Opening Keynote: Looking out to the future – how geospatial technologies will change the way we think, plan and do – Charles Davies

Abstract

TomTom have three main areas of business:

- Automotive and Licensing - focusing on location technologies for applications
- Telematics – focusing on fleet management and connected car services
- Consumer – focusing on sports and navigation devices

They are now primarily business to business.

TomTom is transforming mobility through customer applications, with a vision of working to self-driving cars, mobility services and transport within smart cities.

Currently the biggest challenge is keeping up with the volume of global change, akin to elves moving the contents of a room around each night. Faster map update cycle time is a key area of focus, trying to update a customer's map in seconds.

Autonomous driving is not a straight forward step, there is a recognised evolution from Advanced Driver Assistance Systems, such as automatic emergency breaking and transferring lanes, to fully autonomous vehicles.

Charles asked, does the autonomous vehicle need a map? And answered, a map can augment with reality and work in harmony with the vehicles systems, providing pointers and base information, which will increase safety and decease processing time.

NMAs are in a similar situation to TomTom, investing deeply in mapmaking technology and processes and improving map update cycle times.

- TomTom's primary purpose is to transform mobility through customer applications
- The benefit of collecting and process data is not realised until the customer receives an update
- Reporting problems and fixing them is very hard in real time
- May spend the next decade on getting real world change to customer in near real time
- Lots of Advance Driver Assistance Systems (ADAS) already in use, such as automatic braking, assistive/adaptive cruise control to changing lane with indicating
- Tesla are at level 2 for ADAS to Autonomous Driving (AD)
- Level 3 is automatic driving with humans intervening in an emergency, this is generally thought to be a bad idea as humans will not naturally be able to be ready for an emergency at any point on a journey that involves them not doing anything, as such vehicles are likely to go as far in stage 2 as possible then jump to stage 4.
- Vehicles will not only need a map but to receive data over the air taking feedback from other cars to improve base data
- At the end of the presentation there were discussions on who owns the data from sensors. There is no easy answer and it is a very hot topic at the moment, car manufactures feel it is their data and lots of the data will be in proprietary formats.