CDEX Data Distribution and SEDIS Phase III
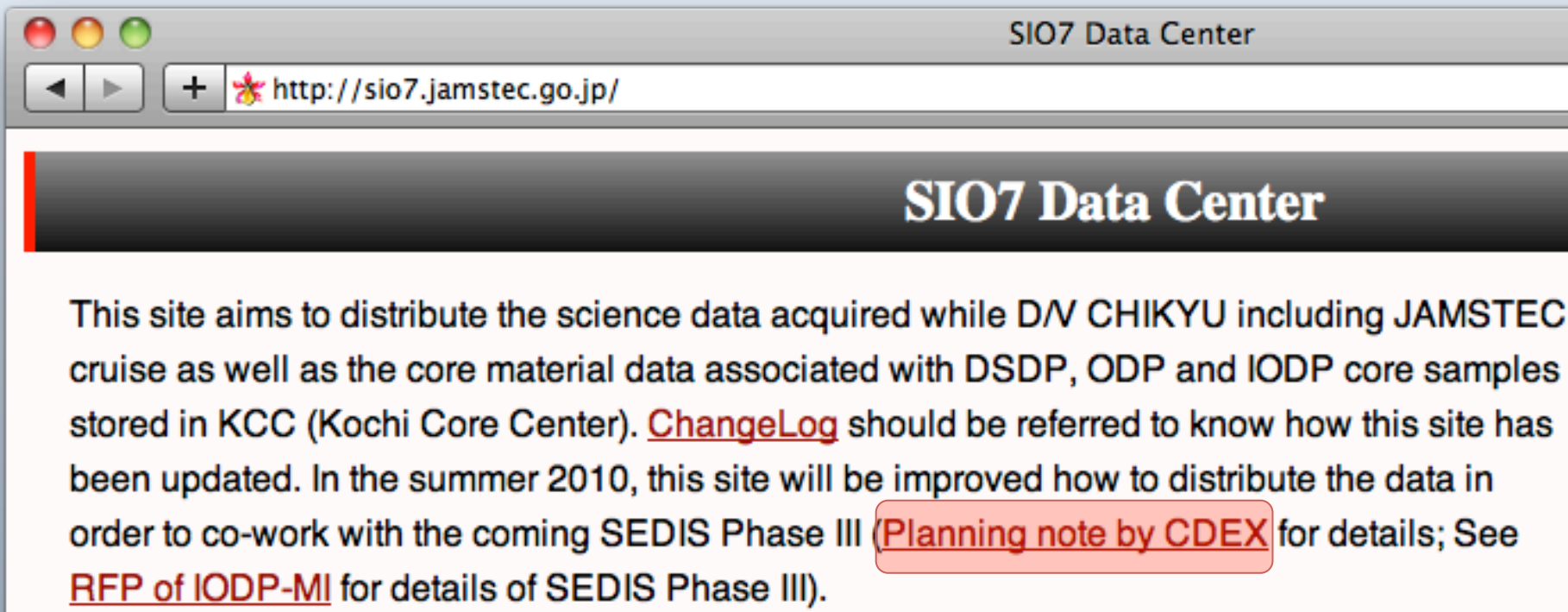
2010-07-14

CDEX, JAMSTEC

Planned and Implementing

- CDEX showed its note how it was going to distribute scientific data on 2010-04-01 after discussing with IODP-MI in 2010-01 and 02.

SIO7 Data Center

http://sio7.jamstec.go.jp/

SIO7 Data Center

This site aims to distribute the science data acquired while D/V CHIKYU including JAMSTEC cruise as well as the core material data associated with DSDP, ODP and IODP core samples stored in KCC (Kochi Core Center). ChangeLog should be referred to know how this site has been updated. In the summer 2010, this site will be improved how to distribute the data in order to co-work with the coming SEDIS Phase III (Planning note by CDEX for details; See RFP of IODP-MI for details of SEDIS Phase III).

