Welcome!!!

The 6th OME Users Meeting

Institut Pasteur, Paris
Thank you!!!

Christiane Pacaud
Spencer Shorte
Thank you!!!
Agenda

15 min: Project overview
Jason

45 min: Last 2 years
OME Team

15 min: Discussion
Introducing....
Introducing....

...and the ImageJDev Team
OME: What we do...

Digital Image Acquisition System → Raw Data → 'Glue' → Processed Data

'Glue' also connects to:
- Visualisation
- Quantitative Analysis
- Data Management, Tagging, Querying

Raw Data → Metadata

OME: open microscopy environment
What's this mtg for?

“Annual Report”
Building the Consortium
OME-TIFF and Bio-Formats: Moving the standard forward
Demos, Docs, and Installs
Roadmap
Use cases for analysis integration
More feedback, criticism, comments…
More collaboration…
<table>
<thead>
<tr>
<th>2010</th>
<th>2011</th>
<th>Beyond...</th>
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</thead>
<tbody>
<tr>
<td>4.1.0</td>
<td>4.2.0</td>
<td>4.3.0</td>
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<tr>
<td>4.1.1</td>
<td>4.2.1</td>
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<tr>
<td>4.2.2</td>
<td>4.3.0</td>
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**Extended metadata**

- SPW
- InCell, Mias, Opera
- OME-TIFF export
- Expanded scripting
- SPW analysis
- SPW in Web
- OpenGL preview
- Group permissions
- Advanced LDAP

**Advanced permissions**

- Major Review
- Client consistency
- Bulk Annotations

**Big Images!**

- Big PFFs

**FS Dedup.**

- FS 1.0

**Advanced**

- Advanced Delete
- Web Publishing

- FastCGI
Bio-Formats 4.3
Bio-Formats 4.3

New File Formats  InCell 3000, NanoZoomer, Trestle, Olympus VSI, and Volocity (!!!)

.....and a whole lot of fixes and suggestions from the community
Primary Emphasis 4.1 - 4.3

- Extended metadata: Read PFFs more thoroughly
- Group permissions: Removing private limitation from 4.0
- SPW Model: Support for HCS
- Big images: Beyond the 4k X 4k limit!
- Client Clean-up: Consistency!!!!!
- API Clean-up: Python....
Extended Metadata
... for scientists and developers
... for scientists and developers
... for scientists and developers
... for scientists and developers

General client updates & consistency improvements

OMERO.web 4.3.0
for scientists and developers

General client updates & consistency improvements
... for scientists and developers

ROIs in OMERO.Web
... for scientists and developers

ROIs in OMERO.Web
... for scientists and developers

Import in Insight
… for scientists and developers

Import in Insight
... for scientists and developers

Import in Insight
... for scientists and developers

Scripting
... for scientists and developers

Scripting
... for scientists and developers
ImageJ plugin

Launch
... for scientists and developers

ImageJ plugin

Login
... for scientists and developers
ImageJ plugin

Analyze
... for scientists and developers

Future directions for analysis...

- Integration?
- Result storage?
- Visualisation?
- ROIs?
- Script invocation?

3rd Parties

OMERO
... for scientists and developers

Export of OME-TIFF

3rd party applications
... for scientists and developers
FS Lite and Big Images
... for scientists and developers

FS Lite and Big Images

- Single file PFFs
- Pyramid generation server side
- Uses "archive" functionality
- Aperio SVS, JPEG, PNG, TIFF, JPEG 2000
... for scientists and developers

FS Lite and Big Images
... for scientists and developers

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... for scientists and developers

FS Lite and Big Images
... for scientists and developers

FS Lite and Big Images

- Compression realities
- Image tiling
- Original file format details

http://iipimage.sourceforge.net/documentation/images/
... for scientists and developers

FS Lite and Big Images

Importer

Bio-Formats

BigImage.svs

Archiving

Metadata only import

Archived File

Image Pyramid

OMERO.server

PixelData-0
Features for developers and admins

Advanced LDAP
omero config set omero.ldap.new_user_group ":query:(member=@{dn})"

Improved delete
Immediately removes binary data, freeing up system resources.

FastCGI
omero config nginx > nginx.conf
nginx -c `pwd`/nginx.conf

OMERO.tables API
Storage of tabular data on the server with efficient retrieval.
OMERO 4.3 Previews

Bulk Annotation

Webmobile

FLIM
... for scientists and developers

Bulk annotation

Attach tabular data and view it from Insight
... for scientists and developers
ROIs in OMERO.Web

Work-in-progress
webmobile
... for scientists and developers

FLIM and RAPID

OMERO.insight

Job Preparation

Job Visualisation

OMERO.server

RAPID

Job Submission

Cluster / Grid / Cloud

Job Output
Questions?
Next major efforts: FS...
...and also:

- **Group permission tools**: Move data between groups; reassign data from old group members to new group members.
- **More 3rd party analysis**
  - Improve the ImageJ plugin; integrate with other clients. CellProfiler? Others?
- **Improve OME-TIFF Export**
  - Include export as older OME-XML versions for backwards compatibility.
- **Imported analysis results**
  - Import, view, and analyze tabular, etc. data in OMERO.
OMERO Ecosystem

clients

internet

server

processing

acquisition

Image Data

just some files

Metadata

adaptable

Search

generated

Analytics

flexible