

SEDRIS™

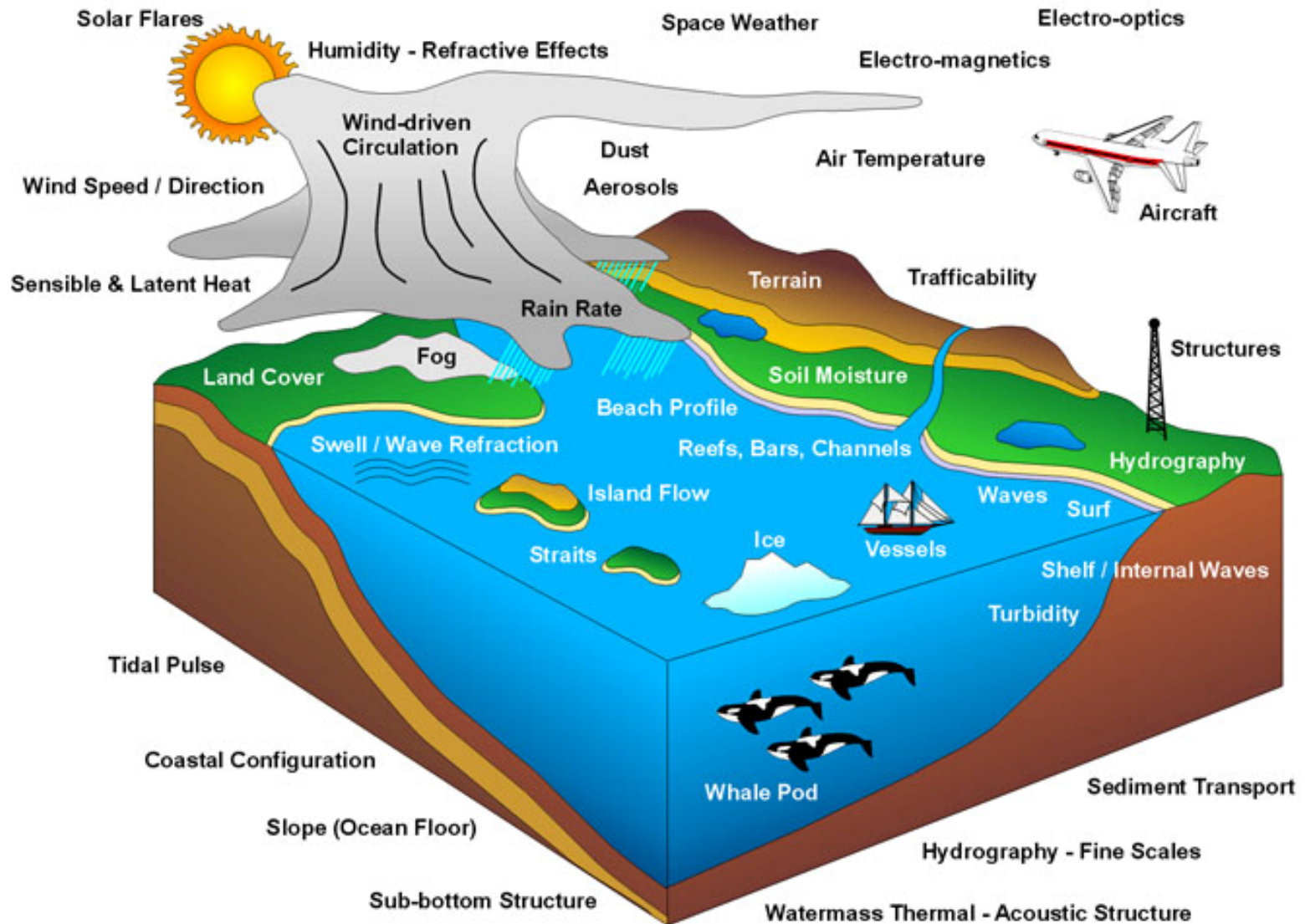
Environmental Representation Standards for M&S Interoperability