What the Planning Note Defined

Snapshots of J-CORES Bulk-Exported files

Contents of J-CORES Bulk-Exported files

Well logging and downhole measurement results

Data files not on J-CORES

Hole 316-C0008C, J-CORES

This URL provides the access to the most recent output from J-CORES database, as a part of SIO7 Data Center. The output is being overwritten as often as possible.

This data set was output from J-CORES database by using its complete Bulk Export function from 2010-07-06T04:32:18Z till 2010-07-06T04:33:06Z. The specification of the outputs is available to be referred. J-CORES Bulk Exports a file `bulk.csv` with various attachment files (e.g. image files). Files `bulk-something.csv` are generated by picking some kinds of data from `bulk.csv`. Files `something.zip` consist of `bulk-something.csv` and related attachment files. Files `bulk-something.csv` are in character encoding UTF-8 with line ending characters CRLF. To know J-CORES software program, visit J-CORES' web site.

Hole 316-C0008C	
Latitude	33°12′43.8779″N
Longitude	136°43′40.361″E
Water depth	2797 m

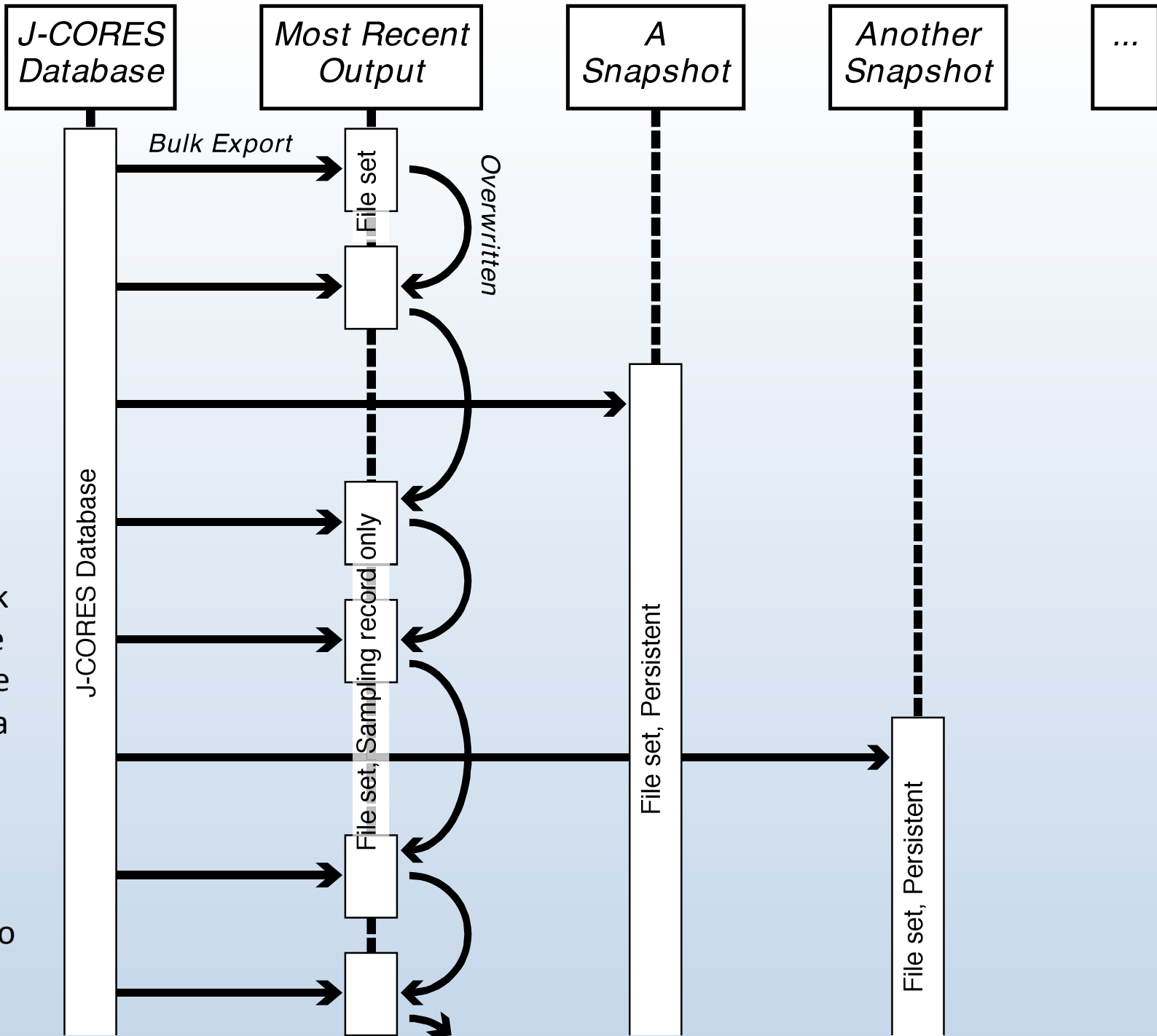| File	Contents	Length (bytes)
bulk-hole.csv	Expedition, site and hole records	1636
bulk-core.csv	Core drilling and curatorial records	11529
bulk-section.csv	Core section records	71028
sample.zip	Records of ship and personal samples taken from core sections and miscellaneous materials	56543
vcd.zip	Visual core descriptions (VCD)	540023
fossil-occurrence.zip	(Micro-) paleontological records of fossil occurrences	87124
xray-ct-scanner.zip	X-ray CT scanned coronal images of core sections	20602909
mscl.zip	Physical properties by Multi Sensor Core Logger(s) (MSCL)	2129167
split-section-image.zip	Images of split halves of core sections	44393564
moisture-density.zip	Moisture and density (MAD) for discrete samples	17353
thermal-conductivity.zip	Thermal conductivity for core sections	9283
bulk-magnetometer.csv	Magnetometry for split halves of core sections and discrete samples	1931164
xrd.zip	XRD for bulk discrete samples	3447357

