INVENIO 2.0
THE NEXT GENERATION DIGITAL LIBRARY.
SERVICE PROVIDER
CERN SPINOFF

OPEN SOURCE GPL
RELEASED IN 2002
2.0 SINCE 2015
AGENDA

FEATURES & ARCHITECTURE

COMMON APPLICATIONS

TECHNOLOGY «HIGHLIGHTS»
N.B. SOME OF THIS STUFF IS STILL IN BETA.
COMBINE +60 MODULES

DEVELOP
+ CUSTOMIZE
+ OUT OF THE BOX
FLEXIBLE OVERLAY STRUCTURE

CUSTOMER OVERLAY

CUSTOMER OVERLAY

CUSTOMER OVERLAY

TIND OVERLAY

INVENIO BASE
FLEXIBLE OVERLAY STRUCTURE

M1  M2  M2  M4  M5
FLEXIBLE OVERLAY STRUCTURE

M1  M2  M2  M4  M5

M1  M2  M3

M1  M2  M3  M4  M5

INVENIO BASE

CUSTOMER OVERLAY

TIND OVERLAY
FLEXIBLE OVERLAY STRUCTURE

M1 M2 M2 M4 M5

M1 M2 M3

M2

M1 M2 M3 M4 M5

INVENIO BASE

CUSTOMER OVERLAY

TIND OVERLAY
12 YEARS OF OPEN SOURCE SOFTWARE DEVELOPMENT:

SEAMLESS UPDATES WHILE MAINTAINING LOCAL CUSTOMIZATIONS.
COMMON APPLICATIONS

INSTITUTIONAL REPOSITORY

RESEARCH DATA MANAGEMENT

INTEGRATED LIBRARY SYSTEM

PUBLISHING PLATFORM
INSTITUTIONAL REPOSITORY

2-STEP REGISTRATION WORKFLOW

STEP 1.  + ‘BASE’ METADATA
          Register metadata that is consistent for all files in one single operation.

STEP 2.  + — ‘ITEM’ METADATA
          Register metadata that is unique for each file in a unified workflow.
AUTOCOMPLETION OF FIELDS

INTERNAL KNOWLEDGE BASE

EXTERNAL KNOWLEDGE BASE

SHERPA RoMEO
METADATA IMPORT BASED ON DOIs

TIP: Fill in both fields to automatically import more data. This will save you time!

arXiv ID

E.g. hep-th/9711200 or 1207.7235 or arXiv:1001.4538

DOI

E.g. 10.1086/305772 or doi:10.1086/305772

Skip, and fill the form manually

Import
New upload

Instructions: (i) Press "Save" to save your upload for editing later, as many times you like. (ii) Upload and remove extra files in the bottom of the form. (iii) When ready, press "Submit" to finalize and make your upload public.

Type of file(s)

- Publication
- Poster
- Presentation
- Dataset
- Image
- Video/Audio
- Software

Type of publication

- Journal article
MARC -> JSON

because not everything can or should be described with MARC.
DATA MODEL: DATA STORED IN JSON

{
    "title": "Invenio 2.0:"
    "subtitle": "The new generation Digital Libraries",
    "firstName": "Kenneth"
    "lastName": "Hole"
}
DATA MODEL: EXAMPLE OF JSON SCHEMA

{
    "name": "Example Schema",
    "type": "object",
    "properties": {
        "tile": {
            "type": "string"
        },
        "subtitle": {
            "type": "string"
        },
        "firstName": {
            "type": "string"
        },
        "lastName": {
            "type": "string"
        }
    },
    "required": ["title", firstName, lastName]
}
DATA MODEL: JSON Alchemy

title:
  schema:
    {'title': {'type': 'dict', 'required': False}}
creator:
  @legacy(("245", "245__", "245__%"), ""),
    {"245__a", "title", "title"},
    {"245__b", "subtitle"},
  marc, '245..', {'title': value['a'], 'subtitle': value[b]}
  dc, 'dc:title', {'title': value}

producer:
  json_for_marc(), {'a': 'title', 'b': 'subtitle'}
  json_for_dc(), {'dc:title': ''}
DATA MODEL: JSON SCHEMAS

- Change bases on use cases (books vs. research data, physics vs. chemistry)
- Migration purposes
- Preservation purposes
RESEARCH DATA MANAGEMENT

**DataCite**
Find, access, and reuse data

ASSIGN [DIGITAL OBJECT IDENTIFIERS](#) TO MAKE THE DATA CITEABLE.

