



Solutions de gestion des données d'imagerie:exemples avec Shanoir, Archimed et Cati-DB

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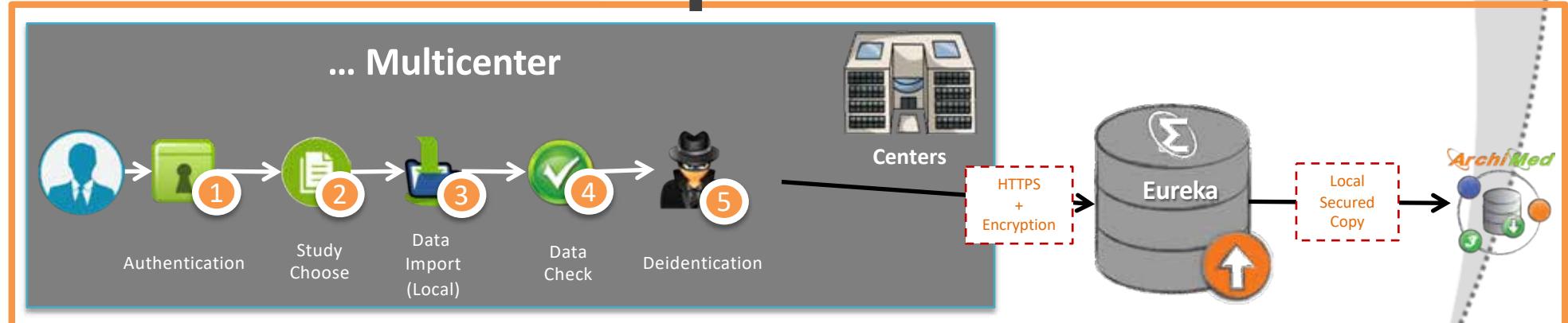
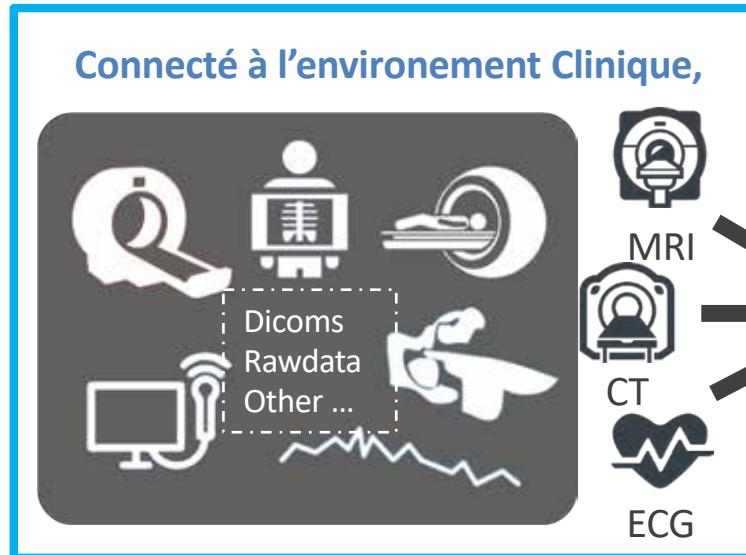
Solutions de gestion des données d'imagerie: exemples avec Shanoir, Archimed et Cati-DB

