



5G Initiative – “5G Roadmap” Working Group

Proposal for Contribution

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Contribution: automotive sector perspective

- **Topic Field** (eg device, wireless, core, application)
 - Connected vehicles (V2V, V2I)
 - Automated (surface) transport
 - Future traffic management systems, especially safety-crucial situations
- **Relation to SDOs and other**
 - 3GPP LTE, ETSI, ISO TC204, etc.
- **Impact Horizon** (short, medium, long)
 - Short term (KPIs)
 - ❖ latency <1ms; reliability >99.999%; 1000 fold mobile traffic increase per area; requirements on data rates, mobility, connection density, latency, energy efficiency, spectrum efficiency, and traffic volume density; standardization and spectrum requirements
 - Medium term
 - ❖ QoS; (vehicle-)safety performance; standardization
 - Long term
 - ❖ ensuring cyber security; costs

Contribution: Potential Applications

■ Specific Thought

- Ubiquitous 5G access leveraging optical technologies
 - ❖ to develop and assess new optical access network solutions based on integrated optical device prototypes
 - ❖ to map 5G channels to optical transport and a co-design of the optical and wireless interfaces and protocols (to increase capacity and reduce latency, especially in highly dense 5G scenarios)
- Flexible network applications
 - to leverage the current R&D activities in relation to Virtualised Network Functions (VNF)
 - to target development of a multiplicity of VNF's useful to operators, service providers and users