Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C. 20554

In the Matter of the Year 2000 Biennial Regulatory Review – Amendment of Part 22 of the Commission's Rules to Modify or Eliminate Outdated Rules Affecting Cellular Radio Telephone Service and Other Commercial Mobile Radio Services	**)**	**WT Docket No. 01-108**

COMMENTS

OF

ONSTAR CORPORATION

OnStar Corporation hereby submits these comments on the impact that eliminating the long-standing rules concerning analog standards and availability would have on vehicle manufacturers and occupants of existing and future vehicles equipped with automatic crash and safety notification devices in response to the Commission's specific request contained in Public Notice FCC 01-153 released May 17, 2001 in the above captioned matter.

Background

OnStar, a wholly owned subsidiary of General Motors Corporation, provides telematics services to the owners of vehicles manufactured by General Motors (Chevrolet, Pontiac, Oldsmobile, Buick, Cadillac, GMC, Saturn, and SAAB) and other automotive manufacturers including Lexus (manufactured by Toyota) and Acura (manufactured by Honda). Subaru, Hummer and Audi (manufactured by Volkswagen) also have announced selected future product programs will offer OnStar. As of April 2001, OnStar was the largest provider of such services with over one million subscribers.

OnStar's Service Offering Promotes Motor Vehicle Occupant Safety

The cornerstone of OnStar's service offerings is automatic crash notification (ACN). Immediately following a crash, the vehicle initiates a call over the analog cellular network to the OnStar Call Center. That call first transmits both vehicle and GPS-based location data and then switches to voice to allow an advisor at the Call Center to attempt to talk to the occupants. As required, the advisor will contact, and if possible, conference the vehicle occupants with, the appropriate public safety answering point (PSAP) for an emergency response.

In addition to ACN, OnStar offers other emergency, safety, security and information services.[1]

[1] See www.onstar.com for a complete list and explanation of offered services

Hands Free, Voice Activation Minimizes Distracted Driving

An important feature of the OnStar System in providing all of its telematics services is that there is no handset. It is "hands-free" and "voice-activated" so that concerns about driver distraction can be minimized.

In recent months, the public policy concerns about distracted driving have increased. As of February 26, 2001 there were approximately 106 bills in 39 states raising concerns about the use of hand-held cell phones in vehicles. On June 28, 2001, New York became the first state to enact a ban on the use of hand-held cell phones while driving. In May 2001, bills were introduced in the U.S. Senate and House of Representatives seeking to address the issue.

OnStar believes there is a clear public interest in avoiding regulatory actions that might have the unintended effect of reducing drivers' options - such as OnStar - to minimize the potential distraction associated with the use of a cell phone while driving.

Nationwide Availability of Automatic Crash and Other Emergency Notification Saves Lives and is in the Public Interest

OnStar expects to have over 4 million subscribers by 2003. Currently, OnStar receives over 120 air bag deployment notifications per month as well as a number of other emergency response requests and expects this number to grow as the number of subscribers increases. By providing to the appropriate PSAP, timely notice, exact vehicle location and any information from the vehicle occupants learned during the voice

conversation, OnStar is able to accelerate the delivery of critical emergency services to the accident scene.

Dr. Howard R. Champion, Research Professor of Surgery, University of Maryland, reports:

> "The goal in trauma care is to get seriously injured patients to a trauma center for diagnosis, critical care and surgical treatment within the 'Golden Hour' "[2] (the first 60 minutes following the crash)

According to Dr. Champion:

> "Currently, of the 42,000 crash deaths each year, nearly 20,000 victims die at the scene. At the scene, about 13,500 people die from injuries in rural crashes and about 6,500 in urban crashes. Of the 22,000 crash deaths that are taken to hospital many die because they arrive too late. Thousands of crash deaths occur each year in which the victim did **not** arrive at a hospital - much less at a trauma center within the 'Golden Hour.'… In the future, ACN will reduce many of the longer times dramatically. With ACN, **all** crash notification times, not just **average** notification times will be reduced to about **one minute**. [3]"

Congress recognized the daily life saving capability of OnStar and similar wireless nationwide services and moved to support them, for example, in the E-911 legislation. In that legislation's statement of findings and purpose, Congress found that:

> "(5) emergency care systems, particularly in rural areas of the Nation, will improve with the enabling of prompt notification of emergency services when motor vehicle crashes occur;
> (6) the construction and operation of <u>seamless, ubiquitous, and reliable</u> (emphasis added) wireless telecommunications systems promote public safety and provide immediate and critical communications links among members of the public, emergency medical service providers and emergency dispatch providers; public safety, fire service and law enforcement officials, and hospital emergency and trauma care facilities."

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[2] Dr. Howard R. Champion, *Reducing Highway Deaths and Disabilities with Automatic Wireless Transmission of Serious Injury Probability Ratings from Crash Recorders to Emergency Medical Services Providers*, International Symposium on Transportation Recorders, May 3-5, 1999.

OnStar believes these findings are particularly relevant to this proceeding.

Analog Offers Robust Capabilities Not Currently Matched by Other Technologies

OnStar employs an analog cellular-based system that is embedded in the vehicle. There is no handset. OnStar selected analog wireless technology because of the technology's nationwide availability and well-defined technical standards. These are critical considerations in the motor vehicle industry with its nationwide product offering, the obvious mobility of the product in use and an average vehicle life of about 8 years.

