



TopCAT

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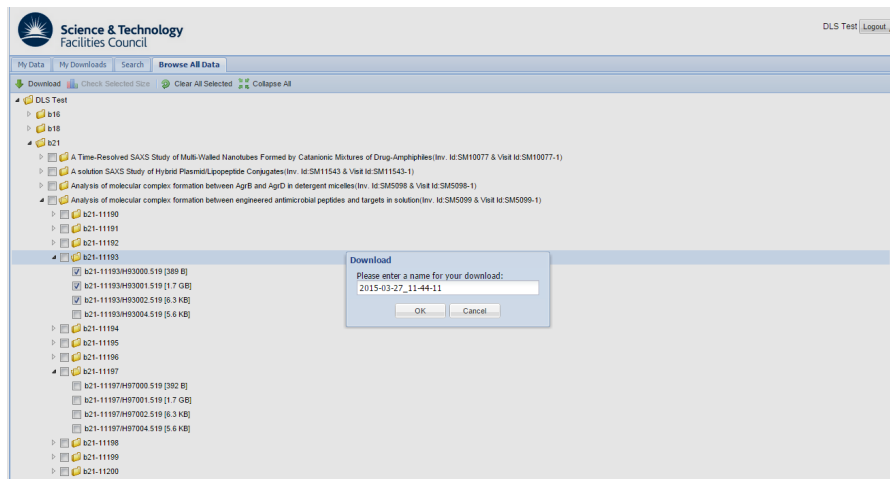
Overview

- What is TopCAT?
- Why TopCAT v2?
- About TopCAT v2
- TopCAT v2 Demo
- Questions



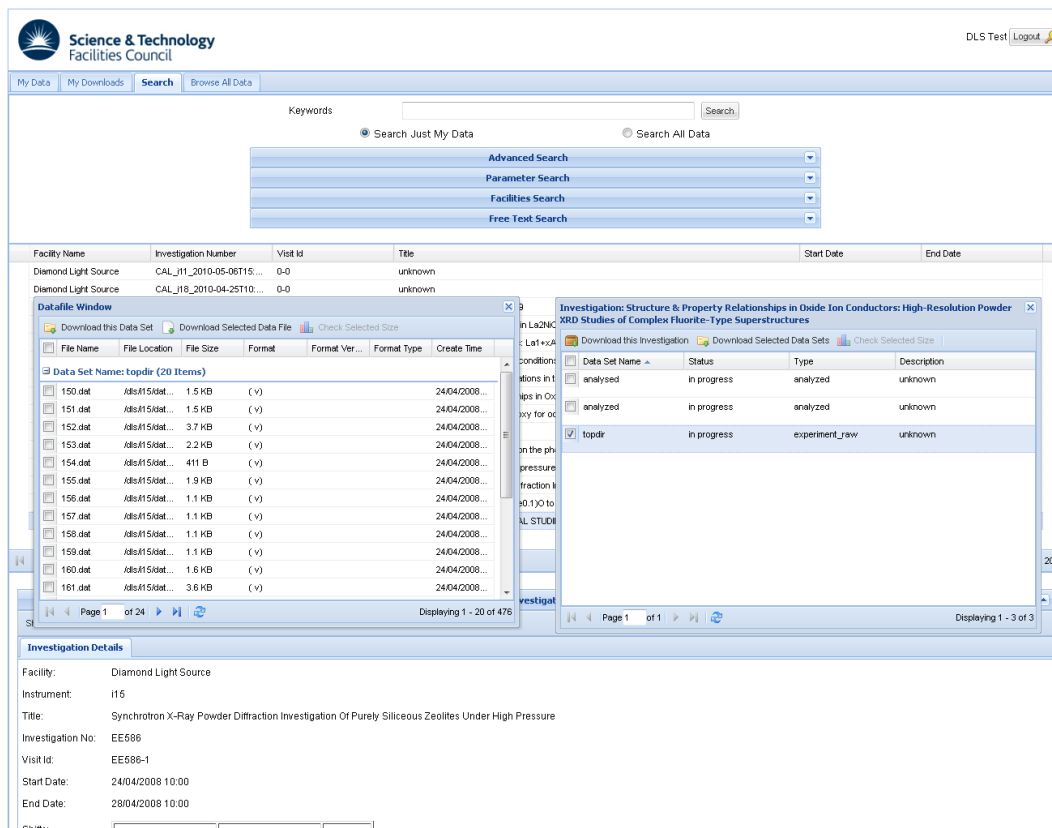
What is TopCAT?

