

## CONTROL TECHNOLOGIES, INC. CAPABILITIES

Control Technologies, Inc. (CTI) is a Virginia based computer systems integration firm serving organizations in both the public and private sectors for over 32 years. CTI specializes in the implementation of intelligent transportation systems and the implementation of command and control systems for NASA. The company consists of highly skilled computer and engineering professionals that specialize in various scientific and business applications ranging from real-time process control systems for the transportation, aerospace, and defense industries, to management information systems for government and business.

This unique organization has the combination of both the resources and skills necessary to provide the efficient design, development, implementation, and enhancement of a wide range of computer systems. CTI's experience encompasses a history of diverse applications on a wide variety of equipment, including the development of software systems for multiple satellites for NASA and the implementation of ITS systems for over 30 municipalities.

### GENERAL CAPABILITIES

CTI has in-depth experience in a variety of computer related activities from real-time systems, to business application. Representative of application types are:

- Intelligent Transportation Systems - Studies, Designs and Implementations
- Traffic Control Systems
- Real-time Process Control Systems
- Satellite Command and Control Systems
- Freeway Surveillance Systems
- Telecommunications/Network Management
- Real Time Workzone ITS Systems
- **Fog Detection Systems**
- High Resolution Real-time Graphics Systems
- CCTV and Surveillance Systems
- Intrusion Detection Systems
- Variable Message Sign and Amber Alert Systems
- Fiber Optic Network Design and installation
- Language and Hardware Platform Conversions
- Professional Engineering and Consulting Services



### SYSTEMS ENGINEERING

In the area of Systems Engineering, CTI provides technical expertise with interactive, real-time and communication systems. These systems cover the spectrum of business and scientific applications, as well as the operation of minicomputers and networked client server applications. Representative of these are:

- Hardware and software design trade-off analysis and studies
- Feasibility studies and cost benefit analysis of various proposed computer configurations
- Transition and migration plans to support new equipment acquisitions
- Hardware/software performances analysis
- Design of computer interfaces between diverse computers
- High-level requirements for projects
- Design of user interfaces





**SOFTWARE DESIGN**

In the area of Software Design, the following are representative of the types of service which CTI provides:

- Feasibility studies and implementation plans for existing systems
- Design, development, implementation and maintenance of real-time spacecraft command and telemetry monitoring systems
- Development of software to manage and optimize the use of onboard spacecraft computer memory
- Development of Payload Operations Control Center software to support multiple satellites
- Design, development, and implementation of intelligent traffic management systems
- Feasibility studies and implementation of upgrading current urban traffic control systems
- Design, develop and implement Freeway Surveillance Systems
- Develop software protocols compatible for ITS technologies including NTCIP and most legacy devices
- Design studies for implementation of ITS technologies into existing transportation systems
- Design and develop local 170 and 2070 controller software for both signal and freeway implementations

CTI is SEI and CMMI Level 3 certified for providing Software and Systems Engineering for its command and control systems.

Control Technologies, Incorporated

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