

## World Knowledge Forum 2012

### October 9<sup>th</sup>, 2012\_ Anthony Thomson\_What is the Tipping Point for Electronic Vehicles?

Picture yourself cruising down the highway in the middle of the desert, taking your new electric car for a spin. Losing track of everything, suddenly the fuel gauge flashes empty and you're forced to pull over and start pushing. Two miles down the road you jump in elation as you see a station. But here comes the bad news: the station has no plugs for you.

Dr. Anthony Thomson, Vice President of Qualcomm and global leader in digital wireless telecommunication, is very interested in solving this problem. Today at the World Knowledge Forum, Dr. Thomas spoke on the future of the automotive industry, noting the importance of smart energy control and distribution.

"We're in a really exciting time. We're at the start of a global industry that's really going to change our lives for the better." The industry Dr. Thomson was referring to is the electric vehicle industry, a market he says is "still in its embryonic stage."

Dr. Thomson cited the various reasons for using electric vehicles in society, including a necessary reduction in pollution, rising oil prices, and the monetized health impact of poor air quality. "Our focus is to understand how we can move society towards a zero emission society," he said. Electric vehicles would be easier than another power source, he added, due to electricity's already widespread distribution network.

The current status of electric vehicles was also discussed. Dr. Thomson claimed, "The good news is there are a lot of car companies spending a lot of money on electric power trains." Electric vehicles have quite often been viewed as having a non-standard shape, but apparently companies are moving away from those designs. "Electric vehicles don't have to be funny little bubble cars," he said. In the future, Dr. Thomson declared, you will be able to go to a dealership, and after choosing the model of your car, you will then be able to choose the power source.

A point made was that the models are not limited to lightweight, economy-style cars. Currently in London, there is a Rolls Royce Phantom being tested with electricity as its power source. The car maker was worried the technology wouldn't work on a premium car.

Just how do we make electric cars more acceptable to the mainstream, aside from the body design? The answer, according to Dr. Thomson, is to make them low-cost, easy to use, and ubiquitous as far as charging. This raises another question, though. How do we make electrical charging ubiquitous?

"Right now charging is an event. You get out of your car and take a minute or two to plug in your car. If we charge little and often, we start to put that event in the background," he said.

Qualcomm is currently pioneering a wireless charging pad, wherein the batteries on your electric car charge simply by parking it over the pad. There are no cables and no need to remember to plug your car in. Dr. Thomson compared the current ubiquity of WIFI to the possible future implementation of the wireless pad.

"The pad is effortless to use, charges in small volumes, and has a high degree of tolerance to misalignment," he added. Along with the charging pad, Dr. Thomson also said, "We need the implementation of standards. There's something like 23 different plugs for charging." Having one single, universal pad, would certainly simplify the electric car experience. With further development, the pad could have the capability to charge your car while driving.

Great news for those who enjoy late night joy rides in the desert.