<http://www.sedris.org>

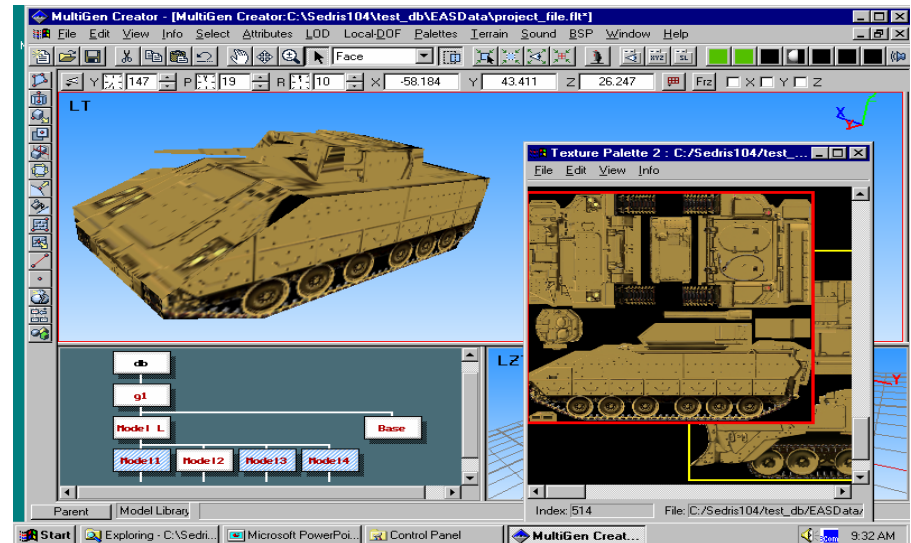
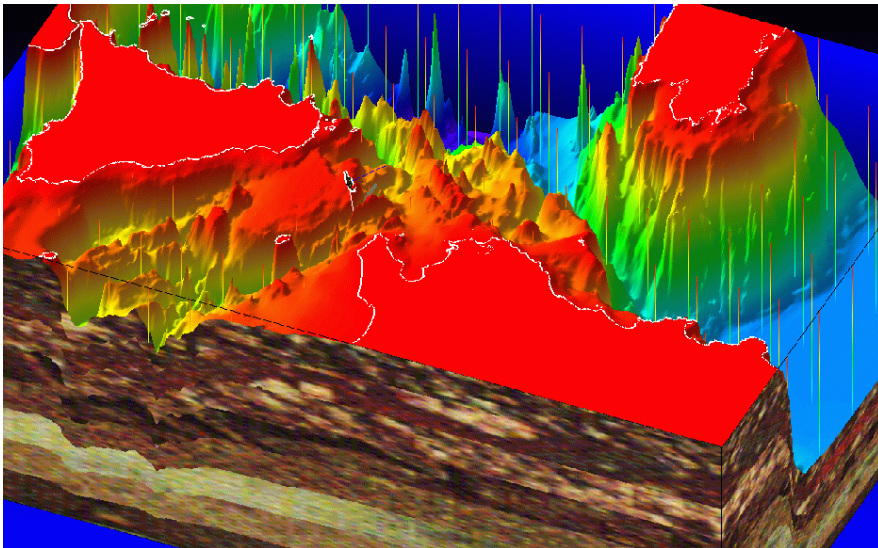
**I/ITSEC 2005
Orlando, Florida
28 Nov - 1 Dec 2005**

