User View

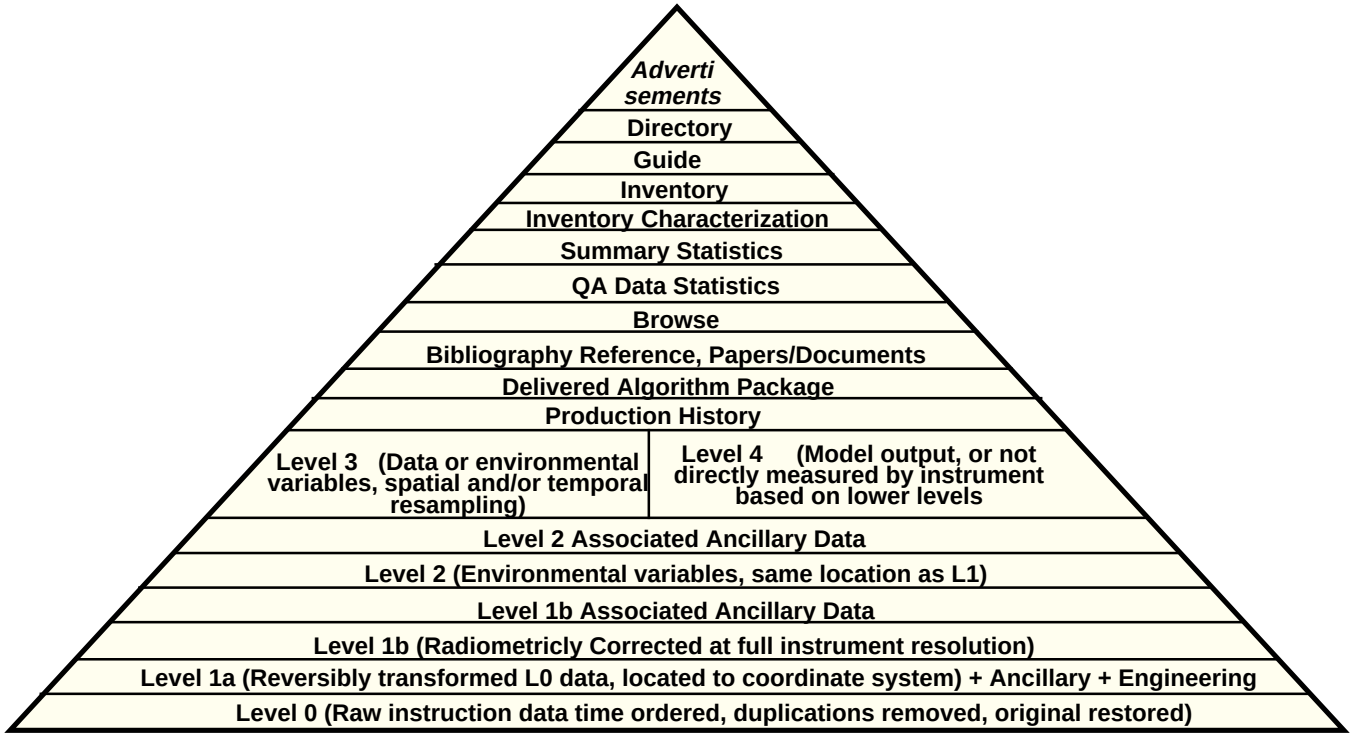
Graham Bland

grahamb@eos.hitc.com

ECS Release A SDPS/CSMS Critical Design Review
14 August 1995

User View

The established user view is represented by the data pyramid



User View vs. Data Model

User View

- Represents user views of data holdings
- Changes through time and from location to location
  - content of layers
  - availability/existence of layers
- Metadata not normalized
  - the same attributes appear in multiple layers
- Does not represent required relationships well

Data Model

- Required to
  - capture requirements
  - facilitate database implementation
- Static for given definitions of data
- Represents analyzed view of data (especially metadata)
- Metadata normalized
- Shows exact relationships

Implementation of User Views at Release A

Implemented in different CSDTs

- **Upper layers (metadata in directory, inventory) in database tables**
- **Lower layers (Product levels 0-4) in HDF and native formats**
- **'Middle' layers have many implementations**
- **Different CSDTs within a layer**

