



Training course 2, Ostende, 20-22 May 2014



SeaDataNet

PAN-EUROPEAN INFRASTRUCTURE
FOR OCEAN & MARINE DATA
MANAGEMENT

IFREMER work-flow for production of CDIs data

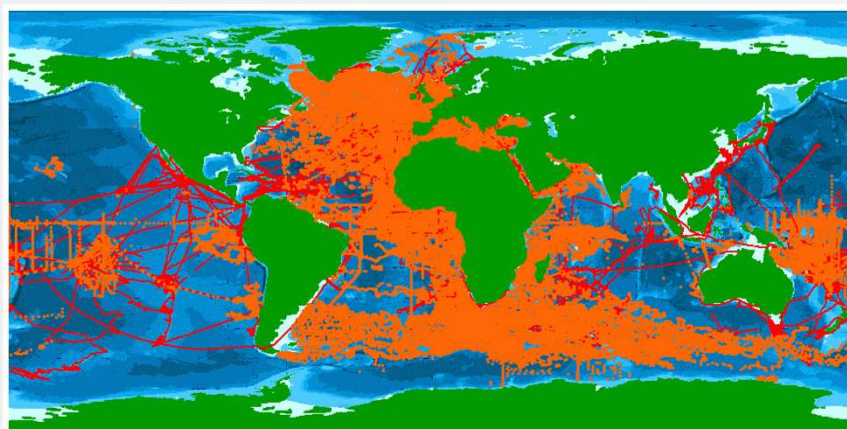
M. Fichaut, IFREMER

Michèle Fichaut, IFREMER, SISMER

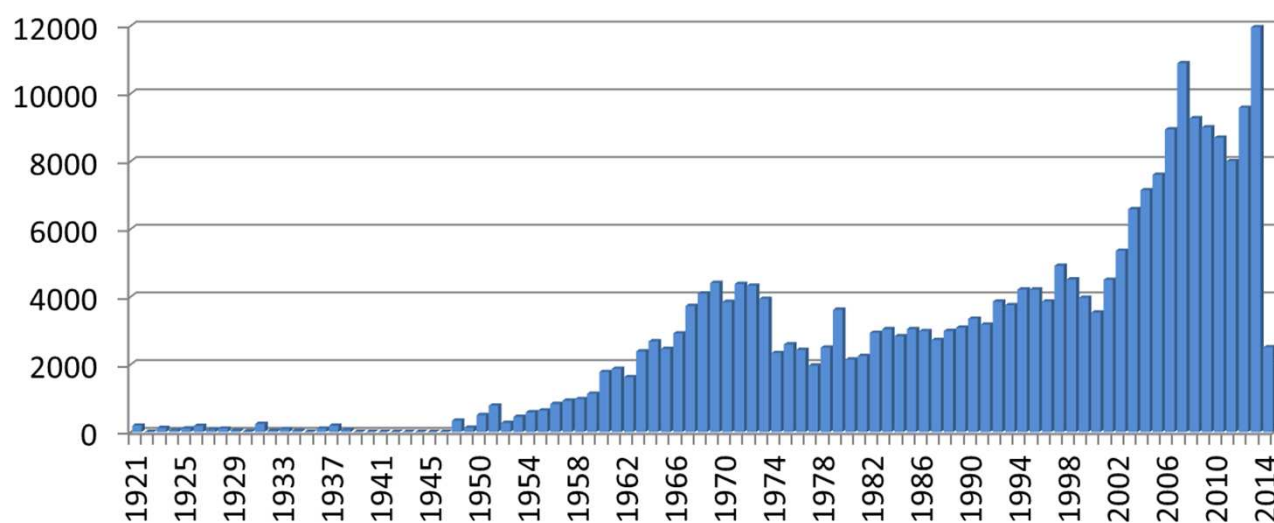
Workflow presentations

- Questionnaire sent to all participants
 - 19 answers received
- Selection of 8 different work flows for presentation
 - IFREMER (France)
 - SMHI (Sweden)
 - BSH (Germany)
 - IMR (Norway)
 - INSTM (Tunisia)
 - MSI (Estonia)
 - IOLR (Israel)
 - FMI (Finland)

