IMAGING COLLECTION
DATASHEET

Pipeline Pilot's dataflow automation and visual programming capabilities have revolutionized the way researchers are performing enterprise image informatics. The Imaging Collection brings together both ease of use and extensive customization. The platform enables IT professionals, researchers and decision makers, to make timely qualified decisions based on holistic, accurate and easily accessible image and related enterprise data. This comprehensive scientific image informatics toolbox reduces the costly and cumbersome need for application centric approaches to image data integration, while maximizing the value of existing technology. The platform scales to integrate images and associated data with a range of other scientific data formats in diverse areas including – life science research, chemistry, materials, electronics, energy, consumer packaged goods, pharmaceuticals, aero-space, academic and government research.

Figure 1 Enabling Image Informatics

Integrate with enterprise applications

- Integration with commercial and open source imaging software applications, enterprise data management systems and corporate portals in applications such as Oracle and SharePoint enable users to leverage existing investments, improve productivity and reduce costs. Using a number of standard technologies, you can bring images and associated data together with other scientific data from in-house databases, files, and instruments, collected from anywhere across the enterprise. You can read not only image data but also chemistry, biological sequences, text and numeric data from all popular formats and analyze data from multiple sources in real-time.

## Improve collaboration across the enterprise

- Complex data integration capabilities allow users to access and explore images from all scientific domains as well as other common and complex scientific data leading to improved knowledge and decision making. Template protocols allow rapid development of custom drill-down reporting and image link capabilities. The Pipeline Pilot corporate portal integration capabilities allow companies to simply and easily increase collaboration among their extended teams and across the enterprise sharing images and related data - significantly increasing productivity, reducing costs and time to market, and demonstrating a higher return on investment for Senior Management.
- Collaboration is increased without security concerns through the use of rolebased authorization and folder security.

Increase productivity

- Automate error-prone manual tasks like gathering images and associated data, processing, analyzing, preparing and importing data, generating reports and distributing results.
- Bypass lengthy compiling and reviewing lengthy coding cycles with "on-the-fly" debugging and immediate deployment in Design Mode. This intuitive interface allows protocol developers to see the data at each step, update multiple caches with one click, view run time for each processing step to optimize the pipeline and quickly build high quality solutions.
- Rapidly interact with the your images. Integration with the pipeline pilot platform enables users to process, segment, measure, export, apply advanced learning algorithms and to create custom interactive reports with image-data links.
- Capture and deployment of best practices – An intuitive web-based environment allows end-users to leverage the power of Pipeline Pilot within a simple point-and-click interface. Automatically capture, annotate and version your image processing and analysis procedures, allowing you to document and reproduce the steps used to achieve a particular result. Your resulting imaging protocols can be published and shared with others to facilitate cooperative development and knowledge transfer via the Pipeline Pilot web client
- Parallel processing – The platform supports parallel processing, grid engines and cloud computing to scale to the processing power that is right for your imaging needs.
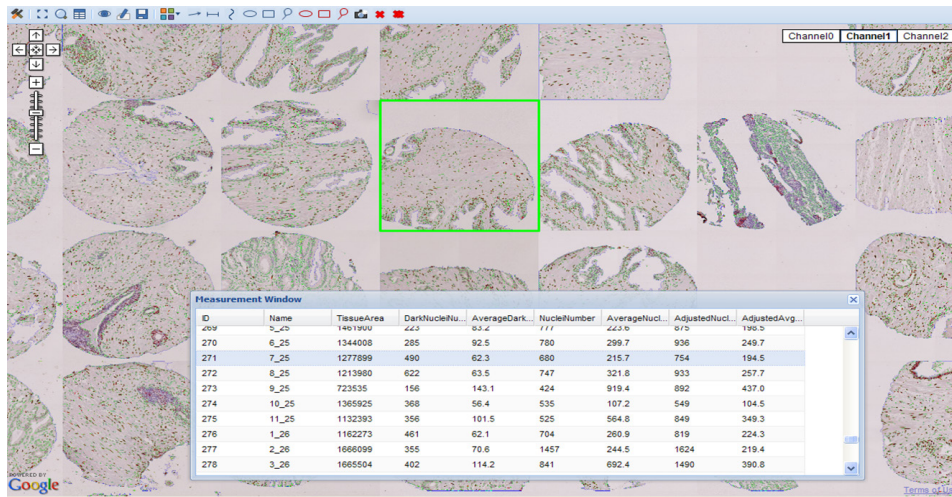
An interactive Explorer allows for rapid image object manipulation and results viewing
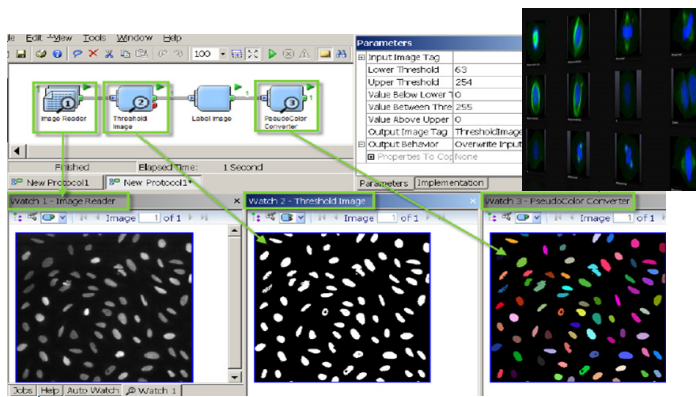
Custom Protocol development is made simple with multiple watch windows in Design Mode
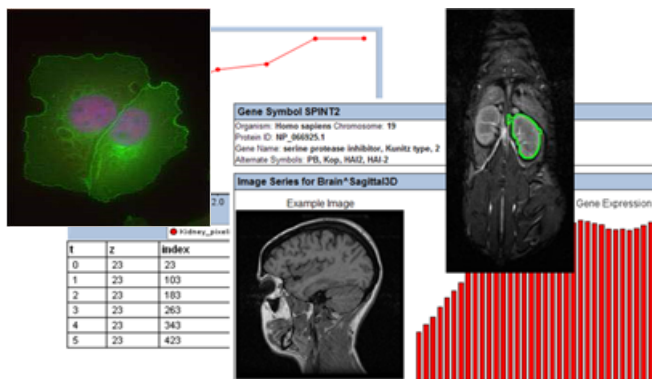
Customized Reporting and Web Application Development

- Create customized reports and applications with powerful tables, charts, images, text and links. With complete control over the layout and content, you can easily interpret and communicate your results.

Collection

The collection is comprised of a suite of components, each a functional unit of tested code, often with user definable input and output parameters. End users can combine these components into complete image processing and analysis protocols without ever performing complex scripting or programming. These protocols can range from simple image manipulation to advanced supervised and unsupervised learning. The collection offers best in class processing and analysis capabilities and a collaborative reporting environment enabling developers, researchers and management to make better decisions faster.

The ability to process and integrate all types of data including numeric, text, chemical, biological, image and instrument data combined with an open server architecture makes Pipeline Pilot the ideal enterprise image informatics platform. Pipeline Pilot will automatically take vendor platform and formatting into account for you with the ability to analyze data from multiple sources in real time - seamlessly guiding your data through processing and analysis steps even into statistical analysis, modeling, data integration, and interactive reporting complete with easy drill down and image-data links. Please contact support or consult the Pipeline Pilot use guides for component specific descriptions in the Imaging collection.

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