- Web based GUI to search and download data across multiple ICAT instances.
- Provides a web interface to multiple ICATs and IDSs
- Allows users to browse for data
- Allows users to search metadata from multiple ICAT servers
- Allows users to download files from IDS servers
- Ability to Add dataset and upload datafiles
- Developed using GWT 2.5.1 and GXT 2.3.1 for UI Widgets



Status of TopCAT

- TopCAT 1.12.0
- Support ICAT 4.3+
- Support for IDS 1.1.0+



The screenshot displays the TopCAT web interface. At the top, there is a navigation bar with 'My Data', 'My Downloads', 'Search', and 'Browse All Data'. Below this is a search area with a 'Keywords' input field and a 'Search' button. There are two radio buttons for 'Search Just My Data' (selected) and 'Search All Data'. A dropdown menu is open, showing search options: 'Advanced Search', 'Parameter Search', 'Facilities Search', and 'Free Text Search'.

Below the search area is a table with columns: Facility Name, Investigation Number, Visit Id, Title, Start Date, and End Date. The table contains two rows of data:

Facility Name	Investigation Number	Visit Id	Title	Start Date	End Date
Diamond Light Source	CAL_11_2010-05-06T15...	0-0	unknown		
Diamond Light Source	CAL_18_2010-04-25T10...	0-0	unknown		

Two windows are open over the main interface. The 'Datafile Window' shows a list of data files for a 'Data Set Name: topdir (20 Items)'. The files are listed with columns: File Name, File Location, File Size, Format, Format Ver..., Format Type, and Create Time. The files are numbered 150 to 181, all in 'dat' format, with various file sizes and creation dates in 2008.

The 'Investigation: Structure & Property Relationships in Oxide Ion Conductors: High-Resolution Powder XRD Studies of Complex Fluorite-Type Superstructures' window shows a table with columns: Data Set Name, Status, Type, and Description. The table contains three rows:

Data Set Name	Status	Type	Description
analyzed	in progress	analyzed	unknown
analyzed	in progress	analyzed	unknown
<input checked="" type="checkbox"/> topdir	in progress	experiment_raw	unknown

At the bottom of the interface, there is an 'Investigation Details' section with the following information:

Facility: Diamond Light Source
 Instrument: I16
 Title: Synchrotron X-Ray Powder Diffraction Investigation Of Purely Siliceous Zeolites Under High Pressure
 Investigation No: EE588
 Visit Id: EE588-1
 Start Date: 24/04/2008 10:00
 End Date: 28/04/2008 10:00



Why TopCAT v2?