Data inventory : 234 606 CDIs from 137 labs



Per Instrument	Datasets
Argo floats	81 984
bathythermographs	60 128
discrete water samplers	43 841
CTD	40 093
current meters	2 116
Total	228162



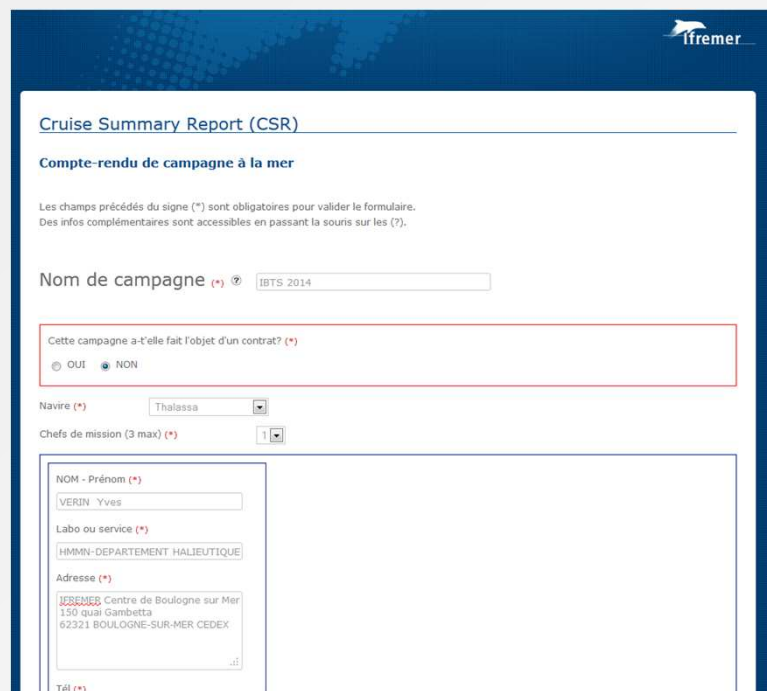
Access	%
SDN licence	62.4
Unrestricted	35.0
By negotiation	2.6

Two work flow descriptions

- Delayed mode data
 - Physical and chemical data collected during French cruises : CTDs, Discrete water samples, Current meters,...
- Near real time data
 - French Argo floats data

Work-flow – Phys/Chem data from French cruises

- 1. Input of CSR in IFREMER database



Cruise Summary Report (CSR)

Compte-rendu de campagne à la mer

Les champs précédés du signe (*) sont obligatoires pour valider le formulaire.
Des infos complémentaires sont accessibles en passant la souris sur les (?).

Nom de campagne (*)

Cette campagne a-t-elle fait l'objet d'un contrat? (*)
☐ OUI ☒ NON

Navire (*)

Chefs de mission (3 max) (*)

NOM - Prénom (*)

Labo ou service (*)

Adresse (*)

Tél (*)



SISMER DB



Once a year

SISMER DB →



→ SDN CSR catalogue

Work-flow – Phys/Chem data from French cruises

- 2. Input of metadata linked to CSR's (in // to step 1)

if
New project (EDMERP)
New Organisation (EDMO)
New dataset (EDMED)
New chief scientist



SISMER DB



SISMER DB →  → SDN EDMO, EDMED and EDMERP catalogues



**SeaDataNet**

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Work-flow – Phys/Chem data from French cruises

- 3. Data recovery from French laboratories

From French CSRs



SISMER DB

Chief scientists



Once a year





Work-flow – Phys/Chem data from French cruises

- 4. Reformating data files, per cruise and per data type

Files at format X

No standard vocabulary

Files at SDN format (MEDATLAS)

