

PETUNIA:

The Graphical User Interface for the TPP

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Day 1

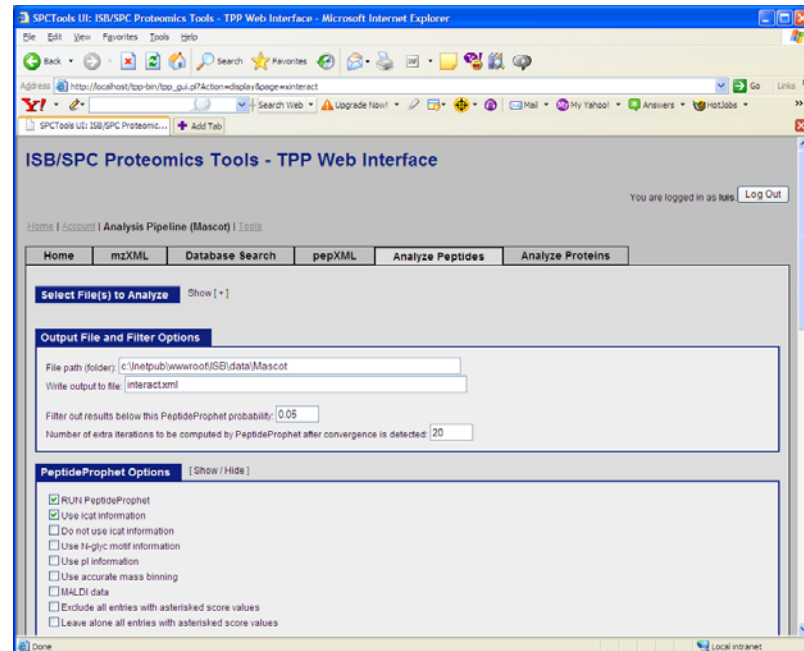
Apr 27, 2009

Motivation

- Ease of use
- Command-line:

```
cygdrive/c/inetpub/wwwroot/ISB/data/raft
raft0052.html      raft3435.tgz      xinteract.shtml
raft0052.tgz      raft3435.xml      xinteract.xml
raft0052.xml      raft3637.html    xinteract.xml
raft1011.html     raft3637.tgz
raft1011.tgz      raft3637.xml
$ xinteract -X -A-IDE-S raft0020.xml raft0052.xml raft1011.xml
```

- vs. Point-and-Click:



PETUNIA Features

- Client/Server architecture (remote login)
- Familiar interface via web browser
- Use of advanced web technologies to render complex pages and notify user when jobs are done
- Remotely Browse/Copy/Delete files
- Controlled access via username/password
 - *NOT* secure. (Use https:// if needed)
- IIS, Apache Webservers. Firefox, IE browsers
- It's Cool!

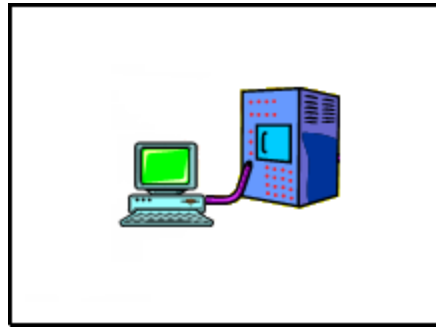
Configuration Options

- Flexibility in Tools set-up:



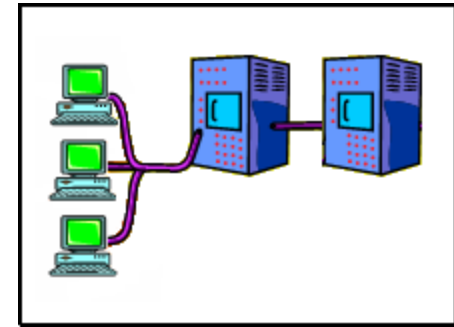
Single server

- Search software, data, TPP on a single user computer.



