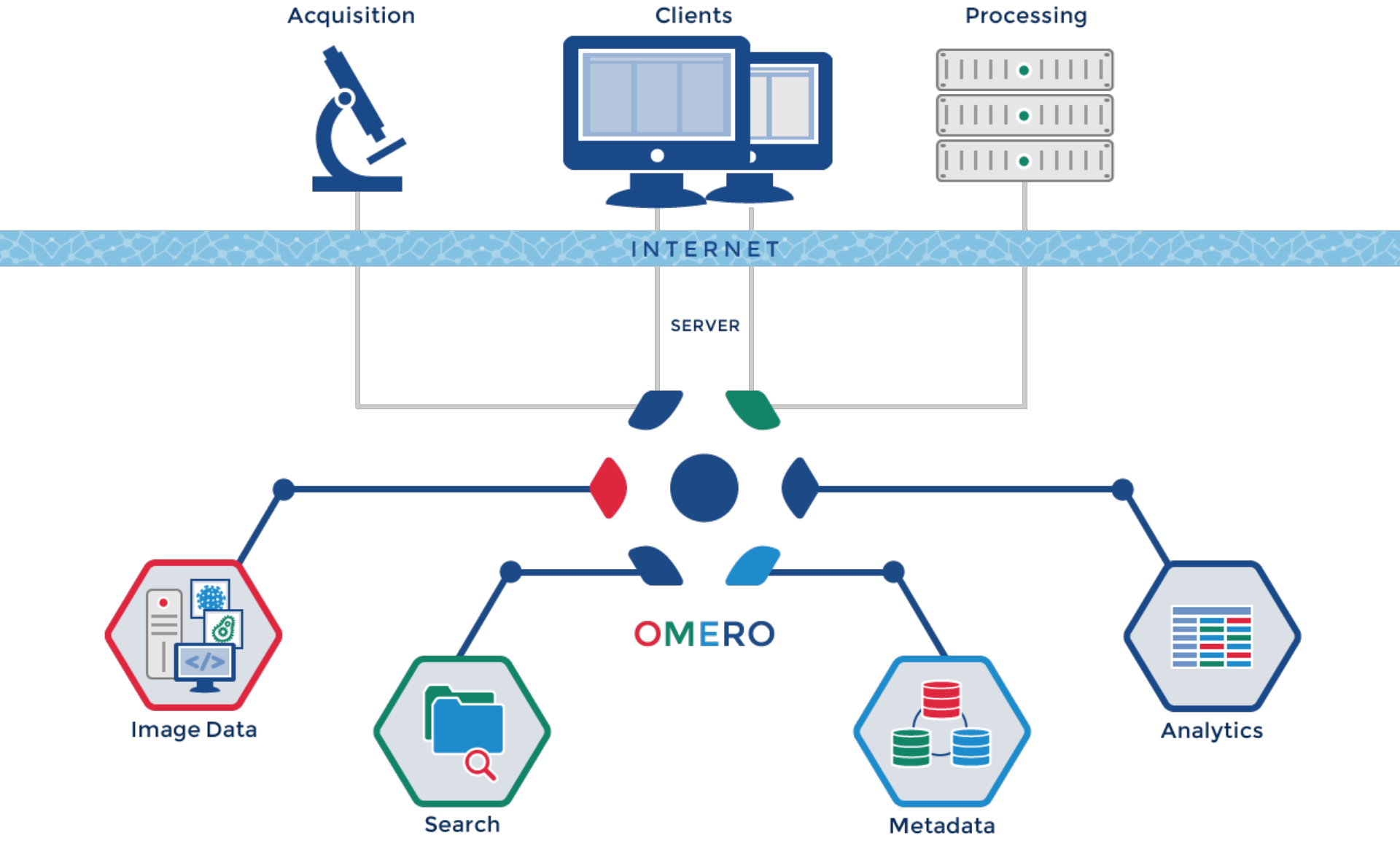
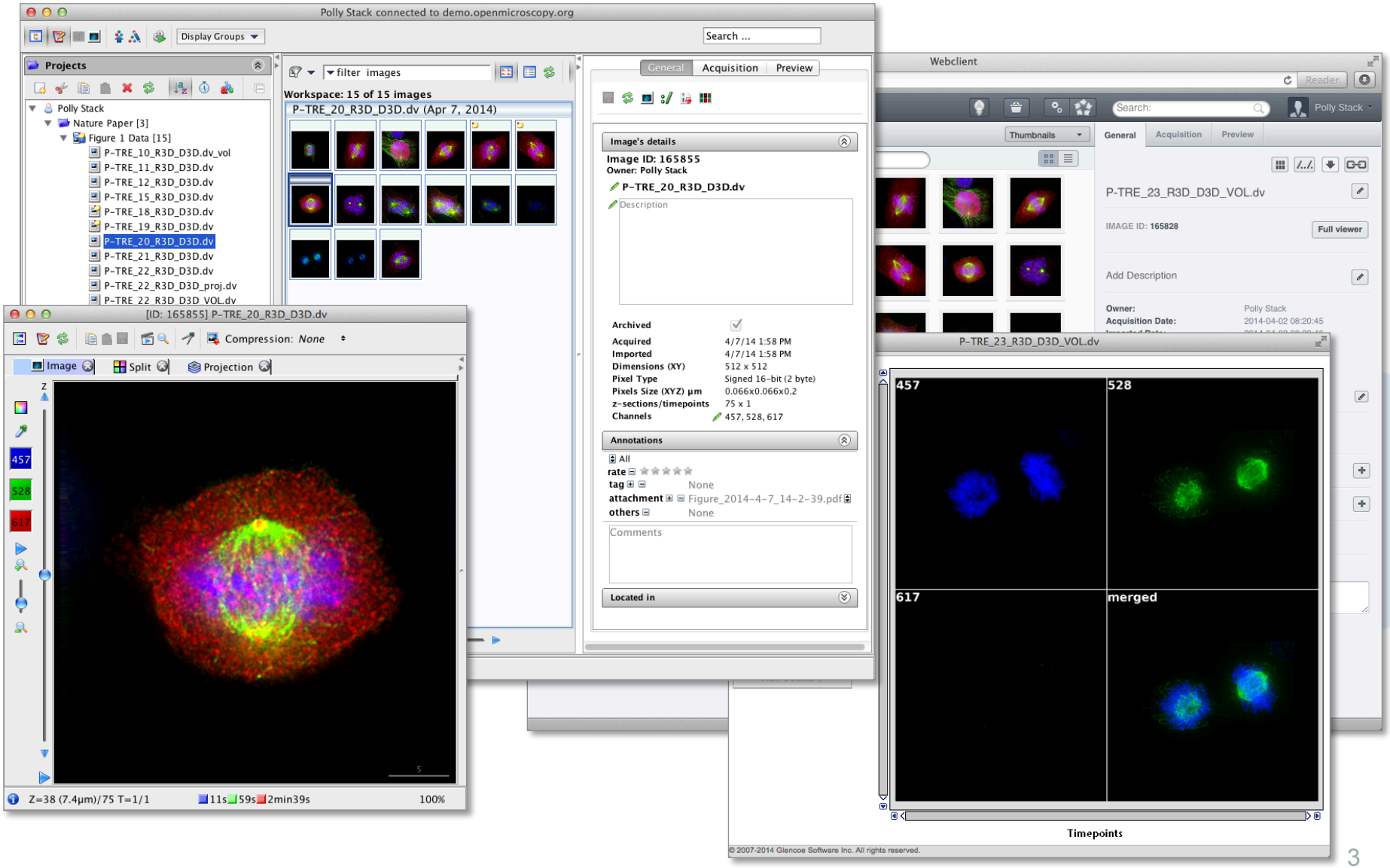
THE PROBLEM

The OMERO Platform



OMERO: Desktop, Web and CLI clients



THE OME TEAM

The OME Team and Consortium

Add in Some Users

THE CONTEXT

Common Development Aim

- deploy functional software
- allows users to achieve tasks
- ease of use
- learnability
- robustness

Expert Systems & Academic Development

- very traditional situation
- well recognised issues
- “it works for me”
- expanding to non-expert users
- determining the user pool
- being all things to everybody

User Experience

- UX team
- requirements gathering
- task and workflow analysis
- UI design
- testing
- user evaluation
- documentation and training

Broad Range and Spread of Users

- **Scientists**
- Facility managers
- Administrators
- Developers
  - Dundee
  - Consortium Members
  - Glencoe
  - Wider community

Scientist User

- User Interface
  - the only way users have to interact with a system

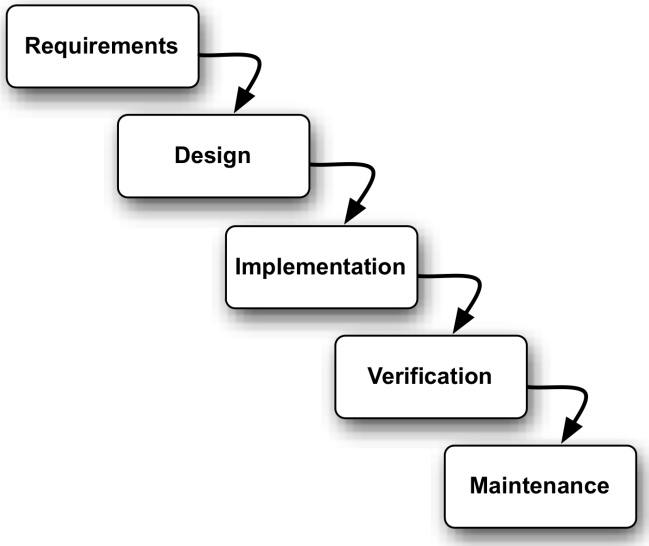
- what they see is what they get ...

  ... they only get what they can see.

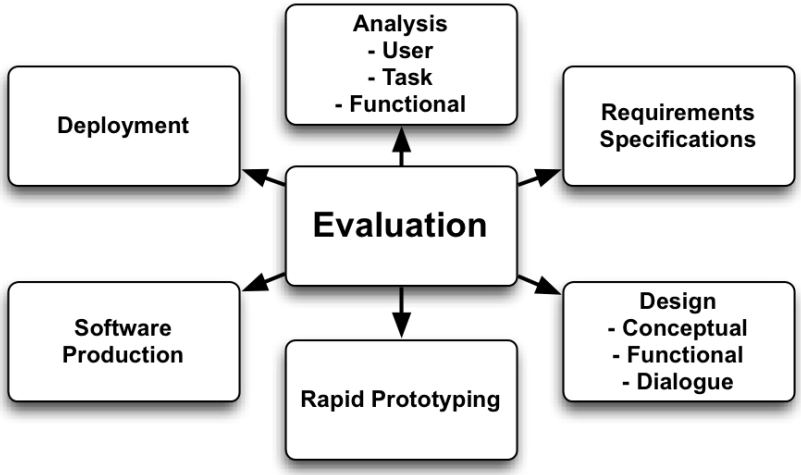
THE APPROACH

Classic Development Models

Waterfall Model

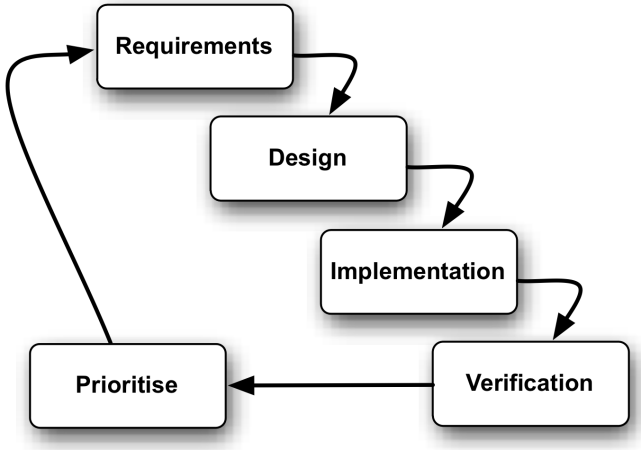


Star Model

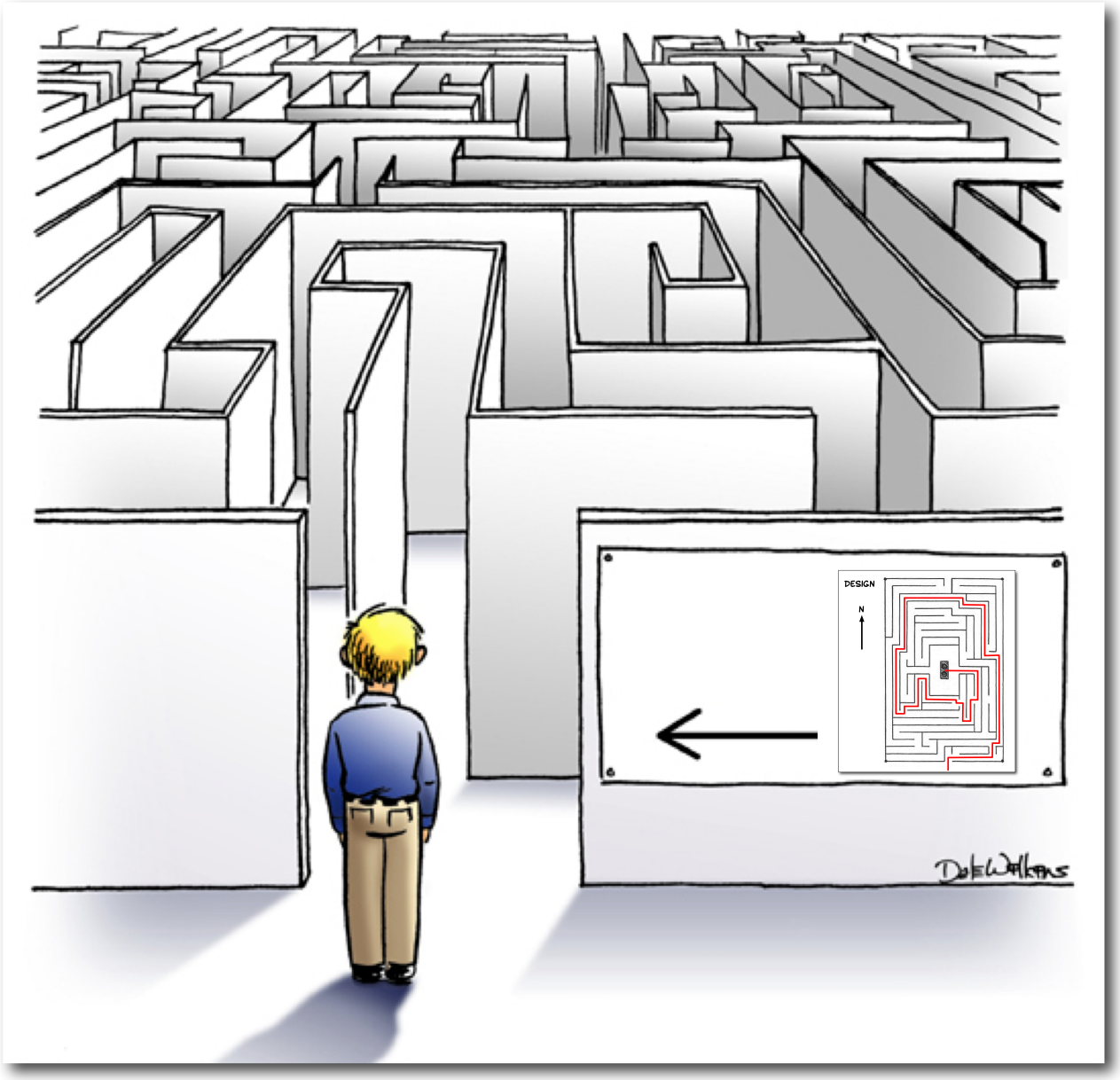


Hartson and Hix

Agile-Waterfall Model



Design = Map of How to Reach Goal



Approach Preferred by Some

Design is Communication

- saves time and effort
- avoids mistakes/crossed wires
- prevents redundancy
- facilitates collaboration
- enhances documentation

Expert Knowledge and Mental Models

- mental models are incomplete, unstable, nebulous and easily confused (Norman)
- making mental models explicit stabilises them and clarifies ideas
- expert scientist users, expert developer users
- mostly expert knowledge is “deep knowledge”

  i.e. tacit, not consciously articulated
- making abstract knowledge explicit actually changes it (Bliss)

Kick Starts Thought Processes

- starts developers thinking
- before they start coding
  - done a lot of pre-processing
  - firmed up their mental models
  - filled in gaps
- this is where real time-saving can take place