Standard SDN vocabulary

```

000 CTYPE 04          THALASSA          SB
*NO station, nom campagne, nom navire, type sonde
*(13,10,4160,18,68)
OTW02004 1817 2 13 0139 W 19 57,3 4 2686 2693 1 2686
Date, heure, lat., lon., nb parametres, nb mesures, fond, pmn, pmx
*(69,12,12,12,18,611,18,12,4,18,12,4,18,15,4)
PRECISION            deg
TEMPERATURE          deg.cels.
SALINITE             p.p.t/1000
OXIGENE DISS.        mg/l
1.0 12.2394 35,476 269.0
2.0 12.2394 35,476 269.8
3.0 12.2394 35,476 270.8
4.0 12.2395 35,476 271.0
5.0 12.2396 35,476 271.0
6.0 12.2396 35,476 271.2
7.0 12.2393 35,476 272.1
8.0 12.2391 35,476 272.6
9.0 12.2391 35,476 272.6
10.0 12.2228 35,476 271.8
11.0 12.2220 35,476 272.7
12.0 12.2118 35,476 275.9
13.0 12.2059 35,476 279.4
14.0 12.2178 35,477 274.4
15.0 12.2131 35,477 274.9
16.0 12.0997 35,478 275.3
17.0 12.0893 35,477 276.6
18.0 12.0778 35,477 275.7
19.0 12.0661 35,478 276.0
20.0 12.0449 35,478 276.5

```

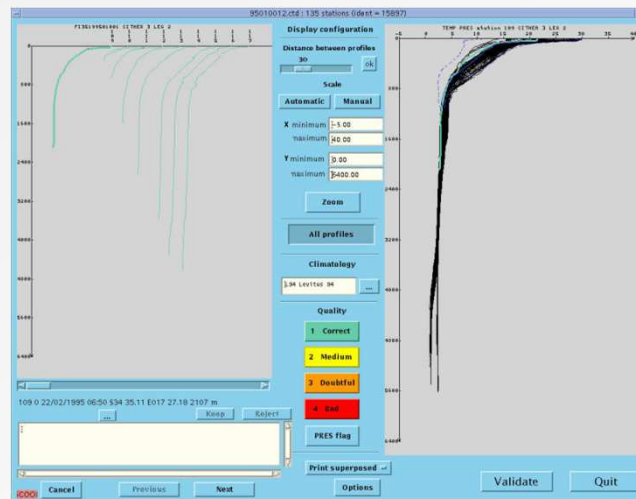
	A	B	C	D	E	F	G	H	I	J	K		L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	
1	sur N/O THALASSA du 05 au 23 juillet 2006																											
2																												
3																												
4		Date	Heure (TUT)	Longitude	latitude	Station	sonde	niveau	T°	seiche	SW	fluo	SN	NH4	NO3 & NO2	NO3 net	PO4	Si	Si(OH3)									
5	6	06/07/2006	9H20	W 04° 45'34	N 47° 49' 80	HB1	80	75	10.34	35.59	0.084	0.087	3	0.13	0.38	0.21	8.17	0.51	2	5.33								
6	7							40	10.39	35.56																		
7	8							5																				
8	9							40																				
9	10							21																				
10	11							28	15.77	35.321	0.52	1	0.54	3.04	0.25	2.79	0.15	1	1.73									
11	12	06/07/2006	13H54	W 47° 19'82	N 04° 44' 95	HB2	121	80	11.06	35.615	0.044	5	0.06	4.24	0.01	4.23	0.37	5	4.05									
12	13							48	11.03	35.62	0.222	6	0.03	8.67	0.03	8.64	0.51	6	2.87									
13	14							26	13.74	35.65	0.455	7	0.16	0.16	0.00	0.16	0.07	0.7	0.57									
14	15							5	19.06	35.58	0.152	8	0.07	0.13	0.00	0.06	0.03	8	0.33									
15	16							1	19.06	35.579	0.139	9	0.00	0.06	0.00	0.06	0.03	9	0.33									
16	17																											
17	18							34	13.4	35.6	1.18	1																
18	19							39	12.52	35.61	1.31	4	0.37	1.86	0.16	1.70	0.43	4	0.93									

[illegible][illegible]

Work-flow – Phys/Chem data from French cruises

- 5. Quality checks (same flag scale than SDN), par data type (CTDs, Bottle...), cruise per cruise