Search server

- Search software on server (cluster?)
- Data and TPP on user workstation



Remote access

- Search software on server (cluster?)
- Data and TPP on dedicated server
- Remote access via web browser (http)

Quick Tour: Login

The screenshot shows a Microsoft Internet Explorer browser window. The title bar reads "SPCTools UI: ISB/SPC Proteomics Tools - TPP Web Interface - Microsoft Internet Explorer". The address bar contains "http://localhost//tpp-bin/tpp_gui.pl". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The toolbar contains icons for Back, Forward, Stop, Refresh, Home, Search, Favorites, and other utilities. The main content area displays the title "ISB/SPC Proteomics Tools - TPP Web Interface" in blue. Below the title is a login form with the following fields and buttons:

- User Name:
- Password:
- Login:

At the bottom of the page, there are three logos:

- INSTITUTE FOR Systems Biology** with the tagline "Revolutionizing science. Enhancing life."
- Seattle Proteome Center**
- NHLBI PROTEOMICS**

The Windows taskbar at the bottom shows the system tray with a "Local intranet" icon.

Quick Tour: Home

Sections

Tabs

SPCTools UI: ISB/SPC Proteomics Tools - TPP Web Interface - Microsoft Internet Explorer

Address: http://localhost/tpp-bin/tpp_gui.pl

ISB/SPC Proteomics Tools - TPP Web Interface

You are logged in as **luis** [Log Out](#)

Home | [Account](#) | [Analysis Pipeline \(Sequest\)](#) | [Tools](#)

Home ACCOUNT ANALYSIS PIPELINE TOOLS

Messages [Show / Hide]

- Welcome, luis.

Welcome

Welcome to the Trans-Proteomic Pipeline (TPP) web interface. These tools and interfaces were developed at the [Institute for Systems Biology](#) (ISB) under a grant from [NHLBI](#). Please visit www.proteomecenter.org and tools.proteomecenter.org for more information.

Please select analysis pipeline you want to use:

Select Pipeline Type!

Analysis Pipeline

Follow these steps to convert, search, and analyze your data:

- 1. RAW to mzXML Conversion**
Convert original .RAW files to the standard mzXML input format used by the tools
- 2. Peptide Database Search and Identification**
This is a front-end to Sequest (runsearch)
- 3. Conversion to pepXML**
Convert original search results to the pepXML input format used by xinteract
- 4. Data Curation and (optional) Peptide validation and Quantification**
Use Xinteract to filter, sort, group, and highlight data based on various criteria. You can also validate peptide identifications using PeptideProphet and/or use ASAPRatio or XPRESS to calculate the relative abundances of proteins and the corresponding confidence intervals from ICAT-type ESI-LC/MS data.
- 5. Protein Assignment and Validation**
ProteinProphet provides a statistical model for validation of peptide identifications at the protein level.

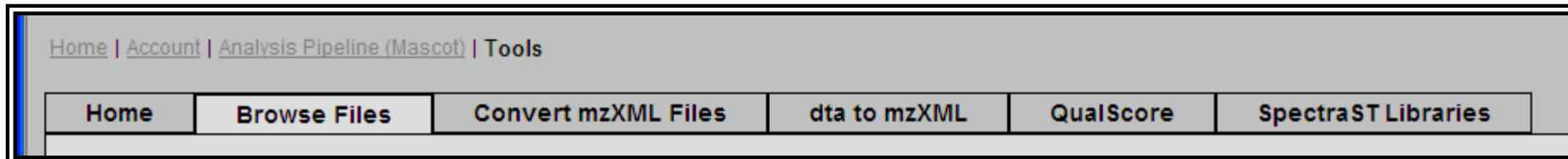
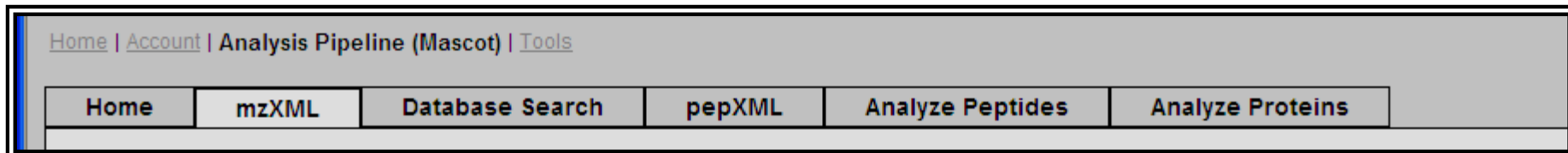
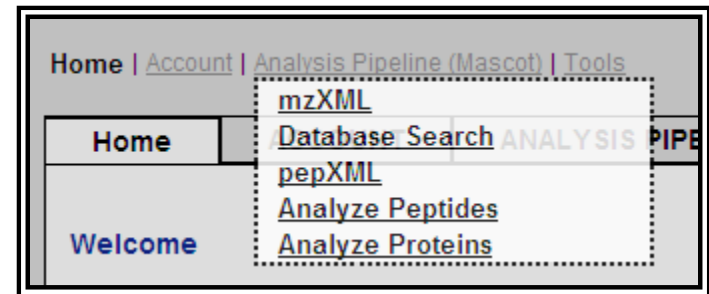
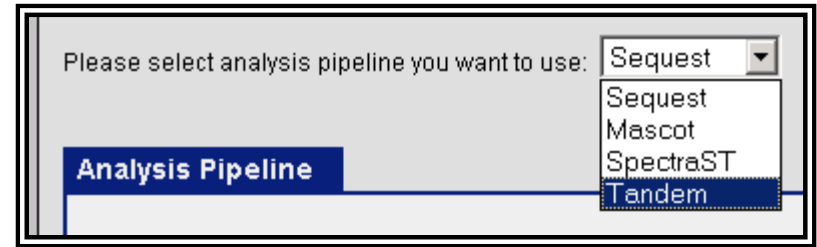
Local intranet

