

CERN Analysis capture Portal (CAP)

Tim Smith

On behalf of Patricia, Tibor,
Sünje, Frank, and many more



Pilot

The screenshot shows the INVENIO web interface. At the top, there is a dark navigation bar with the INVENIO logo, an envelope icon, and links for Search, Deposit, and Help. On the right side of the bar, there is a user profile icon labeled 'tjs'. The main content area features a large heading 'Data Analysis Preservation Demo'. Below the heading is a search bar with a magnifying glass icon, a plus-minus icon, a settings gear icon, and a 'Search' button. Underneath the search bar are four logos for particle physics experiments: ALICE (a red octagon with a white starburst), ATLAS (a bronze figure holding a globe), CMS (a blue and yellow square with 'CMS' text), and LHCb (a blue square with 'LHCb' and 'ГЧРР' text). At the bottom of the page, there is a footer with the text 'Data Analysis Preservation Platform Demo :: Search :: Submit :: Personalize :: Help', 'Powered by invenio v1.9999', and 'Maintained by info@invenio-software.org'. To the right of this footer, there is a list of languages: 'This site is also available in the following languages: Afrikaans العربية বাংলাбългарски català čeština Deutsch Ελληνικά English español français hrvatski galego ગુજરાતીitaliano Kinyarwanda lietuvių magyar 日本語 norsk bokmål polski português română русский slovenčina svenska українська 中文 中文'.

Submission Mock-ups

- Workflow, code, statis environment

Access to all submitted data will be restricted to the ALICE collaboration only.

Basic Information

*** This whole section is autofilled by the analysis number ***

Analysis

Physics Information

Primary Data Set ⌵ ×
[+ Add Primary Data Set](#)

MC Data Set Path ⌵ ×
[+ Add MC Data Set Path](#)

Trigger Selection ⌵ ×
 ⌵ ×
[+ Add Trigger Selection](#)

Upon full implementation, this selection box will cover all years (as this is just sets for 2013) and will be filtered based on the input from the primary data set above

Final State Particles ⌵ ×
[+ Add Final State Particles](#)

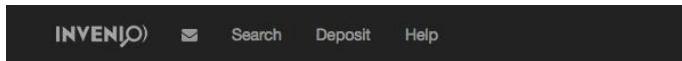
Particle - Number - PT Cut - ETA Cut

Physics Objects

Keywords ⌵ ×
[+ Add another keyword](#)

