

## LESSONS IN HISTORY

### The Great Kipton Train Wreck

On April 18, 1891, eight people died when two trains collided just east of the train depot in Kipton, Ohio. An accident investigation found that one train engineer used a watch that was four minutes slow.

The train wreck, caused by lack of time-keeping standards, drove a technological innovation. In 1893 the great American railroad watch, unrivaled in quality and reliability, was developed and the railroad industry implemented watch performances and inspection standards.

### The Great Baltimore Fire

On the morning of February 7, 1904, fire spread quickly through the Hurst building in Baltimore, Maryland. An alarm sounded, activating all the fire companies in the Baltimore and Washington, DC areas. The DC fire departments discovered that their hoses did not fit the hydrants in Baltimore. Firefighters finally extinguished the fire by the following evening; the fire destroyed 140 acres, more than seventy blocks, and 1,526 buildings. This disaster, highlighting the need for interoperability, led to the formation of the American National Standards Institute which published standards for pipes and threads about ten years later. Once again, tragedy led to technological innovation and standards implementation.

## Geospatial Intelligence Standards

The National Geospatial-Intelligence Agency (NGA) is the Functional Manager for geospatial intelligence (GEOINT) standards. NGA, under its charter, is assigned the responsibility to prescribe and mandate standards for imagery, imagery intelligence, and geospatial information for all Department of Defense (DoD) components and the Intelligence Community (IC).

The Director of NGA, retired Air Force Lt. General James R. Clapper, Jr., authorized the establishment of the National Center for Geospatial Intelligence Standards (NCGIS) on September 18, 2002. The NCGIS was created to support a standards-based approach to transforming the enterprise architecture of the National System for Geospatial-Intelligence (NSG).

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► **NGA**



## National Center for Geospatial Intelligence Standards

STANDARDS

► NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY

*The Foundation for Interoperability*

# THE NATIONAL CENTER for GEOSPATIAL INTELLIGENCE STANDARDS (NCGIS)

## Mission

The mission of the NCGIS is to execute the responsibilities of the Director, National Geospatial-Intelligence Agency (NGA) as Functional Manager for geospatial intelligence (GEOINT) standards. The Center does this by setting, implementing, and being an advocate for GEOINT standards and standards management processes and policies that promote interoperability and operational efficiency across the National System for Geospatial-Intelligence (NSG) community.

The NSG community includes the Department of Defense (DoD) and the Intelligence Community (IC), and, when and where appropriate, federal civil agencies and NGA's international mission co-producers and partners.

## Leading the Way Through Geospatial Intelligence Standards

Through the NCGIS, NGA provides leadership to the NSG community for geospatial intelligence standards that support technological advances in the use of imagery, imagery intelligence, and geospatial data.

Geospatial intelligence standards are those standards that support elements of a geospatial intelligence infrastructure, such as data, data constructs, data services and interfaces;

they enable repeatable processes by which information interoperability can be measured. Examples include:

- Geospatial Intelligence Metadata
- Imagery Content and Format
- Geographic Feature Encoding
- Geospatial Reference
- Information Transfer
- Geographic Portrayal
- Geospatial Intelligence Reporting
- Data Compression

By enabling effective, timely, and affordable geospatial intelligence through the use of common geospatial intelligence standards, the NCGIS supports realization of war-fighter and mission capabilities envisioned in DoD's Joint Vision 2020 and the strategic interoperability goals of the Defense Standardization Program.

## NCGIS Drives Cost-Effective Geospatial Intelligence Standards

The NCGIS works towards leveraging acquisition investments, as well as research and development initiatives, to encourage industry to meet the standardization requirements of the NSG. The use of common standards-based solutions can reduce system life-cycle costs by minimizing custom solutions and their associated maintenance costs. Encouraging the commercial market to develop and validate new open interfaces consistent with enterprise architecture needs can also reduce technology risks. These interoperability gains can be extended to production partners and customer.

## NCGIS GOALS

- **Goal 1**  
Advance geospatial intelligence interoperability.
- **Goal 2**  
Advocate geospatial intelligence standards relevant to future NSG environments.
- **Goal 3**  
Foster key relationships and innovative partnerships to coordinate, adopt and sustain geospatial intelligence standards.

## NCGIS CORE VALUES

- **Customers**  
We are committed to providing effective and timely geospatial intelligence standards and standardization information and services that meet the needs of our DoD, intelligence, civilian and international customers.
- **Production Partners**  
We are committed to partnering with our production partners in the development of standards to support future joint operations involving geospatial intelligence and geospatial intelligence production.
- **Realization of the Common Operational Picture**  
We recognize that those we serve require reliable information with a common geospatial foundation. To that end, we will champion standards that ensure geospatial intelligence data and information is accurately described, interoperable and easily accessible.
- **The NSG**  
We support the Director of NGA's role in leading the NSG as Functional Manager for standards, and we are committed to developing a comprehensive, enterprise-wide standards management policy with a suite of standards that enable interoperability across the NSG.

*...enabling effective, timely, and affordable geospatial intelligence through*

# STANDARDS