



Labs Overview

Status of Development

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Labs Overview

- Extensions offer additional functionalities
 - Nodes not part of the core KNIME version
 - Feature pre-view
- KNIME extensions sponsored or resulting from collaborations, academic and/or industry
- Provided at a separate update site:
<http://labs.knime.org/update/2.1>

Text Processing

- Processes textual and natural language (NLP)
- Text Mining
- Information Retrieval

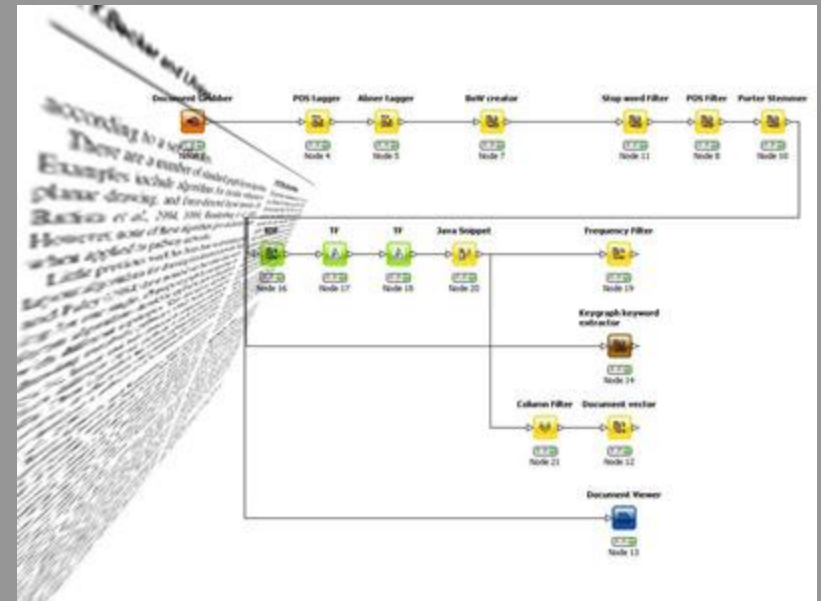
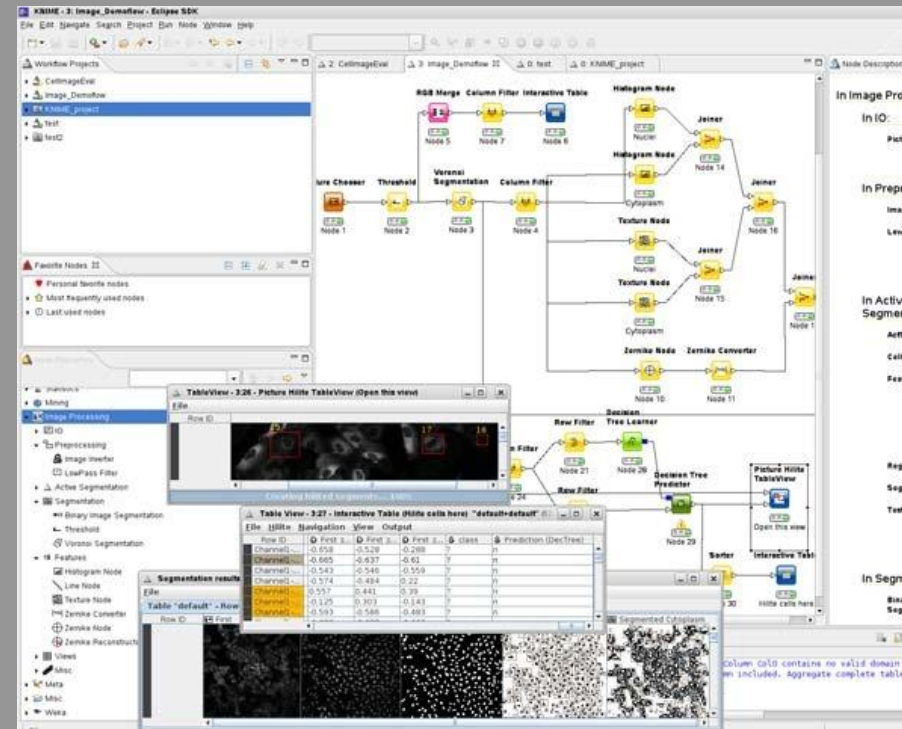