Log Out

Select Pipeline Type!

Quick Tour: Navigation

- Select Pipeline type: (default can be re-set)
- Mouse-over sections to reveal menus
- Tabs are context-sensitive:



Quick Tour: File Browser(I)

- Found under TOOLS ⇨ Browse Files
- Get directory listings: file size & modified date-time
- Navigate directory tree
- View data files, old results, etc. (Launches appropriate viewer, if known)
- Edit text files (e.g. parameter files)
- Create directories/folders
- Delete unwanted files
- Copy/move files (Clipboard)

Quick Tour: File Browser(2)

3 Panes:

Alpha (ASCII) listing

Current Directory: c:\inetpub\wwwroot\ISB\data\LUIS\MASCOT\

FILES:

File Name	View?	Size	Date Modified
<input type="checkbox"/> F001309.dat	[View]	40,714 k	Mon Apr 10 14:23:24 2006
<input type="checkbox"/> halolCAT2_30.dat	[View]	37,253 k	Tue Mar 21 10:58:08 2006
<input type="checkbox"/> halolCAT2_30.mgf	[View]	7,691 k	Fri Jul 28 12:05:38 2006
<input type="checkbox"/> halolCAT2_30.mzXML	[Pep3D]	29,561 k	Tue Mar 21 10:56:50 2006
<input type="checkbox"/> halolCAT2_30.tgz	---	5,125 k	Tue Mar 21 11:18:05 2006
<input type="checkbox"/> halolCAT2_30.xml	[PepXML]	1,898 k	Tue Mar 21 11:18:45 2006
<input type="checkbox"/> halobacterium_111401_plus_human.prot	[View]	39,129 k	Tue Mar 21 10:59:11 2006
<input type="checkbox"/> interact.shtml	[View]	0.182 k	Tue Mar 21 11:58:45 2006
<input type="checkbox"/> interact.xml	[PepXML]	3,736 k	Tue Mar 21 11:59:05 2006
<input type="checkbox"/> interact.xsl	[View]	43 k	Tue Mar 21 11:58:45 2006

10 files found.

DIRECTORIES:

- Go up to: [data](#)
- Go up to: [|-- LUIS](#)

SUB-DIRECTORIES:

- [MM](#)
- [Mtest2](#)
- [halolCAT2_30](#)

Create new directory:

Create

Navigate up tree

Subdirs

Quick Tour: File Copy

- Select Files

- Click here!

FILES:

Select/Unselect All

File Name	View?	Size	Date Modified
<input checked="" type="checkbox"/> xinteract.shtml	[View]	0.176 k	Thu Feb 23 11:59:12 2006
<input checked="" type="checkbox"/> xinteract.xml	[PepXML]	6,215 k	Thu Feb 23 11:59:14 2006
<input checked="" type="checkbox"/> xinteract.xsl	[View]	43 k	Thu Feb 23 11:59:14 2006

3 files found.