File format SDN
MEDATLAS
No QC



File format SDN
MEDATLAS
QC

IFREMER SCOOP Software



Work-flow – Phys/Chem data from French cruises

- 6. Archiving

File format SDN
MEDATLAS
QC

Metadata loading
in-house software



DB SISMER



File archiving



MEDATLAS files

IFREMER server



Work-flow – Phys/Chem data from French cruises

- 7. CDIs XML generation, **new data** and **updated data** (timestamp in the DB)



SISMER DB



MIKADO



XML for CDIs

Twice a year





Work-flow – Phys/Chem data from French cruises

- 8. Update of the coupling table



SISMER DB

COUPLING table	
ID	12345
LOCAL_CDI_ID	<i>Local_unique_id</i>
MODUS	3
FORMAT	MEDATLAS
FILENAME	<i>filename</i>
SQL_QUERY	
CONNECTION_STRING	
LOGIN	
PASSWORD	
MAPPING_FILE	
XMLEXPORT_DATE	24/06/2009

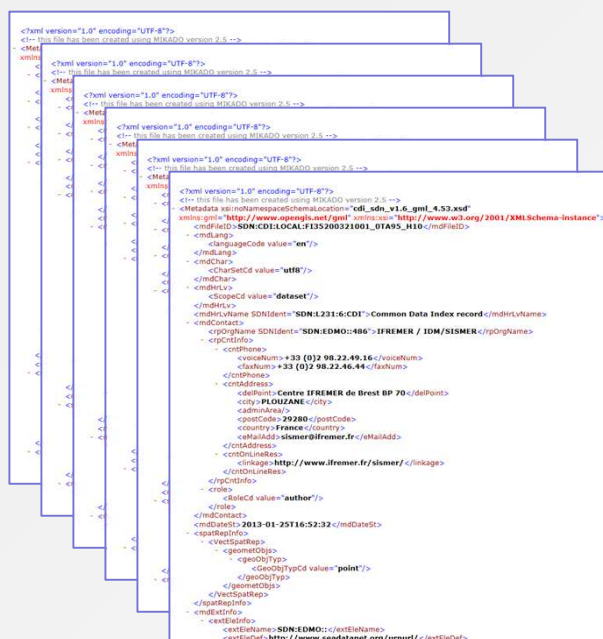
Twice a year



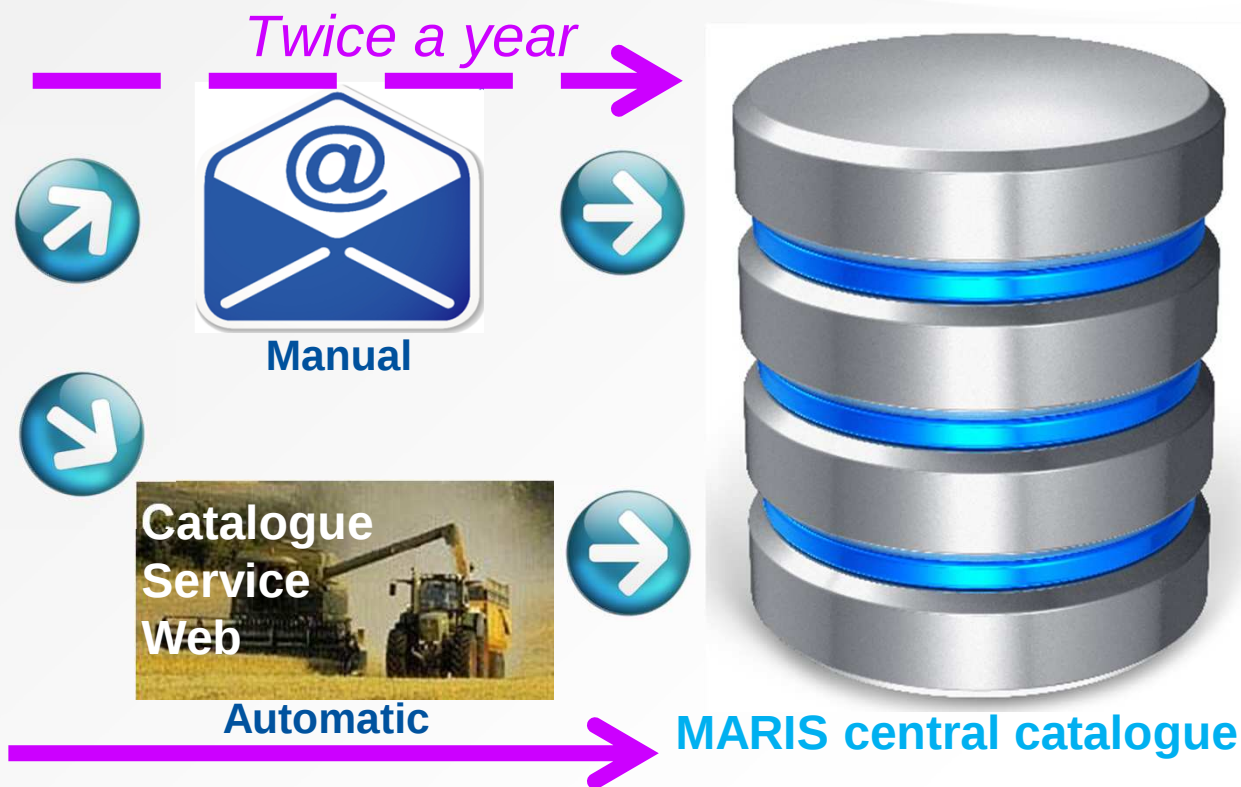


Work-flow – Phys/Chem data from French cruises

- 9. CDs XML sent to MARIS

