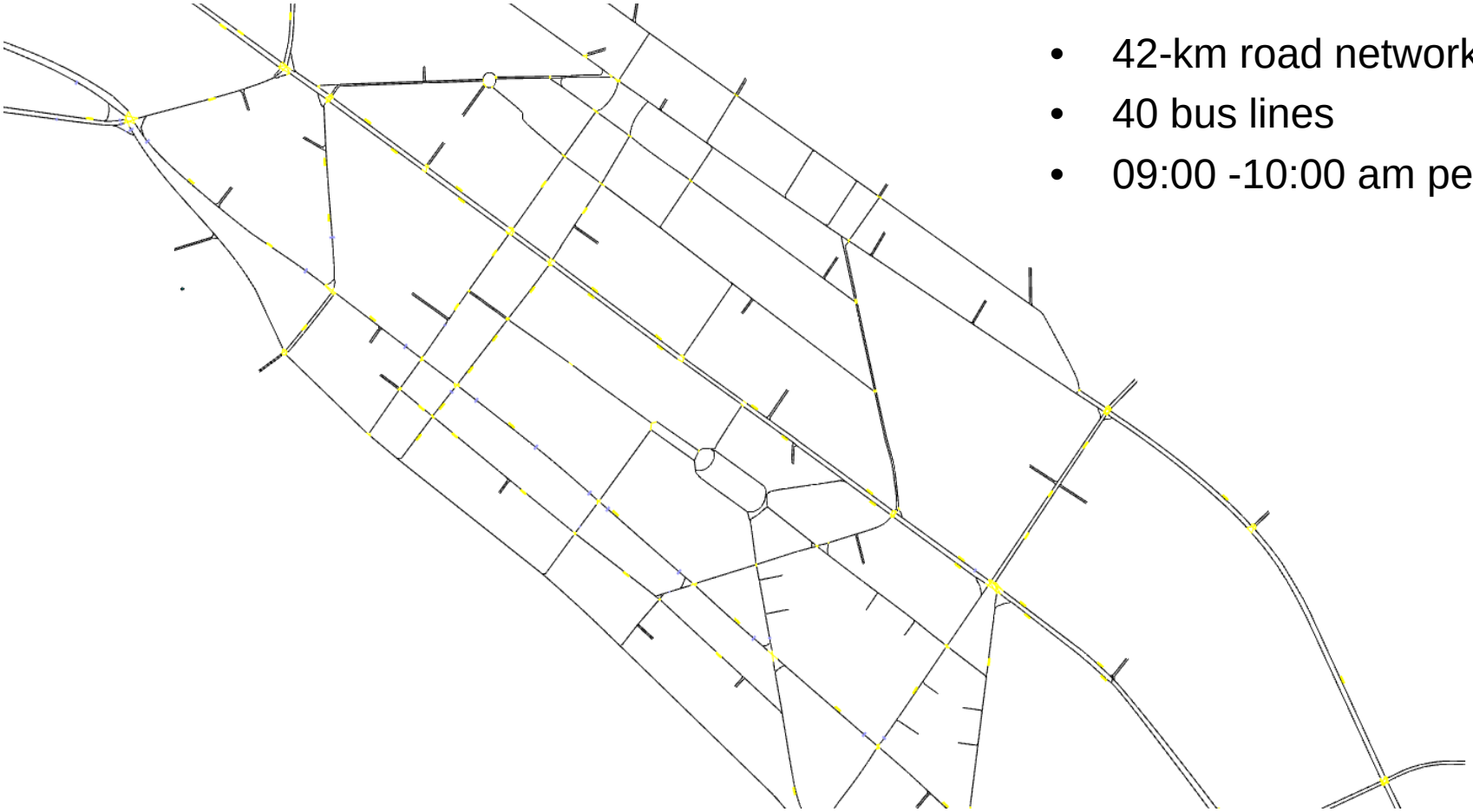
- Access guidelines regarding the implementation of innovative traffic management.
- Gain experience pertaining to the establishment of collaborations between the public and private sector for the deployment of interactive traffic management.
- Identify technical barriers but also enablers for the development of innovative traffic management.
- Provision with the key criteria required for the selection of a TM 2.0 deployment area in cooperation with the mobility service actors and road operators.
- Information with respect to the current status of Automation in Traffic Management.
- Awareness regarding the tangible effects of interactive traffic management.

TM 2.0 – CERTH/HIT Activities

- Participation in the Quantification of Benefits Task Force
  - Estimation of the benefits of interactive traffic management (i.e. exchange of information between Traffic Management Centers and Mobility Service Providers for efficient traffic management).