Importantly, for the cornerstone application of ACN and provision of emergency services, analog offers the ability to transmit data and voice on the same call. Once a voice channel connection is established, frequency-modulated data is transmitted on that channel to the call center. This data includes reason for the call (e.g. airbag deployment), location of the vehicle, vehicle identity and in the future will include crash impact data. The call is then switched to a voice mode and conversation between the call center and vehicle occupants takes place.

The digital standards do not allow for this type of call – alternatives have been discussed yet the robustness analog offers is not available. Some of the data transports being discussed for an airbag deployment call include:

- A circuit-switched data call, followed by a tear down of the data call and the set up of a voice call;
- SMS data with a voice call; and

[3] Id.

- Proprietary, non-standard based modulation schemes for sending data over the digital voice channel.

While all these types of calls may be possible, none are nearly as robust as the basic analog voice and data in the same call. OnStar recommends that a standard form of communication for voice and data be developed for emergency services within digital.

Retention of Standardized Analog Service is Critical to Public Safety

OnStar believes it is premature for the Commission to eliminate the analog availability requirement and the supporting compatibility standards as there is no single, technically standardized nationwide alternative. Moreover, when the Commission determines that such an alternative is available and it is appropriate to change the current rules, OnStar believes that the Commission must take into account two factors. First, there is a large fleet of legacy vehicles that only have analog calling capability. While the average life of a car today is 8-9 years and 7-8 years for a truck, vehicles are designed for a life of double that time[4]. Indeed, as of July 1999, nearly 40 percent of the vehicles on the road were over 10 years old.[5]

Second, if a change is to take place, the length of the vehicle development cycle (the length of time it would take vehicles manufacturers to design in, validate and build compatible vehicles) needs to be accommodated. As a vehicle-based system, it necessarily must be, and is designed, engineered and validated to motor vehicle standards for operation in a wide range of climatic conditions and road conditions; for

[4] Ward's Motor Vehicle Facts &Figures 2000 pp44-45.
[5] Ibid.

electromagnetic compatibility; and life of the vehicle durability and reliability. Typically, this takes about three years but implementing a change over an entire fleet may take longer as all vehicles are not redesigned each year.

The life saving benefits of OnStar are intended not only for initial vehicle purchasers but also for subsequent owners over the life of the vehicle. Thus, without a phased reduction over a large number of years, the Commission action would potentially jeopardize the lifesaving capability of OnStar and other similar telematics providers of ACN and emergency services.

Standardization is a Vital Element in Maintaining a Nationwide System

The importance of standardization should not be underestimated. Without it, future systems cannot be confidently designed nor offered with the assurance that the automatic crash and emergency notification features will connect with the nation's wireless telecommunication system over the life of the vehicle. OnStar is an embedded system integral to the vehicle's electrical architecture and validated to the rigors of the motor vehicle environment. The system monitors the vehicle electrical bus to detect an air bag deployment or other similar automatic emergency triggering event so that a data message can be formulated and a call placed to one of the OnStar Centers. For reasons of overall electrical architecture integrity, telematics components are not designed for periodic replacement.

Perhaps at some future time, if a "software defined radio" is successfully designed and can be validated for the motor vehicle environment, greater flexibility will exist. While OnStar is exploring digital designs and options, digital technology today is neither available nationwide nor sufficiently standardized to meet the life of the vehicle requirement for providing automatic crash notification and other emergency safety and security services.

Thus, OnStar advocates the continued standardization of cellular requirements such as antenna performance. In order to deliver the most robust in vehicle system that works across all cellular systems, telematics requires rigorous and exact performance standardization. Local market variation such as broadcast wave polarization sub-optimizes overall performance nationwide. Therefore, OnStar cannot support proposed changes to Part 22.367, Part 22.915, Part 22.917, Part 22.901(d)(2) and Part 22.905.

Analog is an Essential Component for a True Nationwide Network

OnStar is concerned that the Notice in this matter understates the reliance of the nations' wireless system on analog availability and the Part 22 rules. While statistics show that the nations' cell phone users are increasingly shifting to digital phones, in fact there is no nationwide wireless system without analog. Analog is the "glue" that holds the system together by enabling nationwide roaming. There is no true nationwide digital network. One hundred percent of digital phones that offer true nationwide service are also analog.

Under these circumstances, OnStar supports the retention of Part 22.901(b). Moreover, OnStar recommends that the Commission should consider designing incentive strategies to support carriers continuing to provide adequate availability of analog service.

Conclusion

In summary, all OnStar vehicle customers are and, for the foreseeable future, will be AMPS customers. The reasons provided by the Commission for adopting the Part 22 rules (Para.7, NPRM) are still valid today. Nationwide technical compatibility and availability of AMPS is important to motor vehicle safety. The analog system was selected by OnStar and other telematics service providers because it is the only common standard in the US - because of the FCC rule it is available everywhere and there is forward and backward compatibility. OnStar and other providers of telematics services have relied on ongoing AMPS compatibility and availability and it is premature and potentially injurious to the health and welfare of the motoring public to begin phasing down the system without an as carefully crafted successor strategy.

Respectfully submitted,

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