

About This Standard

Current Status *Emerging*

Standard Identifier HDF v5

Title of Standard

Hierarchical Data Format (HDF), Version 5, release 1.4.2, National Center for Super Computing Applications, 4 October 2001

Standards History

Introduced to Registry	Date Emerging	Date Mandated	Last Status Update	Last Status Review	Inactive/Retired
2003-04-04	2003-04-04	n/a	2003-04-04	2008-11-20	n/a

Standards Body

[NCSA](#)

[Broken Link?](#)

URL to Access or Acquire

<http://www.hdfgroup.org/HDF5/index.html>

Working Group

Primary Owner

Geospatial Intelligence (GWG)

Secondary Interest

No Secondary Interest

Service Areas

Application-specific Data Interchange
GEOINT: Geospatial

KIPs

No KIP Found

Standard Applicability

2008-11-04

Hierarchical Data Format (HDF) was developed by the National Center for Supercomputing Applications (NCSA) to facilitate interchange of scientific data. It is used in many fields including environmental science, oceanography, and atmospheric modeling. It emphasizes storage and I/O efficiency for use in the storage, archiving and transmission of large datasets like images, multidimensional arrays, structures and tables. HDF organizes data as a digraph, with Groups and Datasets as primary objects. Secondary and tertiary objects can be created for subsetting and assigning parameters to data, and each object may have more than one path to it. HDF provides a set of APIs which can be used to access the data or subsets without knowledge of the actual format. For large or complex data sets that are interchanged between environmental data processing systems, the standard is emerging.

2007-02-27

Hierarchical Data Format (HDF) was developed by the National Center for Supercomputing Applications (NCSA) to facilitate interchange of scientific data. It is used in many fields including environmental science, oceanography, and atmospheric modeling. It emphasizes storage and I/O efficiency for use in the storage, archiving and transmission of large datasets like images, multidimensional arrays, structures and tables. HDF organizes data as a digraph, with Groups and Datasets as primary objects. Secondary and tertiary objects can be created for subsetting and assigning parameters to data, and each object may have more than one path to it. HDF provides a set of APIs which can be used to access the data or subsets without knowledge of the actual format. For large or complex data sets that

are interchanged between environmental data processing systems, the standard is emerging.

2003-10-03

Hierarchical Data Format (HDF) was developed by the National Center for Supercomputing Applications (NCSA) to facilitate interchange of scientific data. It is used in many fields including environmental science, oceanography, and atmospheric modeling. It emphasizes storage and I/O efficiency for use in the storage, archiving and transmission of large datasets like images, multidimensional arrays, structures and tables. HDF organizes data as a digraph, with Groups and Datasets as primary objects. Secondary and tertiary objects can be created for subsetting and assigning parameters to data, and each object may have more than one path to it. HDF provides a set of APIs which can be used to access the data or subsets without knowledge of the actual format. For large or complex data sets that are interchanged between environmental data processing systems, the standard is emerging.

Standard Abstract

2003-04-04

HDF5 is a completely new Hierarchical Data Format product consisting of a data format specification and a supporting library implementation. HDF5 is designed to address some of the limitations of the older HDF product and to address current and anticipated requirements of modern systems and applications.

Profiling Questions

**Application-specific
Data Interchange
GEOINT: Geospatial**

- Does your system exchange large or complex data sets between environmental data processing systems?
- Does your system interchange scientific data, i.e. environmental science, oceanography, atmospheric modeling and geospatial?

Products Incorporating This Standard

None

Relevant Information

This citation was authored by the GWG Application Schemas for Feature Encoding (ASFE) Focus Group.

Implementation Guidance

None

Standard Selection Criteria

Interoperability/Supportability

Since HDF provides for data storage, retrieval, and exchange of large, complex data structures, it provides the basis for sharing of information between many widely dispersed users accessing that data over the Web and other communications facilities.

Technical Maturity

Developed jointly between NCSA and Lawrence Livermore National Laboratory

Public Availability

<http://www.hdfgroup.org/HDF5/index.html>

Implementability

Implemented by NCSA, used in NASA's Earth Observing System (EOS)

Authority

Developed by National Center for Supercomputing Applications.

Standard Type Non-Military

Standard Classification Unclassified

Keywords for Search APIs, Application programming interface, HDF, Hierarchical Data Format, data exchange, data retrieval, data storage, data structure, diagraph, images, multidimensional arrays, tables