Image Processing

Research collaboration between the Uni. of Konstanz and Nycomed (ALTANA)

- Defines image type and nodes for analyzing cell assays
- Special Interest Group at HCA meeting

A screenshot of the KNIME software interface. The main workspace shows a workflow with several nodes: 'Line Chooser', 'Threshold', 'Voronoi Segmentation', 'Column Filter', 'Hologram Node', 'Texture Node', 'Zernike Node', 'Zernike Converter', 'Decision Tree Learner', and 'Picture Viewer'. A 'Table View' window is open, displaying a table with columns for 'Row ID', 'File', 'First Area', 'Second Area', 'Class', and 'Prediction (Decision Tree)'. The table contains several rows of data. Below the table, there are three image thumbnails showing the results of the segmentation process: the original image, the segmented image, and the segmented image with labels.



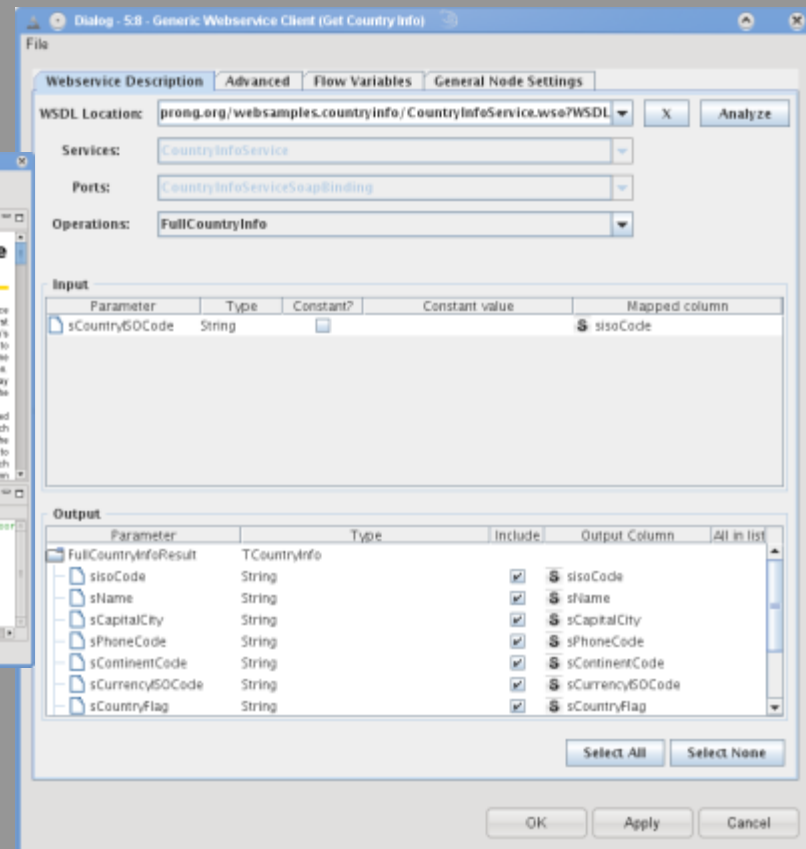
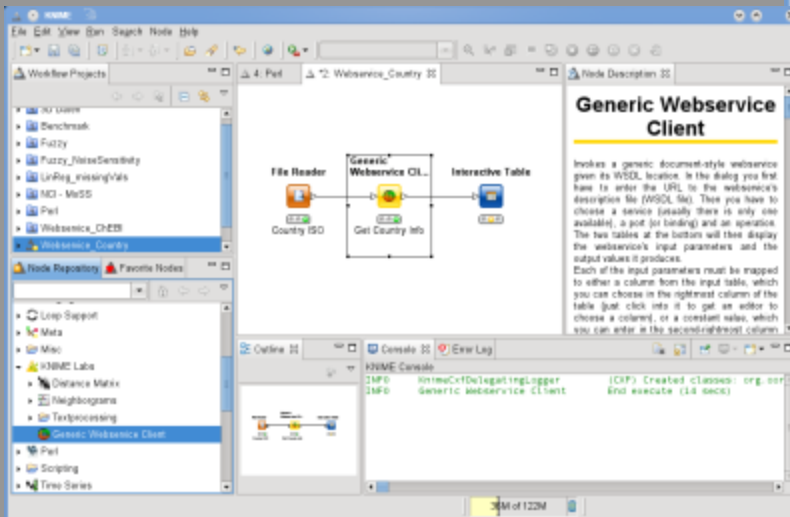
Other Plug-ins and Extensions