Michael KAIN, Inria Rennes

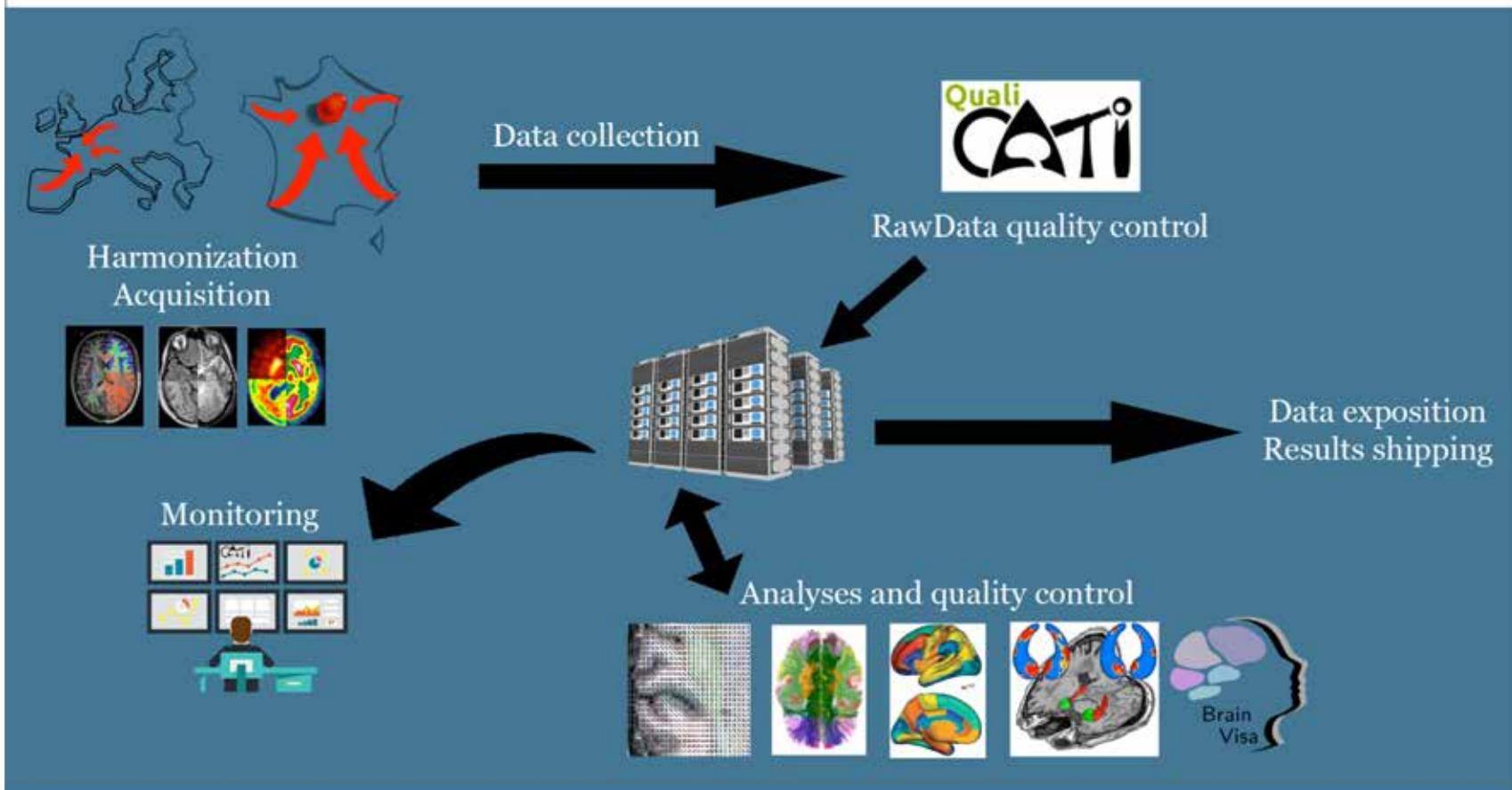
Bases de données en imagerie médicale

- Pour les études **multi**-centriques, cliniques et précliniques :
 - Images (brutes (DICOM) et derivées/traitées)
 - Meta-data associés, par ex. time points, protocole d'étude etc.
- Dans un **environnement complexe**:
 - **Standards/formats** : DICOM, PACS, DICOM De-identification, Pseudonymization and Anonymization, **DICOMWeb**: WADO-URI, -WS or -RS, QIDO-RS, STOW-RS, NIfTI, NRRD, XDS, HL7 CDA, HL7 **FHIR**, **BIDS**, NIDM, Medical Health Records (DMP, EHR, PHR, openEHR) → **interopérabilité**
 - **Juridique** :
 - France: CNIL, « agrément HDS », ANSM
 - Europe: GDPR, applied on 25. May 2018
 - USA: HIPAA & Title 21 CFR Part 11 by FDA
 - **Sécurité** : cybersécurité et -attaques, serveur et hardware
 - **Besoins scientifiques et économiques**
- **Besoin** pour un hébergement professionnel/industriel: -> FLI-IAM
- Bases de données: ArchiMed, CATI-DB, Shanoir, XNAT

