



Toyota Displays a Mirai-Based Research Vehicle with **Satellite Communications Function**

Accelerates Connected Technology Development through Collaboration with Kymeta











Detroit, MI, January 12, 2016—At the 2016 North American International Auto Show (NAIAS), Toyota is displaying a research vehicle based on the Mirai fuel cell vehicle which is equipped with satellite communications technology from Kymeta, a U.S.-based company that is the world's leader in flat-panel antenna technology.

Toyota is working to enhance its connected technologies, including a plan to install a Data Communication Module into a broader range of its vehicles. The company is also considering using satellite communications in the future, including high $capacity \, satellites \, that \, offer \, much \, higher \, data \, transfer \, rates \, than \, conventional \, satellite \, technologies \, than \, conventional \, satellite \,$

While these satellites have historically required the use of a "dish" antenna on the ground, Kymeta's satellite antennas remove the need for mechanical components by using software and liquid crystal technologies to electronically track and steer towards satellites. The lightweight, flat profile of the antenna also allows for seamless integration during vehicle assembly or easy aftermarket installation.

"For several years, Toyota met with emerging companies around the world to investigate new technologies," said Shigeki Tomoyama, Senior Managing Officer of Toyota Motor Corporation. "We were very excited to learn about Kymeta, because their flat antennae technology could solve the challenge of vehicle-based satellite communications."

Satellite communications offer several key benefits to meet automotive needs, including 1) the distribution of huge amounts of data to a vehicle, 2) broad coverage areas and the global deployment of connected vehicles that share common standards across national borders, and 3) more stable and secure communications, particularly in emergencies such as

"We're excited to be working with Toyota on this next generation of vehicle connectivity," said Dr. Nathan Kundtz, CEO of Kymeta. "Kymeta is the first company to successfully demonstrate this type of technology, and we have over 8,000 miles of the company to successfully demonstrate this type of technology."road testing with cars connected to satellites."

Since September 2013, Toyota and Kymeta have been jointly researching on-car flat antennae to support satellite distribution of huge amounts of data to a vehicle. With an exclusive right for development and testing of the on-car $antenna, Toyota \ lent the company \ research \ vehicles \ for \ test \ driving. \ The \ Mirai \ displayed \ at \ NAIAS \ represents \ the \ progress$ of these efforts.

 $Mirai\ Creation\ Investment\ Limited\ Partnership,\ a\ fund\ where\ Toyota\ participates\ as\ an\ investor,\ provided\ an\ investment\ of\ provided\ an\ provided\ an\ provided\ an\ provided\ an\ provided\ partnership.$ 5 million dollars to Kymeta this month to enhance future technology research and development. Toyota expects acceleration of the joint research with Kymeta through the investment.

Toyota continues to work to accelerate connected car development and introduction including use of satellite communications, to offer customers ever-better car experience.

0 marks by Senior Managing Officer Shigeki Toi STABLE COMMUNICATIONS

Remarks by Senior Managing Officer Shigeki Tomoyama at 2016 North American International Auto Show

Thank you for coming.

 $I\,am\,very\,happy\,to\,be\,here\,today\,to\,announce\,Toyota's\,partnership\,with\,Kymeta, and\,to\,share\,the\,potential\,for\,vehicle\,Allowship and the contractions of the contraction of the contrac$

As many of you know, last week Toyota announced the framework for our next generation connected vehicles at the 2016 Consumer Electronics Show.

This framework uses vehicle data management to help make ever better cars.

In the coming years, we plan to increase vehicle connectivity in order to provide our customers with better services, such as

DOWNLOADS (VIDEOS)



Remarks by Senior

DOWNLOADS (IMAGES)







RELATED CONTENT



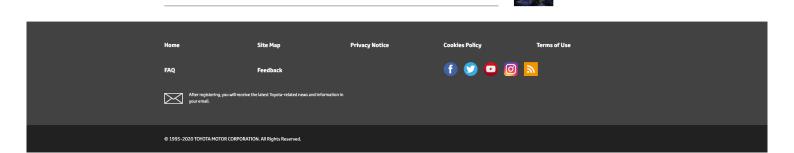




RELATED CONTENT

Toyota Acknowledges Tencent Keen Security

updating 3D map data and software and various infotainment options. Lap's initiatives for... Obviously, this framework would work very well with a secure, high bandwidth communications system with a global property of the property ofcoverage area. NTT and Toyota Enter into Memorandum of $To yota\ has\ investigated\ satellite\ technology\ for\ many\ years.\ It\ offers\ several\ important\ benefits\ for\ vehicle$ YOTA (U) N' Understanding... communications. First, satellite has a global and stable coverage area. Mar. 16, 2020 Toyota Blockchain Lab, Second, it can transmit huge amounts of data. Accelerating Blockchain Technology Initiatives a... Third, it can provide stable communications in case of an emergency or natural disaster. Of course, for automotive use, satellite has challenges as well. Most important, it is very difficult to fit a large bowl-shaped News Release, Innovation, CASE,. MOST POPULAR antenna onto the car. That is why Toyota is so excited about Kymeta. Toyota's response to the spread of COVID-19 (Novel Coronavirus)... $For several years, Toyota\ met\ with\ emerging\ companies\ around\ the\ world\ to\ investigate\ new\ technologies.$ тоуота We were very excited to learn about Kymeta, because their flat antenna technology could solve the challenge of vehicle-Since September 2013, Toyota and Kymeta have conducted joint research on flat antennas for use in cars. Sales, Production, and TOYOTA Export Results Today, I am happy to announce that we have entered into an agreement giving Toyota exclusive right to the development and testing of the on-car antenna. In addition, Mirai Creation Investment Limited Partnership, a fund where Toyota participates as an investor, has invested \$5 Regarding Japan domestic production (as of March 23) million in Kymeta to enhance future technology research and development. тоуота There is still much work to be done, and our project is still in the research stage.



TMC Announces Changes to Board Members and Supervisory Board...

Toyota to Build Prototype City of the Future

тоуота

f 💆 in 🛨

However, I hope you can see how exciting this new technology is, and what it could mean for the future of connected

Thank you.

Download ZIP 🖺 PDF