J-CORES Bulk-Exported Files

Strong Argument from IODP-MI

against that Bulk-Exported files are being overwritten continuously

They need persistent data archives at permanent URIs in order to implement SEDIS Phase III

'Snapshot'

J-CORES Bulk Exported file set for a hole on SIO7 Data Center in UML sequence diagram. Time flows to the bottom.

J-CORES Database	Most Recent Output	A Snapshot	Another Snapshot	...

Bulk Export

File set

Overwritten

J-CORES Database

File set, Sampling record only

File set, Persistent

File set, Persistent

IODP-MI and SEDIS May

Put DOIs for the snapshots distributing URIs

Have transparent cache(s) for the snapshots in order to implement SEDIS Phase III

Timeline

The snapshots for the holes of Expedition 319 will be taken no later than 2010-08-31, the moratorium expiration date

At the same time, the holes of Expeditions 314, 315 and 316 will be snapshot

For Expedition 322, before its moratorium expiration, 2010-10-10

Snapshooting mechanism now under development

What the Planning Note Defined

✓ Snapshots of J-CORES Bulk-Exported files

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J-CORES Bulk-Exported Files

SEDIS Phase III Needs

To know how the Bulk-Exported data files contain data in order to serve data transformation, parameterized querying, and data aggregation

It may have transparent caches for J-CORES Bulk-Exported files to implement its services

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Bulk export output specification

This document specifies what is output by J-CORES bulk export function.

Bulk export

This document does not contain complete explanation how the bulk export function behaves, see another appropriate document.

J-CORES bulk export function aims to output all the depth-oriented data on the database. There are two different modes of bulk export, i.e. quick and complete. Quick bulk export limits the output data by a

J-CORES Flexibility

Stores extra numerical data against depths. They are in 'Extra scalar column group' in Bulk-Exported CSV file

Capable to have various processed depths like core composite depth (CCSF). Depths in such processed scales are calculated and contained in the Bulk-Exported files when such processed depths are stored optionally

List of Extra Scalar

Now under preparation

The list will be shown with their explanations in SIO7 Data Center no later than 2010-08-31

SEDIS Phase III Can

Serve all the data in the Bulk-Exported file sets (i.e. all the data in the J-CORES database) to the users by its data transformation, parameterized querying, and data aggregation services