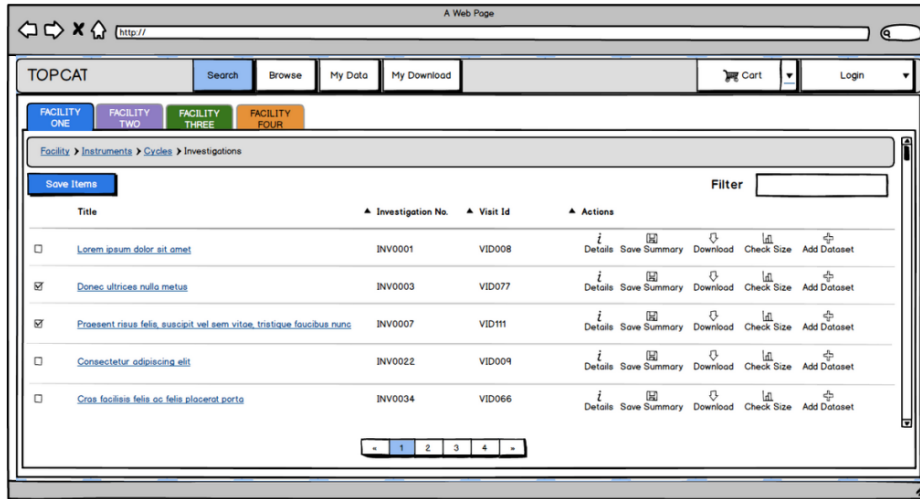
- Move away from GWT
- Current interface getting old. UI need modernising
- Different views (Tree and Window) and multiple ways of selecting and downloading files confuses users
- Improve customisation
 - TopCAT v1 Assumes a specific hierarchy:
 - Facility > Instrument > Cycle > Investigation > dataset > datafile
 - Facility > Instrument > Investigation > dataset > datafile
 - Terminology on the UI (Labels, Buttons, column title etc)
- Add support for new ICAT features (Multiple facilities on single ICAT server)



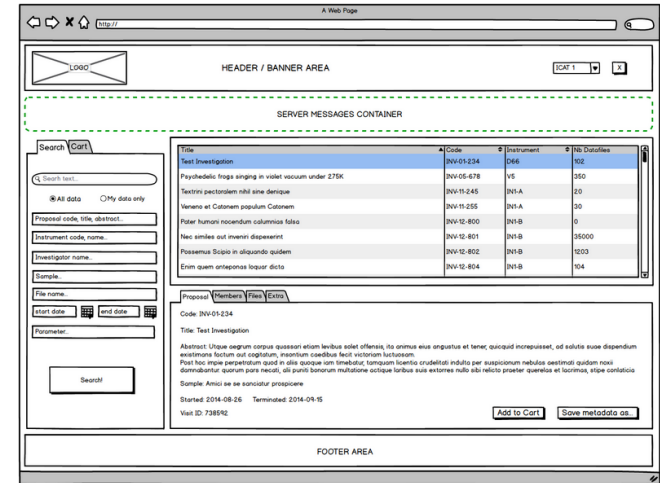
About TopCAT v2

- Requirement gathering
- Mockups
- Shopping cart based
- Customisable
- Better support for facility hierarchy
- Improve searching via upcoming ICAT search API
- Developed using AngularJS
- Looking at streaming json loading (oboe.js)
- Using SCRUM to manage project
- Plan to release end of July

