

## MA07-012 - COCOMINT: Cooperative Communications in Traffic Telematics

### Zusammenfassung

**Motivation.** At current traffic levels, traffic telematics is an essential prerequisite for better traffic control and enhanced safety. Conventional cellular communication systems are not powerful enough for establishing real-time traffic information systems. New cooperative communication systems allow overcoming this bottleneck for traffic jams and high cruising speeds.

**Research Goals.** Relevant properties of vehicle-to-vehicle communication channels will be measured, analyzed, and modeled mathematically. Cooperative signaling schemes and respective receiver algorithms will be designed, implemented, and tested.

**Socio-Economic Perspective.** Traffic control systems based on cooperative communications have the potential to significantly improve traffic flow, and thus will minimize health hazards by reducing the number of accidents and harmful emissions.

### Keywords:

wireless cooperative communications, analysis and optimization of communication networks, traffic telematics, virtual MIMO systems, mobile sensor networks, distributed algebraic space-time codes, random set theory, non-coherent capacity

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Weiterführende Links zu den beteiligten Personen und zum Projekt finden Sie unter <https://wwtf.at/funding/programmes/past/ma/MA07-012/>