

## Career History- Christopher Wilson

Chris Wilson is currently the Vice President of ITS Strategy and Programs for DaimlerChrysler Research and Technology North America Inc. He has been with the company for ten years, holding various technical and managerial positions during that time. The primary focus of Chris's work at DaimlerChrysler is the development of and deployment models for Location Based Safety Systems. He has initiated several industry wide projects towards this end, and is internationally recognized as a leader in this field.

- 1996-1997            Developed techniques and algorithms for the collection of GPS data from vehicles, and processing that data to provide precise information as to road geometry and the presence of traffic controls. Published several seminal papers on map support for automotive safety.
- 1998-2002            Managed a research group developing location aware safety applications. Further developed probe based map refinement systems. Initiated and managed DaimlerChrysler involvement in two industry wide projects to further investigate map utility.
  - *Rollover Stability Advisor* worked with US DOT and Freightliner to develop truck rollover warning systems based on speed and curvature-curvature derived from probe data collected from previous transits. This system is now deployed in Freightliner vehicles.
  - *Enhanced Digital Maps*- a \$10M, 3 year project working with Ford, GM, Toyota, US DOT, and Navtech to evaluate safety benefits of map based safety applications. Conclusions were very positive about the potential benefits, however technology and deployment considerations were still significant barriers. This work also spawned NextMap activities in Europe.
- 2002-2004            Managed a research group developing location based applications, and developing communications technology and algorithms for disseminating maps, location, and state informations between vehicles, and between vehicles and infrastructure.
  - Chris developed the technical concept and was the primary evangelist for the *Vehicle Safety Communication* project (\$6m, 2 years) to evaluate communications options for interchange of location and map data between vehicles. All major vehicle manufacturers and US DOT participated in this effort. Conclusions were that DSRC showed unique and significant opportunity. Deployment strategy still not clear.
- 2005-2007            Managed corporate strategy towards ITS research, in particular through cooperative and government programs. Oversaw all projects in ITS space. Developed three new initiatives.
  - *Vehicle Infrastructure Integration (VII)*- This is an ongoing project (currently \$150M and 4 years) to develop deployment plans for dedicated vehicle-vehicle and vehicle-infrastructure communications in order to support transportation safety, efficiency, and mobility. Participants include major vehicle manufacturers, US, State and local DOTs, and several other stakeholders and technology providers. Chris developed the

original concepts and worked with US DOT to introduce them to the community, and acted as the primary public and private evangelist for this project for the first few years. Founding board member of the VII Consortium. One of the primary goals of VII is to enable the collection of massive amounts of low value probe data from (eventually) every vehicle, along with the processing of that data to determine the state of the transportation network, and real time dissemination of real time maps to vehicles for safety, mobility and efficiency applications.

- The *Cooperative Intersection Collision Avoidance System (CICAS)* program (\$30M, 5 years, several vehicle manufacturers, US DOT and some states and universities.) is a key application for VII deployment. It may provide early benefits and save thousands of lives and billions of dollars based on avoiding red light and stop-sign violations through communications of control locations and light phases to vehicles. Chris evangelized the project, developed the Concept of Operations for this system, and manages DaimlerChrysler's involvement in the project.
- *Enhanced Places of Interest* is a DaimlerChrysler program to develop rich content for use in navigation systems. With the web becoming geo-aware, it is possible to provide personalized information to drivers based on preferences (tags or categories) and location. This is intended to collect information about places beyond the shops and services available. Chris has been working with various online communities to develop an ecosystem where content is created that can be consumed without watching a screen, fed to devices that deliver the content appropriately (navigation systems, location enabled cell phones, etc), then provide rankings and feedback on the content. The goal is to create a virtuous (and financially sustainable) spiral of ever more stories about places.
- Chris also manages the *Vehicle Safety Communications-Augmentation* project (\$8M, 5 years), intended to develop vehicle-vehicle safety applications to a point where they can be deployed.

Prior to joining DaimlerChrysler, Chris worked at Fastline developing traffic management systems for DOTs, vehicle navigation and entertainment systems for vehicle manufacturers. Before that he was at TRW where he developed the first off-board navigation system using early maps and the paging network to provide services. He also developed one of the earliest Automatic Collision Notification Systems in the early 1990s.

Chris has a degree in Physics from Princeton University. He has attended several professional development courses in engineering, business and communications over the years. He is a member of several professional societies, and serves on several transportation industry and location industry committees and boards.