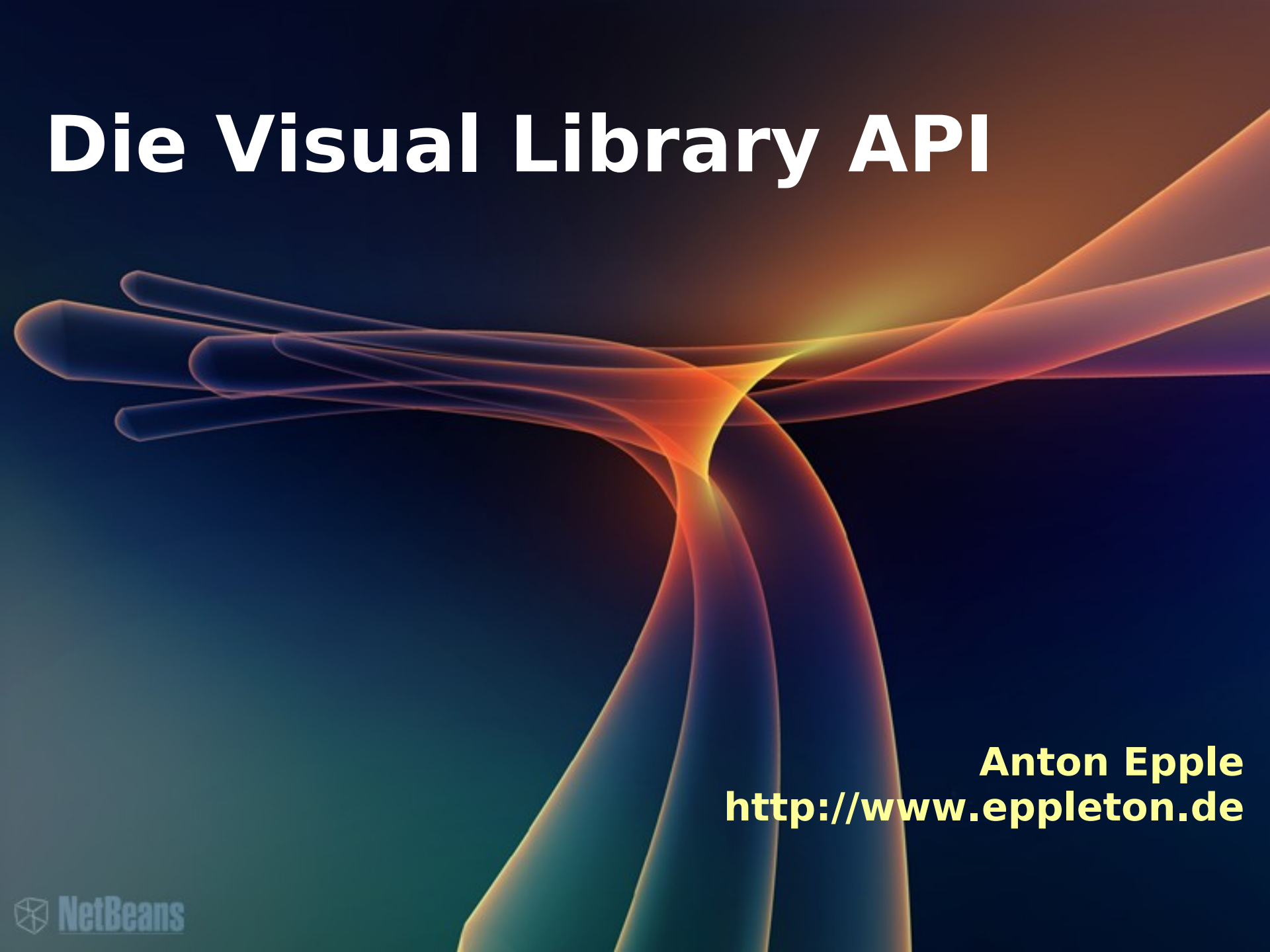


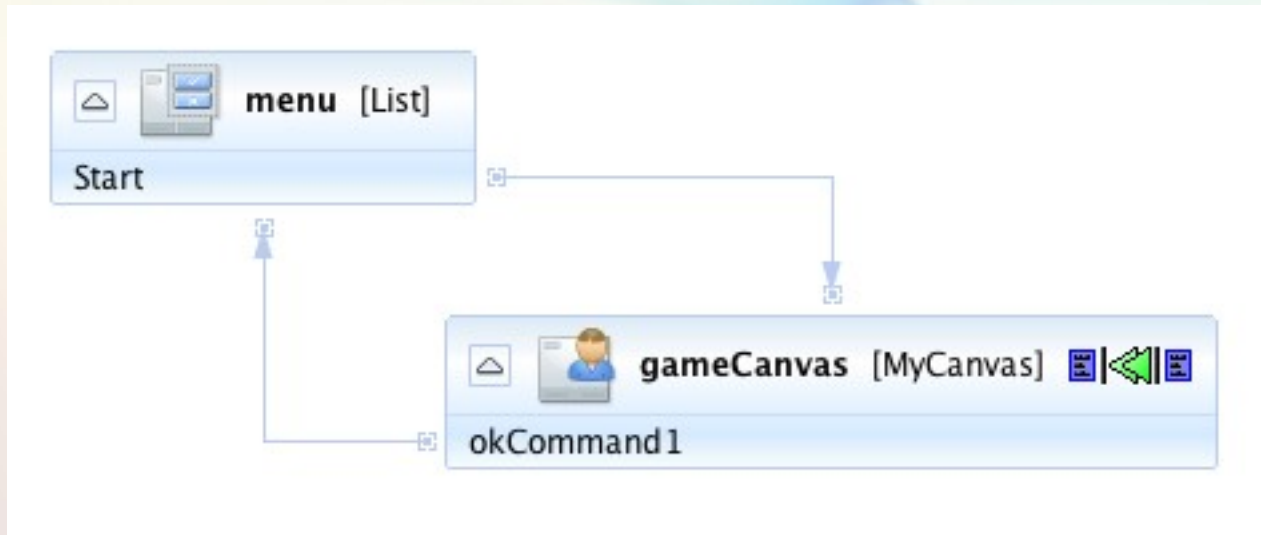
Die Visual Library API



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Was ist die Visual Library?

