

Why

GENIVI Projects – Why

People all around the world see automobiles as an essential part of their daily lives. Others have a deep passion for cars and dream about driving the latest and greatest model on the market. Whether driving is a necessity or a pleasure, the smartphone industry has produced an expectation that drivers and their passengers deserve their personalized entertainment choices and immediate connectivity to friends and colleagues whenever and wherever they might drive. Driver distraction is a problem, however, so in-vehicle systems where drivers can choose a safer method of interaction with people and with information is a growing preference to new car buyers. In response to this growing demand, automakers have developed in-vehicle infotainment (IVI) systems which are highly complex and require massive amounts of software to deliver this content in the car.

In past IVI products, automakers would give the system requirements to suppliers who would then build each IVI system independently, resulting in long development cycles and high costs. They also paid license fees for proprietary operating systems, much like consumers of PCs do today, and had little choice in the software services delivered to their customers.

GENIVI is evolving the way IVI software is produced by introducing a non-proprietary operating environment (Linux) and by fulfilling automaker requirements using community-developed, open source software. GENIVI's expectation is that over time, this will fundamentally change the way automakers and their suppliers build IVI systems resulting in shortened development lifecycles and reduced cost to the automaker and to the customer.

Community-based development is not a new phenomenon. The Linux operating system, which is developed through a large, international community of developers (<http://www.linuxfoundation.org>), today runs mission critical computers which support transactions people depend on every day. And automotive systems in cars are a perfect target for this robust operating environment in which open IVI software can reside.

GENIVI's focus, however, is not just on Linux in the car, it is identifying and implementing the core functionality of the IVI system that automakers agree is "non-differentiating". Make no mistake, automakers still wish to compete on the applications and user experience their drivers will use; but the rest of the "commodity" functionality (the IVI software platform) should be built once and reused in IVI products and services across many brands and models. For example, it is not likely that someone will purchase one car over another based on the car's ability to support Bluetooth, hands-free calling capabilities (as long as that functionality exists in both cars). Bluetooth support is one example of the many features and functionality delivered by an IVI software platform.

To facilitate the creation of an open source, IVI software platform, GENIVI works in existing (upstream) open source software projects where essential functionality is already being built. In cases where no projects exist to meet IVI requirements, GENIVI hosts open source projects (GENIVI Projects - What) which operate according to best practices of community-based development.