**GitHub**

GITHUB INTEGRATION FOR SEAMLESS PRESERVATION OF [SOFTWARE AND CODE](#).

**Recline.js**
Relax with your data

VISUALIZE DATA USING BUILT IN HTML AND JAVASCRIPT APPLICATIONS.
CMS is releasing data in the same format as used in data analysis by CMS physicists. A CMS-specific analysis framework is needed, and it is provided as a Virtual Machine image with the CMS analysis environment. The data can be accessed directly through the VM image. Basic information of the data contents is provided in About CMS and in About CMS Physics Objects. The original data are in primary datasets, i.e. no selection nor identification criteria have been applied (apart from the trigger decision), and these have to be applied in the subsequent analysis step. For the first release, no simulated Monte Carlo datasets are provided.

<table>
<thead>
<tr>
<th>CMS Primary Datasets</th>
<th>CMS Derived Datasets</th>
<th>CMS Tools</th>
<th>CMS Validated Runs</th>
<th>CMS Learning Resources</th>
<th>CMS Open Data Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMS primary datasets are AOD (Analysis Object Data) files, which contain the information that is needed for analysis</td>
<td>This collection includes data that have been derived from the CMS primary datasets</td>
<td>This collection includes tools, with which the CMS open data can be accessed and used</td>
<td>This collection includes CMS Validated Runs</td>
<td>This collection includes learning resources that use CMS public data</td>
<td>This collection contains CMS open data instructions.</td>
</tr>
<tr>
<td><strong>Total records:</strong></td>
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</tr>
<tr>
<td>14</td>
<td>37</td>
<td>7</td>
<td>1</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>
Explore CMS open data and play with the histograms

Select one or more parameters:
- E
- pt
- eta
- phi
- Q
- MET
- phiMET
Event display file derived from /ZeroBias/Run-2010B-Apr21ReReco-v1/AOD

McCauley, Thomas


Collection CMS Derived Datasets Collision Energy 7TeV Parent Dataset /ZeroBias/Run-2010B-Apr21ReReco-v1/AOD

Description

Sample event set from /ZeroBias/Run-2010B-Apr21ReReco-v1/AOD primary dataset in json format readable from the browser-based 3D event display.

Preview

Event 1 of 25: Events/Run_145338/Event_368

Detector Model
- Tracker Barrels
- Tracker Endcaps
- ECAL Barrel
- ECAL Endcaps
- ECAL Preshower
- HCAL Barrel
- HCAL Endcaps
- HCAL Outer
- HCAL Forward
- Drift Tubes (muon)
- Cathode Strip Chambers (muon)
- Resistive Plate Chambers (muon)

Tracking
- Tracks (reco.)

ECAL
- Barrel Rec. Hits
- Endcap Rec. Hits
- Preshower Rec. Hits

HCAL
- Barrel Rec. Hits
- Endcap Rec. Hits
- Forward Rec. Hits
- Outer Rec. Hits

Muon

Physics Objects
- Electron Tracks (GSF)
- Tracker Muons (Reco)
- Stand-alone Muons (Reco)
- Global Muons (Reco)
- Calorimeter Energy Towers

Characteristics
STORAGE

- Storage on multiple places
- File to link
- Point directly to correct storage place
- Optimizing the merging of chunks
INTEGRATED LIBRARY SYSTEM

ADVANCED STATISTICS

- OVER 20 PRE-CONFIGURED KEY STATISTICS DASHBOARDS
- CONFIGURE YOUR OWN DASHBOARD WITH CUSTOM QUERIES

Collection population

Circulation loans

Search type distribution
INTEGRATED LIBRARY SYSTEM

APIs FOR EFFECTIVE INTEGRATION.

DISCOVERY

EBSCO Discovery

Primo

Summon

KNOWLEDGE BASE

EBSCO

WorldCat

ProQuest

LINK RESOLVER

SFX

360 LinkSource
WHY CHOOSE OPEN SOURCE?
OPEN SOURCE BENEFITS.

FLEXIBLE  OPEN  PERSISTENT
DOWNLOAD OR GET IN TOUCH.

www.tind.io

www.invenio-software.org

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