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16. Abstract <p>The project has been focused on National Transportation Communications for ITS Protocol (NTCIP) research and testing across the entire life cycle of traffic operations, ITS, and statewide communications deployments. This life cycle includes design, development, operations, and maintenance. Specifically, the research efforts have resulted draft Florida Specific NTCIP MIBs for CCTV and ASC based on the functional requirements of these ITS devices. In addition, NTCIP-compliance testing procedures have been developed according to the draft MIBs.</p> <p>The testing procedures for CCTV utilize macros that are developed to work with the free and open-source software NTCIP Exerciser. These macros are intended to facilitate some degree of automation for the NTCIP testing and to provide a high-level functional interface between a tester and the device under test.</p> <p>The testing procedures for ASC rely on the Alternative NTCIP Testing Software (ANTS) which is developed by the research team at the Traffic Engineering Research Lab (TERL) of FDOT. The ANTS utilizes the open-source Python scripting language which makes it possible to communicate using SNMP messages between a computer and a controller through a serial or Ethernet port.</p>					
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