- Distance Matrix Support
 - Efficient processing of distance and similarity values
- Perl Scripting node (new with 2.1.2)
- XLS Writer and XLS Reader (planned for 2.2)



Web Service Client (SOAP)

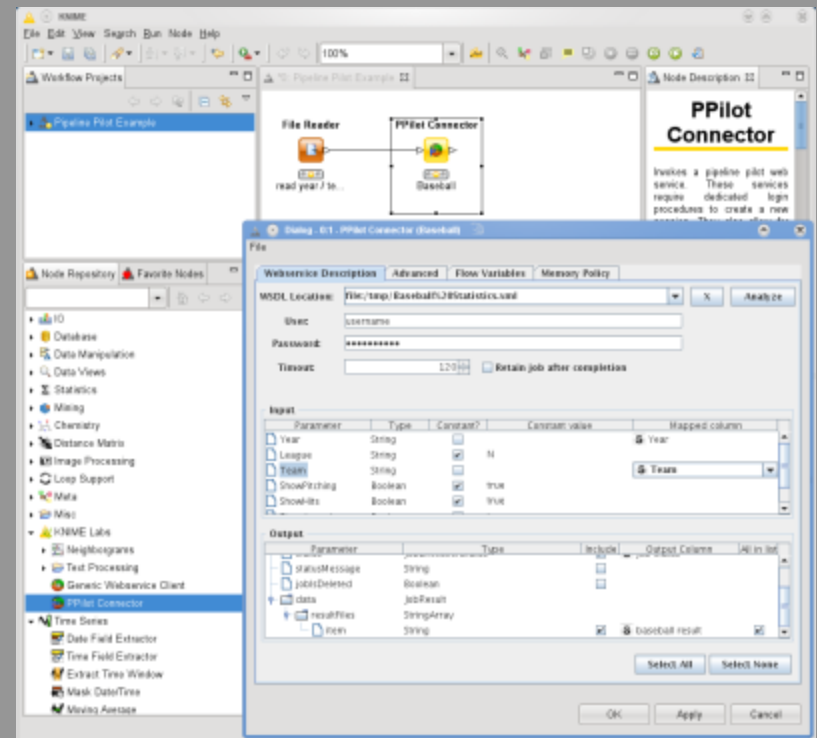
Generic web service node to invoke document-style services



Pipeline Pilot Connector

Connector uses the Pipeline Pilot's SOAP interface

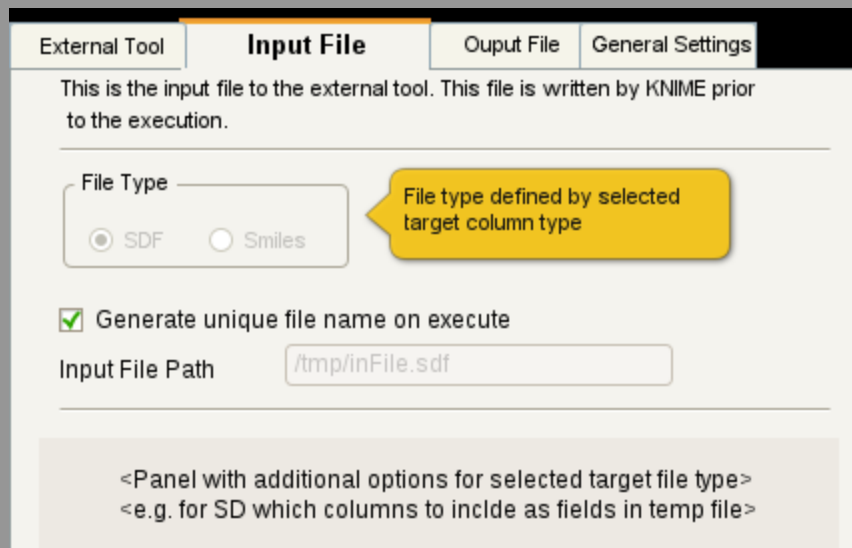
- Parse web service description, create requests and read responses



