MBTA Real-Time
Massachusetts Bay Transportation Authority
Boston, MA

TrafInfo is part of a team working on this innovative project called the MBTA Real-time. The project involves developing a web-based portal to provide real-time information across all modes including commuter rail, rapid transit, light rail, bus and water transportation.

As part of the project, TrafInfo is currently supporting the software development and is involved in various aspects including SQL server database development, web-based user interface using JavaScript, as well as back-office components using the .NET framework and the C# programming language.

In addition, TrafInfo has been tasked with three others tasks: 1) Conduct of a vendor survey to solicit information on real-time transit information system; and 2) Conduct a GPS and cellular signal strength testing on the MBTA's light rail surface routes; and 3) Assist in preparing bid documents to procure a GPS-based vehicle tracking system.

TrafInfo conducted a detailed vendor survey to collect information of real-time transit information systems currently available in the market. A total of four vendors were contacted including ACS, NextBus, Trapeze and INIT. Information collected included real-time vehicle location, passenger loading and parking; prediction algorithms; prediction under various operational situations; and methods of information dissemination. The information was compiled and a set of common capabilities among the various vendors identified. These common capabilities were utilized by the prime consultant to develop a bid document for a real-time information system for buses.

TrafInfo measured the signal strength of both the GPS and cellular wireless networks along the surface portions of the four light rail routes on the MBTA system. The GPS quality was assessed in terms of signal strength as well as the number of satellites visible at any time. The cellular signal strengths were tested for both the CDMA as well as GSM networks. The data was collected once every minute and plotted in ArcGIS to identify areas of limited GPS and cellular signal coverage.

TrafInfo participated in the compilation of bid documents for a GPS-based tracking system. The MBTA bid document requirements were reviewed and information about the functional requirements of the system was translated in specifications and special provisions for the bid documents.