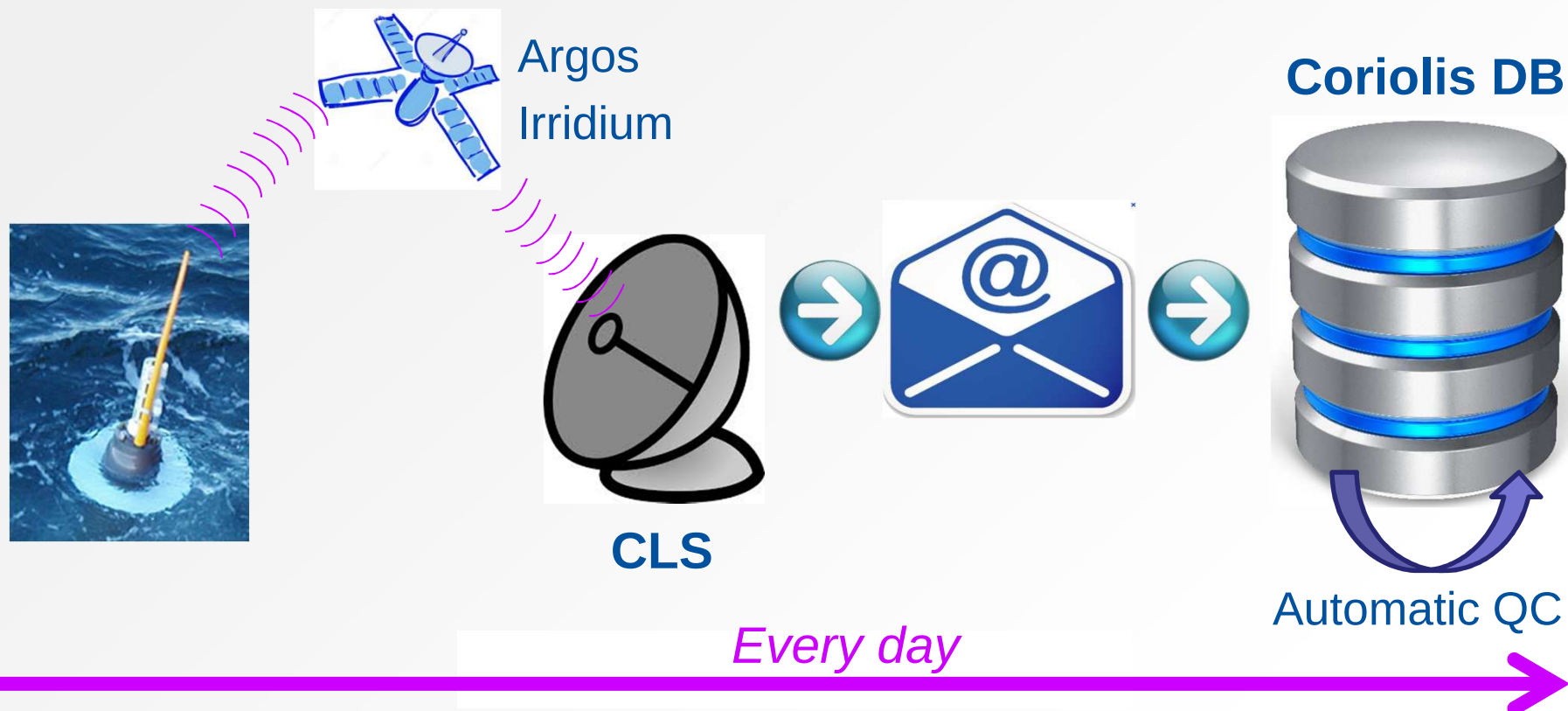


XML for CDIs



Work-flow – French Argo float

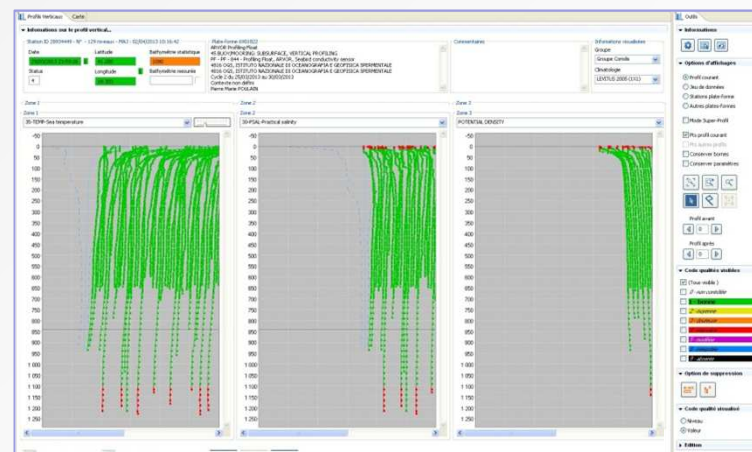
- 1. Data and metadata loaded in IFREMER database



Work-flow – French Argo float

- 2. Manual QC of the data, by set of data not yet manually QCed

Coriolis DB



IFREMER SCOOP2 software

Every working day



Work-flow – French Argo floats

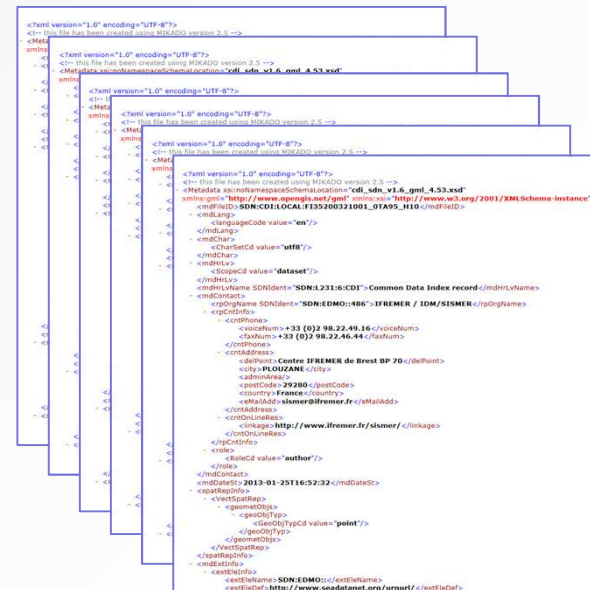
- 3. CDIs XML generation, new data and updated data (timestamp in the DB)



