PATTER, Volume *1*

Supplemental Information

Pancreatlas: Applying an Adaptable Framework to Map the Human Pancreas in Health and Disease

Diane C. Saunders, James Messmer, Irina Kusmartseva, Maria L. Beery, Mingder Yang, Mark A. Atkinson, Alvin C. Powers, Jean-Philippe Cartailler, and Marcela Brissova

Table S1. Related to Figures 1-2. Glossary of abbreviations and technical terms

Term/ Abbreviation	Description
API	Application program interface; a piece of code that defines interactions between two different systems or entities.
Client	End user's machine, that makes requests to servers.
Components	Reusable pieces of React code that define a certain part of the user interface.
Django	Popular framework for creating web applications, written in Python.
FFIND	Flexible Framework for Integrating and Navigating Data; a platform engineered by the authors to enhance existing databases that includes a customizable API (back-end) and web application (front-end).
JavaScript	Programming language to create and control dynamic web content.
Metadata	Relevant experimental information associated with a piece of data; descriptor of data.
OMERO	Open Microscopy Environment Remote Objects; a client-server software for management, visualization, and analysis of biological microscopy images. See also References [6] and [7].
Python	High-level, general-purpose programming language.
React	Open-source library for building web application user interfaces, written in JavaScript.
REST	Representational state transfer; an architectural style that defines a set of best practices for creating web services.
Server	Machines hosting web applications and/or software.
SQL	Structured Query Language; the standard language for relational database management systems.
Storage	Local storage is physically attached to a machine, whereas network-attached storage is connected via a network connection.
UI	User interface; the visual elements to software with which the user interacts to read information and input commands.
VM	Virtual machine; a piece of software that emulates the function of a full computer and is capable of performing all tasks of a physical machine.
Web application	A computer program developed specifically to be run and accessed via a web browser
Web framework	A system providing generic functionality; offers ready-made solutions to common web development idioms and design patterns and can be selectively changed by user-defined code.

Table S2. Related to Table 1. Comparison of OMERO/OMERO.iviewer and OMERO Plus/PathViewer for image viewing

Feature or Component	OMERO.iviewer (OMERO)	PathViewer (OMERO Plus)
Multi-image views	Supported in newer versions	Supported and tailored to digital pathology workflows
Loading images	Support for multi-resolution, tiled images	Support for multi-resolution, tiled images • Support for acceleration through tile microservice • Support for selecting tile sizes and compression parameters • Support for image flipping through tile microservice • Predictive preloading of images
Annotation tools	Basic tools required for marking and annotating regions of interest (ROIs)	Extended features for ROI annotation, including improved freehand drawing and detailed rich formatted descriptions • Rich formatted descriptions allowed at Image and Channel levels
Multichannel image support	Supported	Supported • Ability to organize channels into custom-named groups and toggle on/off • Intuitive design for adjusting brightness and contrast
Portability	Parametric URL available from right-click; status of ROI display not included	Parametric URLs to share exact viewing settings available from Location bar
Metadata	Basic metadata visible in separate Info tab; map annotations not supported	Annotations and map annotations viewable in Properties panel, along with image info and description

Sources: Glencoe Software, Inc. (n.d.). *PathViewer*. http://www.glencoesoftware.com/products/pathviewer/features/ and University of Dundee & Open Microscopy Environment. (n.d.). *OMERO.iviewer*. http://www.openmicroscopy.org/omero/iviewer/