Interoperable C4I Services (ICS) is Northrop Grumman’s principal C4I product. It offers a unique set of capabilities facilitating the creation, visualisation and distribution of the Common Operational Picture (COP). ICS is based on the same software delivered for the Common Operating Environment (COE) on which systems such as the Global Command and Control System are built. This ensures interoperability with other COE-based systems and allows ICS customers to take advantage of the same benefits enjoyed by these systems. ICS provides a foundation for C4I systems, offering core services such as Track Management, Communications, Data Correlation, Geographic Display, Picture Presentation, Decision Aids and Planning Tools. The extensible architecture allows additional third-party applications to be incorporated to provide mission specific services.

ICS is available for both Microsoft Windows® and Unix hardware configurations with identical capabilities offered. The Microsoft Windows® capability provides the potential benefits of:

- Reduced initial infrastructure costs
- Reduced infrastructure training costs
- Reduced ongoing maintenance costs
- Interoperable with existing UNIX deployments

The ICS Track Management capability can correlate data from multiple sources to create a COP, these include:

- Global Command and Control System (GCCS)
- Tactical Data Links (TDL)
- Integrated Broadcast Service (IBS)
- Automatic Dependent Surveillance-Broadcast (ADS-B)
Features

- **Operating System**
  - Microsoft Windows® or Unix versions available

- **Communications**
  - Data exchange with wide variety of systems using standard formatted messages
  - Multiple live data feeds into single ICS Server
  - High Speed Tactical Data Links (Link11/Link16)

- **Data Correlation**
  - Automatic correlation of data from multiple contact reports to form a single synchronised picture
  - Track comparison and merge tools to aid manual resolution of conflicting or ambiguous reports

- **Track Management**
  - Visualisation using standard military symbology MIL-STD-2525B and NTDS
  - High performance database for track persistence
  - Powerful track database search facilities

- **Geographic Display**
  - Multiple geographic map views
  - Support for a wide variety of map and image data
  - Filtering on geographic area of interest and data attributes

- **Decision Aids and Planning Tools**
  - Full support for Mil-STD-2525B Tactical Overlays
  - Includes Sites, Routes, Formations, Air Tasking Order and Airspace Control Order Visualisation

ICS allows access to its foundation services in an open development environment via a series of Application Programming Interfaces available through Software Developer Kits.

Benefits

- Reduced through life cost
- Information from multiple data sources combined into a single COP
- Improved sharing of situational awareness data in support of Operations in the Joint environment
- Mapping interface supporting operational and intelligence planning
- Interoperability with other key allied force systems
- Minimal operator intervention required to manage the COP
- Data-rich COP available on a choice of fully capable, functionally equivalent UNIX® or PC clients
- Provision of framework and services needed for network-centric warfare
- Multi language support