

DATA LINK FOR GPS RANGE APPLICATIONS PROGRAM



Richard G. Baldwin

Thomas J. Macdonald

The Analytic Sciences Corporation (TASC)

Reading, Massachusetts 01867

ABSTRACT

The Range Applications Joint Program Office (RAJPO) was formed to develop a family of NAVSTAR Global Positioning System (GPS) range equipment for the Tri-Service national test range community. TASC has supported the RAJPO in analyzing the potential use of GPS-derived Time Space and Position Information (TSPSI) in test and training range activities, developing functional and performance parameters for a family of GPS range equipment, and aiding in the resolution of technical issues. This paper describes the Data Link System (DLS) which will be an integral part of the proposed GPS range instrumentation system. The DLS provides a means to transfer GPS-derived TSPSI data from multiple vehicles to a central location. The major focus of the paper is on defining the DLS performance requirements to the detailed parameter level. A description of the data link operations is also included to provide insight into the functions of each of the US components.