OME DESIGN

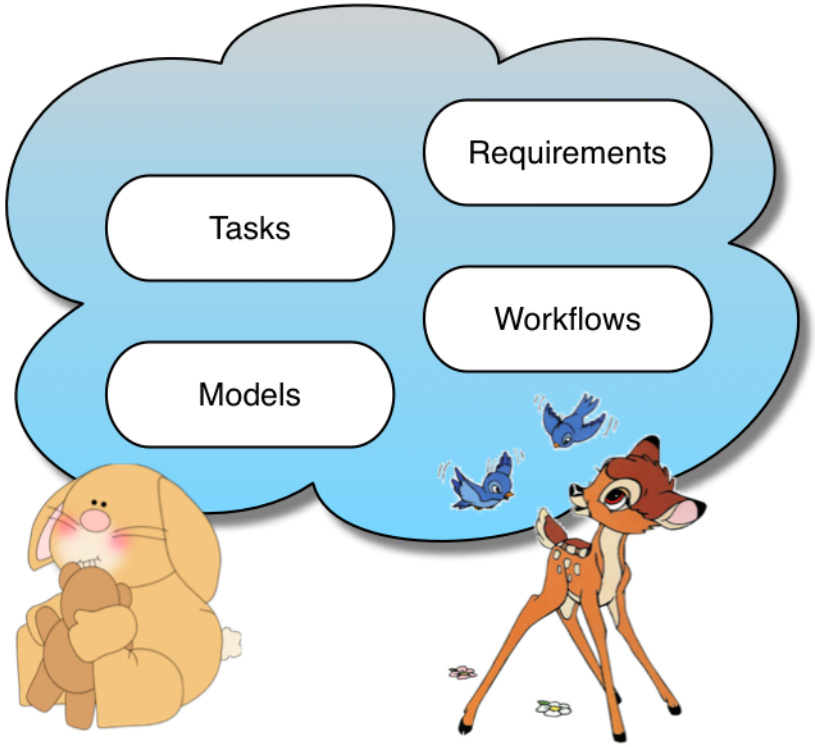
UX Team Workflow

- starts with requirements
- use cases
  - single task
  - complex workflow
- sometimes small user numbers
- busy people
- once on board very helpful

UX Team Workflow

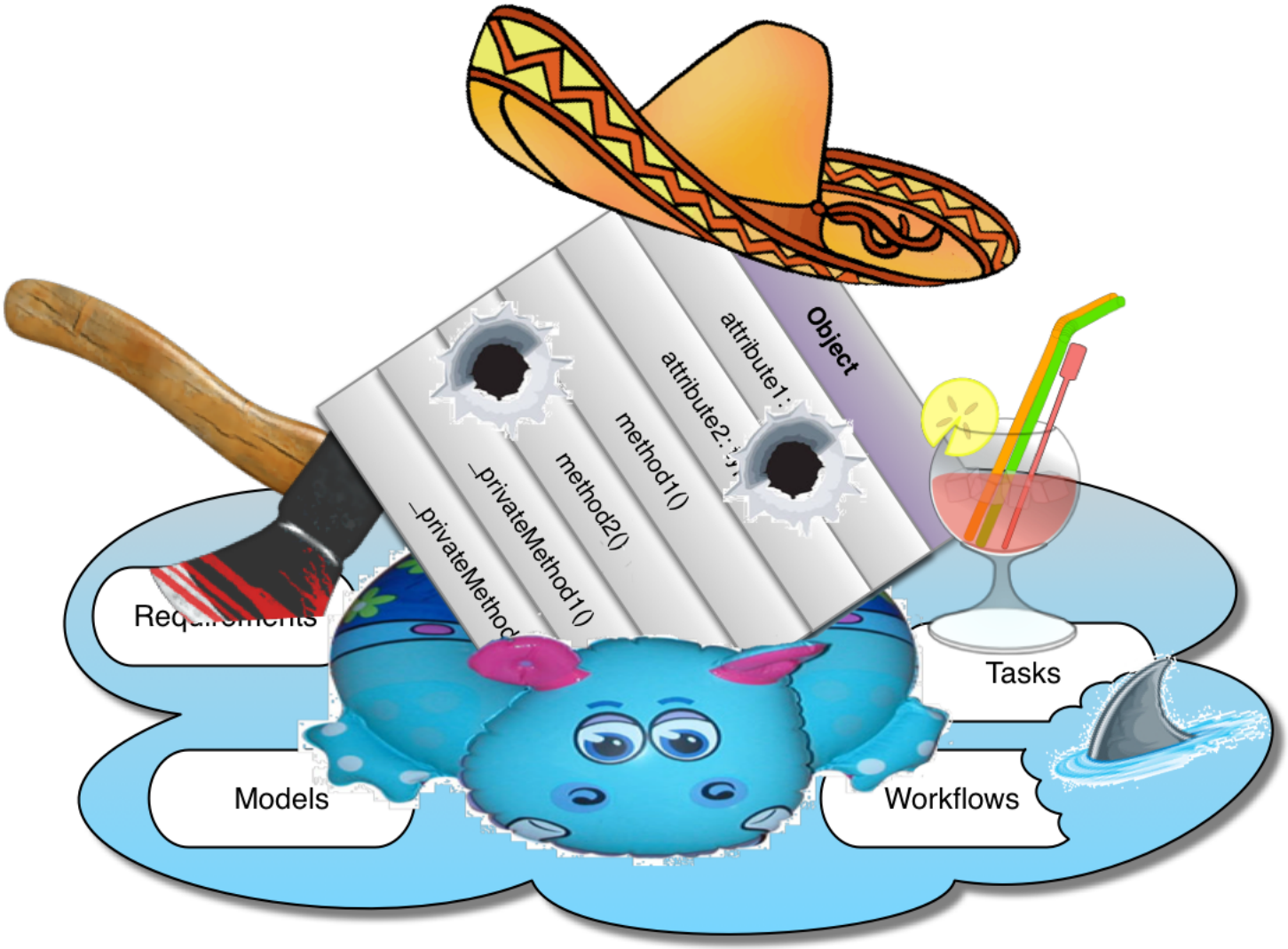
- Client Group meetings
  - present requirements
  - talk through issues
  - present any scoping/feedback
- often where conceptual design and functional design get all twisted up

Conceptual and Functional Design



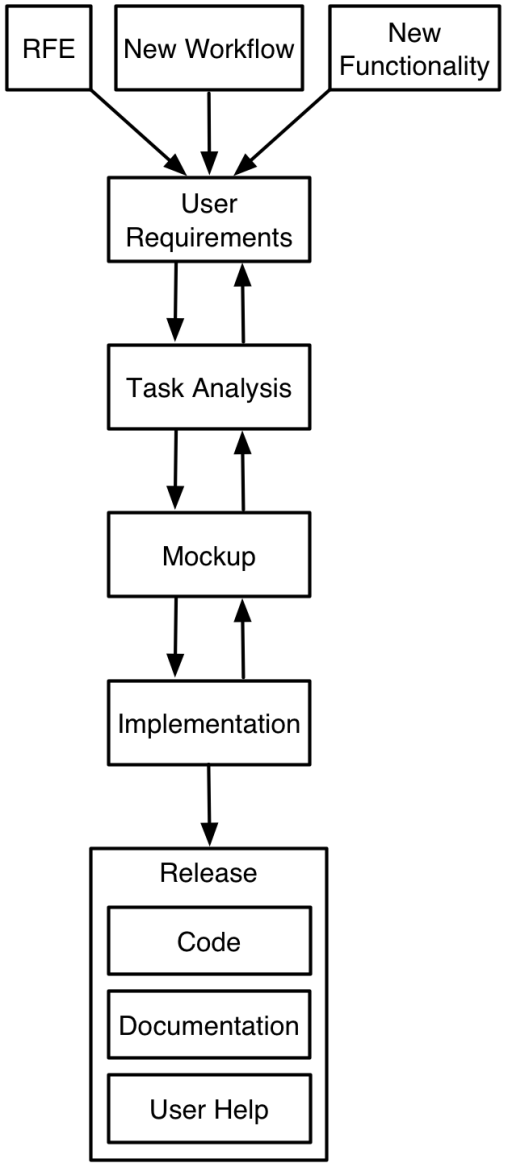
Object
attribute1: type
attribute2: type
method1()
method2()
_privateMethod1()
_privateMethod2()

Reality

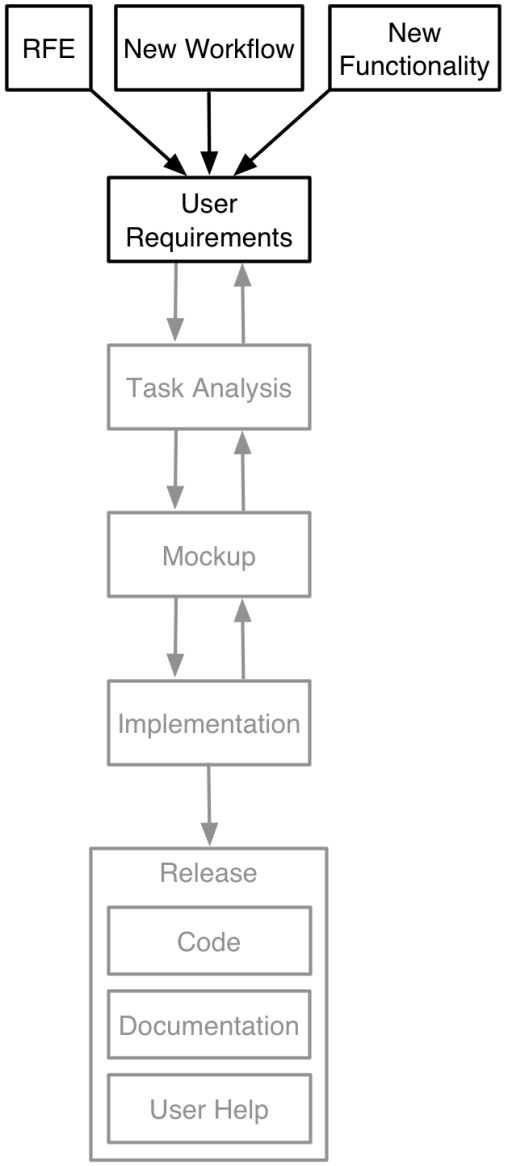

Object
attribute1:
attribute2:
method1()
method2()
_privateMethod1()
_privateMethod
Tasks
Models
Workflows