After SEDIS Phase III implementation, CDEX will inform IODP-MI when attempting to modify the Bulk-Export output specification and when the extra scalar list had any updates
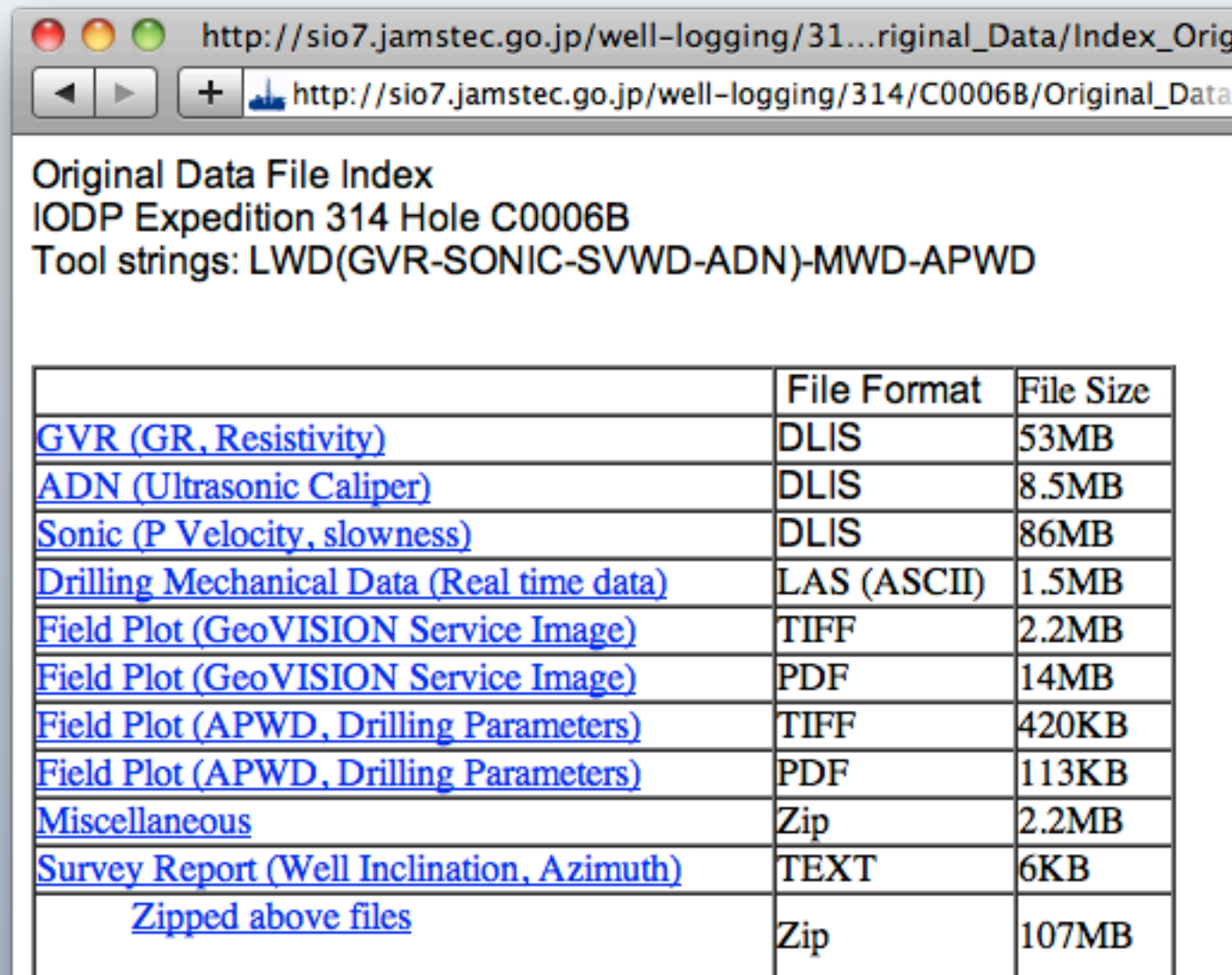
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Well Logging and Downhole Measurements