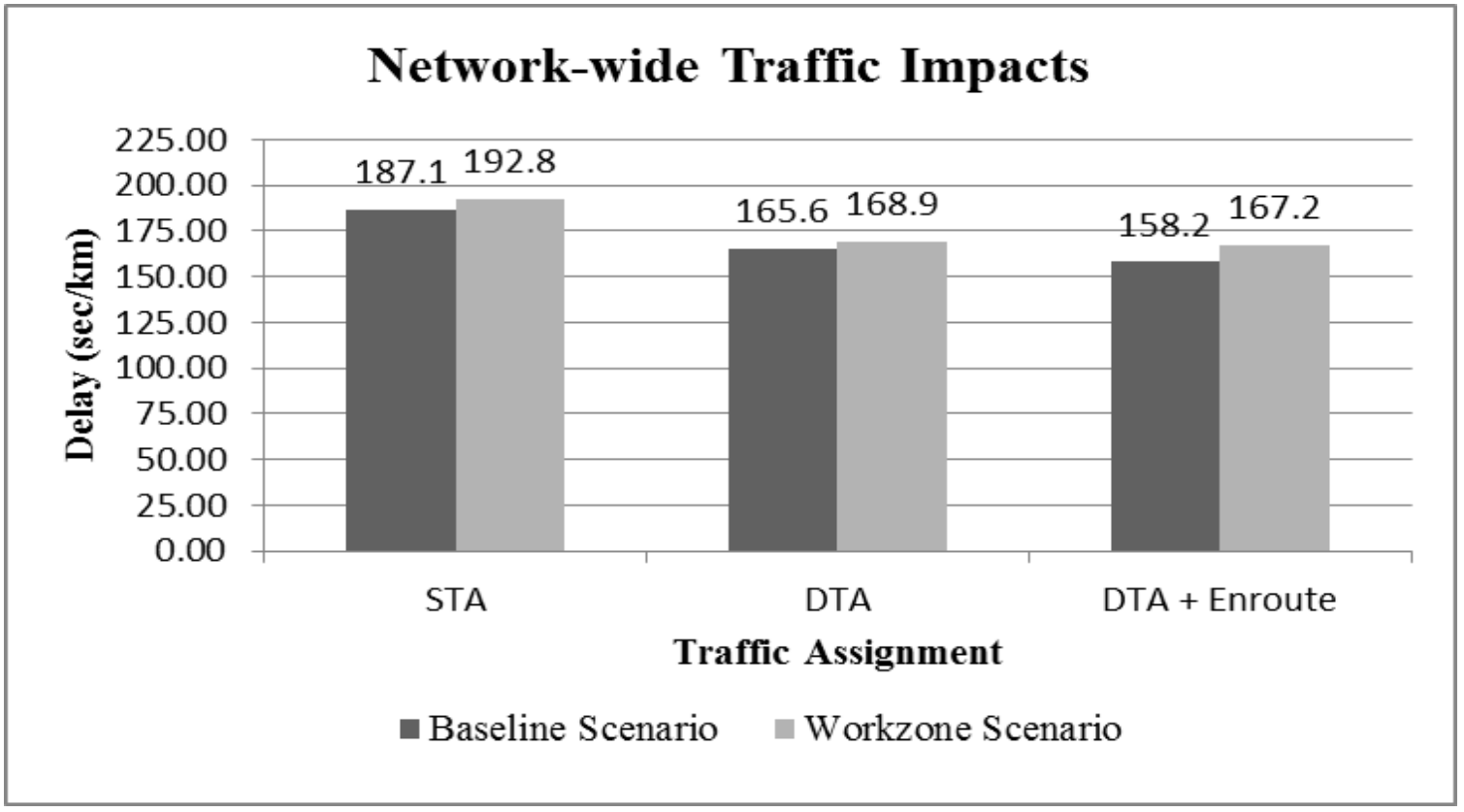
- Development of a traffic microscopic simulation model (Aimsun).
  - Implementation of dynamic traffic assignment.
  - Traffic has been assigned statically (STA), dynamically (DTA), and dynamically + enroute for all scenarios.
  - Baseline Scenario: No management plan is implemented.
  - Workzone Scenario: Traffic restriction measures imposed around a metro construction site.