SCOPING

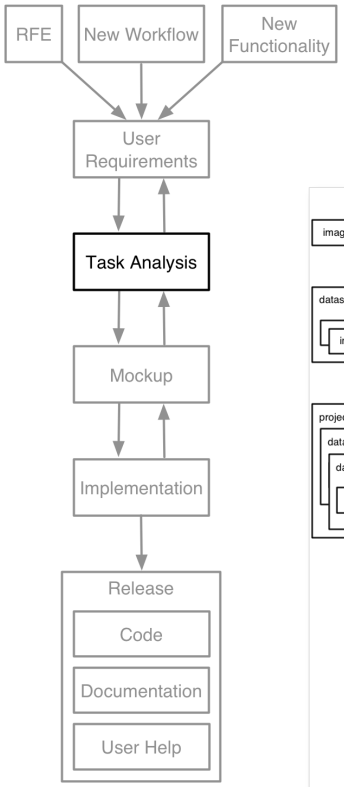
Scoping Workflow

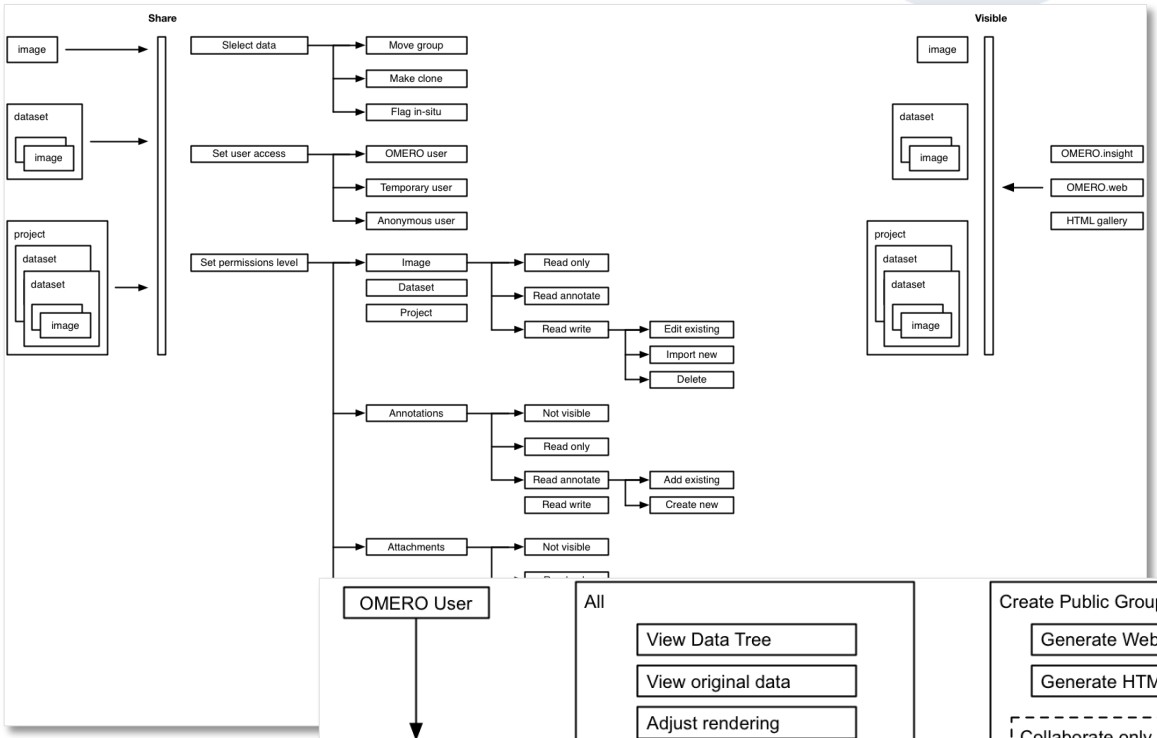


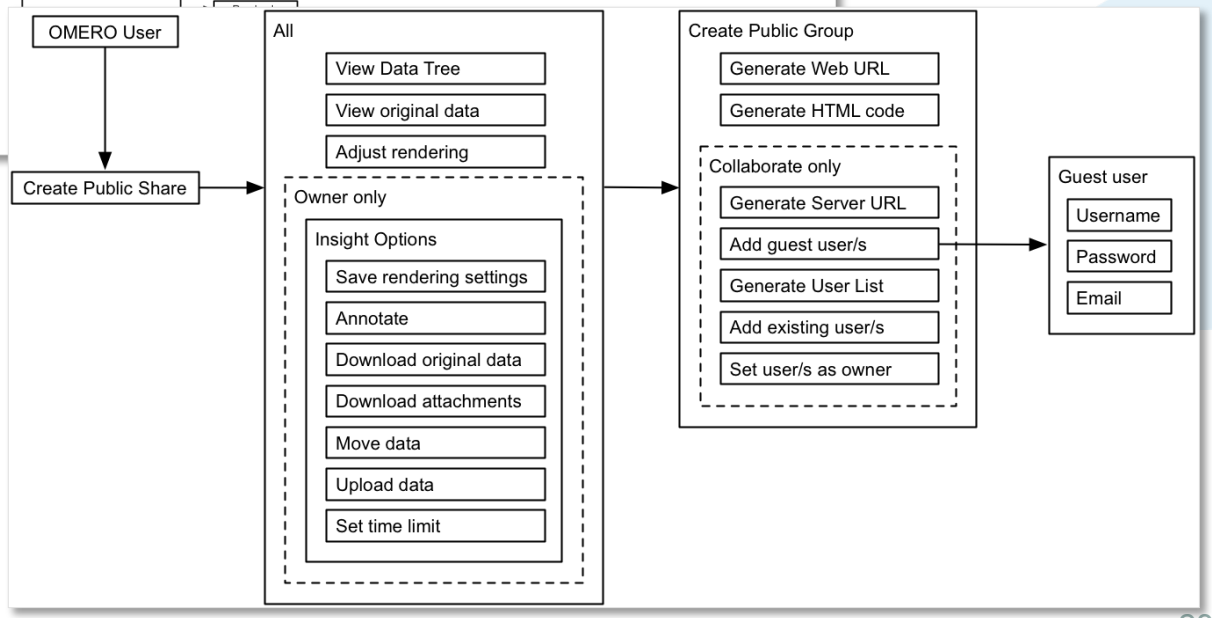
One Step at a Time

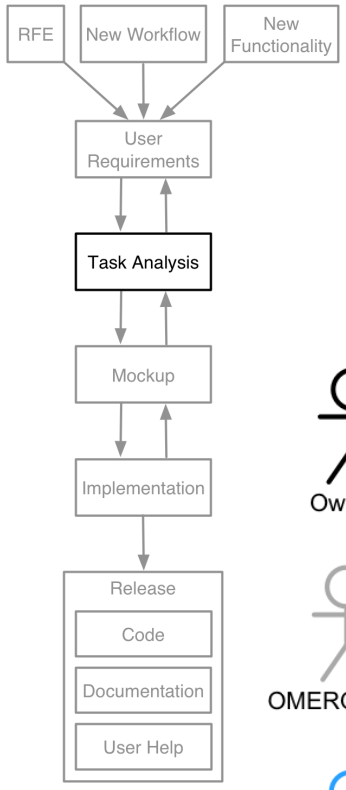


Task Analysis

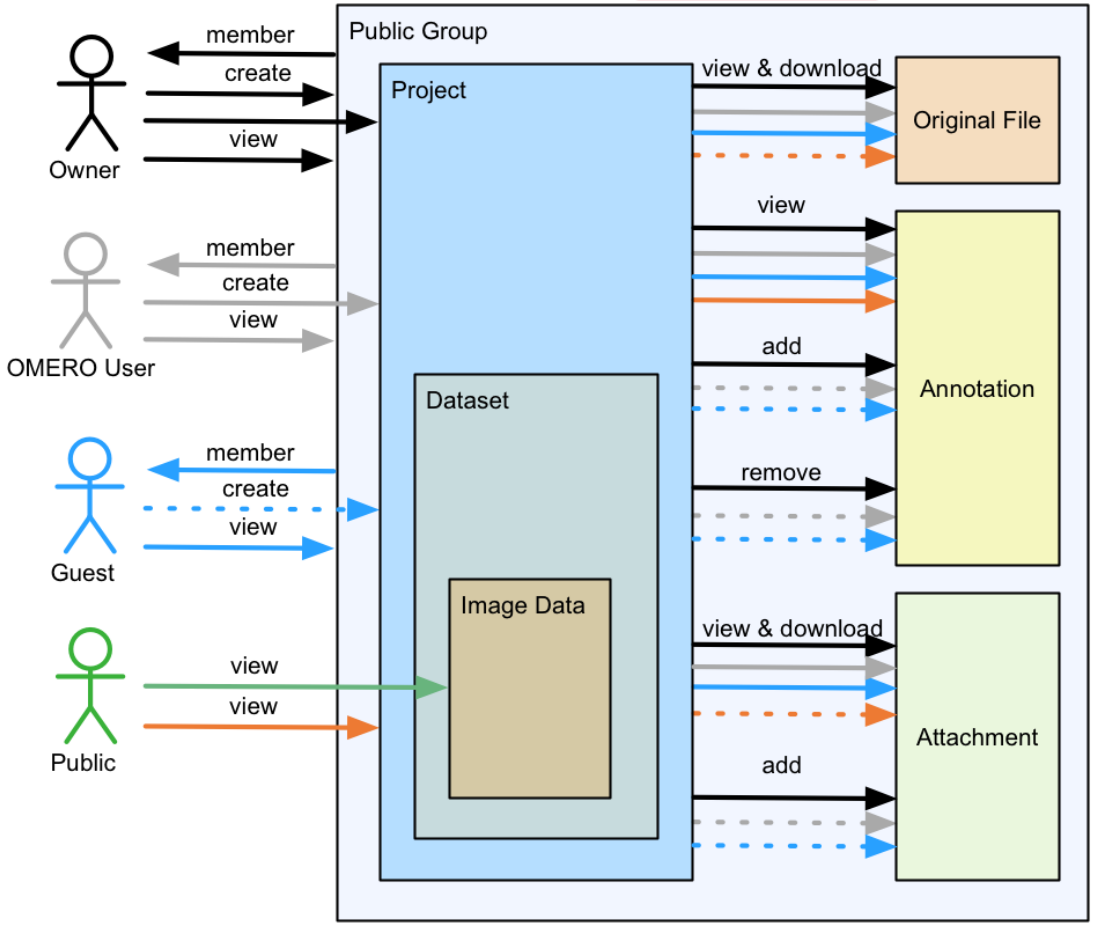


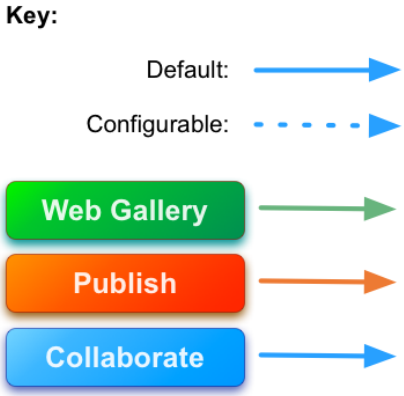


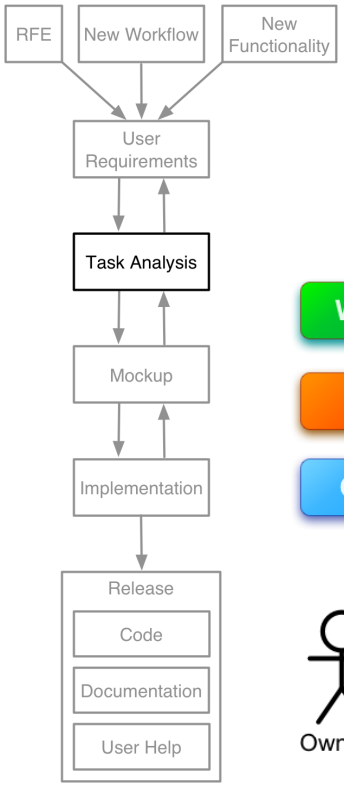




UML-type Use Case Diagram





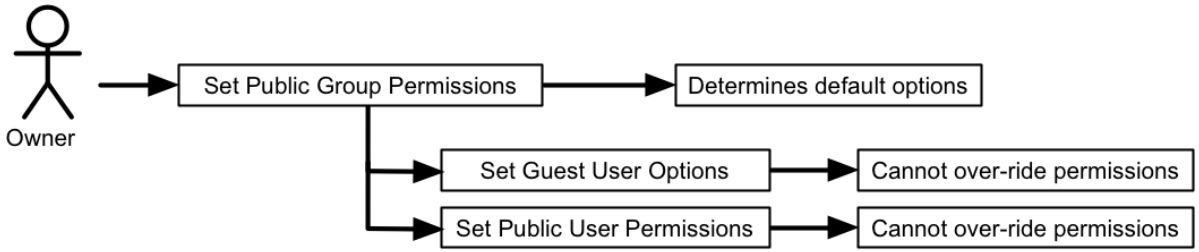


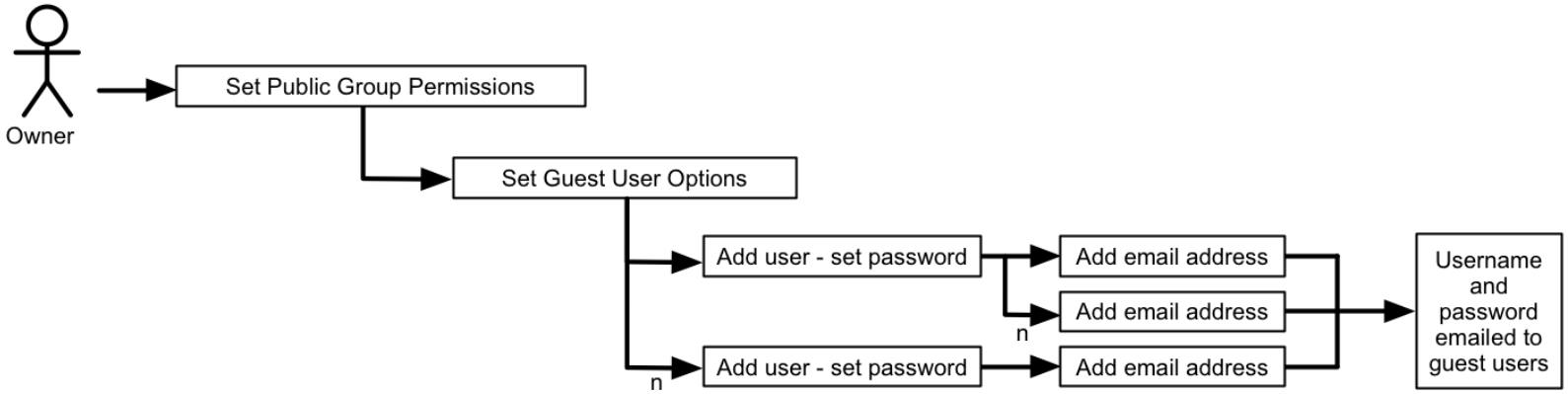
Flow Diagrams

Web Gallery — Has same permissions and interactivity as current "share link" in Web client but does not require login to view images.

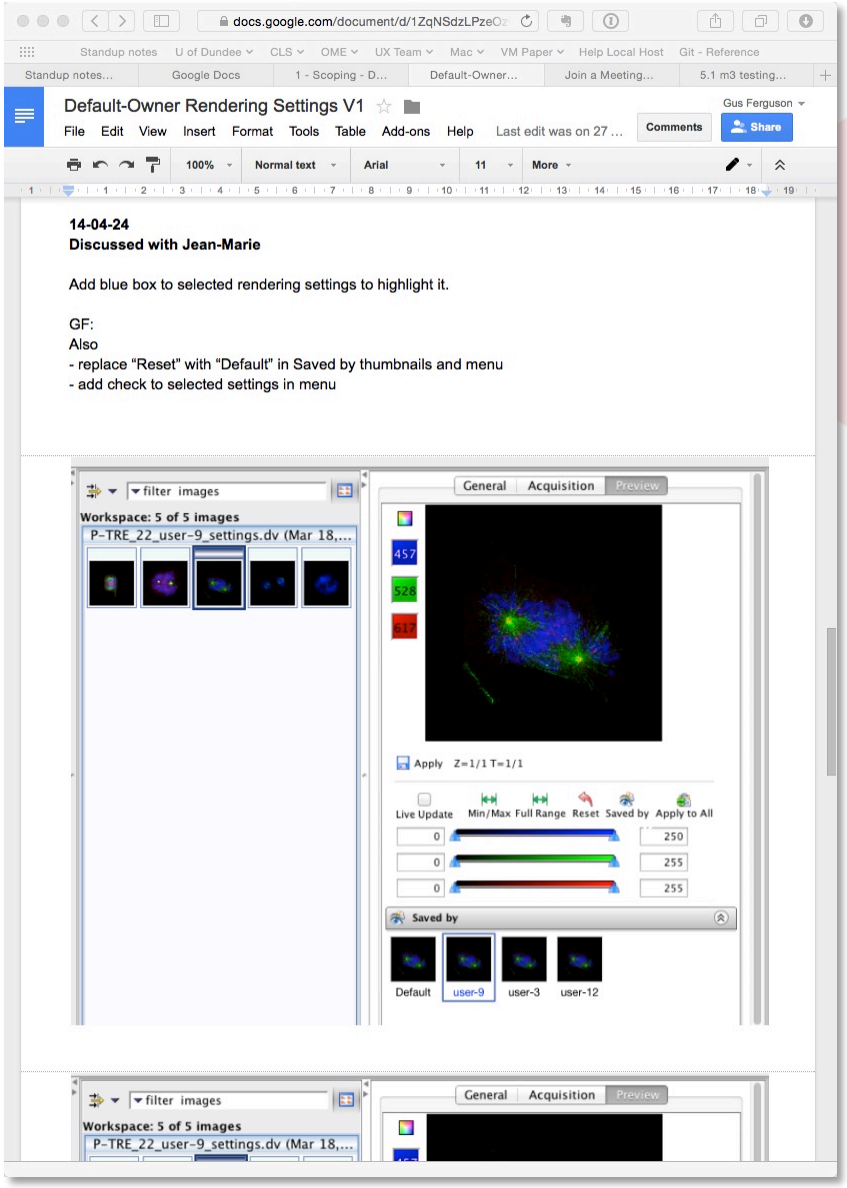
Publish — Has same permissions and interactivity as current "Virtual Microscope" user but does not require login to view images/annotations/attachments.

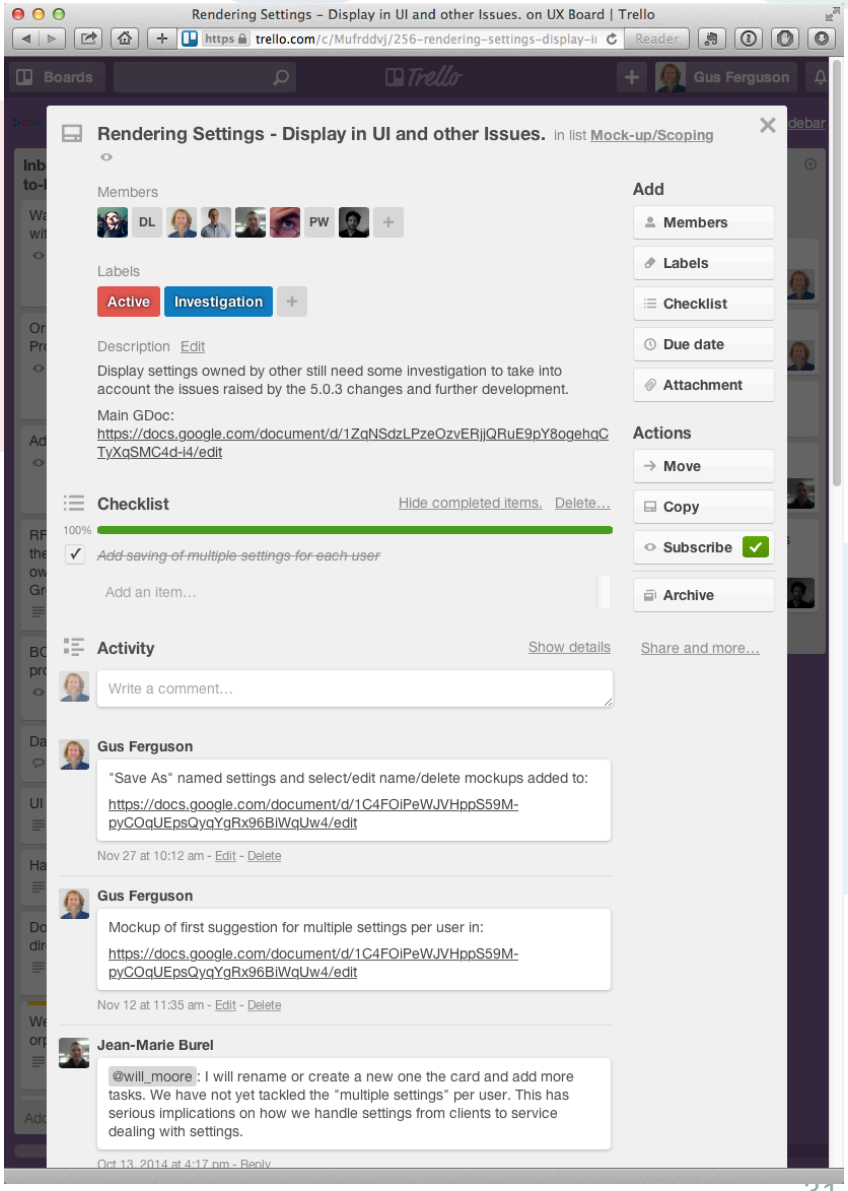
Collaborate — Has same permissions and interactivity as current group permissions system - requires insight and login but group owner can generate username/s and password/s.