In various forms

SEDIS III cannot parse

Original Data File Index
IODP Expedition 314 Hole C0006B
Tool strings: LWD(GVR-SONIC-SVWD-ADN)-MWD-APWD

	File Format	File Size
GVR (GR, Resistivity)	DLIS	53MB
ADN (Ultrasonic Caliper)	DLIS	8.5MB
Sonic (P Velocity, slowness)	DLIS	86MB
Drilling Mechanical Data (Real time data)	LAS (ASCII)	1.5MB
Field Plot (GeoVISION Service Image)	TIFF	2.2MB
Field Plot (GeoVISION Service Image)	PDF	14MB
Field Plot (APWD, Drilling Parameters)	TIFF	420KB
Field Plot (APWD, Drilling Parameters)	PDF	113KB
Miscellaneous	Zip	2.2MB
Survey Report (Well Inclination, Azimuth)	TEXT	6KB
Zipped above files	Zip	107MB

Distribute Final Forms by J-CORES

Final forms of these data are in LAS (Log ASCII Standard) format for well logging data and in ASCII files for downhole measurement data, excluding borehole images

J-CORES will store these final forms as a part of extra numerical data and distributed as Bulk-Exported CSV files

List of Extra Scalar is to include them so that SEDIS can handle them similar to material measurement results

LAS and ASCII are to be removed from SIO7

Timeline

Now loading data from LAS and ASCII onto J-CORES. Will finish before taking the snapshot for each hole

The Other Data Files

(i.e. non-final forms and borehole images)

Distributes as ever

CDEX provides metadata for them so that SEDIS Phase I harvests them and gives data discovery services. Metadata point data index pages of each hole

On 2010-07-07, SEDIS Phase I started handling the metadata

IODP
INTEGRATED OCEAN
DRILLING PROGRAM

Scientific Earth Drilling Information Service - SEDIS

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Expedition 314 Scientists (2010): Well logging data of Hole 314-C0006B. Center for Deep Earth Exploration (CDEX), Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

Abstract:
LWD/MWD (geoVISION, adnVISION w/o radioactive source, sonicVISION, and APWD) for Hole 314-C0006B

Coverage:
West: NaN **East:** NaN **North:** NaN **South:** NaN

Relations:
Expedition: **314**
  Site: **314-C0006**
    Hole: **314-C0006B**

Statement about lineage / data quality:
The data set was output from CDEX LSS. The data set is originated from SIO7 Data Center [http://sio7.jamstec.go.jp].

References:
Kinoshita, Masataka; Tobin, Harold; Ashi, Juichiro; Kimura, Gaku; Lallemant, Siegfried; Screaton, Elizabeth J.; Curewitz, Daniel; Masago, Hideki; Moe Kyaw Thu; the Expedition 314/315/316 Scientists (2009): NanTroSEIZE Stage 1: investigations of seismogenesis, Nankai Trough, Japan. Proceedings of the Integrated Ocean Drilling Program, 314/315/316, doi:10.2204/iodp.proc.314315316.2009

Data access:
Provider: Center for Deep Earth Exploration (CDEX), Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
Data download: text/html
This metadata in ISO19139 XML format

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J-CORES Limitation

Cannot store extremely large data files

    Split section images by an image line scanner

    X-ray CT scanned axial images

Cannot store extra images or extra data files in various forms

    Raw data files of well logging and downhole measurements, including some kinds of borehole images

    Cuttings photographs

Metadata and SEDIS I

Distributes as ever: static files in various formats in SIO7 Data Center

CDEX provides metadata for them so that SEDIS Phase I harvests them and gives data discovery services. Metadata point data index pages of each hole

On 2010-07-07, SEDIS Phase I started handling the metadata and the data are now discoverable

What the Planning Note Defined

✓ Snapshots of J-CORES Bulk-Exported files

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The Sole Violation of the Planning Note

Timeline

CDEX will implement this plan before IODP expeditions in 2010.