ITS

- Safety
- Convenience
- Commercial
ITS

Safety
- Collision Warning
- Stopped Vehicle (Japan)
- Intersection street
- SOS messages
- Road sensors

Commercial
- Commercials
- Internet Access
- Video

Convenience
- Free-flow tolling
- Parking
- Agent-based (traffic)
ITS

V2V
- Collision Warning
- Ad-hoc networks

V2I
- Free flow tolling
- Internet

V2V2I
- Intersection street (cyclists)
- Reduce traffic
Position of cyclist or pedestrian are displayed on car navigation display to alert driver.
ITS

Infrastructure-based warning
roadside equipment
(local or remote)

Safe distance
and speed

Collision
mitigation

Lane
support

Side crash

Blind spot

Rear detection

Lone change
assistant

Collaborative
warning
http://www.youtube.com/watch?v=yqtLvZrz2qE
http://www.youtube.com/watch?v=A_83efj9Xdg&playnext_from=TL&videos=tzW5kaNbZ60
V2V2I Channel properties. 5.85 – 5.95 Ghz como el espectro propuesto, una frecuencia más alta con menor alcance pero debido a que la comunicación se requiere a cientos de metros en lugar de millas como la red celular.
ITS

- Ad-hoc Networks. (channel congestion)
- Broadcast supression techniques. (dense)
- Non-IP networking. Geographical routing.
- Mobile IP (DHCP from wi-fi to vanet)
Standards

- Message priority.
- Regional differences.
- Channel filtration. (safety)
- OSI protocol.
- Projects. (CVIS, SAFESPOT, COOPERS).
ITS

- LTE
- Wimax

Potential deployments: AT&T, T-Mobile, Verizon, Cox Communications, Bell Mobility, Telus, Vodafone, France Telecom

Potential deployments: Sprint-Comcast (Comcast), Time Warner Cable, Bright House Networks


Download speed:
- LTE: 325 Mbps
- WiMAX: 70 Mbps

Upload speed:
- LTE: 86 Mbps
- WiMAX: 70 Mbps

Mobile speed:
- LTE: Less than 10 Mbps, hoping for 150 Mbps
- WiMAX: Less than 10 Mbps, hoping for 150 Mbps

Figures are theoretical maximums. LTE peak upload and download speeds assume 4x4 antenna configuration. Capacities vary.

Source: public documents.