CORIOLIS DB



MIKADO



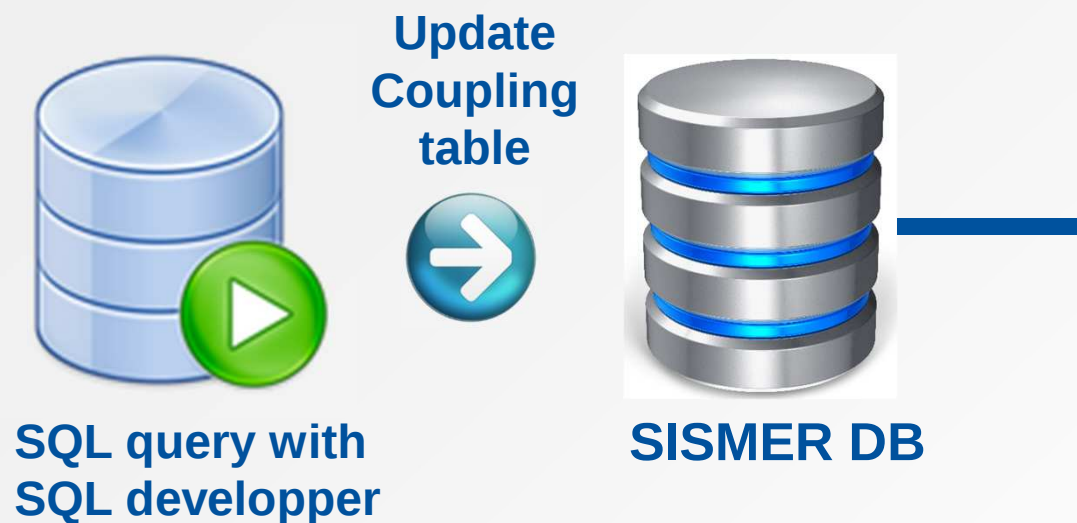
XML for CDIs

Every month



Work-flow – French Argo floats

- 4. Update of the coupling table



COUPLING table	
ID	12345
LOCAL_CDI_ID	Local_unique_id
MODUS	2
FORMAT	ODV
FILENAME	filename
SQL_QUERY	Sql_query
CONNECTION_STRING	jdbc:oracle...
LOGIN	login
PASSWORD	password
MAPPING_FILE	Map_Argo
XMLEXPORT_DATE	24/06/2009

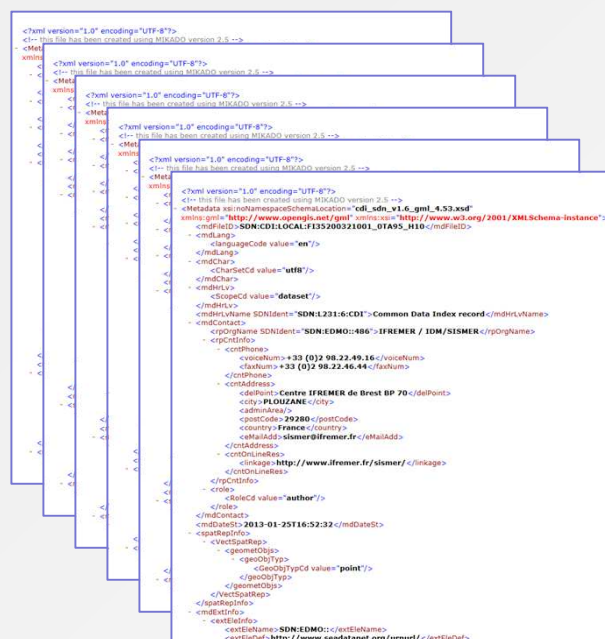
Every month





Work-flow – French Argo floats

- 5. CDIs XML sent to MARIS

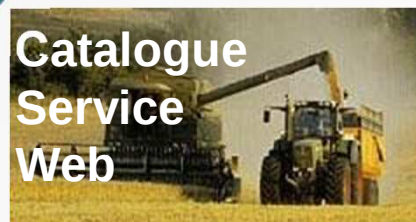


XML for CDIs

Every month



Manual



Automatic



MARIS central catalogue