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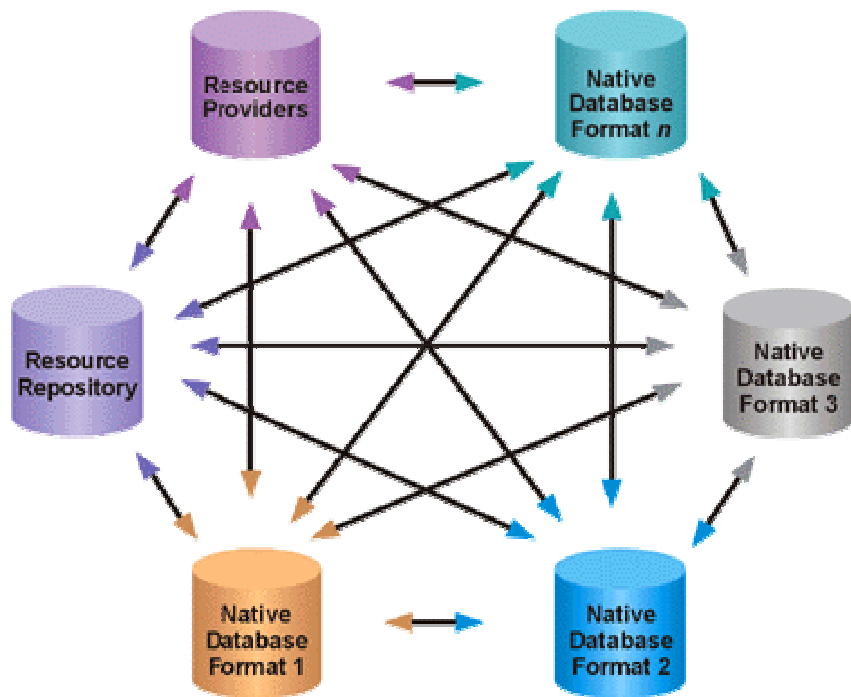
All Environmental Data



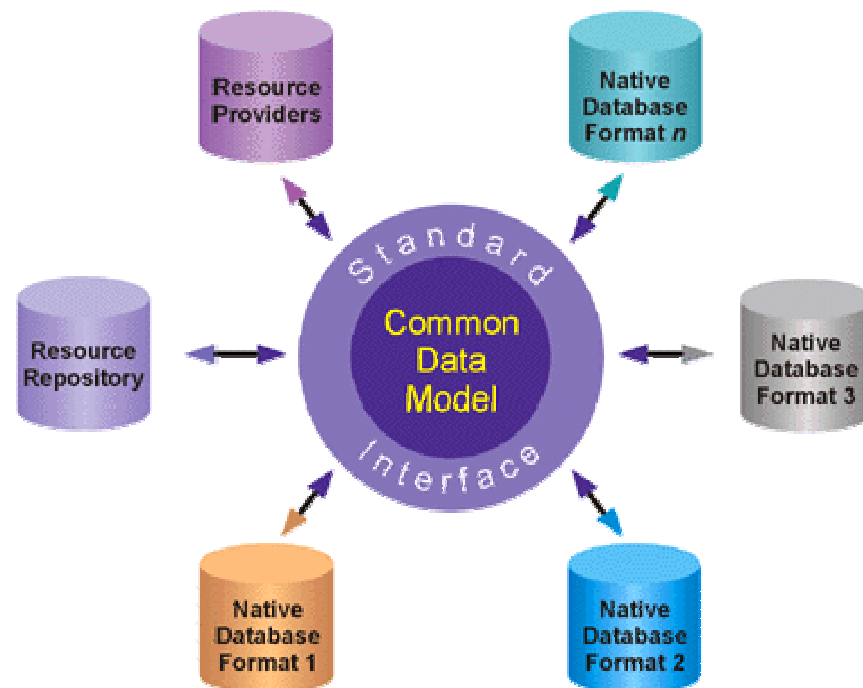
Interoperability: Environmental Data Used for Different Applications & Purposes



Adopting A Middleware Approach



- Expensive and time consuming
- Often unreliable and non-interoperable
- Unique conversion needed for each source
- Increase in sources geometrically increases number of conversions



- Significant reduction in conversion cost
- Higher reliability, interoperability, integration, and reduction of correlation error
- Common and open standards, tools, and software reuse