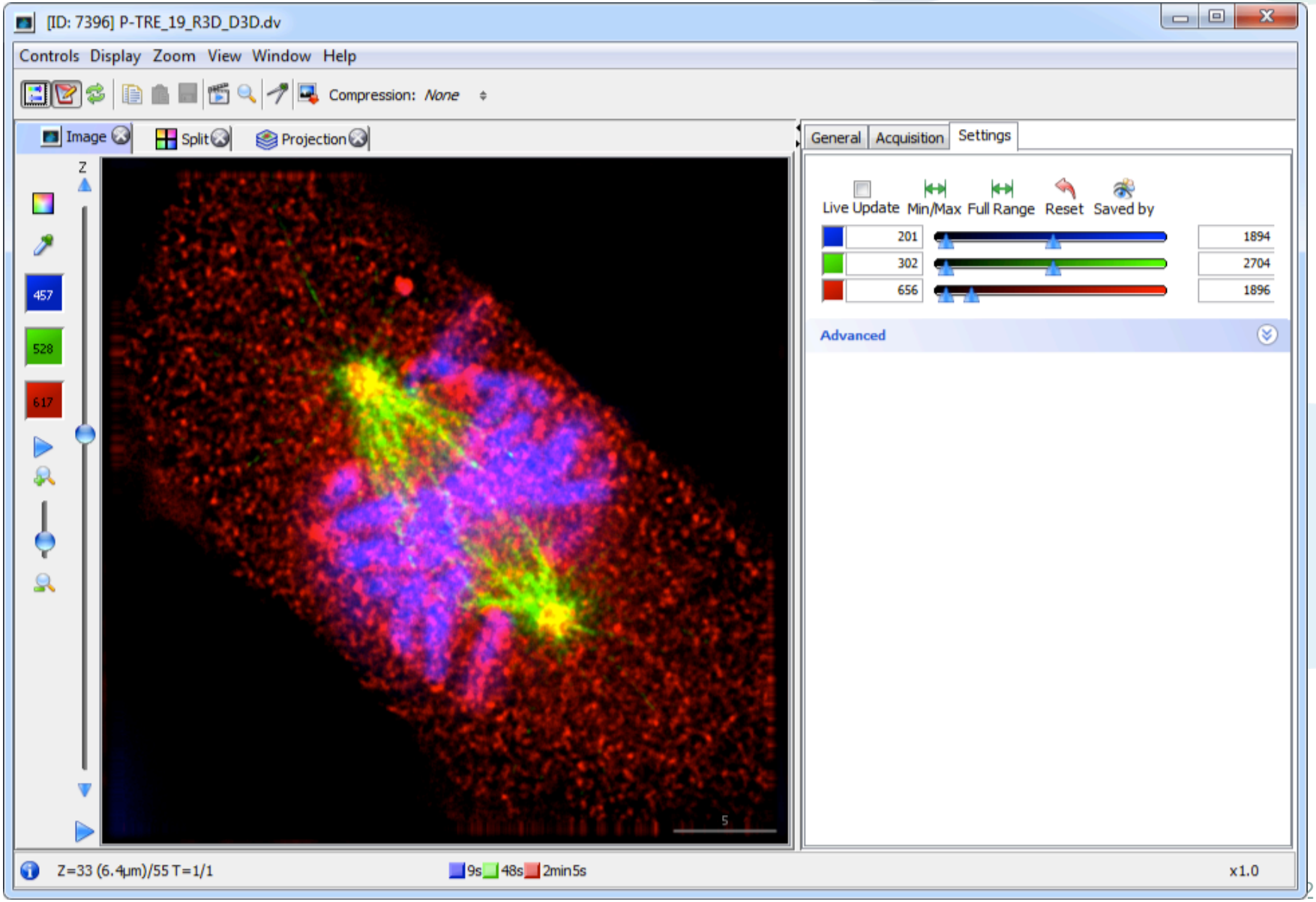


Collaboration





Use Cases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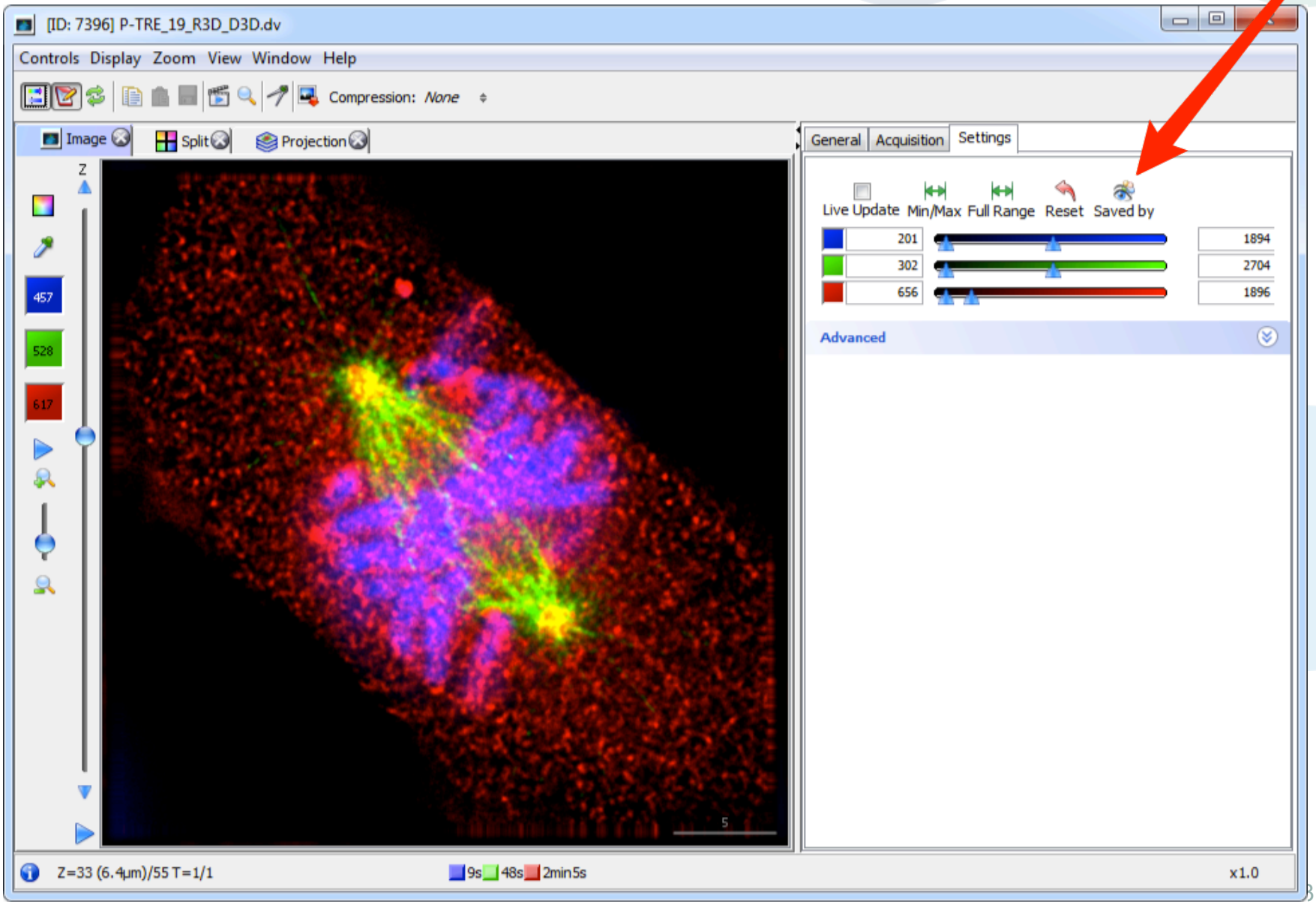
Controls Display Zoom View Window Help
Compression: None
Image
Split
Projection
Z
457
528
617
General
Acquisition
Settings
Live Update
Min/Max
Full Range
Reset
Saved by
201
302
656
1894
2704
1896
Advanced
Z=33 (6.4µm)/55 T=1/1
9s 48s 2min5s
x1.0

Use Cases


[ID: 7396] P-TRE_19_R3D_D3D.dv
Controls Display Zoom View Window Help
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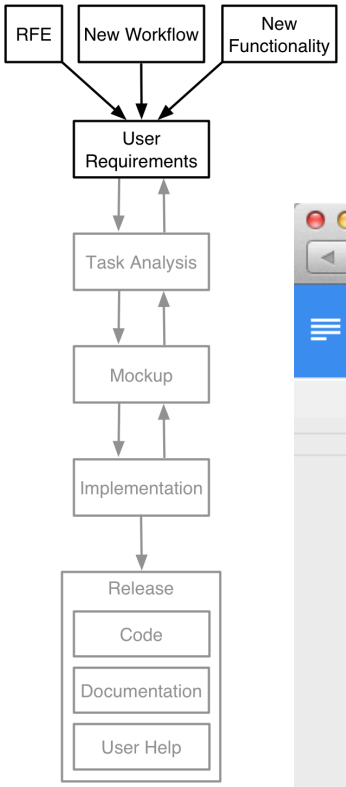
9s 48s 2min5s
x1.0



Use Cases

Default-Owner Rendering Settings V1 - Google Docs

docs.google.com/document/d/1ZqNSdzLPzeOzvERjjQRuE9pY8ogehqCTyXqSMC4d-i4/edit

Default-Owner Rendering Settings V1

File Edit View Insert Format Tools Table Add-ons Help Last edit was on 19 December 2014

Gus Ferguson

Comments Share

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Default-Owner Rendering Settings V1

Arising from feedback from Oxford
Trello Card: https://trello.com/c/Jv1L8gqY/163-rendering-settings

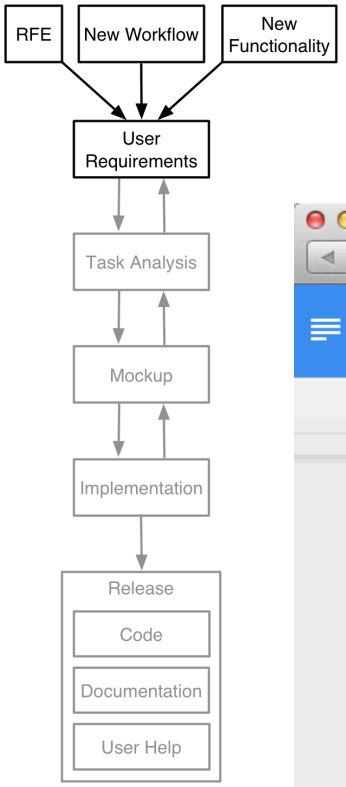
Testing of Current State

Insight:

- If owner has not changed rendering settings then default settings show up as owner settings.
- If owner has changed settings, no default settings show in "Settings By" list - just new owner settings.
- Have to use "Revert" to see default settings.
- In read-only when a non-owner changes rendering settings, these are retained for the session in that group, but no entry added to the "Settings By" list. Will not see changes if remove group from data tree and then reinitiate it and view again.
- In read-annotate if a non-owner views an image without changing rendering settings, an entry is made in the"Settings By" list with the default settings.
- In read-only another user sees the owner's settings by default - in read-annotate a user sees the default settings
- In read-only a group owner cannot save changed settings for the data belonging to another user - either group owner or member. This is contrary to the published permissions.
- In read-annotate - if non-owner changes rendering settings - the thumbnail do not update

Web:

- In read-annotate - no ability to see settings from other users - presented with default settings.
- In read-only - see owners settings by default.



Use Cases

Default-Owner Rendering Settings V1 - Google Docs

https docs.google.com/document/d/1ZqNSdzLPzeOzvERjjQRuE9pY8ogehqCTyXqSMC4d-i4/e

Default-Owner Rendering Settings V1

File Edit View Insert Format Tools Table Add-ons Help Last edit was on 19 December 2014

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- In read-only - see owners settings by default.

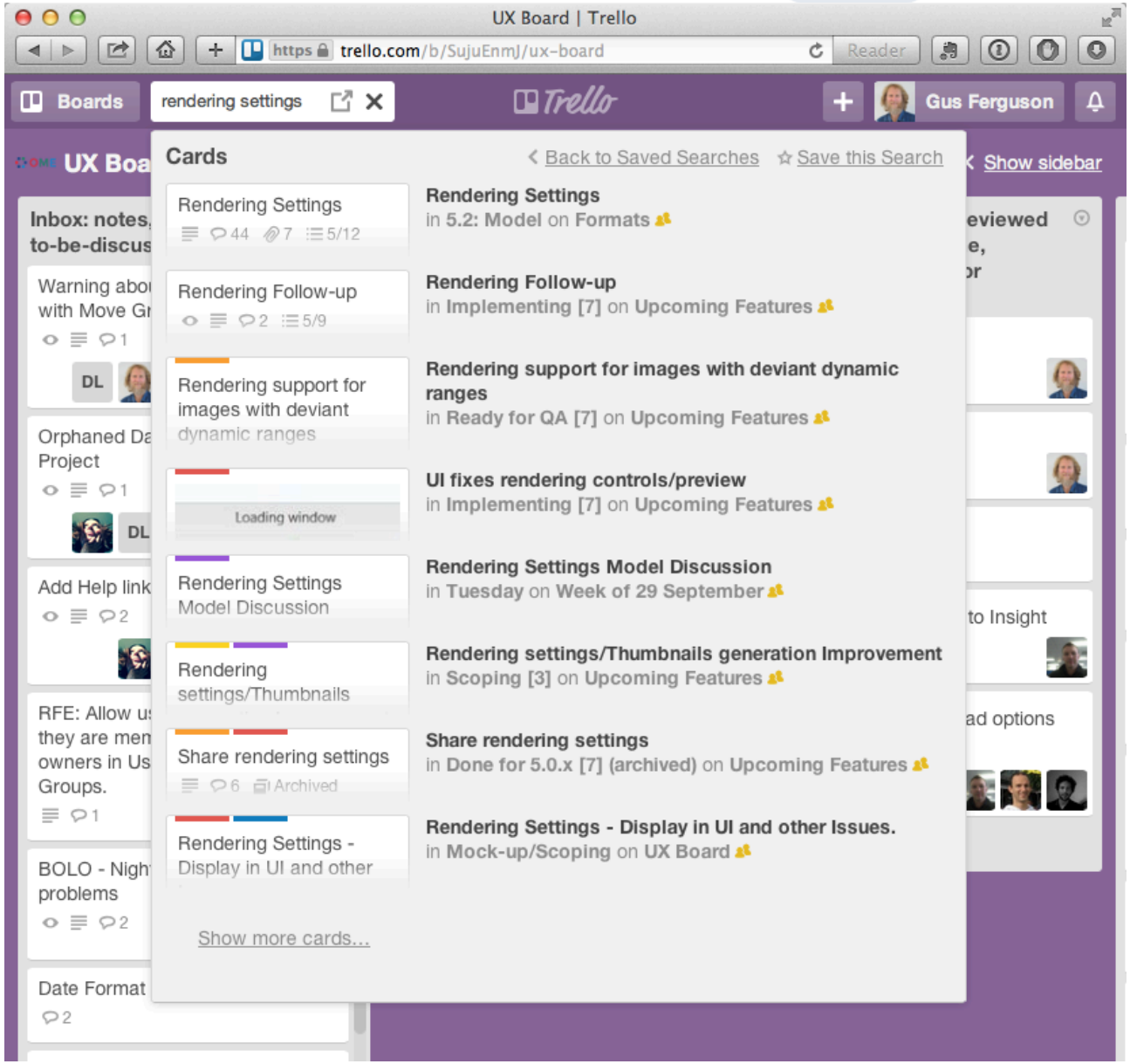
Points:

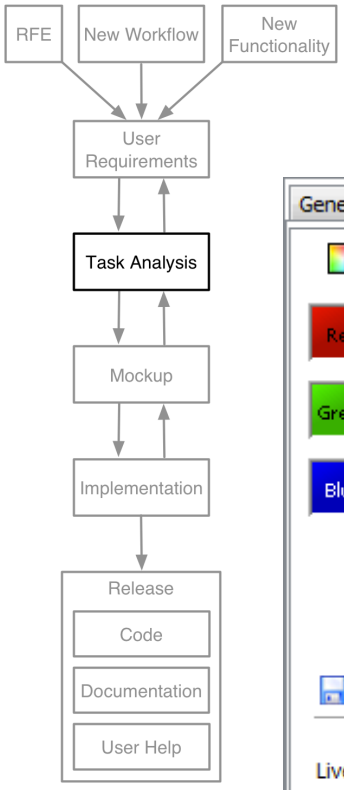
- default to display owner's settings if user has no settings of own
- do not save default settings as user settings if user just views and does not alter settings
- have the settings thumbnails displayed by default
  - this will expose them better
  - plenty of room
  - can collapse if desired)
  - increase size of thumbnails to centre pane default - can't see anything worthwhile as they are
- could do with new icon
- highlight owner's settings with blue text
- display "Reset" settings as thumbnail
- right click on thumbnails should give

  Display Rendering Settings > Default
  user-1
  user-2
- selection of another rendering setting should not over-write user's setting if present
- if no user rendering setting then displayed setting can be saved as user setting as normal
- need to get the rendering settings switching into Web

