

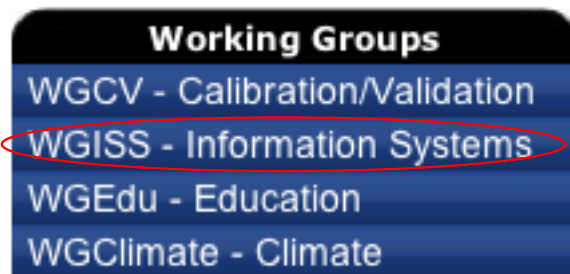
# WGISS / CEOS

Lubia Vinhas

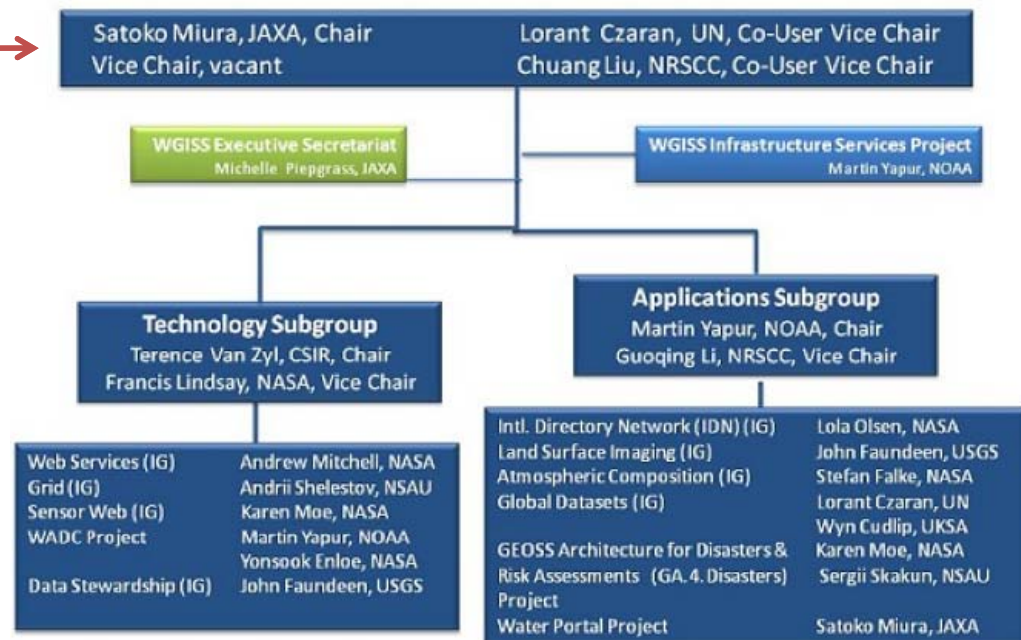
CAP-378 and “Conhecer para não ignorar”  
April 20, 2012

# CEOS Committee on Earth Observation Satellites

Coordinates civil space-borne observations of the Earth.  
 Participating agencies strive to enhance international coordination and data exchange and to optimize societal benefit



## WGISS Structure



### WGISS Menu

WGISS Home  
CEOS Home  
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Meetings  
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Liaisons

### Applications Subgroup

IDN Interest Group  
Land Surface Imaging Interest Group  
Atmospheric Composition Interest Group  
Global Datasets Interest Group  
GA.4.Disasters Project  
Water Portal Project

### Technology Subgroup

Web Services Interest Group  
Grid Interest Group  
WADC Project  
Sensor Web Interest Group  
Data Stewardship Interest Group

### WGISS Sub-Sites

WGISS Security Home Page

### Log In

User Name

Password

Remember Me

Log in

## WGISS Meetings

### Upcoming Meetings:

Meeting	Location	Host	Date
WGISS-33	Tokyo, Japan	JAXA	April 23-27, 2012
WGISS-34	India	ISRO	Sept. 24-28, 2012

### Current Meetings:

WGISS-33 is scheduled for April 23 - 27, 2011 in Budapest, Hungary

- [WGISS 33 Agenda](#) (Update: March 12, 2012)

### Previous Meetings:

WGISS-32 is scheduled for September 26 - 30, 2011 in Budapest, Hungary

- [WGISS 32 Minutes](#)
- [WGISS 32 Agenda](#) (Update: December 7, 2011)
- [WGISS 31 Actions](#)
- [Pictures 1](#)

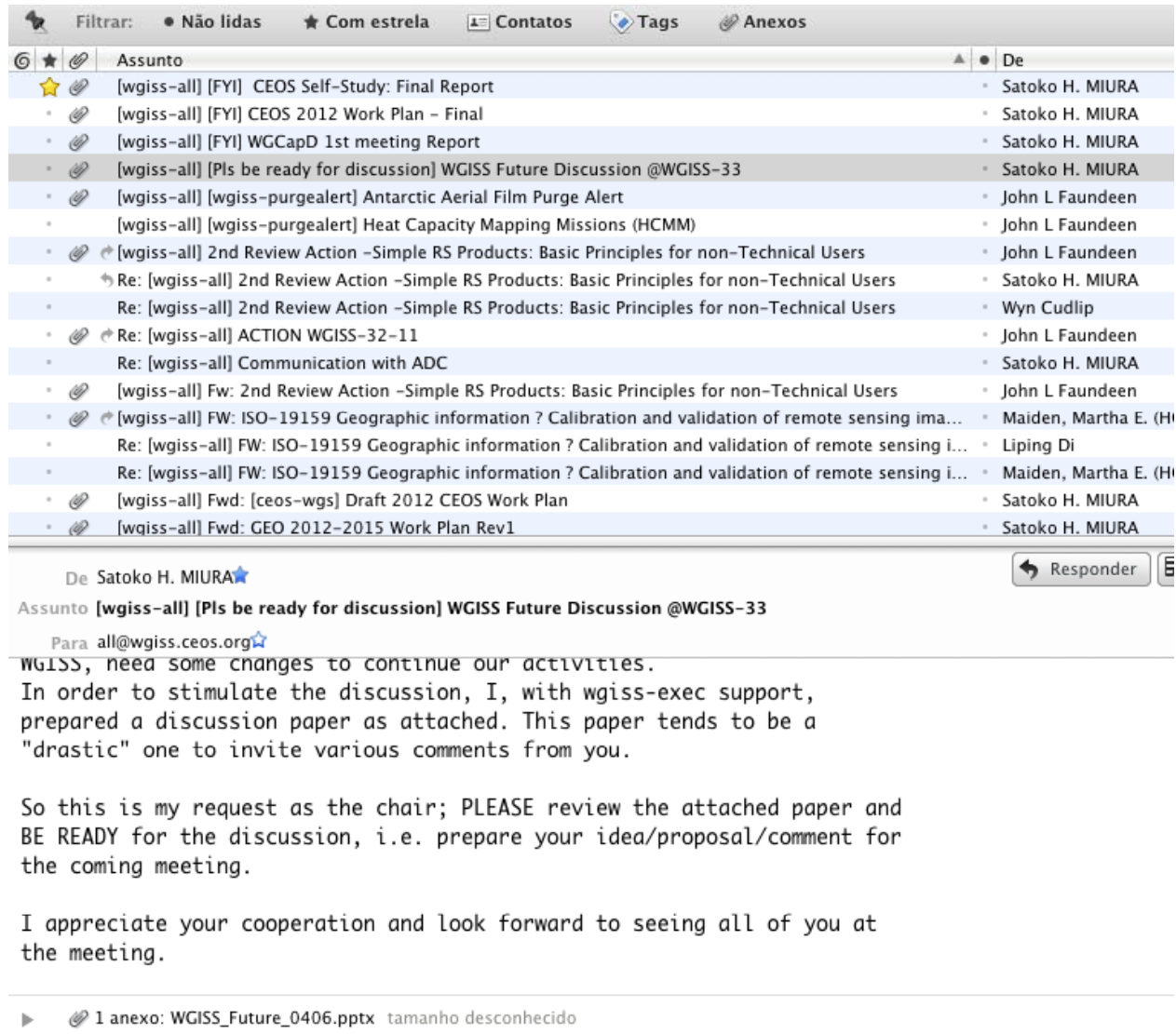
WGISS-31 Sioux Falls, South Dakota, June 13 - 17, 2011

