

SYMPOSIUM ON MILEAGE-BASED USER FEES: TECHNOLOGY WORKSHOP

Session 3: Nexus of Road User Fees and In-Vehicle Technologies

Speaker 5: Barry Einsig, Cisco

[“Monetizing Connected Vehicles”](#)

Slides 2-4

The Internet of Things – or the Internet of Everything (IoE) which is Cisco’s term – will connect things, people, processes and data together to create more intelligent connections and networks. Cisco is currently working on efforts to connect the 99% of things – including many aspects of the transportation system – that are not connected today.

Cisco released a report in January of 2013 discussing the economic value and global GDP impact of connecting the currently unconnected. This includes many aspects of the transportation system.

Slide 5-6: IoE Drivers and Connectivity Platform

Many factors will drive the development of the IoE. There are different types of information that might be connected: real time, scale, security, Big Data. All of these things require some sort of connectivity platform, which is where the IoE begins to add economic value.

Slide 7 – IoE Economy

Cisco’s Internet of Everything Economy Report is available at <http://cisco.com/tomorrowstartshere>.

Slides 8-9

Unlocking that economic value of connected vehicles is about a lot more than simply collecting user fees. The big picture is about the trip better taken. It is easy to focus on the automobile but there has to be discussion about mode shift. Travel has to be thought of in the context of all modes. If one mode is overburdened it will naturally cause a shift to another mode. Transportation has to be thought of from an eco-perspective, with modes acting as the subsystems that will ultimately drive travel decisions.

Slide 10 – Unlocking Economic Benefits

One way to unlock economic value is to reduce user fees associated with driving by developing new services provided equipment in the automobile. There are also societal benefits from reduced carbon emissions and lower congestion.

Slides 11-13

Consumers demonstrate that they do not value or enjoy their travel time because they text, use the phone, eat, and do many other things besides focus on the driving task. The question then becomes how to make the driving experience more enjoyable, which is where the economic value of connected vehicles and the IoE comes in.

Many companies are trying to figure out how to unlock the economic value of the IoE. This is driving the creation of a new ecosystem of connectivity, communications and infrastructure that can be exploited

for mileage-based user fees and much more. Parking services are one example that gets a lot of attention. The opportunities for exploiting economic value continue to grow with new artificial intelligence and vehicle-to-vehicle connectivity. Vehicles may soon provide value to drivers similar to the internet. For example, currently someone might go to Yelp to determine a destination, Google Maps to plan the route, and then input that information into the navigation system on their car. However, a vehicle connected to the IoE would be able to handle all of these functions within one in-vehicle system.

Slide 14 – Cisco’s Role

Cisco’s role is to help create this architecture and build something bigger than ITS infrastructure or connected vehicle infrastructure. Cisco wants multiple clouds with multiple energy sources creating multiple modes of communications.

Slide 15 – The Cisco Vision

We are re-thinking and changing the way we work, live, play and learn, and we are re-evaluating how we use our cars, how we drive, and how we charge for the experience to exploit the economic value of driving.