The SEDRIS Solution



- SEDRIS provides cost-effective technology for the **unified representation and interchange** of environmental data (eliminates expensive recurrent costs)
 - Compatible **across domain boundaries**
 - Covers **multiple product formats**
- SEDRIS supports both **legacy and new** environmental data applications
- SEDRIS technology use decreases both initial (development) and recurring (maintenance and update) costs. Value maximized when using **joint and networked** applications.
- SEDRIS tools **improve validation quality and decrease validation time**. Without these tools, it is difficult to validate environmental data and find errors.

SEDRIS Technology Components



SEDRIS Data Representation Model (DRM)

DRM, EDCS, and SRM are used together to describe the environment

Gives the constructs to express and “shape” environmental data

SEDRIS Spatial Reference Model (SRM)

Makes the environmental description readable in other coordinates

SEDRIS Application Program Interface (API)

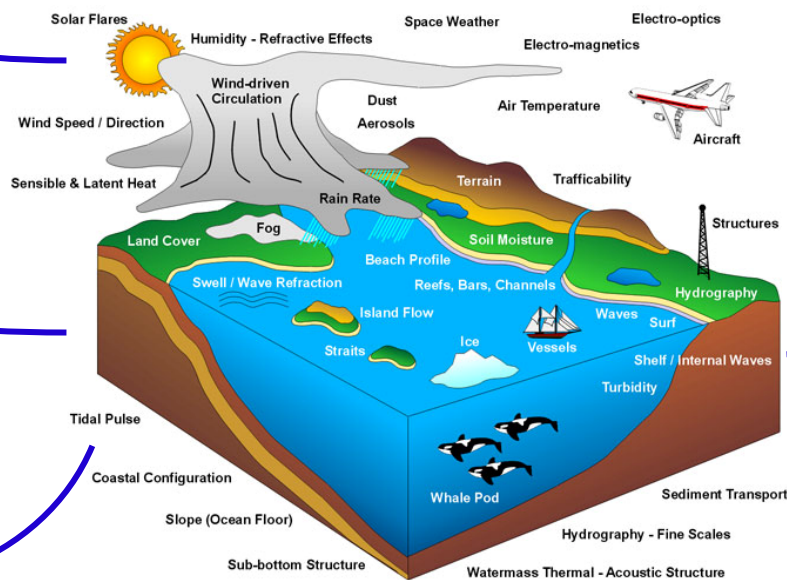
Provides software access to individual elements of environmental data

Environmental Data Coding Specification (EDCS)

