



# CUSTOM SOFTWARE

Unique Solutions for Unique Requirements

*Broad range of languages and development tools*

*Experience with Windows and Linux platforms*

*Work independently or as part of an integrated team*

Ingenicomm's custom software design and development services aim to leverage modern high-performance computing architectures to deliver optimized solutions for unique mission requirements. Ingenicomm offers software engineering capabilities that span the range from enterprise application architecture to driver development, and cover all stages of all the software life cycle, including architecture and design, implementation, and integration and testing.

## **CORE LANGUAGES**

- C/C++
- C#
- Java
- Perl
- Python

Ingenicomm's software engineers are proficient with a variety of operating systems, programming languages, and development tools. They have extensive experience with ground system and ground network environments from stand-alone components to full integrated systems, including spacecraft telemetry and command processing components, network transfer and protocol conversion frameworks, recording and playback components, automated scheduling and performance monitoring sub-systems, remote system monitoring and control components and proxies, and full front-end processor, network gateway, and modem software suites.

## **CORE TOOLS**

- Microsoft Visual Studio 6, .NET, and 2008/2010
- Eclipse and NetBeans
- Intel Parallel Studio
- GNU Compiler Suite
- Perforce and Subversion

Ingenicomm's software expertise can be leveraged through independent development efforts or as part of an integrated engineering team. Ingenicomm's engineers have experience with waterfall, spiral, and iterative models of software development, as well as agile and rapid development techniques.

Ingenicomm's engineers provide a comprehensive range of software documentation, including architecture and design documents, user and operations guides, interface specifications, and maintenance manuals. Direct integration of user or maintenance documentation into delivered software packages is available on request.

## **CORE EXPERTISE**

- Telemetry and command processing
- Spacecraft simulation, testing, and verification
- CCSDS and TDM protocols
- Protocol translation and data distribution
- RF to IP data capture and processing
- Data archiving and retrieval
- Scheduling and data quality metrics
- Custom encoding and encapsulation

Ingenicomm specializes in the standardization of ground network elements, enabling interoperability while providing customized solutions to meet the unique requirements of individual missions. For more information, or to request a price quote, please contact us at [info@ingenicomm.net](mailto:info@ingenicomm.net).