- [WGISS 31 Minutes](#)
- [WGISS 31 Agenda](#) (Update: June 28, 2011 11:18)
- [WGISS 31 Actions](#)
- [Meeting Content Zipped](#)
- [Pictures 1, 2, 3, 4](#)

WGISS-30, Montreal, Canada, September 13-17, 2011

Proposal: WGISS-35  
in Brazil, INPE.

# Discussion lists and telecons



The screenshot shows an email client interface with a list of emails and the content of a selected email. The list includes various subjects related to WGISS, such as "CEOS Self-Study: Final Report", "WGCapD 1st meeting Report", and "WGISS Future Discussion @WGISS-33". The selected email is from Satoko H. MIURA with the subject "[wgiss-all] [Pls be ready for discussion] WGISS Future Discussion @WGISS-33".

**Assunto**

Assunto	De
[wgiss-all] [FYI] CEOS Self-Study: Final Report	Satoko H. MIURA
[wgiss-all] [FYI] CEOS 2012 Work Plan - Final	Satoko H. MIURA
[wgiss-all] [FYI] WGCapD 1st meeting Report	Satoko H. MIURA
[wgiss-all] [Pls be ready for discussion] WGISS Future Discussion @WGISS-33	Satoko H. MIURA
[wgiss-all] [wgiss-purgealert] Antarctic Aerial Film Purge Alert	John L Faundeen
[wgiss-all] [wgiss-purgealert] Heat Capacity Mapping Missions (HCMM)	John L Faundeen
[wgiss-all] 2nd Review Action -Simple RS Products: Basic Principles for non-Technical Users	John L Faundeen
Re: [wgiss-all] 2nd Review Action -Simple RS Products: Basic Principles for non-Technical Users	Satoko H. MIURA
Re: [wgiss-all] 2nd Review Action -Simple RS Products: Basic Principles for non-Technical Users	Wyn Cudlip
Re: [wgiss-all] ACTION WGISS-32-11	John L Faundeen
Re: [wgiss-all] Communication with ADC	Satoko H. MIURA
[wgiss-all] Fw: 2nd Review Action -Simple RS Products: Basic Principles for non-Technical Users	John L Faundeen
[wgiss-all] FW: ISO-19159 Geographic information ? Calibration and validation of remote sensing ima...	Maiden, Martha E. (H)
Re: [wgiss-all] FW: ISO-19159 Geographic information ? Calibration and validation of remote sensing i...	Liping Di
Re: [wgiss-all] FW: ISO-19159 Geographic information ? Calibration and validation of remote sensing i...	Maiden, Martha E. (H)
[wgiss-all] Fwd: [ceos-wgs] Draft 2012 CEOS Work Plan	Satoko H. MIURA
[wgiss-all] Fwd: GEO 2012-2015 Work Plan Rev1	Satoko H. MIURA

De Satoko H. MIURA

Assunto **[wgiss-all] [Pls be ready for discussion] WGISS Future Discussion @WGISS-33**

Para [all@wgiss.ceos.org](mailto:all@wgiss.ceos.org)

~~WGISS, need some changes to continue our activities.~~

In order to stimulate the discussion, I, with wgiss-exec support, prepared a discussion paper as attached. This paper tends to be a "drastic" one to invite various comments from you.

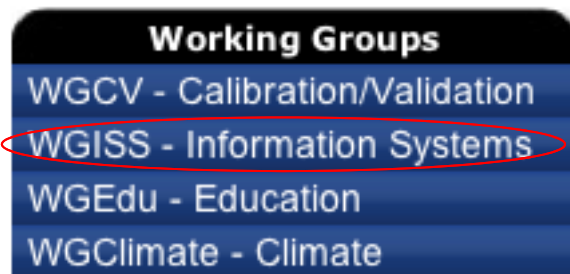
So this is my request as the chair; PLEASE review the attached paper and BE READY for the discussion, i.e. prepare your idea/proposal/comment for the coming meeting.

I appreciate your cooperation and look forward to seeing all of you at the meeting.

