Getting Started with HDF

Draft, Version 3.2
May 1993

University of Illinois at Urbana-Champagin

Table of Contents

Chapter 1: Introducing HDF

1.1 HDF at a Glance 1

1.2 What Is HDF? 2

1.3 Why was HDF created? 3

1.4 Why Use HDF? 3

- HDF is a versatile file format 4
- HDF is an extensible file format 4
- HDF files are self-describing 5
- HDF is a flexible file format 5
- HDF is a portable file format 7
- HDF is a FORTRAN and C callable library 7
- HDF is available in the public domain 8

Chapter 2: The HDF Data Models

2.1 Introducing the Data Models Supported by HDF 10

2.2 The 8-bit Raster Model 10

2.3 The Palette Model 12

2.4 The 24-bit Raster Model 13

2.5 The Scientific Data Model 14

2.6 The Annotation Model 15

2.7 The Vdata Model 16

Chapter 3: The Bare Necessities for Reading and Writing Data

3.1 Introducing the Application Interfaces Supported by HDF 18

3.2 HDF and the 8-bit Raster Interface 19
- Writing an 8-bit Raster Image to an HDF File 19
- Reading an 8-bit Raster Image from an HDF File 21

3.3 HDF and the Palette Interface 24
- Writing a Palette to an HDF File 24
- Reading a Palette from an HDF File 26

3.4 HDF and the 24-bit Raster Image Interface 27
- Writing a 24-bit Image to an HDF File 27
- Reading a 24-bit Raster Image from an HDF File 30

3.5 HDF and the Scientific Data Interface 33
- Writing Scientific Data to an HDF File 33
- Reading Scientific Data from an HDF File 36

3.6 HDF and the Annotation Interface 38
- Writing a File Description 38
- Reading a File Description 40

Chapter 4: HDF Utilities and Software Applications

4.1 Introducing the HDF Utilities 44

4.2 The HDF Inquiry Utilities 45
- hdfls 45
- hdfed 46
- hdfseq/hdfrseq 46

4.3 The Raw Data to HDF Conversion Utilities 46
- r8tohdf 47
- paltohdf 47
- r24hdf8 47
- fp2hdf 48

4.4 The HDF to Raw Data Conversion Utilities 48
- hdftor8 49
- hdftopal 49

4.5 The HDF to HDF Conversion Utilities 49
- ristosds 50
- hdf24to8 50
- fp2hdf 50

4.6 The HDF Compression Utilities 50
- hdfpack 51
- hdfcomp 51

4.7 Introducing Applications that Support HDF 51