

**Federal Trade Commission RFID Workshop - Comment, P049106  
General Motors Corporation  
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**What is RFID all about?**

Use of Radio Frequency Identification is receiving a great deal of attention as issues of privacy emerge. While General Motors agrees that privacy in this context is important, there is a danger that in an effort to address potential abuses, current and future applications of this promising technology will be constrained. The lack of consensus around a definition of RFID is the problem. Without agreement on what devices fall into the category of RFID, there is a real possibility that some uses of radio frequency technology--particularly important safety and customer convenience applications contemplated in the automotive industry--will be inadvertently and inappropriately included.

There is agreement that RFIDs are used today in the retailing context to track inventory and gather information at the point of sale about shopping behavior. RFIDs are also commonly used in many industries during manufacturing processes to track parts. Where questions arise is in regard to cordless phones, cellular phones, remote keyless entry, remote garage door openers, two-way radios, and other practical devices. While these items have not historically been classified as RFID devices, existing definitions could be interpreted to include them.

For purposes of these comments, we employ the term Radio Frequency (RF) device to automotive applications that may or may not be considered RFID depending on which definition is used. In the automotive industry, RF technology, including RFID, has the potential to provide significant safety, security, consumer convenience, manufacturing, and inventory efficiency benefits.

It is important to note that unlike retail and manufacturing uses where the tags can be removed or disabled, current and anticipated automotive applications integrate RF devices into the product and are necessary for its proper functioning.

**How is RF device technology currently being deployed?**

General Motors uses RF-based communication to improve vehicle safety, provide customer conveniences, and improve material management processes. Examples of current uses of RF-based communication and identification are:

- RF devices embedded in ignition keys to identify a legitimate key and deter vehicle theft;

- RF devices used to provide keyless access and pushbutton start operation on the Chevrolet Corvette, Cadillac XLR, and new Cadillac STS;
- RF devices used in the vehicle manufacturing process to track vehicle assembly and parts;
- RF devices, coupled with pressure sensors, installed in the tire valve stem as part of GM's tire pressure monitoring system;
- RF devices installed into key fobs for use in systems allowing remote operation of door locking, door unlocking, power sliding doors, trunk releases, remote start, panic alarms and other features; and,
- RF receiver and transmitter devices integrated into programmable in-vehicle garage door openers.

**What is the future of RF devices and what additional applications are envisioned over the next decade and beyond?**

Some of the most exciting new applications of RF devices in the automotive industry will be safety-related.

- RF devices will allow vehicle-to-vehicle communication that would warn of a potential collision.
- Other applications that have safety and traffic management benefits will include vehicle-to-infrastructure communication that would enable "smart" highways. Smart highways will employ RF devices to communicate traffic signals, road conditions, approaching emergency vehicle warnings, and other important information to the driver.
- Vehicle-to-infrastructure communication will enable further enhancements to cruise control systems.

Manufacturing, inventory control processes, parts identification, and vehicle servicing will also benefit.

- Removable and reusable RF devices that track vehicles as they leave the assembly plant until they are delivered to the dealership will enable enhanced inventory management techniques.
- RF devices can be used to identify assembled components that are hard to access, instead of disassembling the vehicle prior to repair. As an example, the industry is moving toward replacing bar codes or other identification on tires with implanted RFIDs that are easier, faster, and more accurately read. This would constitute a new method of complying with the federal TREAD Act.
- RF devices could also be applied in the effort to combat counterfeit automotive products. This will assist in the identification of genuine parts at ports, distribution centers, and retail locations.

**What might constrain development of these applications?**

A regulation that confuses RF devices that enable safety and other consumer benefits anticipated by the automotive industry with the inappropriate gathering of personal information and tracking of products and consumers in the retail context would constrain development of beneficial RF device applications.

Another constraint would be the emergence of a patchwork of legislation at the state level that attempts to regulate RF devices, which would create an enormous challenge for the business community.

Furthermore, use of RFID as a generic term, without concise definition, will significantly impact future development of safety and convenience features and devices, and potentially hinder mature consumer products and industries such as those identified above.

**How are consumers affected by current and/or anticipated RF device uses?**

RF devices in current GM vehicles offer important safety and convenience benefits to customers.

- GM's tire pressure monitoring system notifies the driver when tire pressure is not within an acceptable range, which is a potentially dangerous driving condition.
- Key fobs have proven to be an effective personal security and convenience feature for locating and accessing vehicles.
- RF-based vehicle theft deterrents have proven to be extremely effective, and electronic key-based vehicle systems are being introduced that enhance customer convenience and vehicle security.
- The emerging uses of RF in vehicle-to-vehicle communication and in smart highways will provide benefits such as collision reduction and faster, more effective emergency response vehicle routing.

**What approaches have led or will lead to use of RF devices in a way that accommodates privacy and security concerns?**

There should be accommodation for RF device applications where it is not possible, practical, or in the consumer's best interest to disable or turn off the RF device . In these situations, however, there should be limitations on how the personal information is used and with whom it may be shared. In addition, security measures should be employed to protect the personal information.

**Summary**

RF device technology, including RFID, is rapidly evolving and General Motors believes that there are valuable automotive applications that will provide important safety

and convenience benefits to the customer. RF devices will also have valuable applications in manufacturing, inventory control and anti-counterfeiting.

General Motors recognizes that any identification technology has privacy implications and that companies utilizing such devices must address those concerns. However, General Motors supports a regulatory approach that: (1) deals with harm caused by misuse of information; (2) is not so restrictive that it inhibits the development of exciting new applications; and (3) does not create a patchwork of laws at the state level that will create an unreasonable compliance burden on companies that utilize RF device technology.