External Tool Node

Allows running external executables

- public API for customized node development
- sample implementation for chemical external tool (supports chem. types)

This screenshot shows the 'Input File' configuration tab. At the top, there are four tabs: 'External Tool', 'Input File' (selected), 'Output File', and 'General Settings'. Below the tabs, a text box explains: 'This is the input file to the external tool. This file is written by KNIME prior to the execution.' The 'File Type' section has two radio buttons: 'SDF' (selected) and 'Smiles'. A yellow callout box points to the 'SDF' option with the text 'File type defined by selected target column type'. Below this, there is a checked checkbox for 'Generate unique file name on execute' and an 'Input File Path' text field containing '/tmp/inFile.sdf'. At the bottom, a grey box contains the text: '<Panel with additional options for selected target file type> <e.g. for SD which columns to include as fields in temp file>'.

External Tool | **Input File** | Output File | General Settings

This is the input file to the external tool. This file is written by KNIME prior to the execution.

File Type

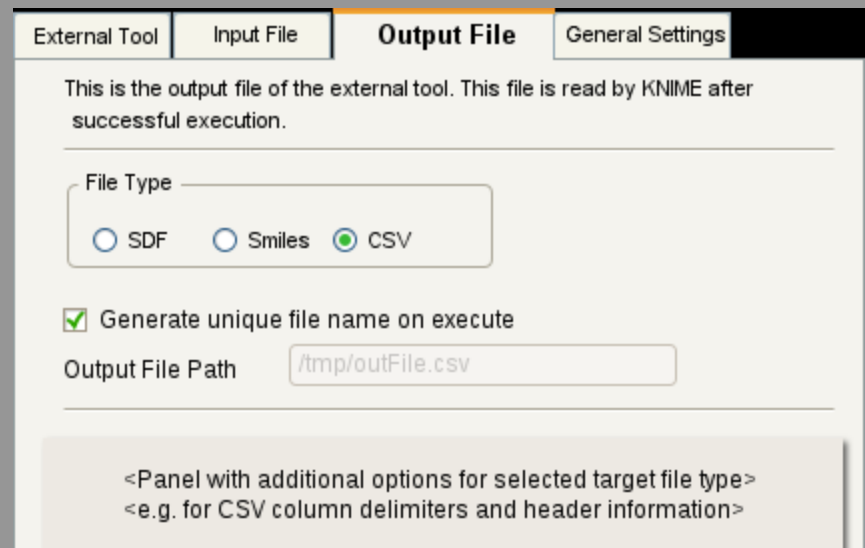
SDF Smiles

File type defined by selected target column type

Generate unique file name on execute

Input File Path

<Panel with additional options for selected target file type>
<e.g. for SD which columns to include as fields in temp file>

This screenshot shows the 'Output File' configuration tab. At the top, there are four tabs: 'External Tool', 'Input File', 'Output File' (selected), and 'General Settings'. Below the tabs, a text box explains: 'This is the output file of the external tool. This file is read by KNIME after successful execution.' The 'File Type' section has three radio buttons: 'SDF', 'Smiles', and 'CSV' (selected). Below this, there is a checked checkbox for 'Generate unique file name on execute' and an 'Output File Path' text field containing '/tmp/outFile.csv'. At the bottom, a grey box contains the text: '<Panel with additional options for selected target file type> <e.g. for CSV column delimiters and header information>'.

