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Rysavy: Vehicles and mobility are converging but fragmentation, lack of standards may hinder progress

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INDUSTRYVOICES

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Two extremely common activities that people engage in are driving and interacting with their mobile broadband devices. Although sometimes people do both at the same time, these have largely been two separate industries. Now they are converging--one might even say they are on a collision course, although avoiding collisions is actually one of the primary objectives for people working in this industry.

From its inception this industry was referred to as "telematics" services, but many now refer to it as "Connected Car" or "Connected Vehicle." This is not a completely new area of focus as many major manufacturers have been providing telematics services for years now. For example, General Motor's OnStar has been around since 1995 providing services focused on safety and security. But now, with mobile broadband becoming ubiquitous, auto manufacturers, cellular operators, and many other firms are significantly ramping up their development efforts to provide a suite of services offerings ranging from safety and security to full infotainment services. Manufacturers that succeed will provide improved customer relationship management as well as the right mix of connected car services that provide daily relevance to tomorrow connected driver. There are however significant challenges that each automotive manufacture is looking to overcome.

First, there are two completely different approaches being employed. One is to have connectivity built directly into the car Telematics Control Unit (TCU) at the factory. The second is to have connectivity provided or "brought in" through the driver's smartphone. Both connectivity approaches have strengths and weaknesses as to what services they can provide and their ease of use. In the next five years, manufactures will be deciding what connectivity approach best addresses their customer demographic or if they believe a "hybrid" approach best addresses tomorrow' s car buyer.

Second, there is an inherent mismatch in development lifecycles. Auto manufacturers are currently designing connected car services for 2016/2017 model years, and those platforms may be around for

seven years providing service to a typical 10+ year vehicle lifetime. Compare that to smartphones that may be updated every six months makes it hard for the automotive industry to keep up with today's constant technological and wireless advances. Compounding this challenge, wireless modems that are built into the Telematics Control Unit (TCU) are not designed to be easily replaced. Drivers may thus be stuck with obsolete wireless technologies are obsolete or no longer supported.

Third, there is fragmentation across the industry with no standards to drive it towards normalization. Auto manufacturers want to deliver their own unique connected vehicle experience that differentiates them from competitive offerings. This leads to auto manufacturers pursuing customized and unique service offerings with their preferred automotive business partners. This ecosystem is also fairly complex, involving multiple suppliers who provide unique capabilities. These suppliers include telematics service providers, mobile network operators, hardware manufacturers, on-board computer operating systems, content providers, etc. Unfortunately there is minimal overlap with the mobile computing industry.

Despite these challenges, I am enthusiastic about the potential of this industry. Cloud-based vehicle services in particular will greatly simplify how auto manufacturers deliver services to tomorrows connected vehicle. Manufacturers are slowly providing app developers the means to develop a whole new category of interesting vehicle-oriented apps by tapping into information like fuel efficiency, G forces, etc. HTML5 will also drive standardization to improve the way in which app developers can develop cross-platform solutions and to extend lifetimes and flexibility of solutions by hosting apps and services in the cloud. Developers will need to keep in mind, however, that there really are two types of connected vehicle applications: ones for the drivers and ones for the passengers. In my opinion, both represent large opportunities. Improved natural language speech recognition technology will also improve the way drivers and passengers to interact with the connected world.

I will be hosting the "Portable Computer and Communications Association workshop, called "Connected Vehicle," hosted by AT&T, on March 27, 2013, when we intend to address many of the issues raised in this column. Also check out this useful infographic.

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