

# **FISITA World Automotive Summit: Integrated Approach Needed to Reduce CO<sub>2</sub> from Road Transportation**

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The key message that emerged from the first FISITA World Automotive Summit, held in Falkenstein, Germany 15 – 16 July 2009 was the need for an integrated approach to reduce CO<sub>2</sub> emissions from the road transportation sector, [according](#) to the event summary provided by FISITA. The World Automotive Summit was organized by global automotive engineering association, FISITA, in association with VDI-FVT, the automotive and traffic technologies division of the German Association of Engineers.

The discussions focused on the potential gains to be made in the areas of Fuels and Fuel Economy; Electrification; and Traffic Management.

In his opening remarks, FISITA President Christoph Huss called on engineers to get more directly involved in the debate around future energy, transport and environmental policy:

*As engineers, we have the abilities—and also a special responsibility—to help clarify the technologies and solutions that politicians can draw on when they make decisions about our energy and mobility futures. That is our motivation behind organizing this first ever FISITA World Automotive Summit.*

Dr. Lew Fulton of the International Energy Agency gave the first presentation, in which he used World Energy Outlook projections to predict overall CO<sub>2</sub> emissions in 2050 and highlighted the importance of reducing CO<sub>2</sub> from transport in particular, arguing that greater fuel efficiency is the best way of doing so:

*If we don't do anything about CO<sub>2</sub> in transport, even with very deep*

*the countries that are still growing, which is most of the world, the biggest problem is the transport sector. If the transport sector gets fixed, that has an enormous downward impact on both fuel and CO<sub>2</sub>.*

The agenda then moved on to Electrification, with presentations from Dr. Alan Lloyd, President of the International Council on Clean Transportation and former Secretary of the California Environmental Protection Agency; and Prof. Ouyang Minggao, Director of China's State Key Laboratory of Automotive Safety and Energy, based within Tsinghua University.

Dr. Lloyd drew upon the experience of California's Zero Emissions Vehicle Mandate in the 1990s, telling participants that,

*Electric drive is capable of addressing urgent climate change, zero-emissions and energy security. Electric drive is feasible, but the challenges should not be under-estimated. Hybridization has however been a success. A long-term view will be necessary and policies will need to be put in place.*

Prof. Ouyang, a top advisor to the Chinese government on vehicle technology, went on to present China's twin-track strategy to a) optimize existing vehicle powertrains while b) developing new energy vehicles and EVs in particular.

Mr. Edgar Thielmann, Head of the Galileo Project from the European Commission and Russ Shields, Chair of Ygomi LLC, led the presentations on Traffic Management, focusing on how ITS and vehicle communications can help lower CO<sub>2</sub>.

Mr. Thielmann told the Summit that, in addition to working on the efficiency of vehicles and the carbon intensity of the energy used to power them, there were significant CO<sub>2</sub> reductions to be achieved from better transport demand / mode choice, improved traffic flow and changes in driver behaviour. Most measures are still in the early stages of development, but some estimates predict up to 25%

reduction if range of measures are implemented in a long-term concerted program.

Russell Shields of Ygomi LLC discussed the role of vehicle communications in CO<sub>2</sub> reduction, specifically in electric vehicles:

*Electric vehicles will happen, and will evolve reasonably rapidly during the course of the next decade. We know the issues that are being discussed&mdash;driving-range, battery cost, recharging etc. Vehicle communications is one of the key involvements in this area*

Shields said vehicle communications could be key to customer acceptance of EVs by providing data to help with range determination, remote battery and range monitoring, charging station location, battery swap station location, economical charge management and more. He went on to describe how communications can help drive greater fuel efficiency in all vehicles, by offering the opportunity to base fuel usage / emissions regulations on real-world data rather than laboratory tests.