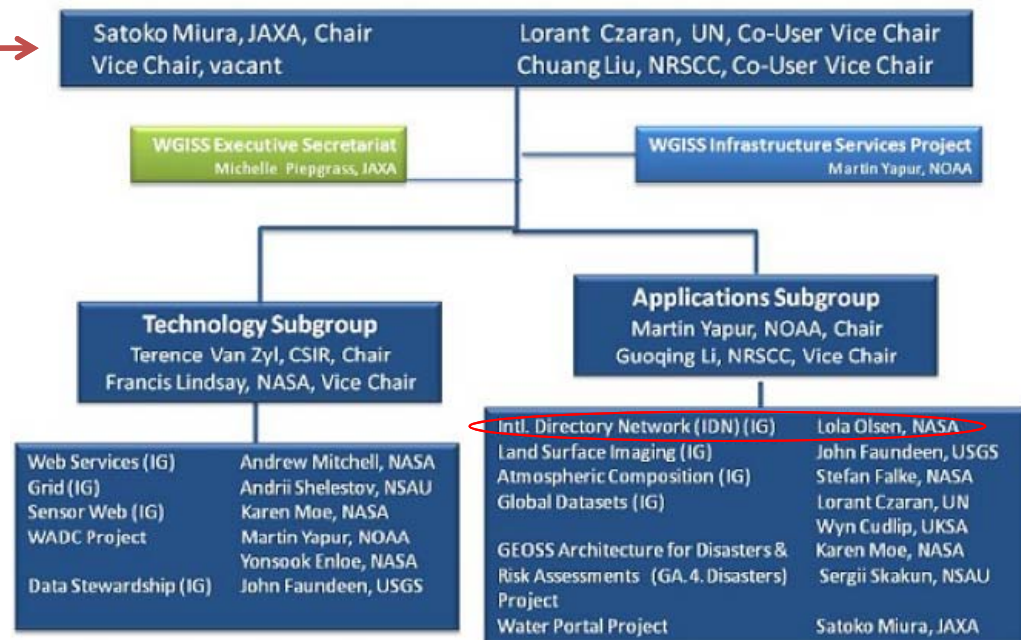
1 anexo: WGISS\_Future\_0406.pptx tamanho desconhecido

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## WGISS Structure



# NASA GCMD

The **Global Change Master Directory (GCMD)** holds more than 25,000 Earth science data set and service descriptions, which cover subject areas within the Earth and environmental sciences

<http://gcmd.nasa.gov/> (1989). Users can search through the Directory's website using controlled keywords, free-text searches, map/date searches or any combination of these. Users may also search or refine a search by data center, location, instrument, platform, project, or temporal/spatial resolution

The project also serves as one of NASA's contributions to the international Committee on Earth Observation Satellites (CEOS), through which it is known as the **CEOS International Directory Network (IDN)**

# CEOS IDN - DIF

The Directory Interchange Format (**DIF**) (1987) is the "container" for the metadata elements that are maintained in the IDN database, where validation for mandatory fields, keywords, personnel, etc. takes place.

DIF has full ISO compatibility, since it contains all the elements required by the ISO 19115/TC211 geospatial metadata standard

<b>DIF Fields</b> <small>Note: All fields denoted as either: <b>Required</b>, <b>Highly Recommended</b>, <b>Recommended</b>.</small>	
<a href="#">Entry ID</a>	<a href="#">Quality</a>
<a href="#">Entry Title</a>	<a href="#">Access Constraints</a>
<a href="#">Parameters (Science Keywords)</a>	<a href="#">Use Constraints</a>
<a href="#">ISO Topic Category</a>	<a href="#">Distribution</a>
<a href="#">Data Center</a>	<a href="#">Data Set Language</a>
<a href="#">Summary</a>	<a href="#">Data Set Progress</a>
<a href="#">Metadata Name</a>	<a href="#">Related URL</a>
<a href="#">Metadata Version</a>	<a href="#">DIF Revision History</a>
<a href="#">Data Set Citation</a>	<a href="#">Keyword (Ancillary Keyword)</a>
<a href="#">Personnel</a>	<a href="#">Originating Center</a>
<a href="#">Instrument</a>	<a href="#">Multimedia Sample</a>
<a href="#">Platform</a>	<a href="#">References (Publications)</a>
<a href="#">Temporal Coverage</a>	<a href="#">Parent DIF</a>
<a href="#">Paleo-Temporal Coverage</a>	<a href="#">IDN Node</a>
<a href="#">Spatial Coverage</a>	<a href="#">DIF Creation Date</a>
<a href="#">Location</a>	<a href="#">Last DIF Revision Date</a>
<a href="#">Data Resolution</a>	<a href="#">Future DIF Review Date</a>
<a href="#">Project</a>	<a href="#">Privacy Status</a>

<http://idn.ceos.org>

# GCMD

Revision of existing, and inclusion of new, datasets registered in GCMD: 50 in total and 14 related to CWIC

Showing 1 through 14 of 14

1. [IRS AWIFS Imagery \[INPE\\_IRS\\_AWIFS\]](#)  
AWIFS, aboard IRS ? P6 (RESOURCESAT-1), imagery held by **INPE**.
2. [LANDSAT-1 MSS Imagery \[INPE\\_LANDSAT1\\_MSS\]](#) PARENT DIF  
LANDSAT 1 MSS imagery held by the National Institute for Space Research (**INPE**), Brazil.
3. [LANDSAT-2 MSS Imagery \[INPE\\_LANDSAT2\\_MSS\]](#) PARENT DIF  
LANDSAT 2 MSS imagery held by the National Institute for Space Research (**INPE**), Brazil.
4. [LANDSAT-3 MSS Imagery \[INPE\\_LANDSAT3\\_MSS\]](#) PARENT DIF  
LANDSAT 3 MSS imagery held by the National Institute for Space Research (**INPE**), Brazil.
5. [LANDSAT-5 TM Imagery \[INPE\\_LANDSAT5\\_TM\]](#) PARENT DIF  
LANDSAT 5 TM imagery held by the National Institute for Space Research (**INPE**), Brazil.
6. [LANDSAT-7 ETM+ Imagery \[INPE\\_LANDSAT7\\_ETM+\]](#)  
LANDSAT 7 ETM+ imagery held by the National Institute for Space Research (**INPE**), Brazil.
7. [Terra 1 MODIS Imagery \[INPE\\_TERRA1\\_MODIS\]](#)  
Imagery from MODIS sensor, aboard Terra platform, held by **INPE**.
8. [Aqua 1 MODIS Imagery \[INPE\\_AQUA1\\_MODIS\]](#)  
Imagery from MODIS sensor, aboard Aqua platform, held by **INPE**.

Record Search Query: [\[Fretext='INPE'\]>\[Fretext='CWIC'\]](#)

**WFI - Wide Field Imager (CBERS 2) Imagery**

Entry ID: INPE\_CBERS2\_WFI

[\[ Get Data \]](#)

[\[ Update this Record \]](#)

#### Summary

**Abstract:** The CBERS-2 satellite is designed for global coverage and include cameras that make optical observations and a Data Collection System transponder to gather data on the environment. They are unique systems due to the use of on board cameras which combine features that are specially designed to resolve the broad range of space and time scales involved in our ecosystem.