Simulation Network



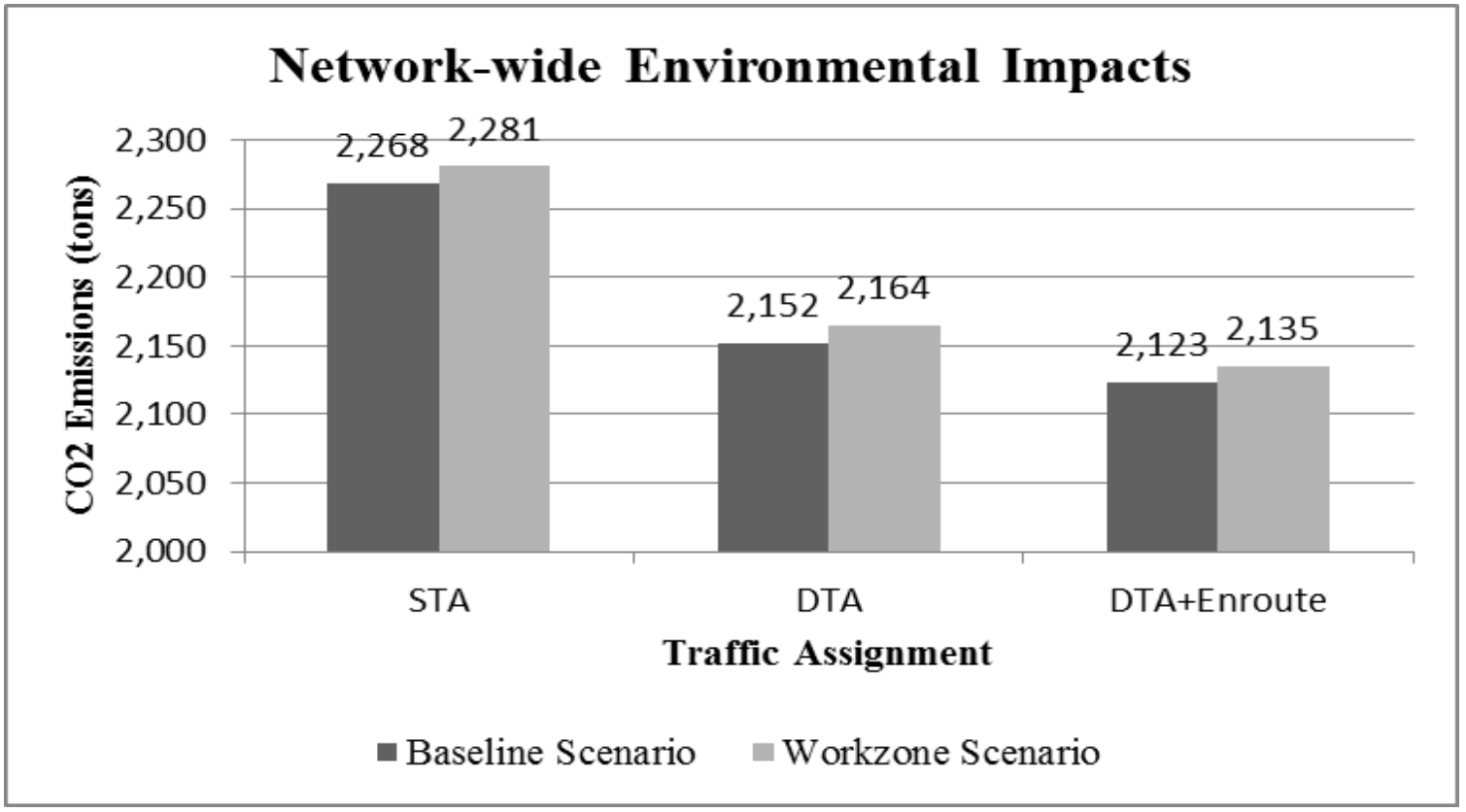
- 42-km road network
- 40 bus lines
- 09:00 -10:00 am peak

Traffic Impacts



- Decrease of average network delay by 13.3% between STA and DTA + Enroute (Workzone Scenario).

Environmental Impacts



- Decrease of CO2 emissions by 6.4 % between STA and DTA + Enroute (Workzone Scenario).

TM 2.0 – CERTH/HIT Contributions

- The study conducted by CERTH/HIT within TM2.0 has demonstrated that cooperation between TMCs and MSPs can yield:
  - An efficient redistribution of traffic on the network.
  - Significant benefits with respect to traffic operations and the environment.
- Moreover, it has become apparent that the more robust this cooperation becomes the more significant the generated benefits are.

TM 2.0 – CERTH/HIT Members

- CERTH/HIT Researchers participating in TM 2.0 activities:
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