Comments

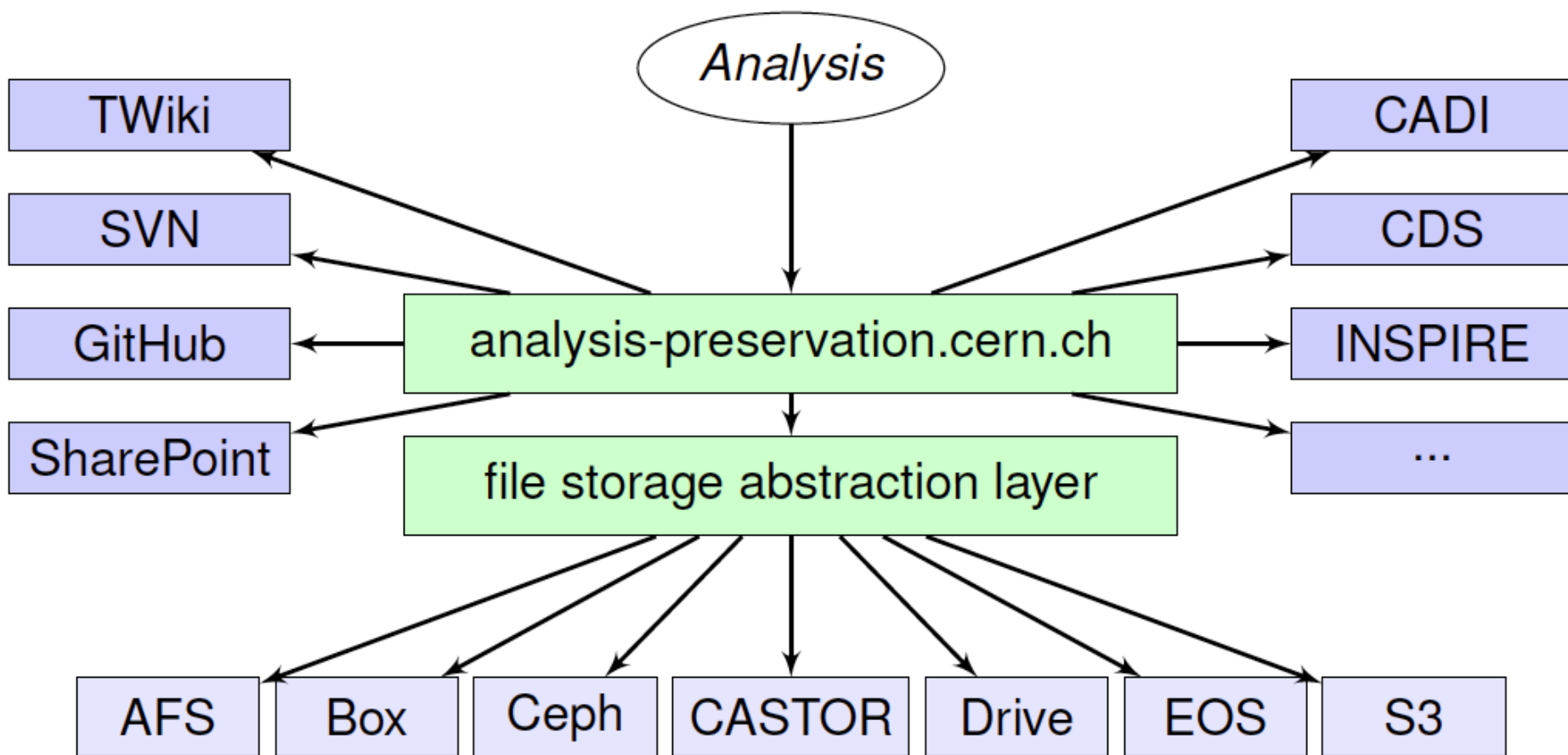
End-user analysis



Data Analysis Prese









System Architecture



Timelines













■ Summer 2014 Pilot studies

- example analysis   
- submission forms   

■ Winter 2014 Infrastructure updates

- Invenio 2 
- EOS 
- OAuth 

■ Spring 2015 Restarting the work

- requirements and use cases    
- data model    
- RECAST 
- statistics committee questionnaire 
- synergies with DASPOS (VoCampND2015)  

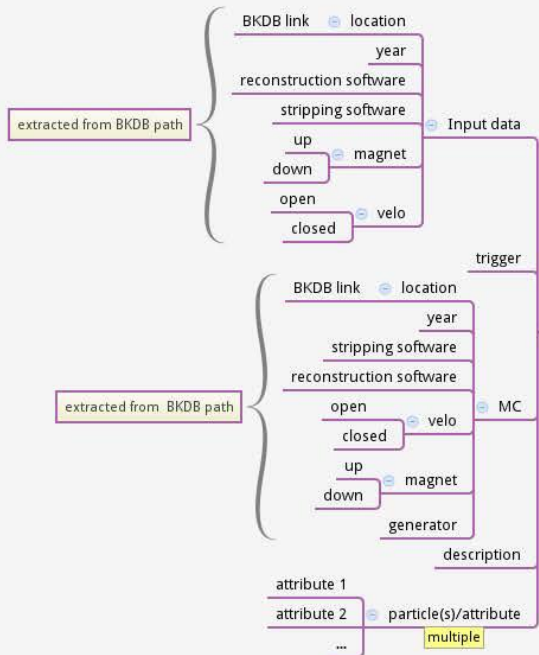
CAP Use Cases (I)

1. The person having done (part of) an analysis is leaving the collaboration and has to hand over the know-how to other collaboration members.
2. A newcomer would like join a group working on some physics subject
3. In a large collaboration, it may occur that two (groups of) people work independently on the same subject
4. There is a conflict between results of two collaborations on the same subject

CAP Use Cases (II)

5. A previous analysis has to be repeated
6. Data from several experiments, on the same physics subject, have to be statistically combined
7. A working group or management member within a collaboration wishes to know who else has worked on a particular dataset, software piece or MC
8. Presentation or publication is submitted for internal/collaboration review and approval: lack of comprehensive metadata
9. Preparing for Open Data Sharing

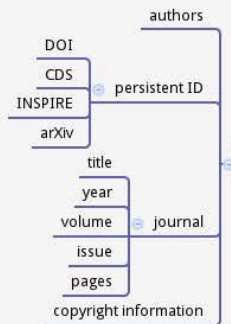
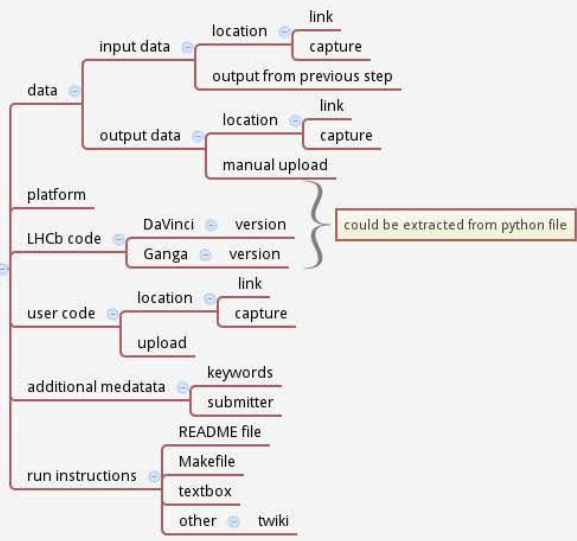
LHCb analysis