External Tool | Input File | **Output File** | General Settings

This is the output file of the external tool. This file is read by KNIME after successful execution.

File Type

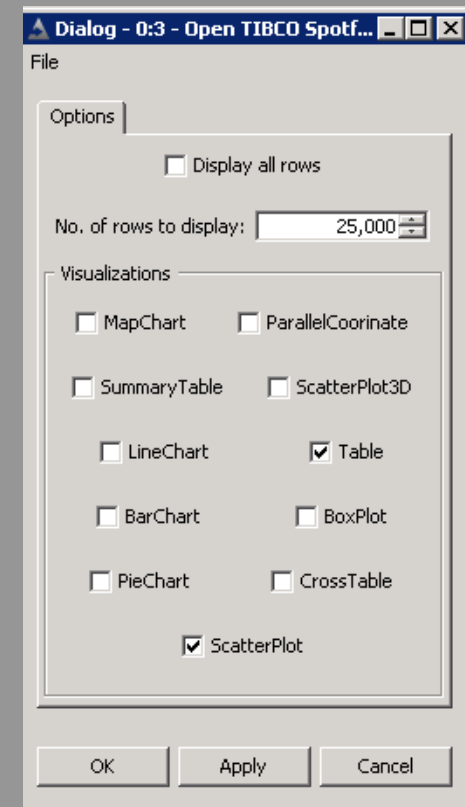
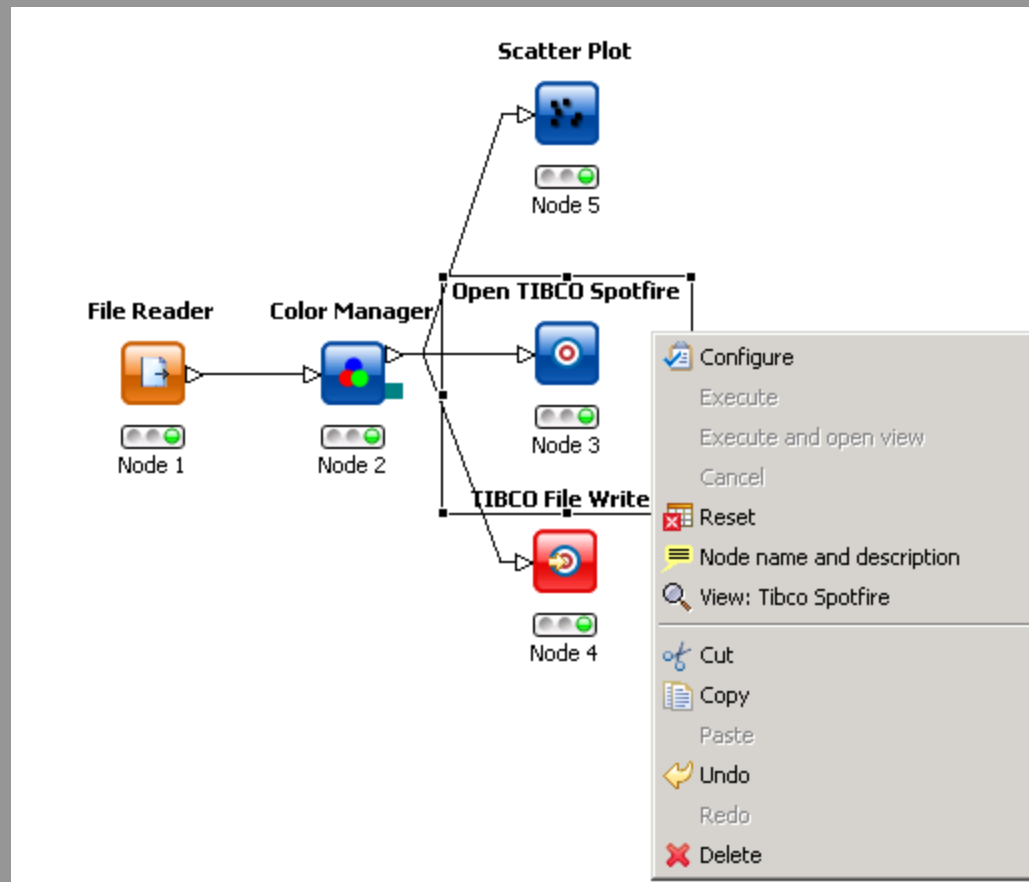
SDF Smiles CSV