Et son environnement



III – Data collection and analysis platform



shanoir

Welcome | Logout

Manage data • Import data • Administration •

Home > Study list > Edit study

Edit study

General

Name *	NATIVE Divers
Start date	02/11/2009
End date	
Status *	In Progress
Is clinical *	<input type="radio"/> Yes <input checked="" type="radio"/> No
Is with examination	<input checked="" type="radio"/> Yes <input type="radio"/> No

Default access level

Visible by default:	<input type="radio"/> Yes <input checked="" type="radio"/> No
Data downloadable by default:	<input type="radio"/> Yes <input checked="" type="radio"/> No

List of centers and principal investigators

Multi / single center * Single center Multicenter

List of centers and principal investigators CHU Rennes

Study members

List of users:

search... to filter

Username	First Name	Last Name	Email	Role	Role/Position*	Received Import Mail	Received Anonymization Mail
yyao	Yao	Yao	yyao@shanoir.fr	User	I'm responsible for the research study	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Found : 1 Total : 1 Page size : 20							

[« Back](#) [Update](#)

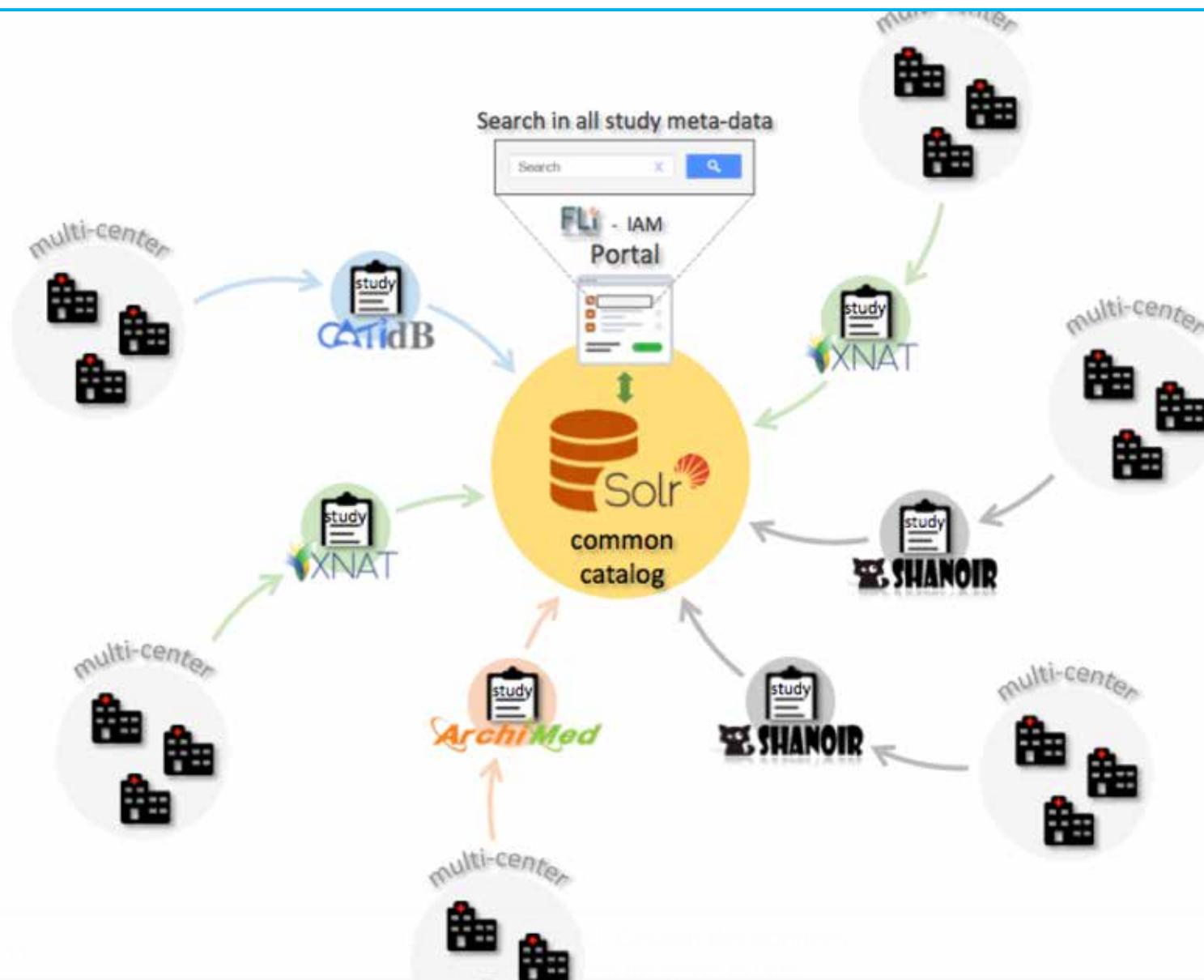
The screenshot shows the XNAT web application interface. At the top, there is a navigation bar with links for Home, New, Upload, Tools, Help, Search, and Advanced. On the left, a sidebar menu includes Projects (Recent, Favorite, My projects, Other projects), Stored Searches, and Data. The main content area displays "PROJECT_NUSDAST > CC0239" and "Subject Details: CC0239". The "Details" tab is selected, showing subject information: Accession # CENTRAL_500989, Date Added 2010-07-23 13:32:42.0 (akogan), Birth year -, Gender Female, Handedness Right, Race 1, Ethnicity 2, and Group 3. The "Projects" tab is also visible. To the right, an "Actions" panel offers options: Edit, View XML, Add Experiment, Download XML, Email, Manage Files, and Delete. Below this, the "Experiments" section lists five entries with columns for Date, Experiment, Project, and Label. The experiments are: 2002-10-23, MR_Session, NUSDAST, CC0239_0; 2005-05-24, MR_Session, NUSDAST, CC0239_24; Encounter Log, NUSDAST, CC0239_sf; SAPSSANS, NUSDAST, CC0239_sapssans_0; and SAPSSANS, NUSDAST, CC0239_sapssans_24. At the bottom right, there is a "powered by XNAT" logo.

