

# INVENTION DISCLOSURE

**Invention Title:**

Terrestrial Wi-Fi based Auto Security and Car Safety Service

**Invention Summary:**

Deliver Auto Security and Car Safety services using the Cable industry's Community Wi-Fi deployments and security services to consumers.

**Invention Description:**

This invention defines an architecture for the cable industry to deliver automotive monitoring services or partner with automobile manufacturers to augment existing deployments to its subscribers. Many consumers purchase advanced car monitoring services when purchasing a new or used automobile. Cable has been deploying wide-array Wi-Fi networks for several years with expansion plans for Community Wi-Fi to significantly increase coverage even further.

The invention combines three existing services offerings by cable companies: Community Wi-Fi (abbr. as Wi-Fi), telephony/PacketCable/WebRTC etc. (abbr. as PacketCable), and Home Security and Automation (abbr. as HSA). The automobile monitoring chip begins by either establishing a secure Wi-Fi connection employing any of the standard public frequency ranges. Once Wi-Fi connectivity is established, an IP address is assigned by the Cable network. Next, the chip registers through the PacketCable network to the HSA for identity, authentication and authorization, for service. As the vehicle moves, the network connectivity is maintained through Wi-Fi roaming standards.

When any event occurs, an alert is issued by the chip. A dialog is established through the PacketCable system between the occupants of the vehicle and a representative from the HSA provider. The HSA representative provides any assistance the occupant needs and clears the event only after issues have been resolved.

**Invention Commercial value/customers:**

OnStar reported \$1.5 Billion in annual revenue with 30-35% margins for service  
Estimates are that 23% of all 2011 and 2012 vehicles have renewed service after expiration of free trial period.  
Luxury car industry has greater penetration with additional products like BMW Assist and Mercedes MBrace.

**Invention differences:**

Traditionally the network these services have relied upon satellites to provide communications between vehicles and monitoring stations. This network is constrained by multiple issues: high latency, low bandwidth and high deployment costs. The car monitoring industry is beginning to look to terrestrial based networks, predominately cellular networks. Cable has an opportunity to begin partnering with the automotive industry to include Wi-Fi which costs only \$10 additional cost over just a 4G wireless only chip.

# Automobile Monitoring State Diagram