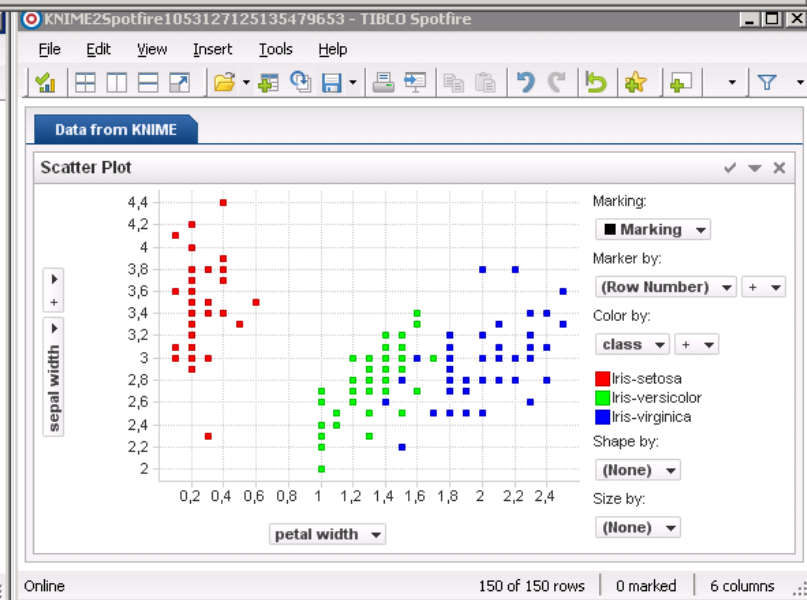
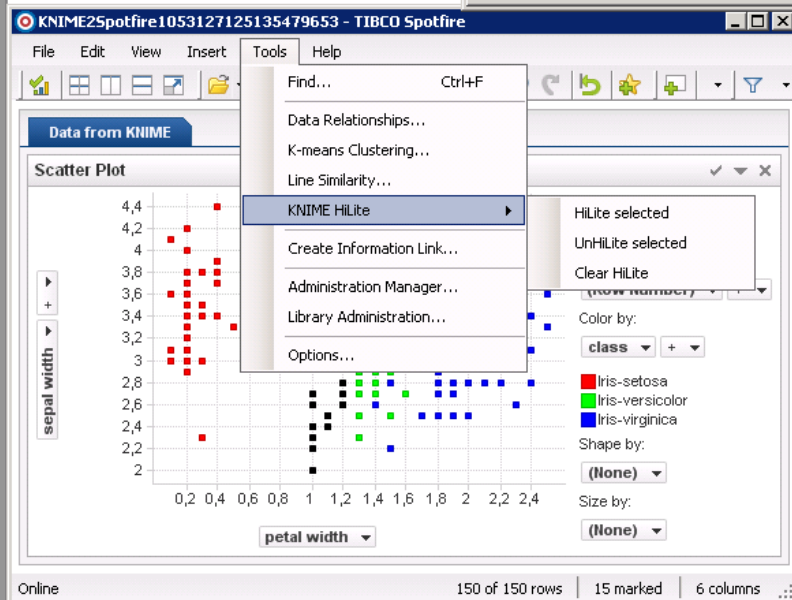