Date	Experiment	Project	Label
2002-10-23	MR_Session	NUSDAST	CC0239_0
2005-05-24	MR_Session	NUSDAST	CC0239_24
	Encounter Log	NUSDAST	CC0239_sf
	SAPSSANS	NUSDAST	CC0239_sapssans_0
	SAPSSANS	NUSDAST	CC0239_sapssans_24

Summary

Name	Who?	Concept/Model/Speci als/Scenario?	Modali ties?	Brow ser?	Links?	Open- Source?
ArchiMed	CIC-IT Nancy, Inserm	Centralized server, model most close to DICOM/PACS, Desktop client, PAAS	MRI, CT, XA	No	Site web CIC-IT	Not yet
CATI-DB	CATI Paris, CEA	Centralized File-system (NFS) with meta-data server, model oriented on processings, perfectly adapted and coupled into CATI infra, turn-key	MRI, PET/SPE CT	No	https://cati-neuroimaging.com	Yes, register for access
Shanoir	Visages, Rennes, Inria	Centralized server Ontology based, Model remains fix, Web client, PAAS	MRI, PET, Bruker, EEG in 2019	Yes	http://shanoir.org	Yes 15.11.2018 On GitHub
XNAT	NRG Lab Wash., USA	Centralized server Schema based, Default model to customize, web client, PAAS	MRI, PET, CT	Yes	https://wiki.xnat.org	Yes On Bitbucket

FLI-IAM : Intégration of Data Management Solutions - Common catalog, search engine



Merci beaucoup pour votre attention!