Home Browse Files Convert mzXML Files dta to mzXML QualScore SpectraST Libraries

Messages [Show / Hide]

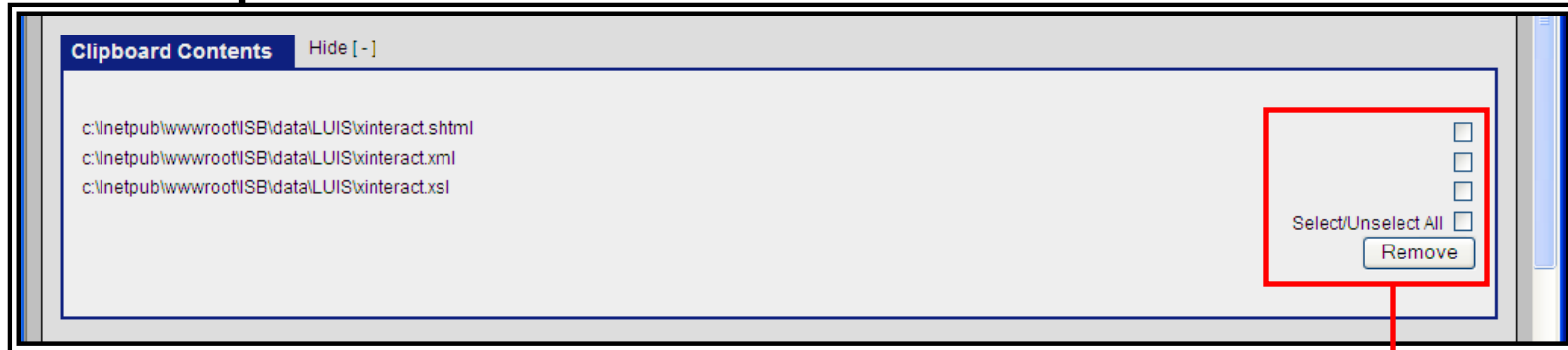
- Your files have been added to the clipboard:
- xinteract.shtml
- xinteract.xml
- xinteract.xsl

Clipboard Contents Show [+]

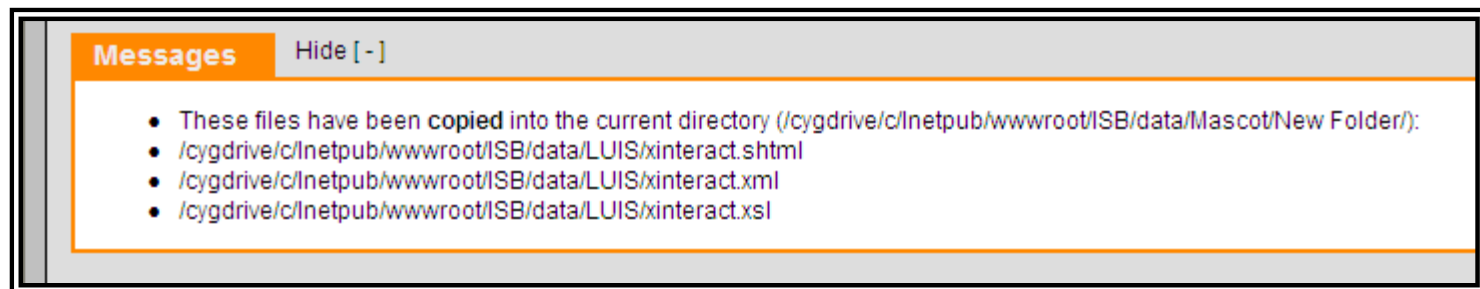
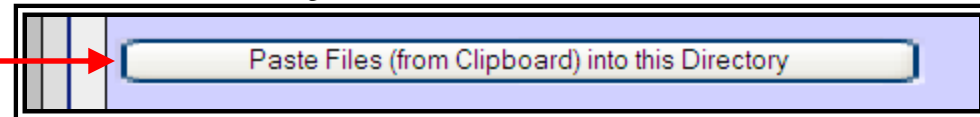
File Browser

Quick Tour: File Paste

- Check Clipboard contents first:



- Edit, if necessary
- Navigate to desired directory
- Click here!



PETUNIA: some tips & URL

- Choose Files first, then options
- OK to navigate while commands run; keep an eye on the Command Status bar for updates:



- Previous command output available until next command is run.
- Open all results files using web browser
- Use section menus for quick navigation
- Got a suggestion? Let us know!

http://<HOST>/tpp-bin/tpp_gui.pl