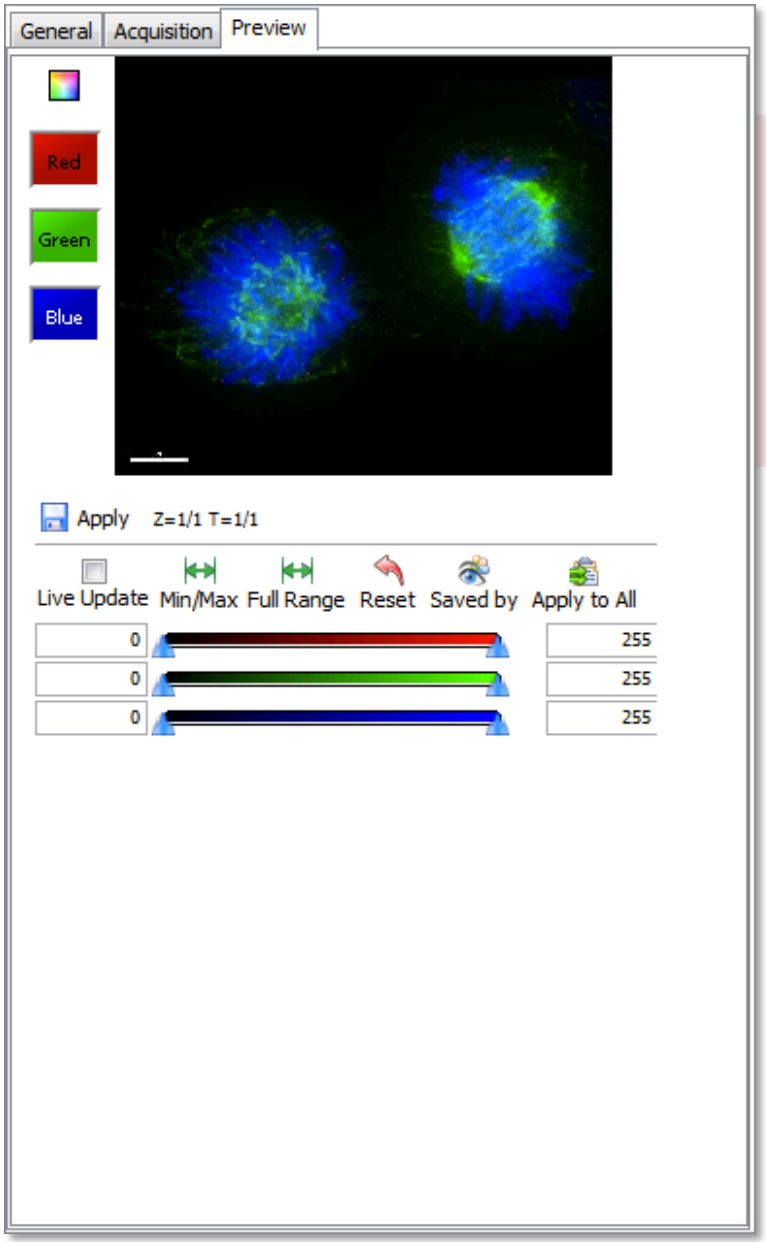
Insight Mockups:

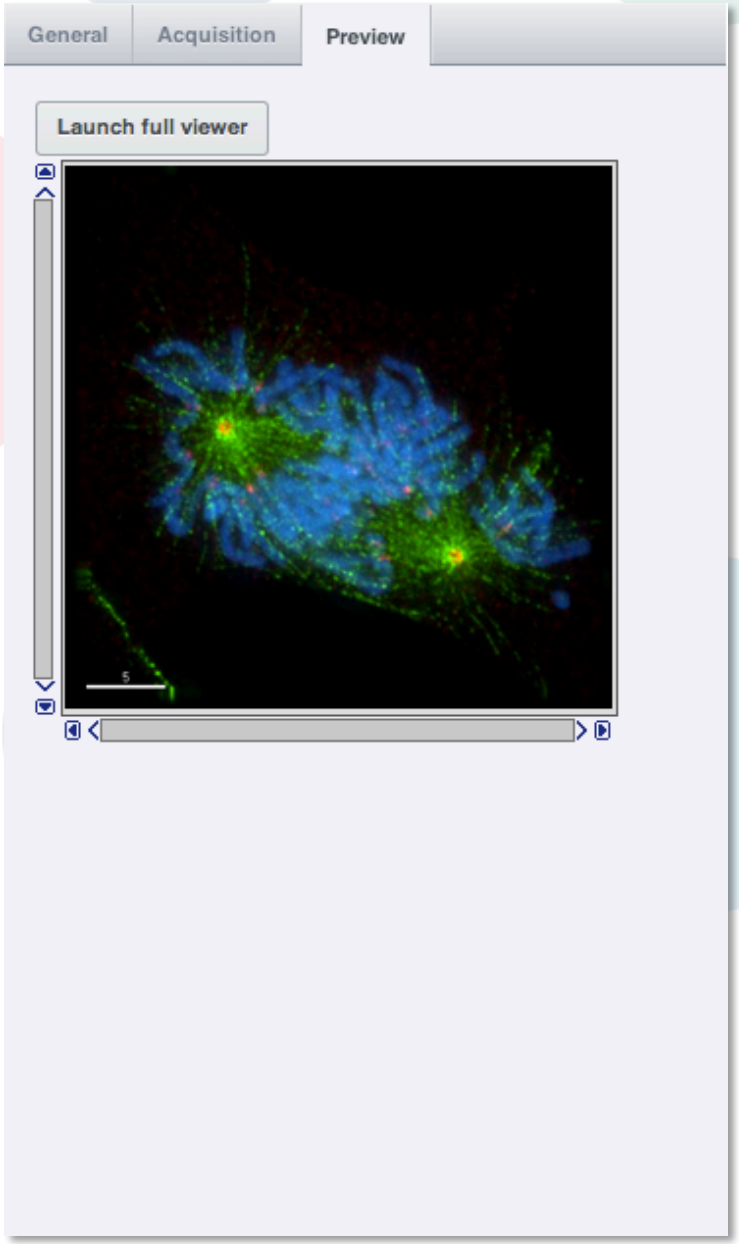
Back end

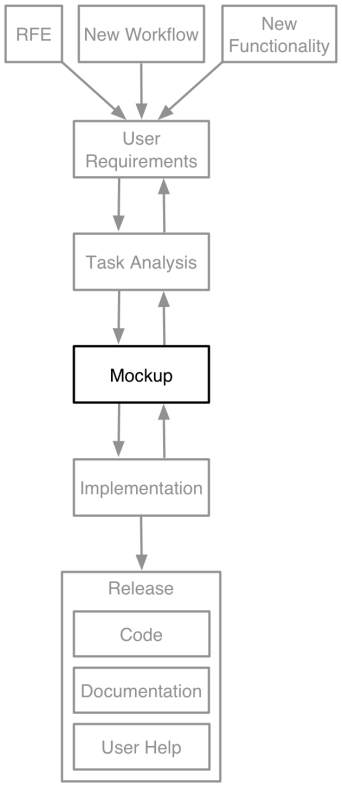

UX Board | Trello
https trello.com/b/SujuEnmJ/ux-board
Reader
Boards
rendering settings
Trello
Gus Ferguson
Cards
Back to Saved Searches
Save this Search
Show sidebar
Rendering Settings
44 7 5/12
Rendering Settings
in 5.2: Model on Formats
Rendering Follow-up
2 5/9
Rendering Follow-up
in Implementing [7] on Upcoming Features
Rendering support for images with deviant dynamic ranges
Rendering support for images with deviant dynamic ranges
in Ready for QA [7] on Upcoming Features
Loading window
UI fixes rendering controls/preview
in Implementing [7] on Upcoming Features
Rendering Settings Model Discussion
Rendering Settings Model Discussion
in Tuesday on Week of 29 September
Rendering settings/Thumbnails
Rendering settings/Thumbnails generation Improvement
in Scoping [3] on Upcoming Features
Share rendering settings
6 Archived
Share rendering settings
in Done for 5.0.x [7] (archived) on Upcoming Features
Rendering Settings - Display in UI and other
Rendering Settings - Display in UI and other Issues.
in Mock-up/Scoping on UX Board
Show more cards...
Inbox: notes, to-be-discus
Warning abou with Move Gr
Orphaned Da Project
Add Help link
RFE: Allow us they are men owners in Us Groups.
BOLO - Nigh problems
Date Format
2
eviewed e, or
to Insight
ad options



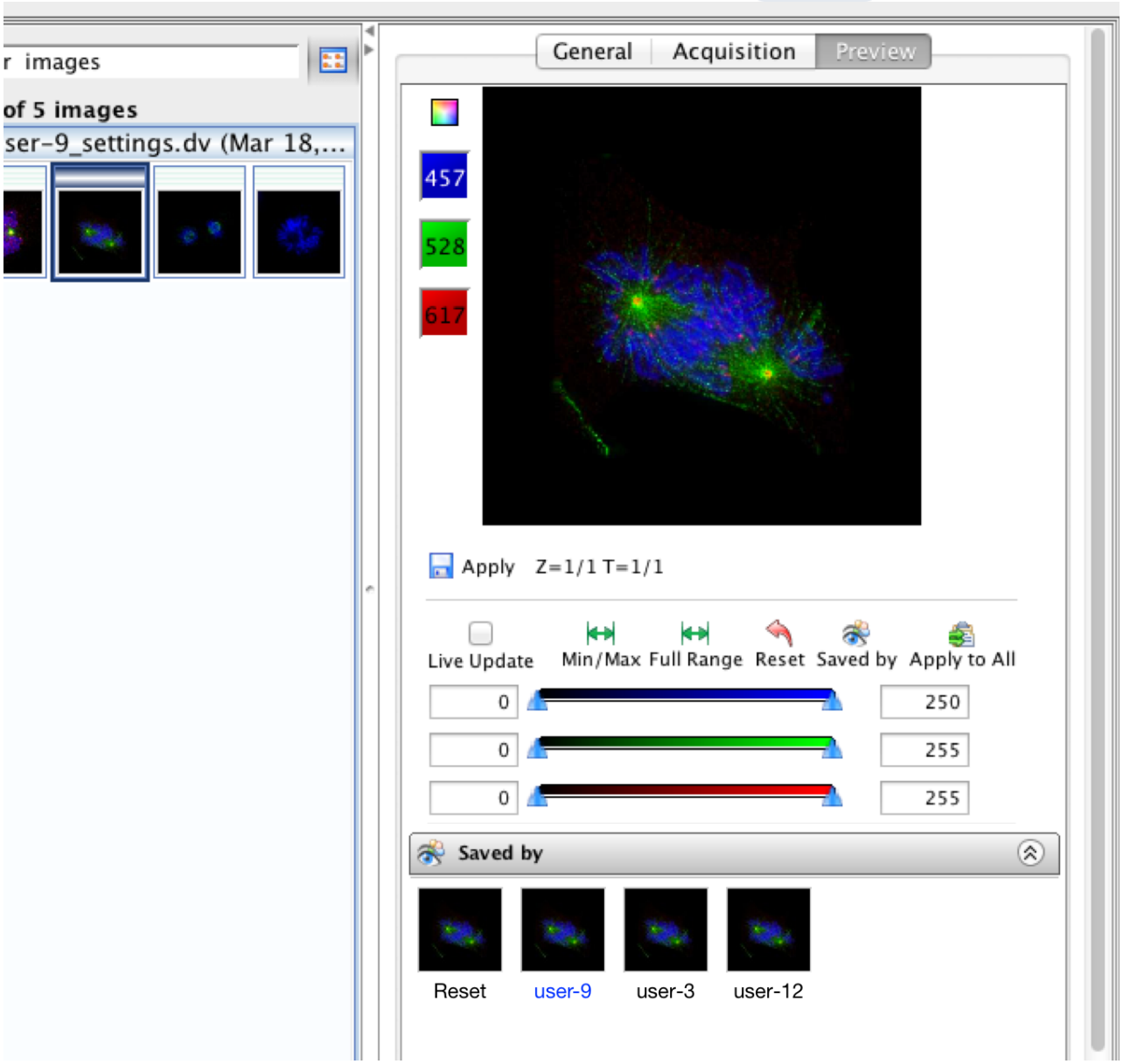
Steps – 5.0.5 state

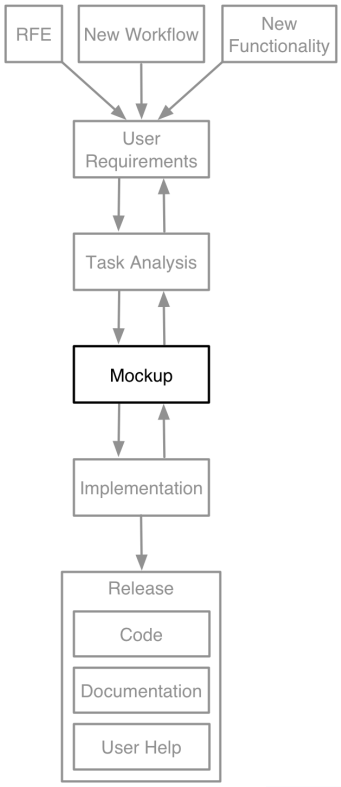




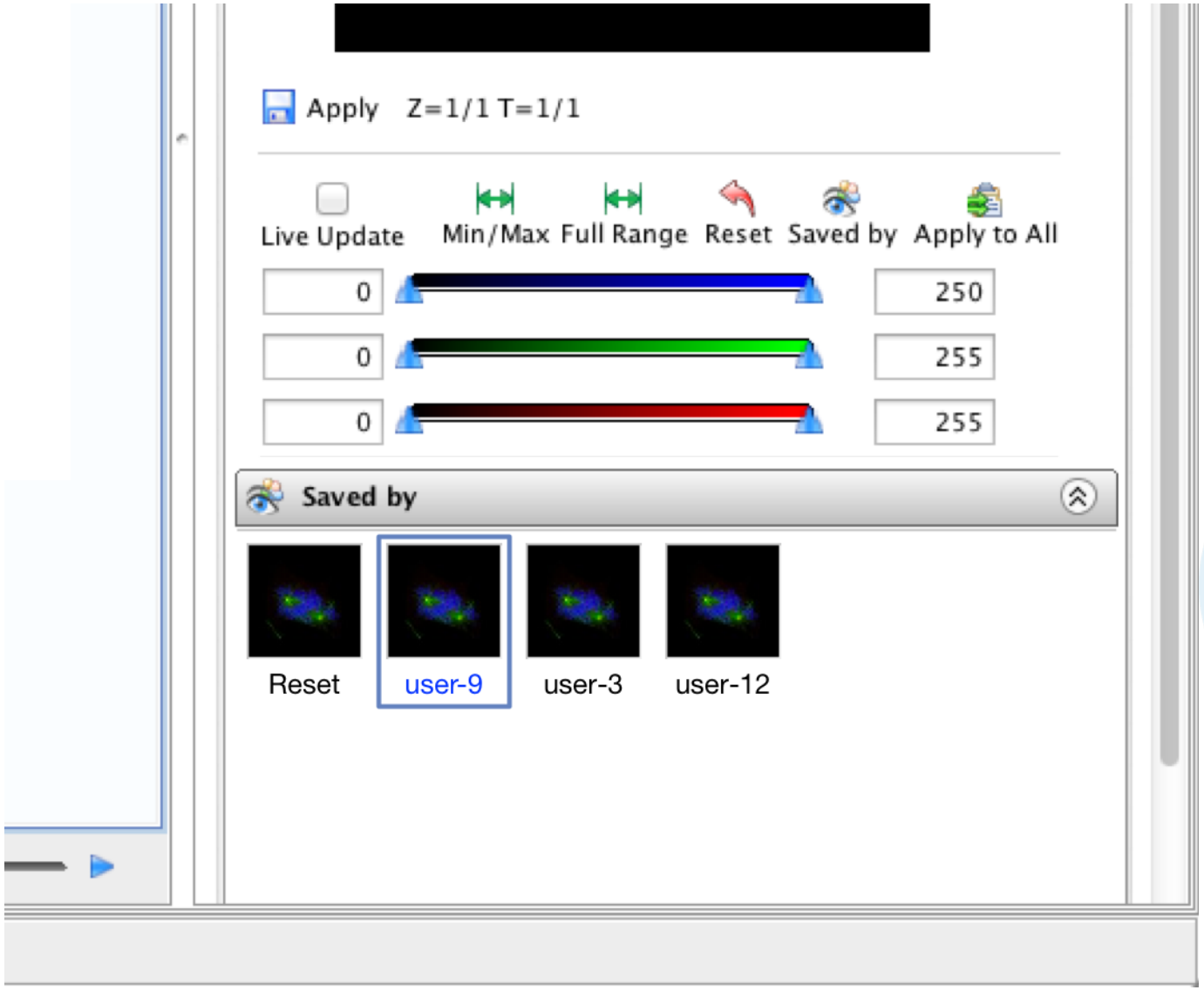


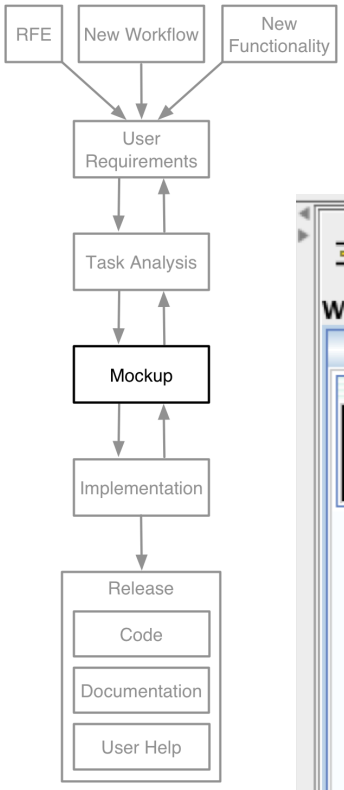
Steps – 1st Round Mockups





Steps – 1st Round Mockups





Steps – 1st Round Mockups

filter images

Workspace: 5 of 5 images

P-TRE_22_user-9_settings.dv (Mar 18,...