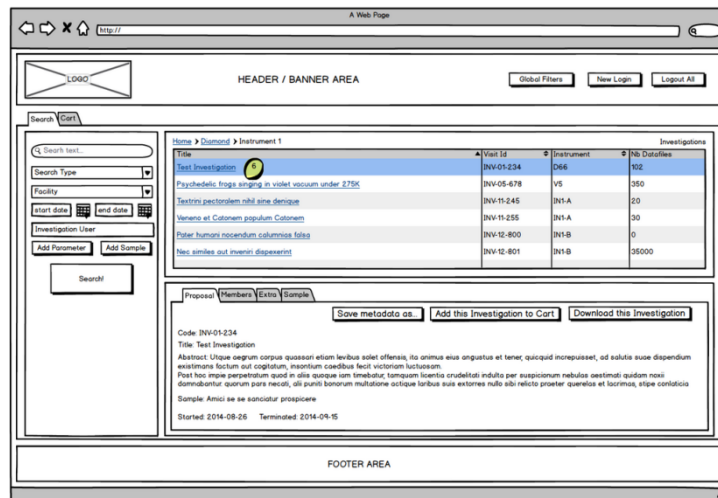
Mockups on Balsamiq



First STFC Mockup



Mockup by Institut Laue-Langevin



Combined Mockup

<https://stfc.mybalsamiq.com/projects>



Scrum Board

<https://trello.com/b/4NvdEIUv>

The screenshot displays a Trello Scrum Board interface. The main workspace is divided into five columns: Product Backlog, Sprint Backlog, Current Sprint, To Do, and In Progress. The Product Backlog column contains several cards with progress indicators and titles such as "Suppress facilities list if only one facility", "Main page layout", "Meta panel tabbing engine", "Display facility details in meta tab area", "User see login page on first access", "Login to single and multiple ICAT servers", "User Logout", and "Continue after session expiry". The Sprint Backlog, Current Sprint, and To Do columns are currently empty, each with an "Add a card..." prompt. The In Progress column also has an "Add a card..." prompt. On the right side, a menu is open, showing the board name "Scrum", a "Burndown Chart" link, a "Members" section with user avatars (WC, CM, DF), and an "Add Members..." button. Below the members section is an "Activity" log showing a series of actions performed by Wayne Chung (WC), including copying links from Story Templates in the Product Backlog and making the board public.



Demo

The screenshot shows a web browser window with the URL `localhost:9000/#/browse/facilities/dls-server/1/instruments/11/investigations`. The page title is "TopCAT v2" and the navigation menu includes "Home", "About", and "Contact".

On the left side, there is a "Browse" section with a "Cart" tab. It contains a search form with the following fields:

- Search Text (with a magnifying glass icon)
- Select a Search Type (dropdown menu)
- Select a facility (dropdown menu)
- Start Date (with a calendar icon)
- End Date (with a calendar icon)
- Add Parameters (button)
- Add Sample (button)
- Search (button)

On the right side, there is a search bar and a table of investigation entries. The table has the following columns: Title, Visit Id, Start Date, and End Date. The entries are:

	Title	Visit Id	Start Date	End Date
<input type="checkbox"/>	8631553 Characterisation of the focusing properties of kinoform silicon lenses	MT192-3	08-07-2008	11-07-2008
<input type="checkbox"/>	8631564 A scanning microscope for hard X rays	MT570-1	17-04-2008	20-04-2008
<input type="checkbox"/>	8631648 Investigating the functionality of the SOLO and Pilatus imaging detectors	MT588-1	23-06-2008	29-06-2008
<input type="checkbox"/>	8631659 Temperature-dependent Structural Changes in the Chiral Pt{531} Surface	MT845-1	25-02-2009	03-03-2009
<input type="checkbox"/>	8631667 Transparent X-ray Beam Imaging	MT767-1	21-01-2009	26-01-2009
<input type="checkbox"/>	8631670 A scanning microscope for hard X rays	MT742-1	06-03-2009	09-03-2009

Below the table, it says "Showing 1 to 6 of 336 entries". There is a pagination control with "First", "Previous", "1" (selected), "2", "3", "4", "5", "...", "56", "Next", and "Last".

At the bottom, there are three tabs: "Meta 1", "Meta 2", and "Meta 3". The "Meta 1" tab is selected, showing a paragraph of Lorem Ipsum text:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce varius eu odio lobortis efficitur. Pellentesque vitae commodo tortor. Fusce placerat lectus a diam facilisis dignissim. Suspendisse efficitur commodo nisi et dictum. Curabitur condimentum arcu nisi, et pretium turpis fermentum non. Donec sodales quam vel lorem tincidunt tempor. Fusce sit amet nisl malesuada, accumsan libero vitae, fermentum lectus. Cras vitae velit lectus. Nulla in arcu ullamcorper dolor eleifend pellentesque vel eu velit.

At the very bottom, there is a footer area with the text "Place sticky footer content here."



Resources

- TopCAT Distro: <http://icatproject.org/mvn/site/topcat/1.12.0/installation.html>
- TopCAT Source: <http://topcat.googlecode.com/svn/>
- Installation Instruction: <http://icatproject.org/installation/>
- TopCAT v2 source: <http://topcat.googlecode.com/svn/branches/topcatv2/>
- TopCAT Mockup: <https://stfc.mybalsamiq.com/projects/topcatv2-stfc/grid>
- More information: <http://icatproject.org/> and <https://code.google.com/p/topcat/>
- TopCATv2 Scrum Board: <https://trello.com/b/4NvdEIUv>



Questions?