The WFI has a ground swath of 890 km which provides a synoptic view with spatial resolution of 260m. The Earth surface is completely covered in about 5 days.

#### Related URL

Link: [GET DATA](#)

#### Geographic Coverage



(Click for Interactive Map)

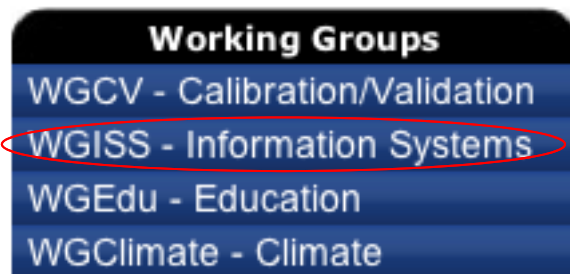
#### Spatial coordinates

N: 10.0 S: -60.0 E: -20.0 W: -85.0

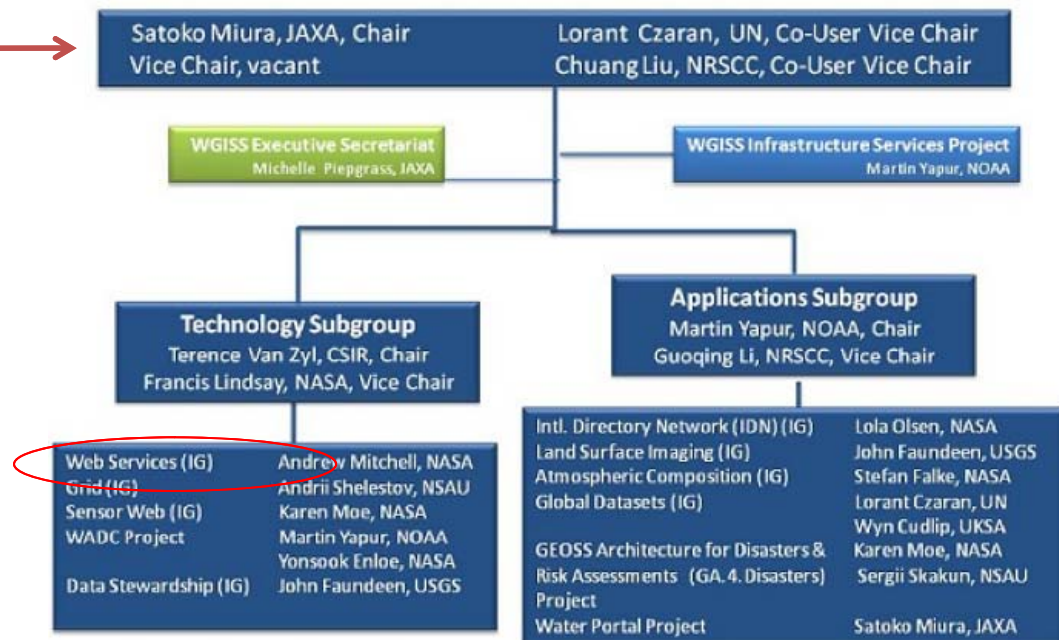


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## WGISS Structure



# OGC General Catalogue

Catalogue Abstract  
Information Model

General Catalogue  
Interface Model

Minimal query language  
Core queryable attributes  
Core returnable properties

Core Schema, expressed using the syntax of  
Dublin Core Metadata, ISO 15836. Simple: 15  
elements, as base text fields

extensions

ISO 19115 (19139): 7 categories of metadata  
elements. Ex. Information, constraints, quality, etc.

OASIS ebXML Registry Information Model (ebRIM)

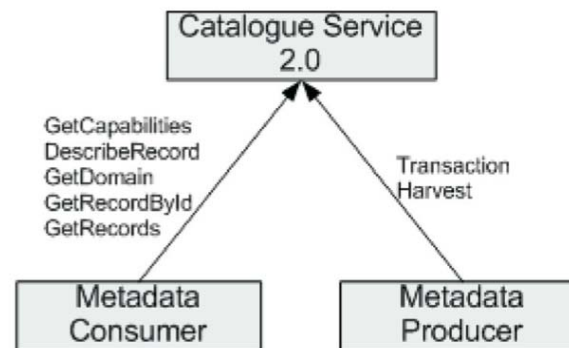
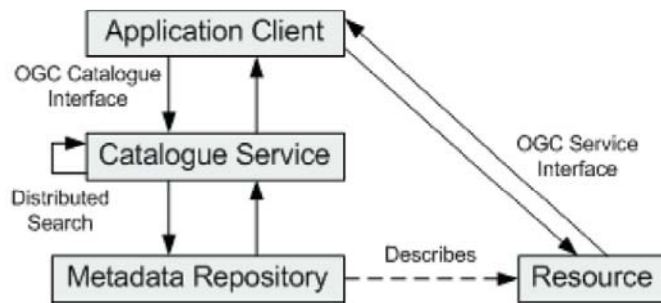
# OGC General Catalogue

Catalogue Abstract Information Model

General Catalogue Interface Model

Reference Model Architecture

Conceptual Architecture



General interfaces can be bound to several application protocols

HTTP  
Z39.50  
CORBA

## The IDN Adapts Earth Science Data Set Contributions for US GEO's GEOSS Data Core for Global Discovery

---

By Scott Ritz, GCMD Science Team Leader

The IDN plays an important role in making Earth science data sets discoverable by future scientists (students)—not just scientists throughout world. Through the IDN's Catalog Services for the Web (CSW), 20,985 metadata records in ISO-19115 format are available to the GEOSS portal. A subset of these records (contributed to the GCMD by US GEO partners) has been “tagged” to assure users that the particular data set is accessible free-of-charge or at-cost, according to the GEOSS Data-CORE guidelines. GEOSS Data CORE translates to “Data Collection of Open Resources for Everyone”. A Data-CORE compliant data set according to the GEOSS Data Sharing Plan is one that is “contributed by the GEO community on the basis of full and open exchange (at no more than the cost of reproduction and distribution) and unrestricted access”. When searching the GEOSS portal, users may perform specific searches for Data CORE-compliant data sets using these “tags”. The “tags”, as established by the GEOSS Data Sharing Task Force (DSTF), are “GEOSS Data Core” and “GEOSS No Monetary Charge”, respectively. There are currently 11,075 US GEO records in the IDN CSW collection that have been identified and tagged as Data CORE-compliant. The US GEO records, characterized by the Data CORE “tags” within, are currently available in the GEOSS Clearinghouse through the IDN.