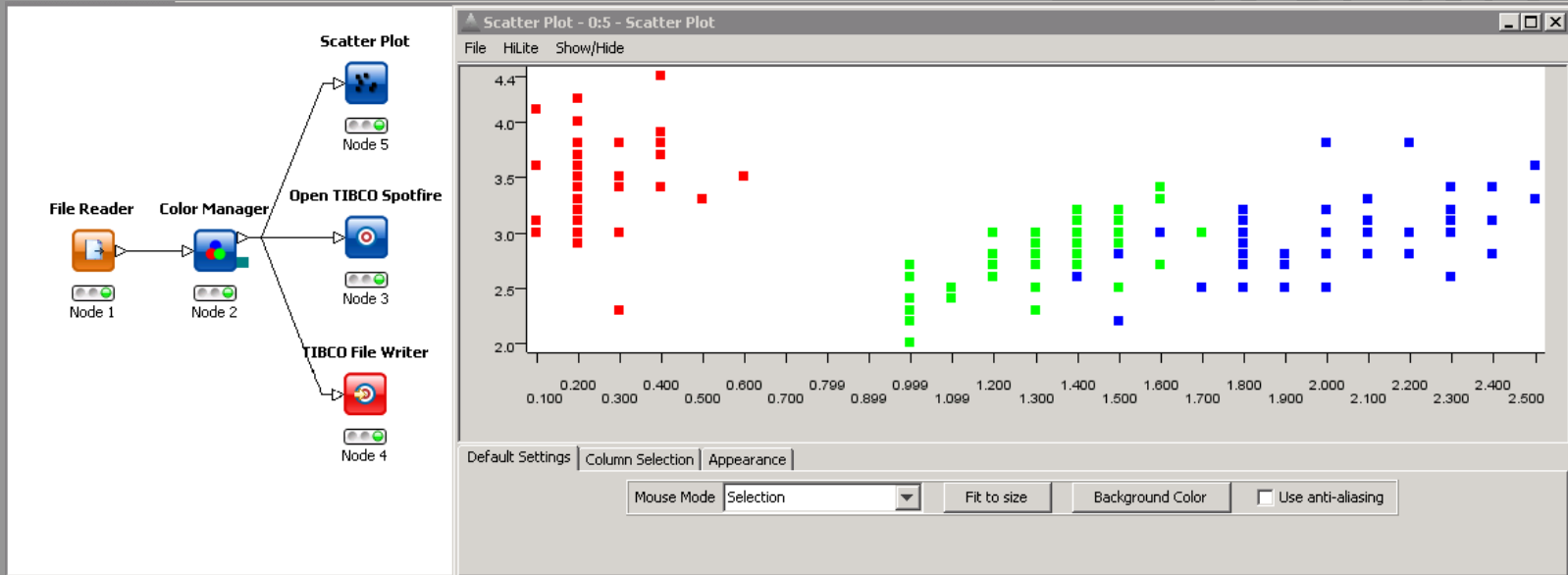
Generate unique file name on execute