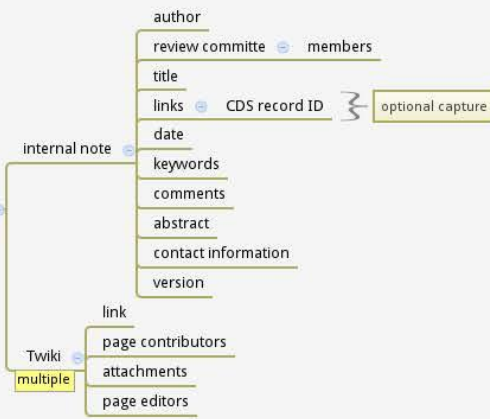
DST selection

analysis step

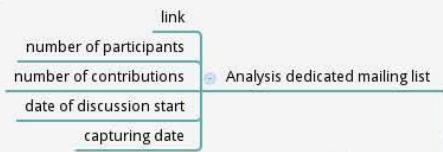
repeatable



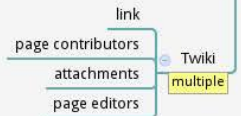
Documentation



optional capture

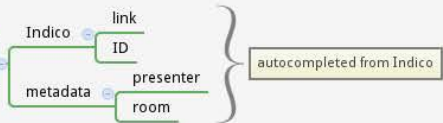


Discussion



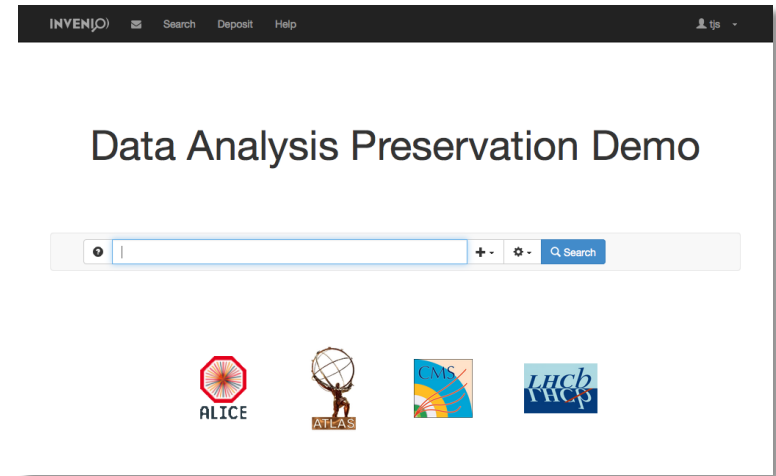
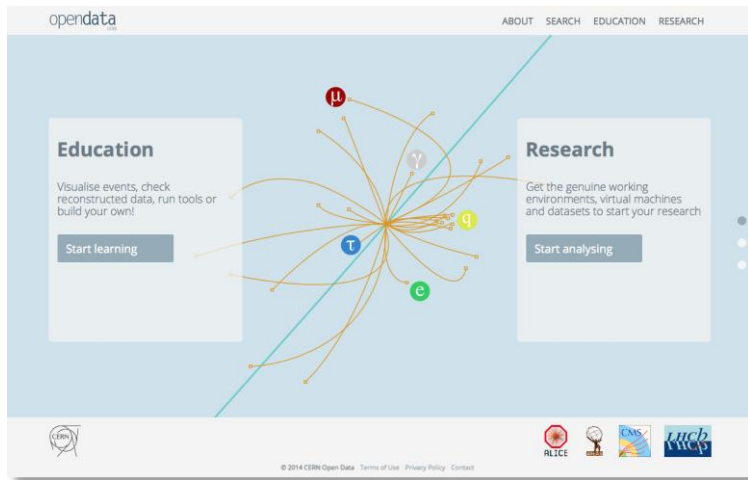
Presentation

multiple



Conclusion

Capture, Share, Preserve



In close collaboration with:

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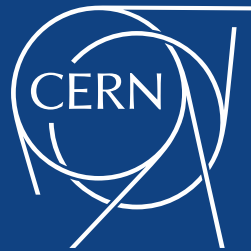
Mihaela Gheata, Costin Grigoras

Kyle Cranmer, Lukas Heinrich, Felix Socher, David Rousseau

Mike Hildreth, Jakob Blomer, Luca Mascetti

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