Source: CEOS IDN Newsletter, September 2011

# CDSR – Remote Sensing Data Center

English

**INPE** Image Catalog [Register](#) [Log In](#)

**Basic Parameters**

Satellite

Instrument

Time Interval  Seasonal

From  /  /

To  /  /

Maximum Cloud Cover

Q1  Q2

Q3  Q4

Quick Look  Small  Big

**Passage Mosaic**

Date :  /  /  or Path :

Country City State

BRASIL manaus AM

Path Row

From  To  From  To

**By Region**

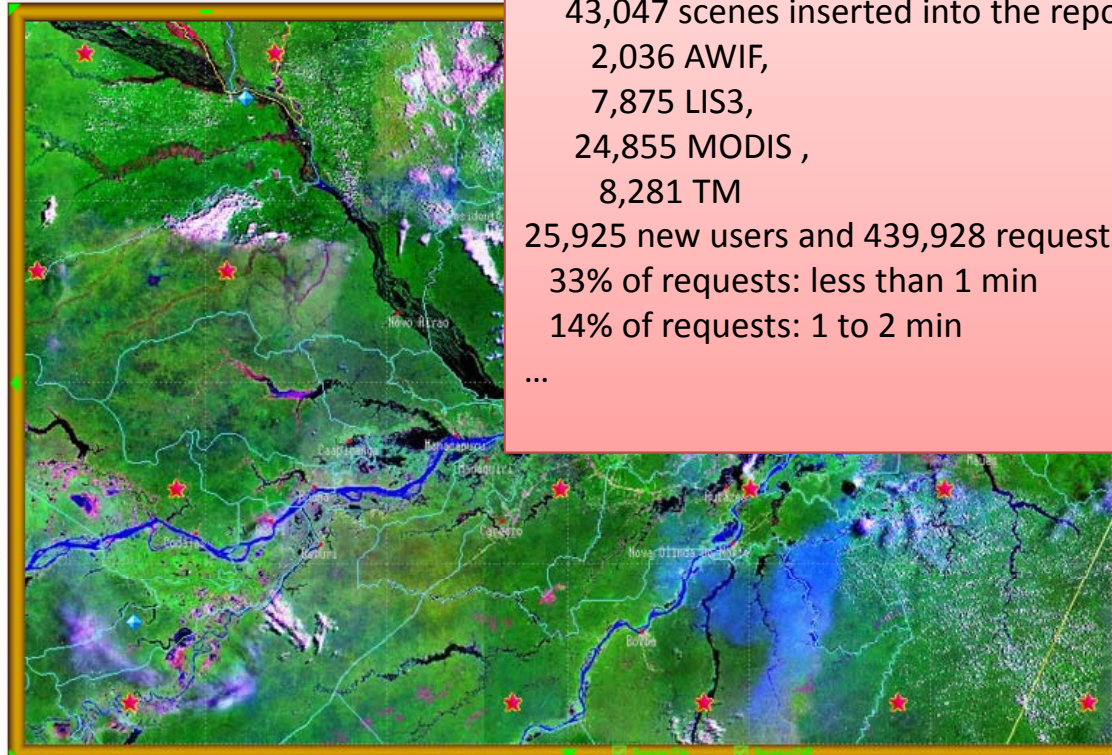
North

West  East

South

**Map Interface**

Lat  Lon



S05:00:00 O63:00:00

~ 1 million of scenes

From 01/01/2011 to 04/18/2012

43,047 scenes inserted into the repository:

2,036 AWIF,

7,875 LIS3,

24,855 MODIS ,

8,281 TM

25,925 new users and 439,928 requests

33% of requests: less than 1 min

14% of requests: 1 to 2 min

...

<http://www.dgi.inpe.br/CDSR/>

# CEOSS WGISS Integrated Catalog (CWIC)

CWIC provides an access point for major CEOS agency catalog systems

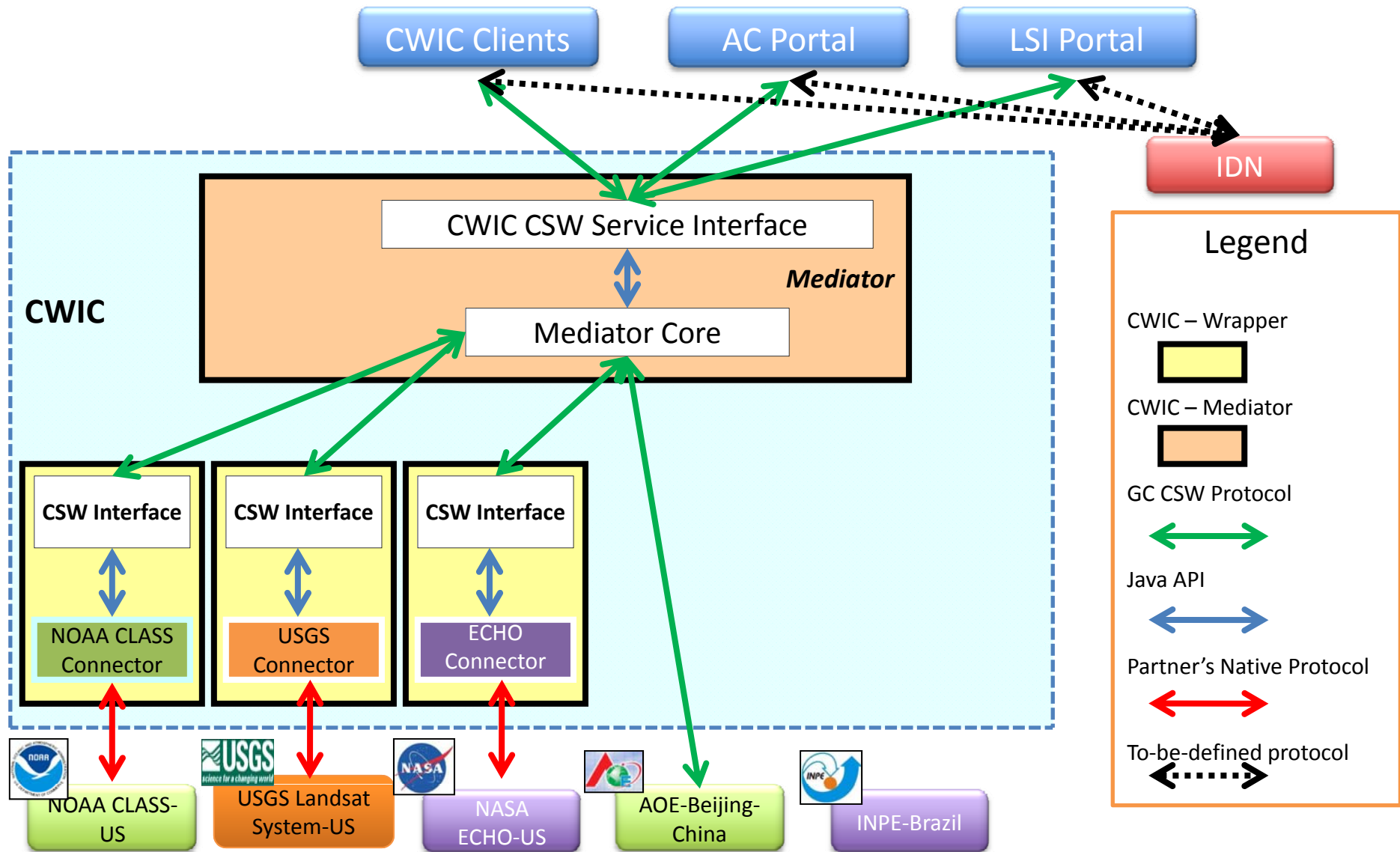
CWIC distributes inventory/product searches to the CEOS agency inventory systems **using the agency systems native protocol**