Output File Path

<Panel with additional options for selected target file type>
<e.g. for CSV column delimiters and header information>

Tibco Spotfire Integration





KNIME

File Edit View Node Search Run Help

100%

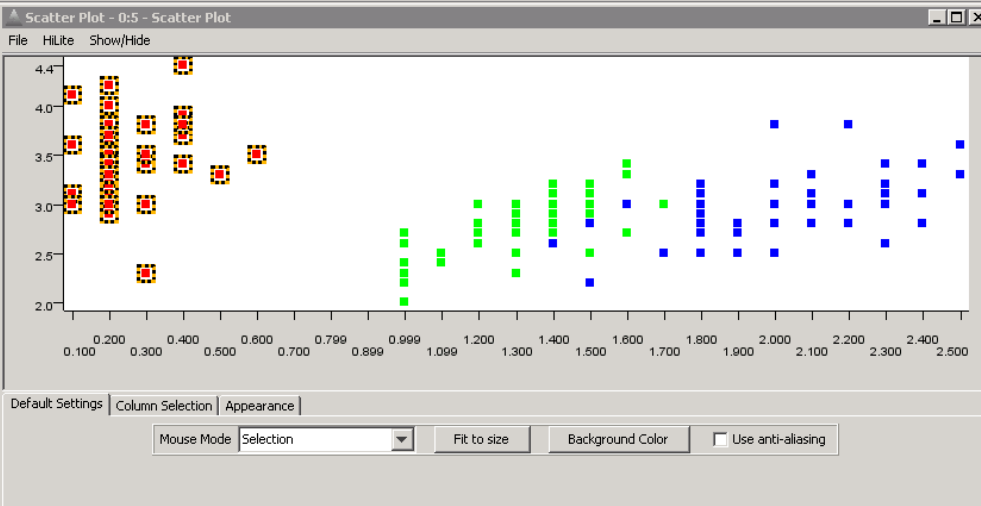
*0: Screenshots

Scatter Plot

File Reader (Node 1) → Color Manager (Node 2) → Open TIBCO Spotfire (Node 3) → TIBCO File Writer (Node 4)

Scatter Plot - 0:5 - Scatter Plot

File HILite Show/Hide



Default Settings | Column Selection | Appearance

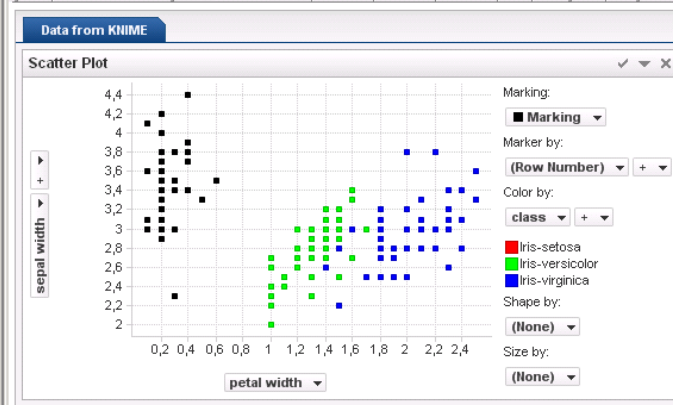
Mouse Mode: Selection | Fit to size | Background Color | Use anti-aliasing

KNIME2Spotfire1053127125135479653 - TIBCO Spotfire

File Edit View Insert Tools Help

Data from KNIME

Scatter Plot



Marking: ■ Marking

Marker by: (Row Number)

Color by: class

- Iris-setosa
- Iris-versicolor
- Iris-virginica

Shape by: (None)

Size by: (None)

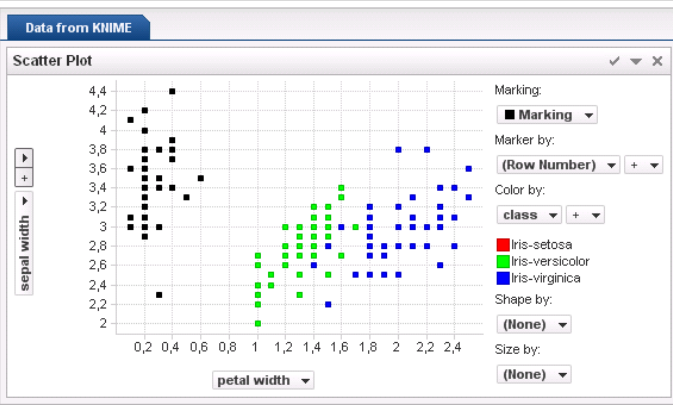
Online | 150 of 150 rows | 50 marked | 6 columns

KNIME2Spotfire1053127125135479653 - TIBCO Spotfire

File Edit View Insert Tools Help

Data from KNIME

Scatter Plot



Marking: ■ Marking

Marker by: (Row Number)

Color by: class

- Iris-setosa
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Shape by: (None)

Size by: (None)

Online | 150 of 150 rows | 50 marked | 6 columns



KNIME Development

- KNIME Desktop & SDK v2.1.2
 - v2.2: end 2010 based on Eclipse 3.5
 - Official MacOSX support
- KNIME Report Designer

- KNIME Enterprises
 - Server Lite v1.0
 - Cluster Support v1.0 (SGE support)
 - Enterprise Server & Reporting Server



What's next?

KNIME v2.2 available this year:

- Workflow and Flow Variable integration
 - additional dialog/settings concept
- View Ports: selected KNIME views can be exported to the Report Designer



Questions...?