View...
Open with
Edit
Delete
Tag...
New Experiment...
Rendering Settings

Copy Settings
Paste Settings
Reset Default Settings
Set Min/Max
Display Settings ...

General | Acquisition | Preview

457
528
617

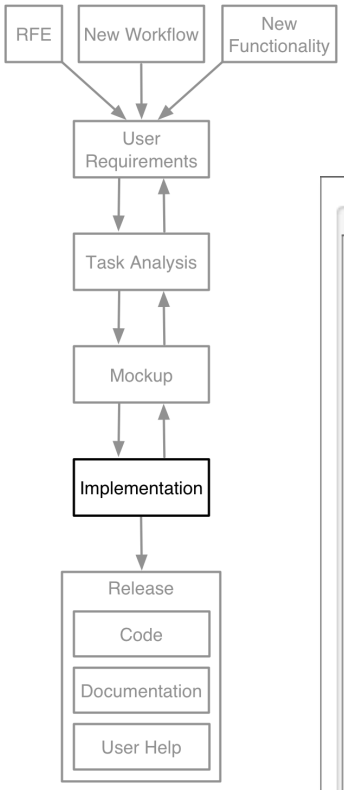
Default
user-9
user-3
user-12

Apply to All

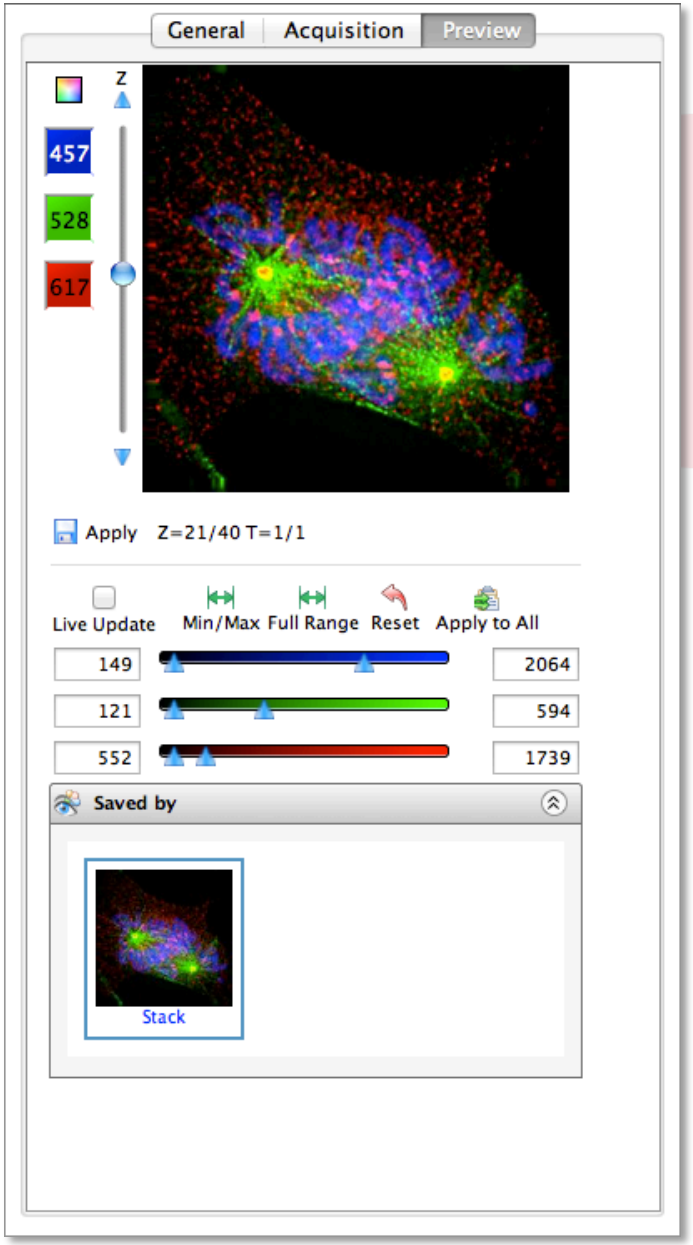
0 250
0 255
0 255

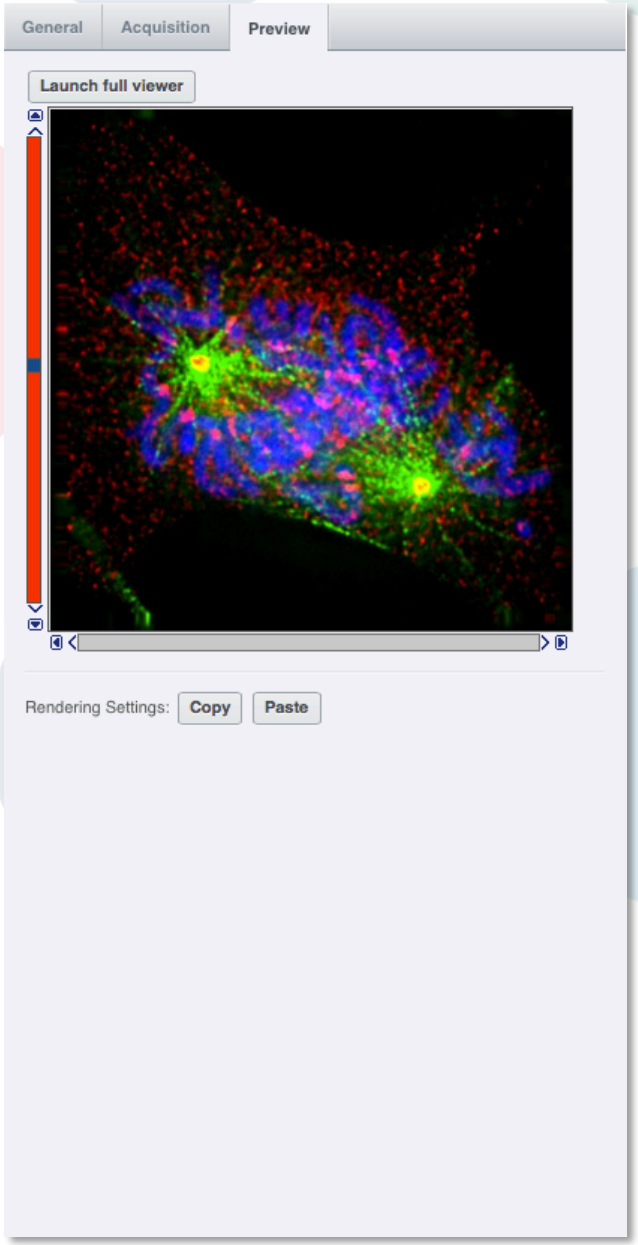
Saved by

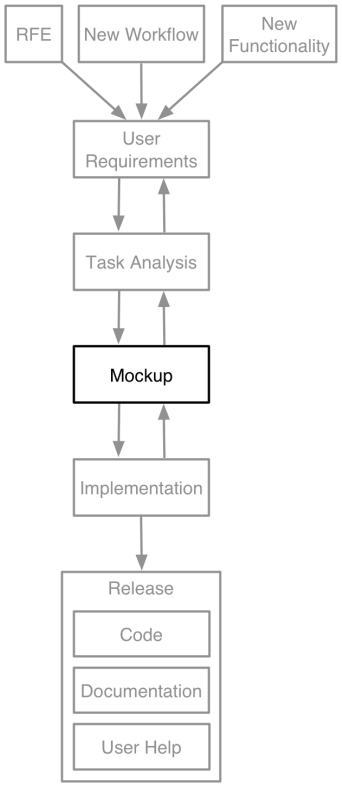
Default | user-9 | user-3 | user-12



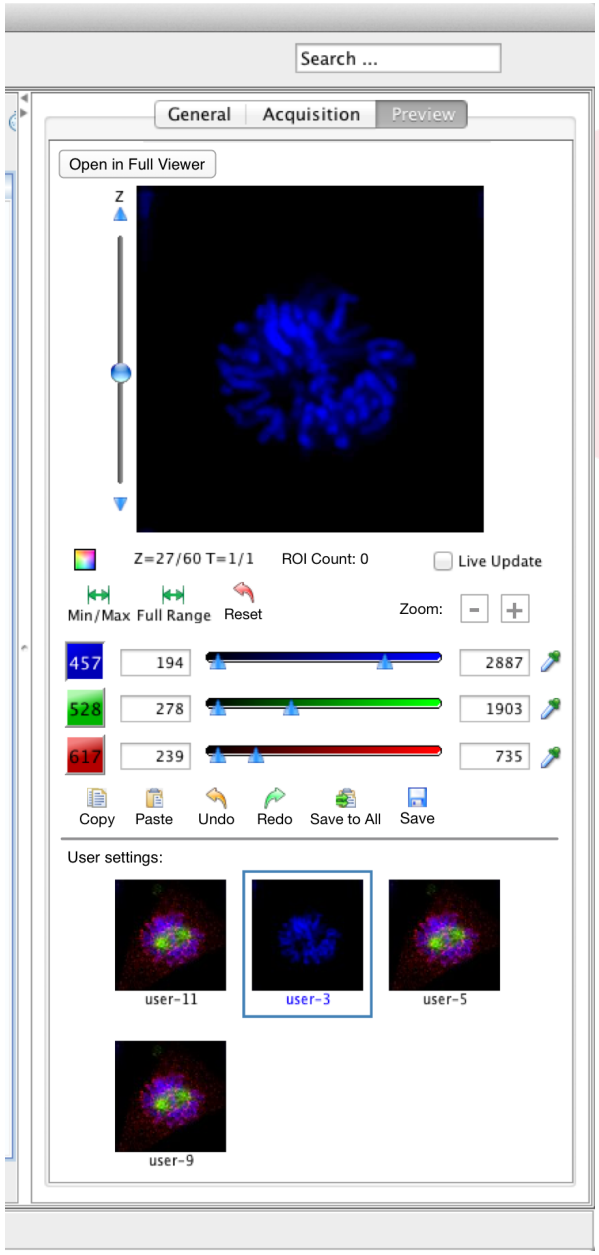
Steps – 5.0.6 Implementation

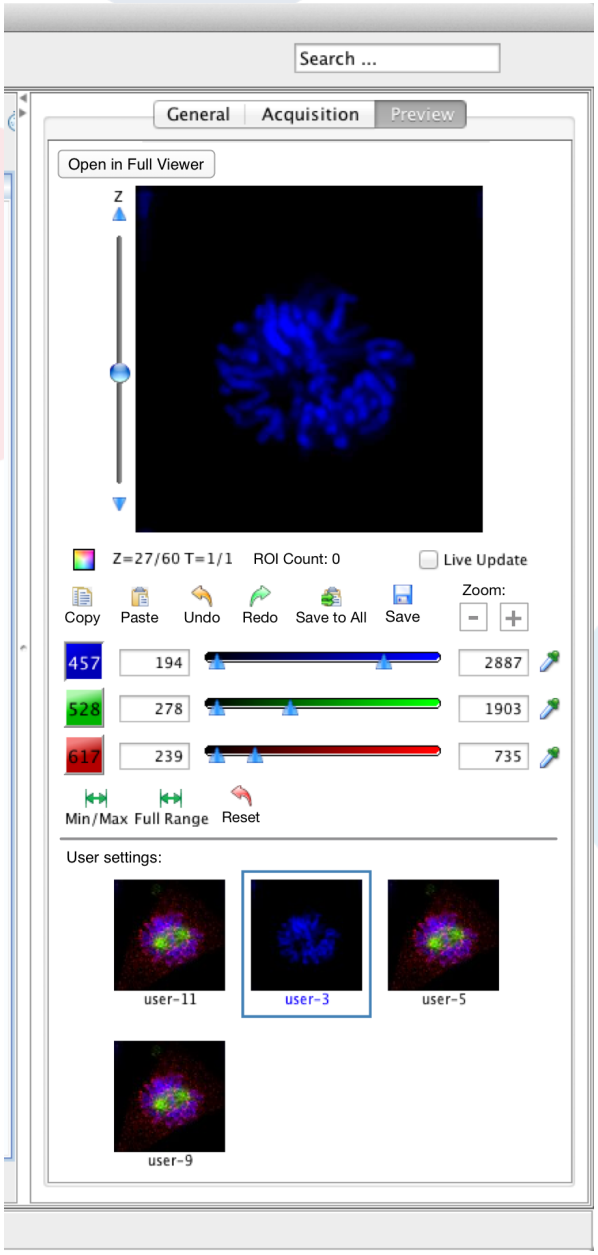


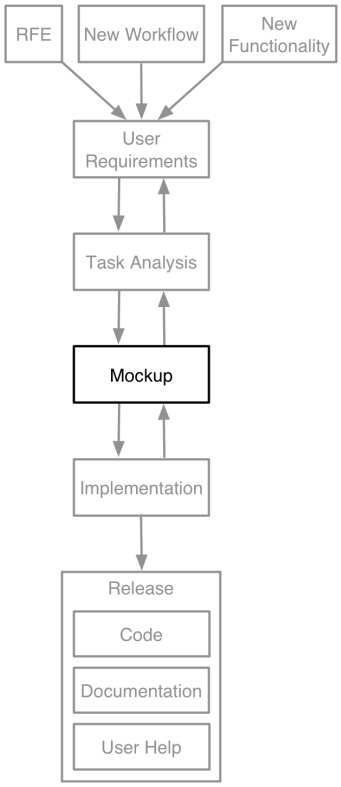




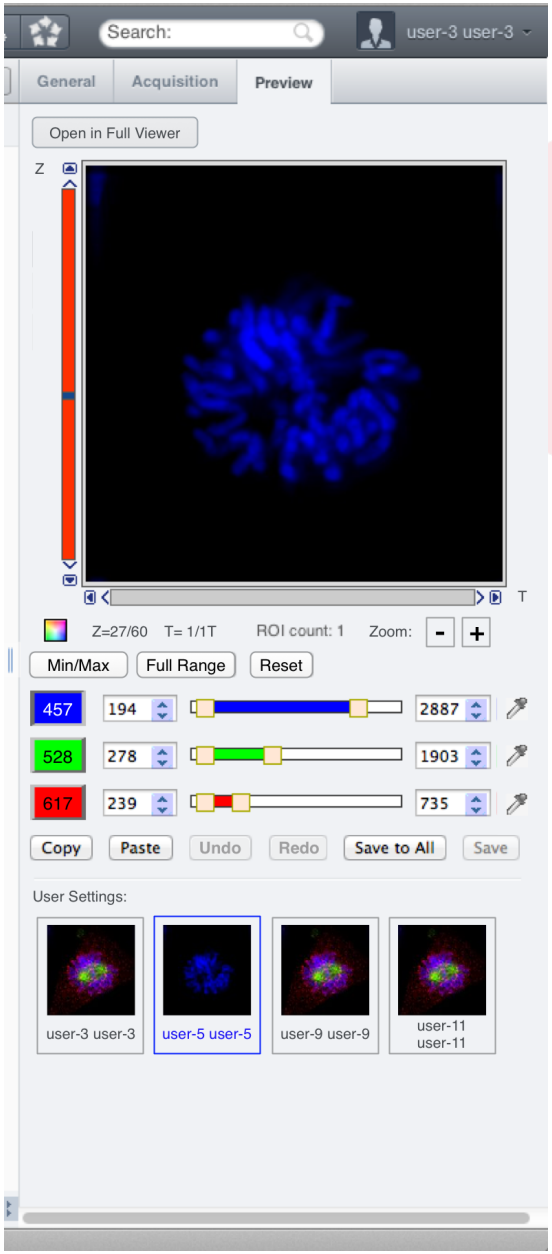
Steps – 2nd Round Mockups

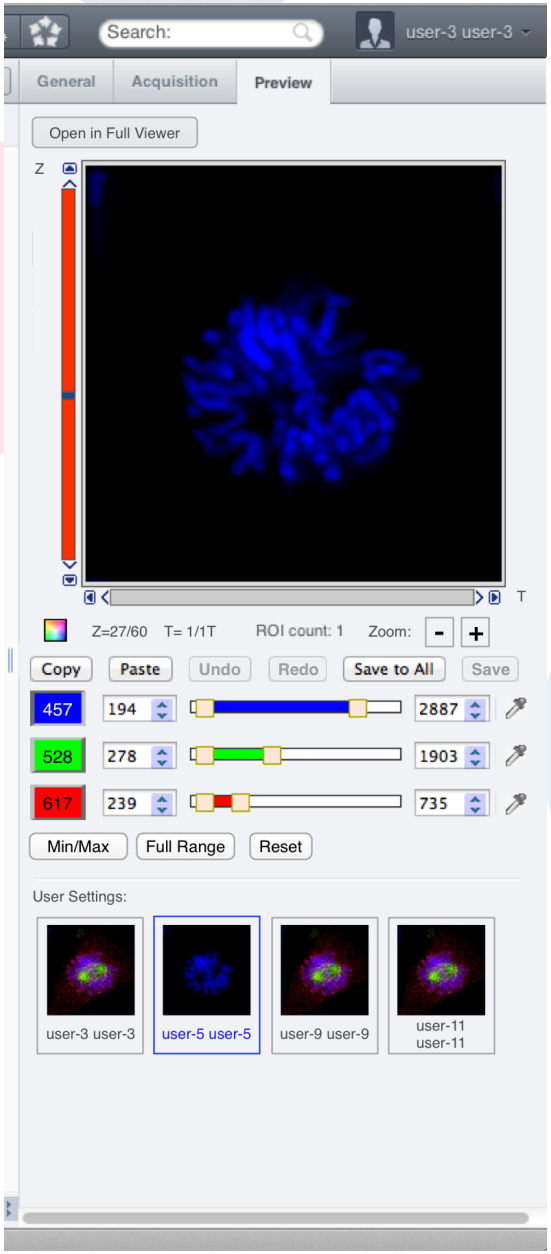


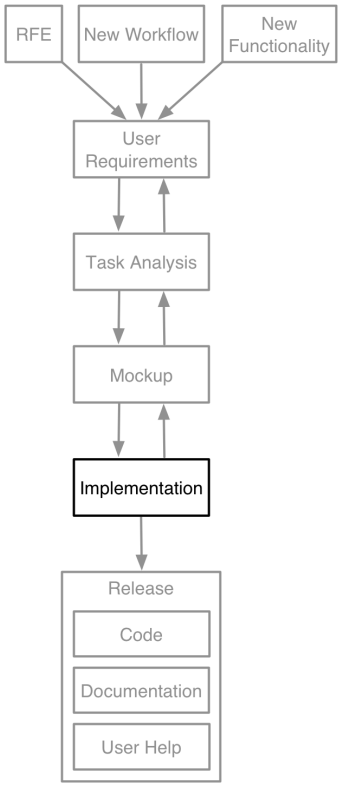




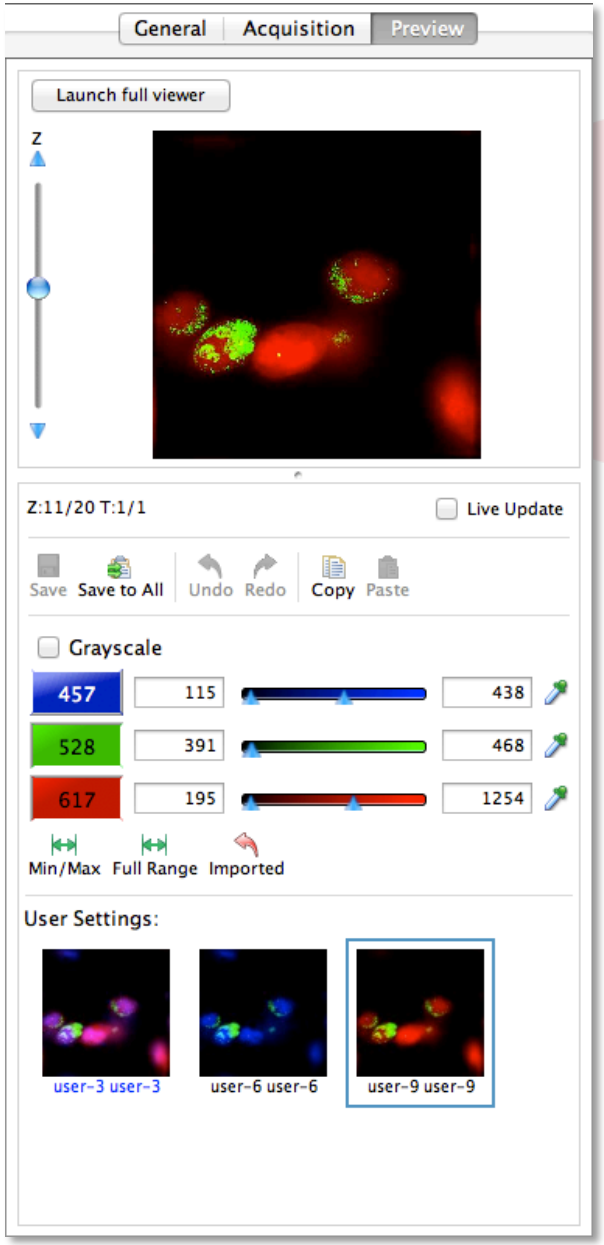
Steps – 2nd Round Mockups

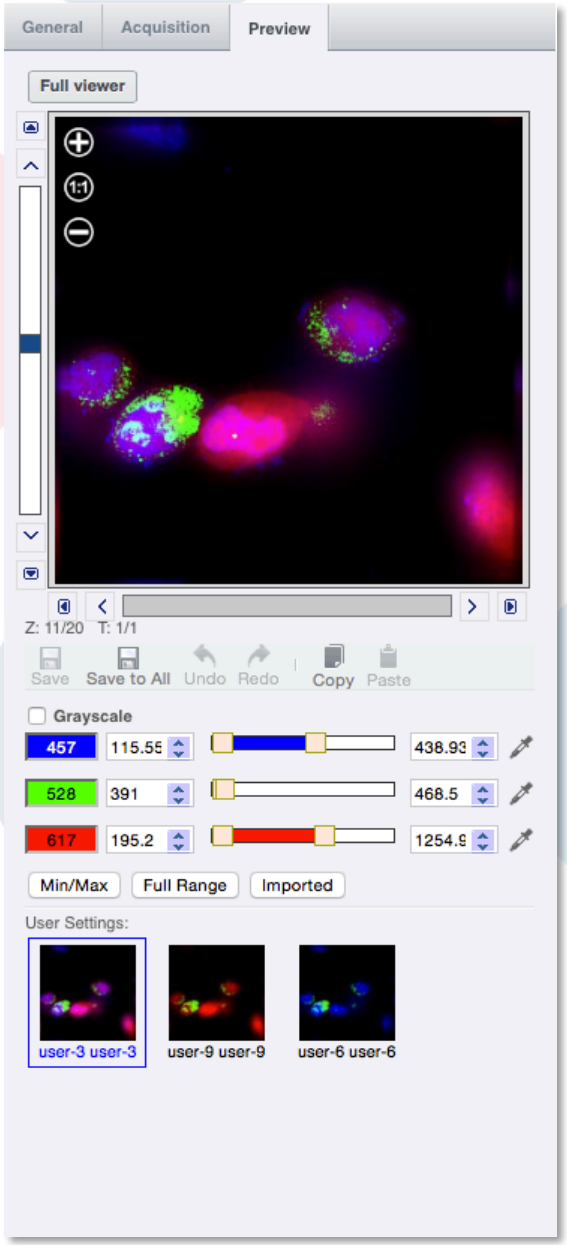


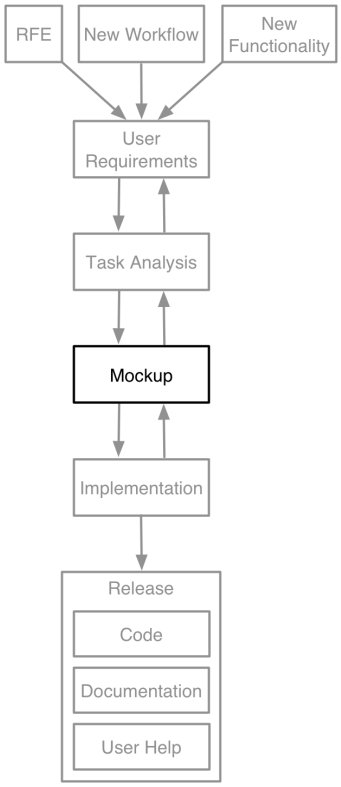




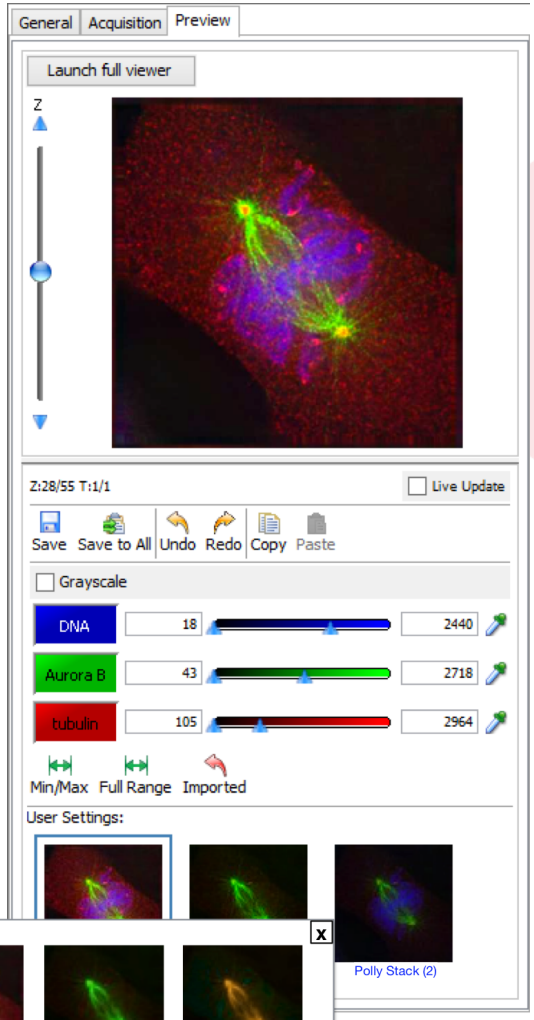
Steps – 5.1.0 Implementation

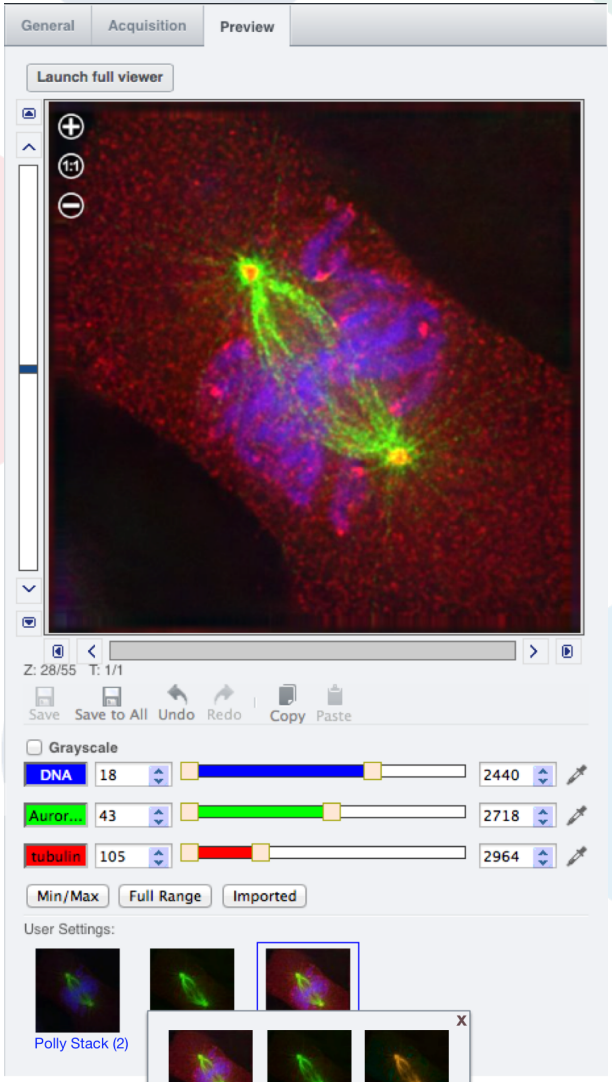


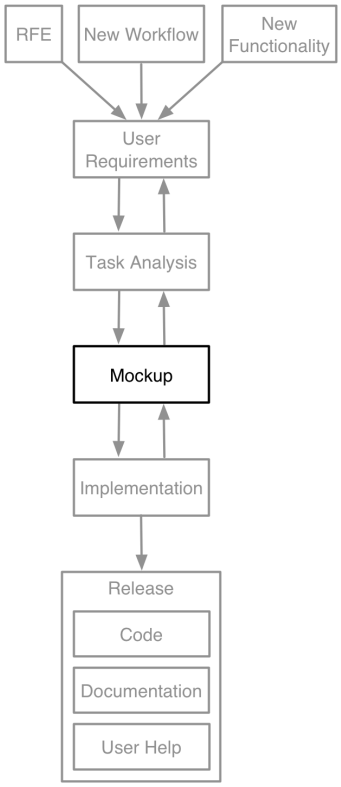




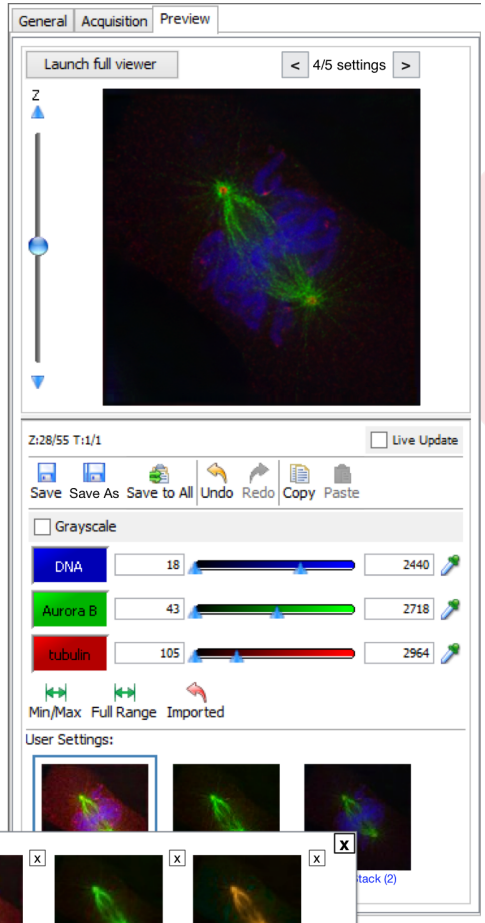
Steps – 3rd Round Mockups

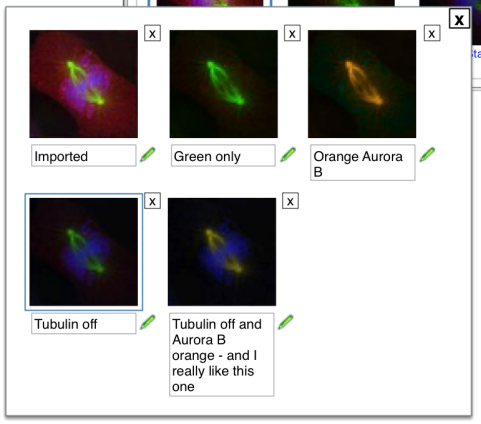


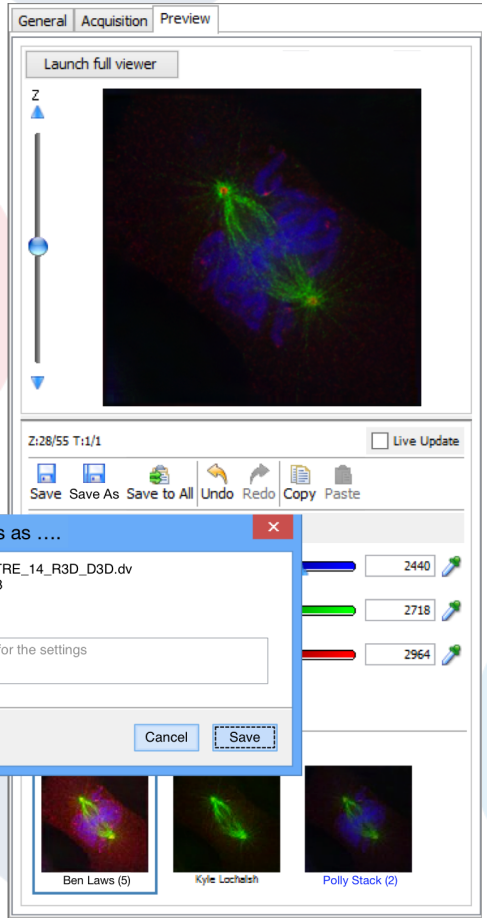


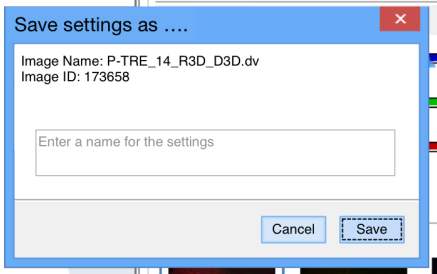


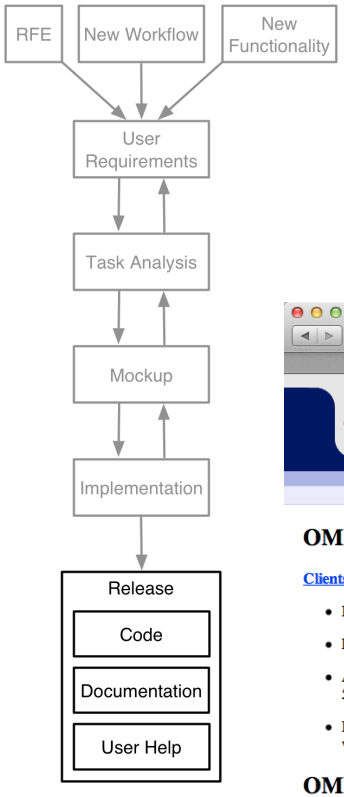
Steps – 3rd Round Mockups







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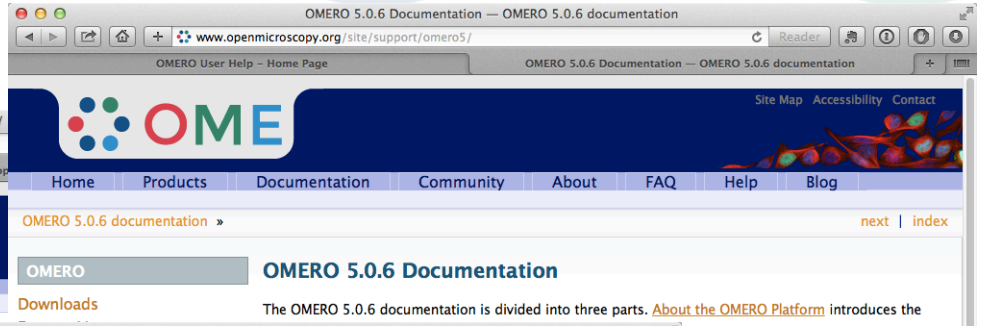
New Workflow
New Functionality
User Requirements
Task Analysis
Mockup
Implementation
Release
Code
Documentation
User Help

Release

downloads.openmicroscopy.org/omero/5.0.6/
OMERO User Help – Home Page
OME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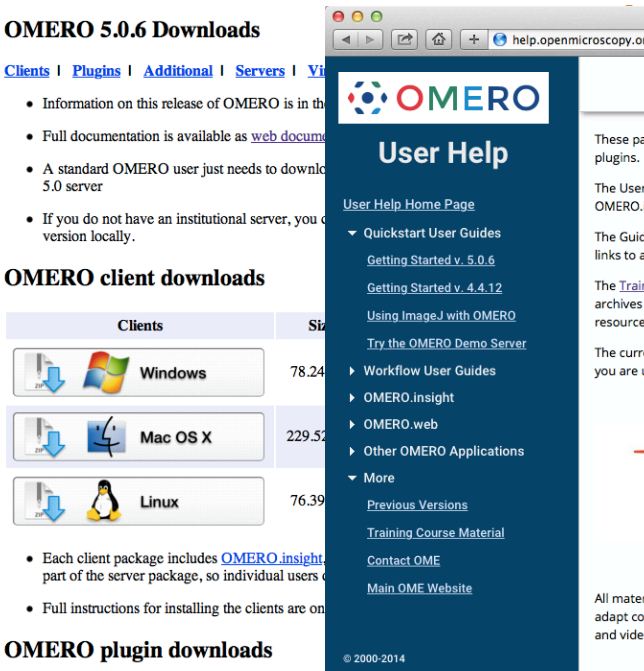
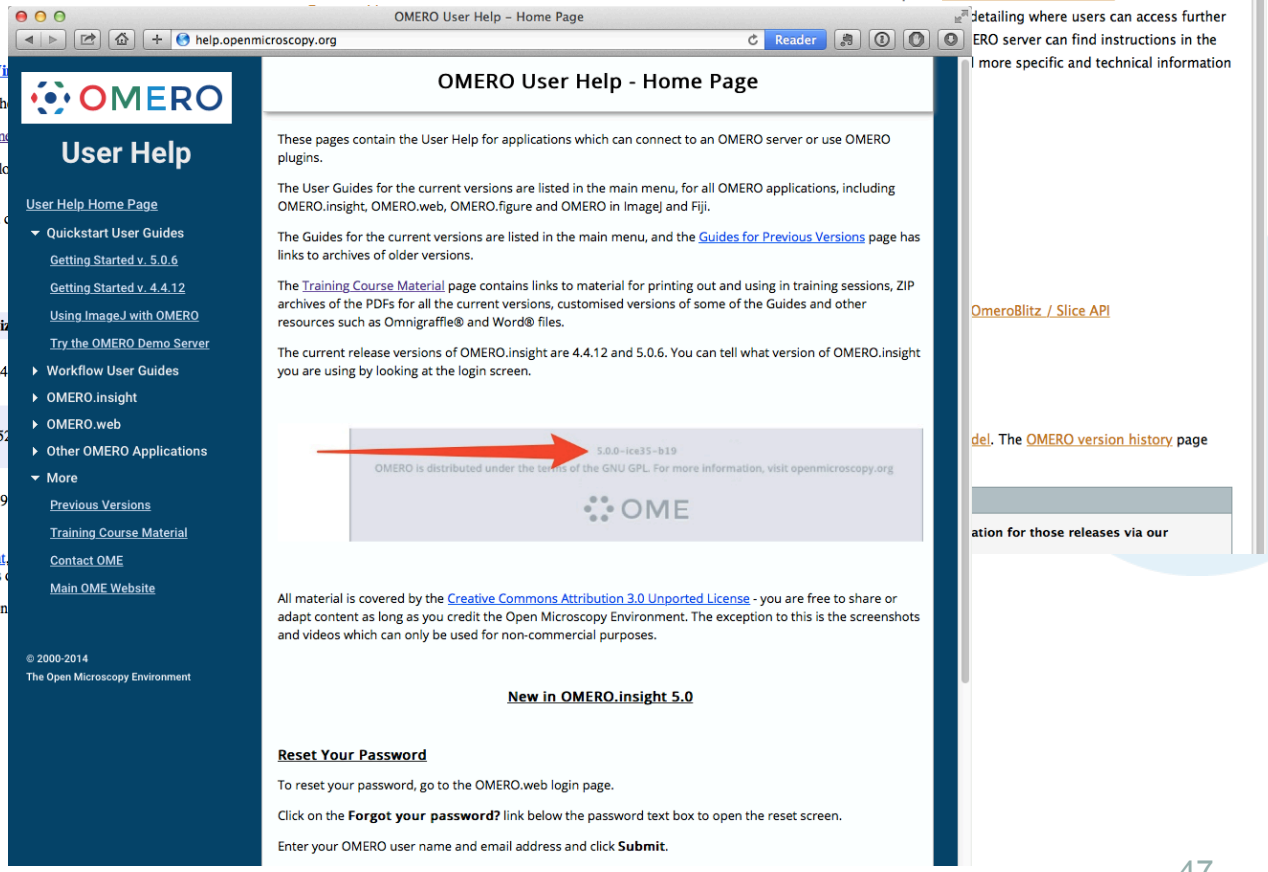