CWIC employs a mediator-wrapper architecture to fulfill distributed searches

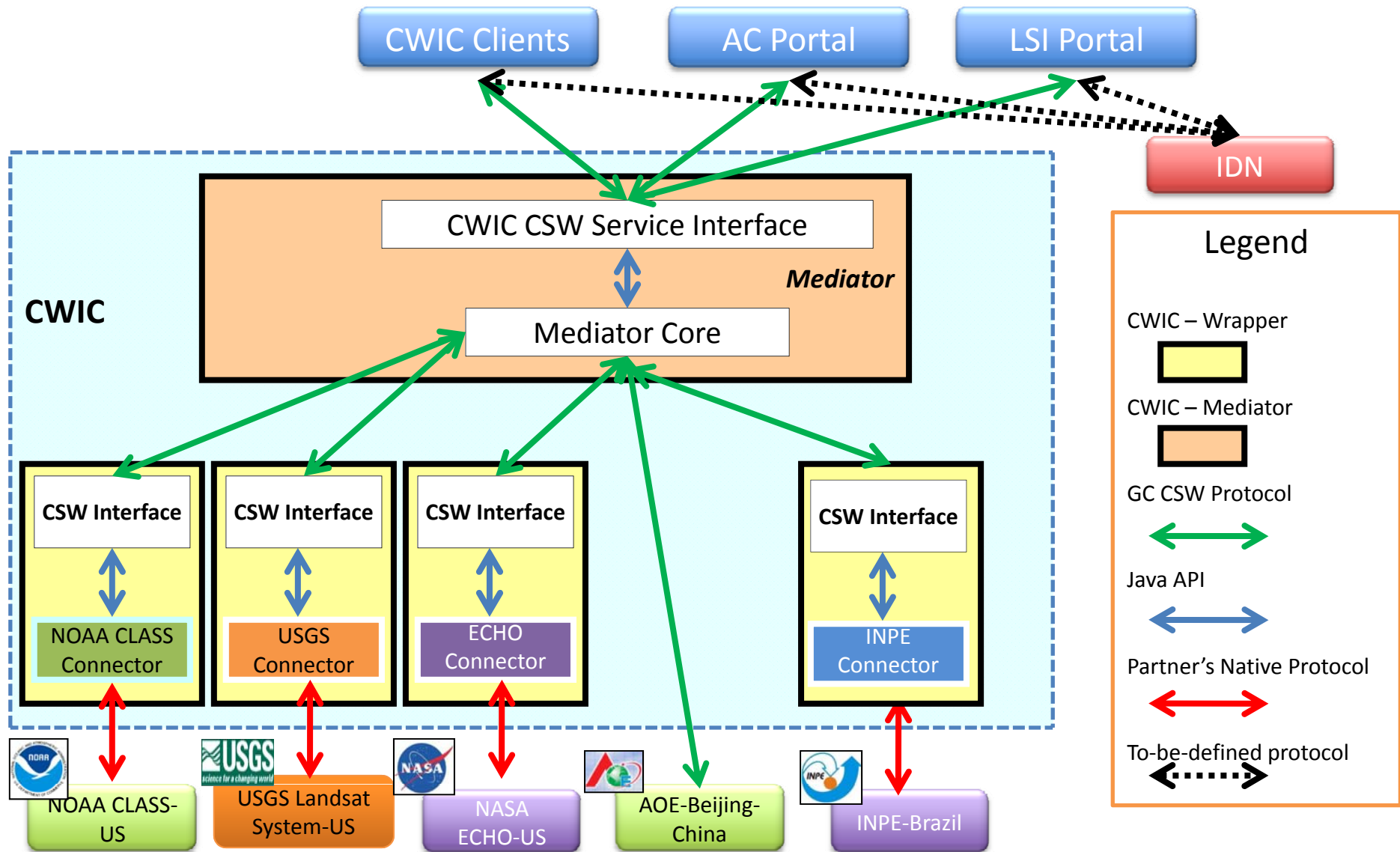
CWIC exposes an OGC CSW 2.0.2 Core profile/ ISO profile-compliant interfaces on the front-end

Extensions to the OGC CSW 2.0.2 are designed and utilized in the CWIC front-end interface

