TIBCO SPOTFIRE CONNECTOR FOR PIPELINE PILOT

2016 Data Analytics & R&D Informatics User Conference

Eric Le Roux | November 2016
Agenda

Company
TIBCO Spotfire Connector
Demo
Q&A
Discngine

Software for Life Sciences Research Informatics

- **Customers**: Sanofi, l’Oréal, AbbVie, Galderma, Merck & Co., GSK, IPSEN, Novartis, Roche, Pierre Fabre, DuPont, Monsanto, Chugai, CEREP, Servier, Galapagos, UCB

- Founded in 2004 - Based in Paris, France
- 35 People

- More Information: [www.discngine.com](http://www.discngine.com)
Discngine

Software for Life Sciences Research Informatics

- Bespoke
- Components
- Off-the-shelf
- Hybrid
Discngine

Software for Research Informatics

- Discngine Network for Pipeline Pilot
- Discngine Chemistry for Pipeline Pilot
- TIBCO Spotfire Connector

Decision  Workflow
Assay  Sample
Software for Research Informatics

- Discngine Network for Pipeline Pilot
- Discngine Chemistry for Pipeline Pilot
- TIBCO Spotfire Connector

Decision | Workflow
---|---
Assay | Sample

Discngine

TIBCO Spotfire
Assay: Plate based assay data analytics
Sample: Inventory, tracking and processing
Decision: Data consolidation and decision making
Workflow: Research project management and progress monitoring
Discngine

Partners

- Dassault Systèmes BIOVIA
- Oracle
- Perkin Elmer

→ Combine & integrate research IT components
Discngine & Spotfire

A long story!
TIBCO SPOTFIRE CONNECTOR

Objectives, Architecture, Demo
What is Pipeline Pilot?

Scientific Data Flow Execution Platform
Objectives

Create workflow based applications which combine advanced scientific data manipulation with elaborated interactive visualizations.

Any Spotfire Client
Analyst, Consumer, Business Author

Data: Binary objects, molecules, images, sequences...

Bidirectional

API: Events, Visualizations, Job Control...

Any Science
Chemistry, Biology, ADMET...
Connector package content

Web Panel
Spotfire Analyst

TIBCO Spotfire Component Collection
Pipeline Pilot

BIOVIA Pipeline Pilot Data Functions
Spotfire Analyst, Consumer, Business Author
Web Panel for TIBCO Spotfire

A Spotfire extension based on the public API

- Allows to entirely control Spotfire Analyst client from JavaScript instructions
Web Panel for TIBCO Spotfire

A Spotfire extension based on the public API

- Allows to entirely control Spotfire Analyst client from JavaScript instructions

TIBCO Spotfire Collection for Pipeline Pilot
Automatically generates Javascript API Calls
TIBCO Spotfire component collection for Pipeline Pilot

A set of components and example protocols

1. Generate JavaScript code dynamically for the Web Panel
2. Read and Write Spotfire data files
3. Allow creation of Web Mashup with Pipeline Pilot reporting collection and Spotfire Web Player (Consumer or Business Author)
TIBCO Spotfire component collection for Pipeline Pilot

A set of components and example protocols

- Generate JavaScript code dynamically for the Web Panel
TIBCO Spotfire component collection for Pipeline Pilot

A set of components and example protocols

- Read and Write Spotfire data files
  - Preserve data types both ways
  - Handles binary objects natively (Images, CTABs..)
  - Based on TIBCO SBDF Java API
TIBCO Spotfire component collection for Pipeline Pilot

A set of components and example protocols

- Allow creation of Web Mashup with Pipeline Pilot reporting collection and Spotfire Web Player (Consumer or Business Author)
Pipeline Pilot Data Functions

A Spotfire extension based on the Data Function API

- Data only integration
- Runs in all clients
Pipeline Pilot Data Functions

What are Data Functions?

- A way to integrate external software for data retrieval and processing
- Used by Spotfire to integrate with:
  - R
  - SAS
  - Matlab
  - S+
- Can be extended with to the public API
- Uses standardized integration mechanisms supported by TIBCO
Pipeline Pilot Data Functions

A two steps process

- **Register the new data function**
  > Select one Pipeline Pilot protocol and save its signature

- **Execute the data function**
  > Create a new data table
  > Process data
  > Can be triggered automatically based on user events or manually
DEMO
Demo

Spotfire Analyst with Web Panel
Spotfire Consumer Mashups & Pipeline Pilot Data Functions
Spotfire Analyst
Spotfire Analyst
Spotfire Web Player Mashups
Spotfire Web Player Mashups
Spotfire Web Player Mashups
Spotfire Web Player Mashups
Summary

Web Panel
Spotfire Analyst

TIBCO Spotfire Component Collection
Pipeline Pilot

BIOVIA Pipeline Pilot Data Function
Spotfire Analyst, Consumer, Business Author

Designed to support the diversity of use cases
Tibco Spotfire Pipeline Pilot Connector

Deployement process

- Install component collection on the Pipeline Pilot server
  > Similar to BIOVIA collection installation
- Upload Discngine Web Panel on the Spotfire server deployment section
  > Web Panel is then automatically deployed on clients

Administration

- Spotfire Administration manager
  > Preferences
  > Deployment control
  > Licensing
Thanks