OMERO 5.0.6 Documentation
The OMERO 5.0.6 documentation is divided into three parts. About the OMERO Platform introduces the


OMERO 5.0.6 Downloads
Clients | Plugins | Additional | Servers |
Information on this release of OMERO is in th
Full documentation is available as web docume
A standard OMERO user just needs to downlc
5.0 server
If you do not have an institutional server, you
version locally.
OMERO client downloads
Clients
Windows
78.24
Mac OS X
229.52
Linux
76.39
Each client package includes OMERO.insight
part of the server package, so individual users
Full instructions for installing the clients are on
OMERO plugin downloads


OMERO User Help – Home Page
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Workflow User Guides
OMERO.insight
OMERO.web
Other OMERO Applications
More
Previous Versions
Training Course Material
Contact OME
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The Open Microscopy Environment
OMERO User Help - Home Page
These pages contain the User Help for applications which can connect to an OMERO server or use OMERO plugins.
The User Guides for the current versions are listed in the main menu, for all OMERO applications, including OMERO.insight, OMERO.web, OMERO.figure and OMERO in ImageJ and Fiji.
The Guides for the current versions are listed in the main menu, and the Guides for Previous Versions page has links to archives of older versions.
The Training Course Material page contains links to material for printing out and using in training sessions, ZIP archives of the PDFs for all the current versions, customised versions of some of the Guides and other resources such as Omnigraffle® and Word® files.
The current release versions of OMERO.insight are 4.4.12 and 5.0.6. You can tell what version of OMERO.insight you are using by looking at the login screen.