# CWIC Context Diagram

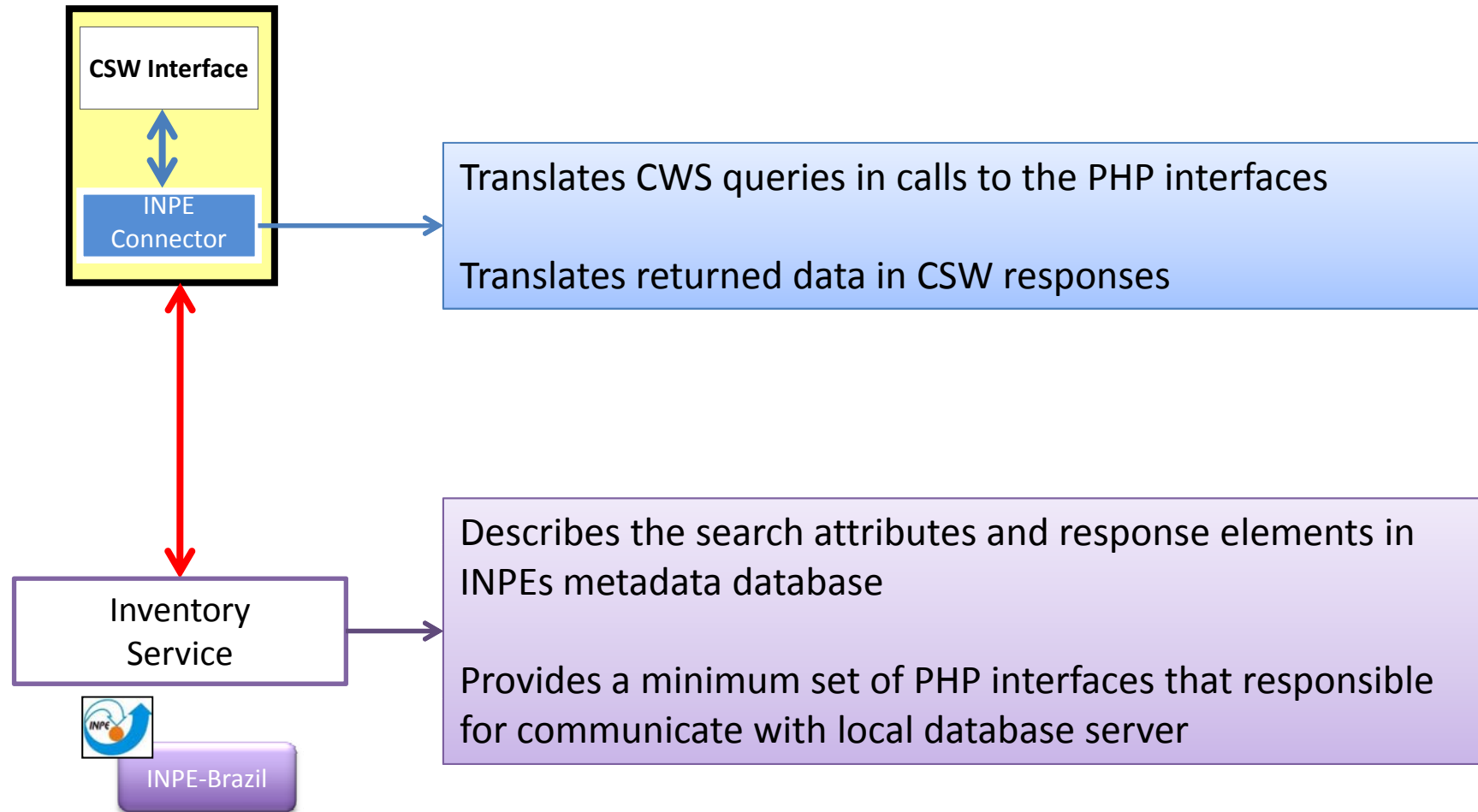


# CWIC Context Diagram





# INPE Connector



# INPE Connector

The URL for the path/row search is:

<http://www.dgi.inpe.br/cwic/pathrow.php?>

An example:

[http://www.dgi.inpe.br/cwic/pathrow.php?dataset=INPE\\_CBERS2B\\_CCD&start\\_path=153&end\\_path=153&start\\_row=100&end\\_row=101](http://www.dgi.inpe.br/cwic/pathrow.php?dataset=INPE_CBERS2B_CCD&start_path=153&end_path=153&start_row=100&end_row=101)

The URL for the lat/long search is:

<http://www.dgi.inpe.br/cwic/latlong.php?>

An example of the lat/long search is:

[http://www.dgi.inpe.br/cwic/latlong.php?dataset=INPE\\_CBERS2\\_CCD&north=-22.5&south=-23.5&east=-45.5&west=-46.5](http://www.dgi.inpe.br/cwic/latlong.php?dataset=INPE_CBERS2_CCD&north=-22.5&south=-23.5&east=-45.5&west=-46.5)

Additionally, there's an URL that retrieves only a specific record based on SceneId Key:

<http://www.dgi.inpe.br/cwic/sceneid.php?>

An example of sceneid search is:

<http://www.dgi.inpe.br/cwic/sceneid.php?sceneid=L3MSS2337619780807>

Inventory  
Service



INPE-Brazil

Thanks to  
Jeferson Souza!