Means of access vary

- **V0 client**
  - **Has fixed definition of search attributes and contents of directory**
  - **Fixed search attributes for inventory**
  - **Fixed keyword and free text access to HTML based guide**
  - **Product order and browse**
- **Web interfaces**

User View at Release A - Metadata Layers

Layers/ESDTs	CSDT	Physical Implementation	Interface/ Access path
Directory	Access table.	Sybase Database tables.	search / retrieve via V0 Client
Inventory	Access table.	Sybase Database tables.	search / retrieve via V0 Client
Inventory characterization.	Access table.	Sybase Database tables.	none (except as pre-constructed)
Advertisements.	Access table.	Sybase Database tables.	Advertising Web

User View at Release A - Middle Layers (1 of 2)

Layers/ESDTs	CSDT	Physical Implementation	Interface/Access path
Guide	Documents	HTML	search / display via V0 Client (or RLS-A Document Web)
Summary statistics	N-Dimensional Array, Science Data Table, ASCII text, Image.	HDF-EOS structures.	(a) search / retrieve via V0 Client direct & via Processing Options
QA data statistics	(a) N-Dimensional Array, Science Data Table ASCII text, Image. (b) Access Table.	(a) HDF-EOS structures. (b) Sybase Database tables.	(a) retrieve via V0 Client (Processing Options) (b) retrieve via V0 Client (granule information)
Reference Papers	Documents	HTML, ASCII, RTF, PDF.	search / retrieve via RLS-A Document Web

User View at Release A - Middle Layers (2 of 2)

Layers/ESDTs	CSDT	Physical Implementation	Interface/ Access path
Delivered Algorithm Package	(a)Documents, (b) Code, N-Dim. Array, Science Data Table, P=V Metadata, ASCII text.	(a) HTML, ASCII, RTF, PDF. (b) binary files; HDF - EOS structures.	(a) search / retrieve via RLS-A Document Web (b) search / retrieve via RLS-A DAP Web
Production Plans	Documents.	HTML, ASCII, RTF, PDF.	search / retrieve via RLS-A Document Web
Production History	(b) Documents (b) Access Tables.	(a) HTML, ASCII, RTF, PDF. (b) Sybase Database tables.	(a) retrieve via V0 Client (Processing Options) (b) retrieve as report via V0 Client (Processing Options)
Browse	N-Dim.array, Science Data Table, Image, P=V Metadata, ASCII text.	HDF-EOS RIS (palettes & lossy compression; 8 & 24 bit).	retrieve /display via V0 Client (Browse option)
Non-geolocated ancillary & engineering Data	N-Dim.array, Science data table, Image, P=V Metadata, ASCII text.	HDF-EOS structures, Native formats.	(a) retrieve dynamic data via V0 Client (Processing Options) (b) retrieve static data via DAP Web interface

User View at Release A - Products

Layers/ESDTs	CSDT	Physical Implementation	Interface/ Access path
Geolocated ancillary data	Grid, Swath, Point	HDF-EOS structures, Native formats.	(a) search / retrieve /display dynamic data via V0 Client direct &/or via Processing Options. (b) retrieve static data via DAP Web interface
Level 1,2,3,4 data; level 0 data; & engineering data.	Grid, Swath, Point; N-Dim.array, Science data table, Image, P=V Metadata, ASCII text.	HDF-EOS structures, Native formats.	search / retrieve /display via V0 Client (EOSView)

Implementation of User View at Release A

User View document also covers

- For products
  - Core attributes mapped to V0 search parameters

    (directory, inventory, browse, product order)
- For documents
  - Search attributes assigned as part of design work

    (reference paper, delivered algorithm package, guide, production plans)
- Data dictionary for all modeled attributes

Document Tree

Data Modeling

SDPS
Database Design
& Database Schema
Specifications
(311-CD-002-003)

User View

Preliminary User View
of Release A Data
(Technical Paper
420-TP-005-001)

Data Population

Metadata Data
Population Process
(Technical Paper
420-TP-006-001)

User Guides