Names and identifies types of objects in an environmental description

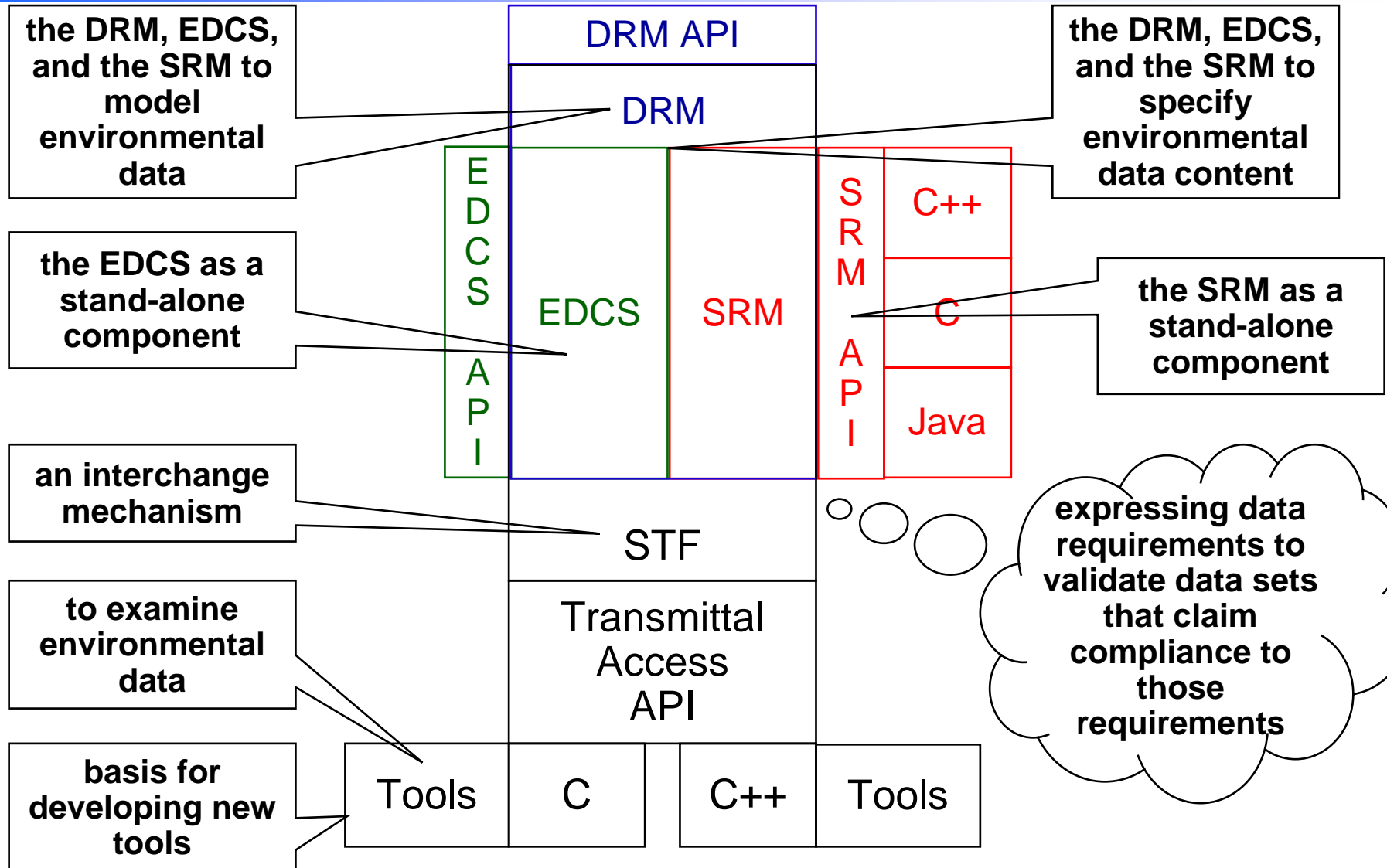
SEDRIS Transmittal Format (STF)

Transfers complete “chunks” of environmental data



API and STF are used to exchange the description of the environment

Using the SEDRIS Components



SEDRIS ISO / IEC Standards



Eight SEDRIS specifications - international standards in 2005/06

International standards — published June-July 2005:

Environmental Data Coding Specification (EDCS) - ISO / IEC 18025

EDCS C Binding - ISO / IEC 18041-4

At final draft international standard (FDIS) stage:

SEDRIS Functional Specification (DRM and API) - ISO / IEC 18023-1

SEDRIS Abstract Transmittal Format - ISO / IEC 18023-2

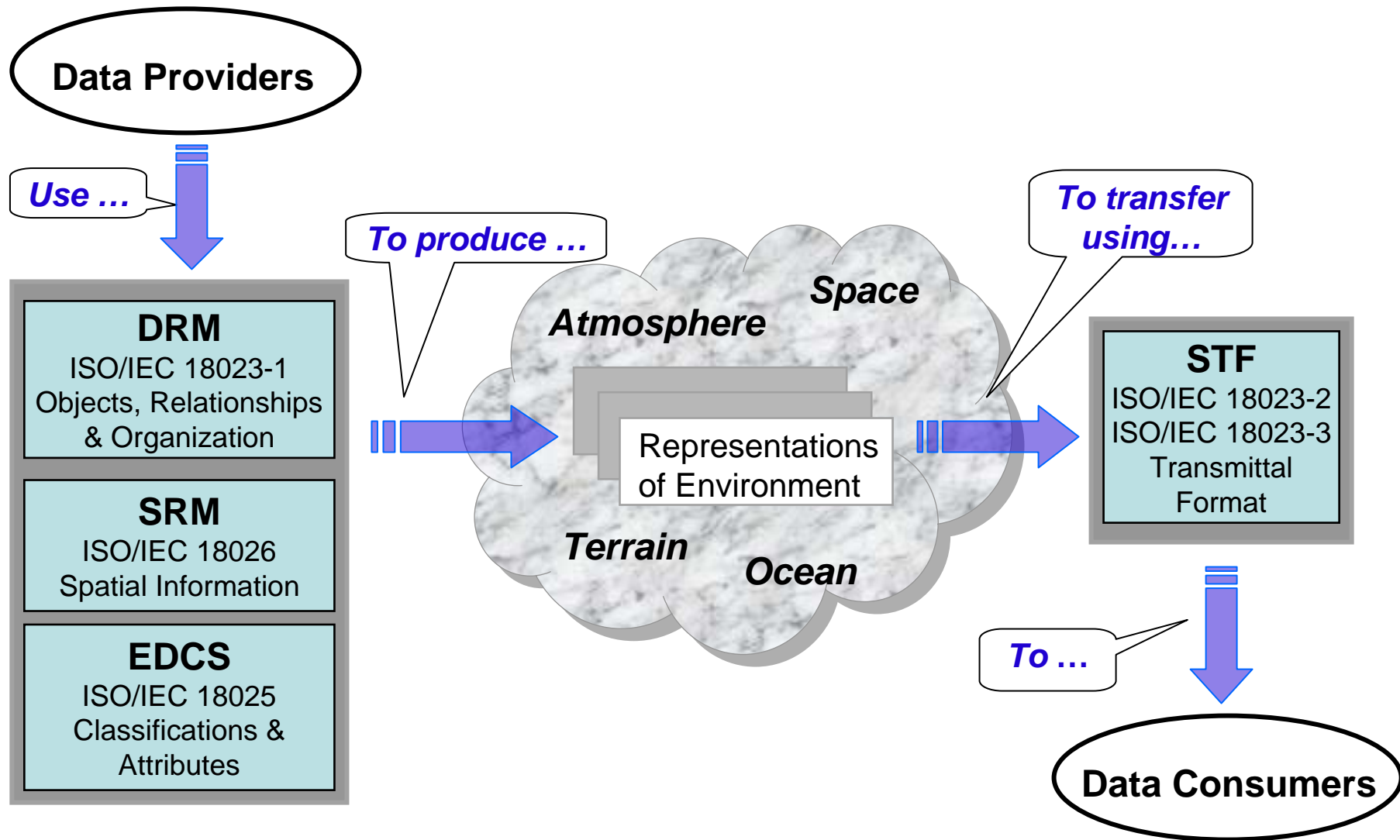
STF Binary Encoding - ISO / IEC 18023-3

SEDRIS C Binding - ISO / IEC 18024-4

Spatial Reference Model (SRM) - ISO / IEC 18026

SRM C Binding - ISO / IEC 18042-4

How SEDRIS is used - Conceptual



More information



- Open source software SDK releases, videos of tutorials, papers
- SEDRIS technology components (EDCS, SRM, DRM, API)
- Proceedings from past conferences

Available at <http://www.sedris.org>

- Free tools & utilities, and pointers to commercial tools

Available at <http://tools.sedris.org>

- Data samples

Available at <http://data.sedris.org>

- Questions

Can be sent to help@sedris.org

- ISO/IEC standards activities

Information at <http://wg8.sedris.org>