OME
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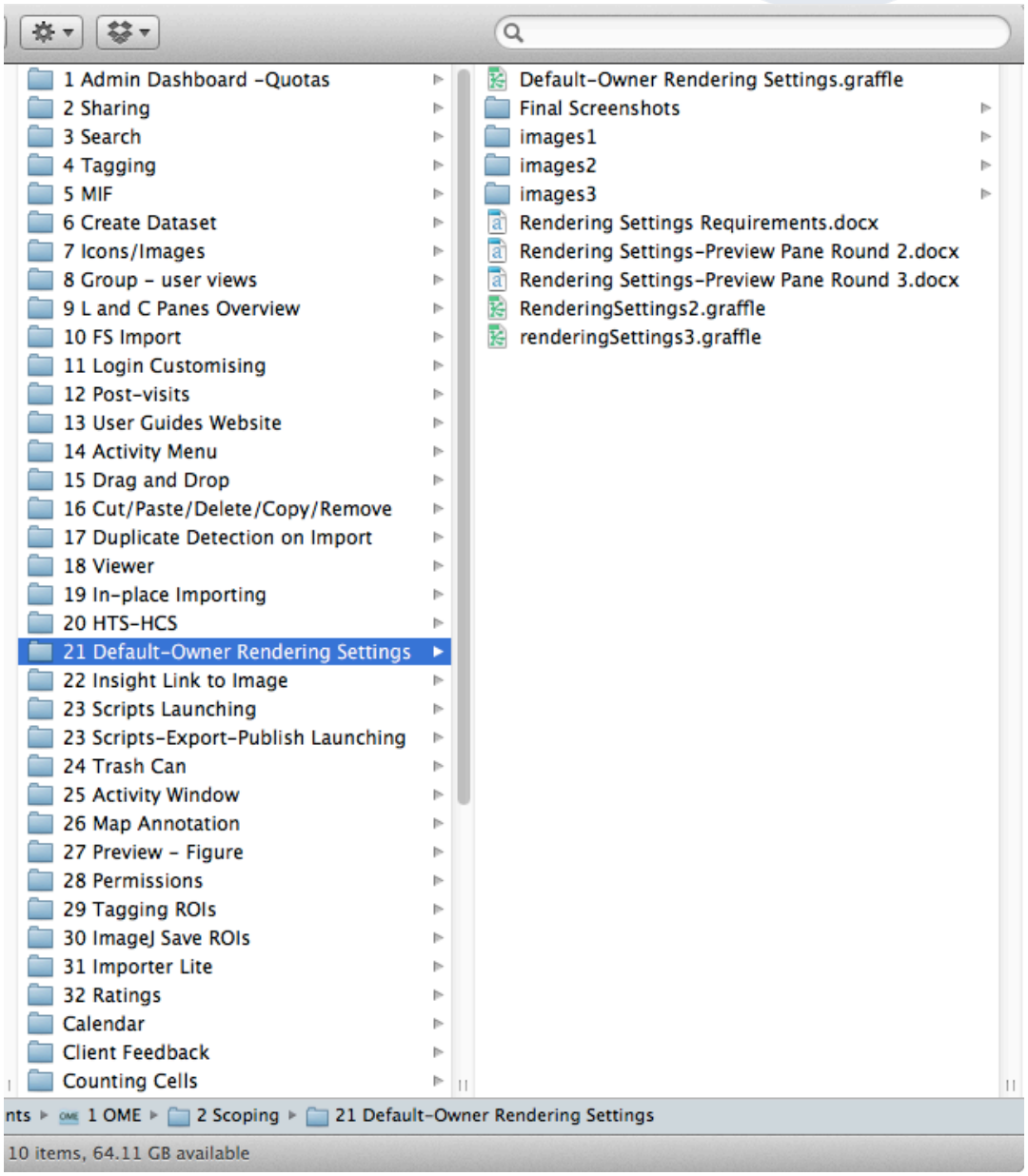
New in OMERO.insight 5.0
Reset Your Password
To reset your password, go to the OMERO.web login page.
Click on the Forgot your password? link below the password text box to open the reset screen.
Enter your OMERO user name and email address and click Submit.

Iterations


1 Admin Dashboard -Quotas
2 Sharing
3 Search
4 Tagging
5 MIF
6 Create Dataset
7 Icons/Images
8 Group - user views
9 L and C Panes Overview
10 FS Import
11 Login Customising
12 Post-visits
13 User Guides Website
14 Activity Menu
15 Drag and Drop
16 Cut/Paste/Delete/Copy/Remove
17 Duplicate Detection on Import
18 Viewer
19 In-place Importing
20 HTS-HCS
21 Default-Owner Rendering Settings
22 Insight Link to Image
23 Scripts Launching
23 Scripts-Export-Publish Launching
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25 Activity Window
26 Map Annotation
27 Preview - Figure
28 Permissions
29 Tagging ROIs
30 ImageJ Save ROIs
31 Importer Lite
32 Ratings
Calendar
Client Feedback
Counting Cells
Default-Owner Rendering Settings.graffle
Final Screenshots
images1
images2
images3
Rendering Settings Requirements.docx
Rendering Settings-Preview Pane Round 2.docx
Rendering Settings-Preview Pane Round 3.docx
RenderingSettings2.graffle
renderingSettings3.graffle
nts
1 OME
2 Scoping
21 Default-Owner Rendering Settings
10 items, 64.11 GB available

Most Valuable when Hardest

- everyone resists change to the status quo
- often have to deal with “ownership”
  - design and code
- identify and deal with issues on paper
- visualisation is key
  - sketches, mockups, paper prototypes
- “it’s so simple – why did it take so long?”

Thanks

- Jason Swedlow
- OME Team
- CLS User-testers

wellcome trust