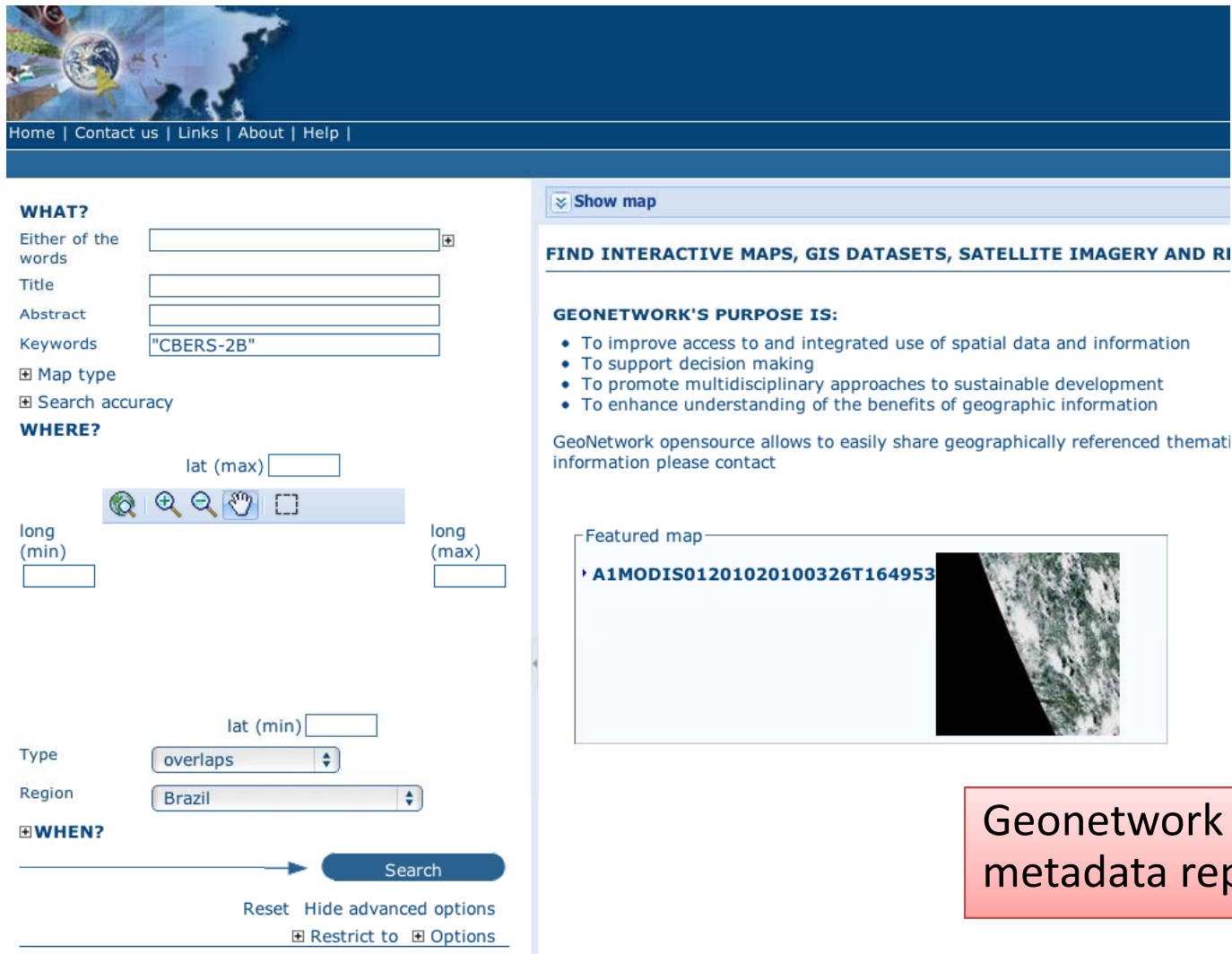
# CWIC in action

<http://cwic.csiss.gmu.edu>

CWIC will provide a listing of all dataset ids and all data sources reachable from its Mediator in its Capabilities document. **Scenario:**

1. Keyword search against GCMD using PROJECT=CWIC.
2. Response is a collection of matching datasets, identified by DIF Entry\_ID and dataset name.
3. Retrieve CWIC Capabilities document from the CWIC server. Human-readable titles and identifiers will be available in the Capabilities document for each CWIC-accessible dataset.
4. Submit GetRecords request to CWIC to find matching data granules in brief records.
5. Select desired granule by ID from GetRecordsResponse.
6. Submit GetRecordById request for full record, using granule ID.
7. Get full record for granule of interest in GetRecordByIdResponse.
8. Retrieve data granule from host system using the URL in the full record response.

# Experiment with CSW Server



Home | Contact us | Links | About | Help |

**WHAT?**

Either of the words

Title

Abstract

Keywords "CBERS-2B"

Map type

Search accuracy

**WHERE?**

lat (max)

long (min)

long (max)

lat (min)

Type overlaps

Region Brazil

**WHEN?**

Search

Reset Hide advanced options

Restrict to  Options

Show map

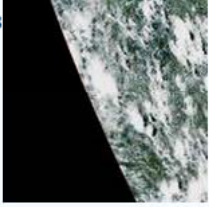
**FIND INTERACTIVE MAPS, GIS DATASETS, SATELLITE IMAGERY AND RI**

**GEONETWORK'S PURPOSE IS:**

- To improve access to and integrated use of spatial data and information
- To support decision making
- To promote multidisciplinary approaches to sustainable development
- To enhance understanding of the benefits of geographic information

GeoNetwork opensource allows to easily share geographically referenced thematic information please contact

Featured map

▸ A1MODIS01201020100326T164953 

Geonetwork and the CDRS metadata repository

# Interaction with other groups

De John L Faundeen★  
Assunto [wgiss-all] Review Action  
Para all@wgiss.ceos.org★

Responder Re: Lista Encaminhar Arquivar Spam Excluir

02/04/12 16:00  
Outras ações

WGISS,

As part of WGISS' deliverable for GEO Action IN-02-C1\_1 (Sharing data management life cycle models and recommendations aligning to the first [CEOS] Priority Actions, please find attached the 4th version of the CEOS WGISS Data Management Statement. Significant additions from Mirko Albani in ESA have been incorporated. Note that I would like this document endorsed at WGISS-33 with all comments received by 13 April 2012.

Thank you,

John Faundeen, Archivist  
U.S. Geological Survey  
Earth Resources Observation and Science Center

# Interaction with other groups

De John L Faundeen★

Assunto [wgiss-all] 2nd Review Action -Simple RS Products: Basic Principles for non-Technical Users

Para all@wgiss.ceos.org★

02/04/12 21:4

Outras açõe

Responder Re: Lista Encaminhar Arquivar Spam Excluir

WGISS,

(Previous title at WGISS-32 was "Guidelines for GIS-Ready Products")

Please read the brief update that Gary Geller from NASA/JPL has created. He has continued to make the document simpler and to the point. It would be great if WGISS could endorse this concept for a segment of users that we probably don't address very well. I'll ask for concurrence of this in Tokyo so please send me any comments by 13 April.

Thank you,

John Faundeen, Archivist  
U.S. Geological Survey

# Interaction with other groups

De "Moe, Karen (GSFC-4070)" <karen.moe@nasa.gov>☆

Responder Re: Lista Encaminhar Arquivar

Assunto [wgiss-all] New GA.4.Disasters draft for WGISS-33

Para WGISS All <all@wgiss.ceos.org>☆

Hello WGISS-All,

In preparation for the upcoming WGISS-33 meeting in Tokyo, the GEOS Architecture for Disasters project has prepared a new draft document. The attachment focuses on the enterprise view of GEOS satellite data use for disasters and risk assessment. This document will be featured in the GA.4.Disasters session at WGISS-33 and we welcome your feedback.

Best Regards,  
Karen

Karen L. Moe  
Earth Science Technology Office [esto.nasa.gov](http://esto.nasa.gov)  
NASA/GSFC MS Code 407 Mobile: (240) 393-8730  
Greenbelt, MD 20771 Office: (301) 286-2978  
email: [Karen.Moe@nasa.gov](mailto:Karen.Moe@nasa.gov) Fax: (301) 286-0321

# Conclusions

Our participation could be more structured

Lots of discussion and document reading/reviewing, in different areas

Representatives are expected to speak for INPE

Resources are finite and we try to do our best by multitasking

We do learn something

It is fun!



Lubia Vinhas - [lubia@dpi.inpe.br](mailto:lubia@dpi.inpe.br)

**THANK YOU**