

- Regional Transit Signal Priority Implementation Program (*Mark E. Pitstick, Gerry Tumbali - Regional Transportation Authority, Daryl Taavola – URS Corporation*)

On behalf of regional transportation stakeholders, the Regional Transportation Authority (RTA) is leading a comprehensive effort to implement a regionally coordinated and interoperable Transit Signal Priority (TSP) system. TSP systems use technology to identify transit vehicles and adjust traffic signals to allow the transit vehicles to progress through signalized intersections by advancing or extending the green phase. This can help reduce transit travel times, improve bus schedule adherence and reduce vehicle-operating costs.

The regional program is being developed and will be implemented in coordination with regional stakeholders including the Chicago Transit Authority (CTA), Pace Suburban Bus (Pace), the Chicago Department of Transportation (CDOT), and the Illinois Department of Transportation (IDOT). Program objectives include the establishment of regional standards and guidelines for the design, implementation, operation and maintenance of a multi-jurisdictional TSP system. An interoperable system will allow for Pace and CTA buses with different types of on-board equipment to successfully make TSP requests at traffic signals that are operated by CDOT, IDOT or other local DOTs.

The TSP system proposed for this program will address four key technological objectives:

1. Maximize the use of existing on-board equipment to generate TSP requests
2. Establish standards-based communication protocols between buses and intersections
3. Utilize readily available off-the-shelf communication technology for vehicle to intersection communications
4. Leverage TSP communications infrastructure for other transit ITS applications

The presentation will focus on the systems engineering process that is being followed in order to achieve these objectives.

