Connected Vehicle Dynamic Mobility Applications for INFLO

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In support of USDOT's Intelligent Transportation Systems' (ITS) Mobility Program, several of the Department's agencies are fully engaged in exploiting active interaction between fixed and mobile transportation system entities both in the way new forms of data are being exchanged and in the opportunities that are afforded to extend the geographic scope, precision and control of our Nation's surface transportation system. An important initiative within the framework of this strategic effort is the Dynamic Mobility Applications (DMA) program which, in part, seeks to create applications that fully leverage frequently collected and rapidly disseminated multi-source data gathered from connected travelers, vehicles and infrastructure, and that increase efficiency and improve individual mobility while reducing negative environmental impacts and safety risks. Under this program, the USDOT has identified a portfolio of ten high-priority mobility applications, including a common bundle collectively identified as Intelligent Network Flow Optimization, or INFLO. The three applications under the INFLO bundle will ultimately help to maximize roadway system productivity, enhance roadway safety and capacity, and reduce overall fuel consumption. These three applications are: • Queue Warning (Q-WARN); • Dynamic Speed Harmonization (SPD-HARM); and • Cooperative Adaptive Cruise Control (CACC). This philosophy moving forward is to identify applications that can be deployed in the near-term is in keeping with the USDOT's goals of quickly moving these applications from the research stage to adoption in the field. The purpose of the INFLO project is to facilitate concept development and needs refinement for the INFLO applications and assess readiness for development and testing. The research identified in this Assessment will form the basis for the current state definition of the concept development. The purpose of this paper/abstract is to discuss this project, the exciting applications involved in INFLO and the status of the research and development associated with this effort.