Generische Visualisierungs Bibliothek
Speziell für die Anzeige von Graphen
Widgets sind die graphische
Grundeinheit



Was ist die Visual Library?

Unabhängig von NB und verwendbar in jeder Swing Anwendung

Nur eine Abhängigkeit: Lookup (util)

Dokumentation & Demo Projekte:

<http://graph.netbeans.org/documentation.htm>

<http://bits.netbeans.org/dev/javadoc/org-netbeans-api-visual/overview-summary.html>

<http://graph.netbeans.org/examples.html>

Wird in NetBeans & vielen anderen Anwendungen verwendet

Beispielanwendungen

NetBeans (Visual Mobile Designer)

Jarvis (Jasperreports Visual Designer)

MindMap

GeeWhiz (Prolog Editor & Tutorial)

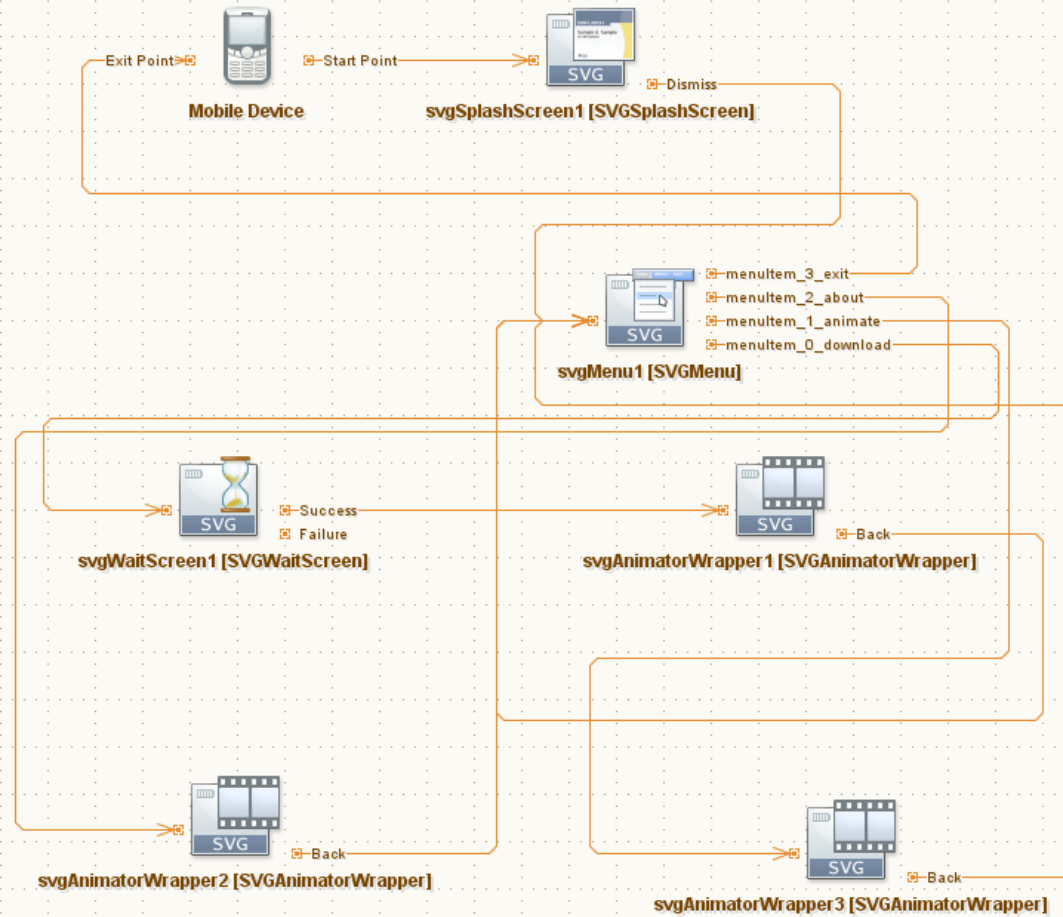
ChipInspector (Genome Browser)

InstantJChem (Form Designer)

BlueMarine (Photo Editor)

VMD

Flow Designer: MIDP-2.0



Instant JChem

The screenshot displays the Instant JChem 2.3.1 application window. The main interface includes a menu bar (File, Edit, View, Search, Data, Lists, Tools, Window, Help), a toolbar, and a sidebar with a project tree. The central area shows a table of search results and a chemical structure viewer. A 'Chemical Terms Filter' dialog is open, showing a query expression and a list of filter options. A yellow tooltip is visible over the structure viewer, providing details about the 'acceptor' function.

Chemical Terms Filter

Chemical terms expression: Favouites...

$(\text{mass}() \leq 500) + (\log P() \leq 5) + (\text{donorCount}() \leq 5) + (\text{acceptorCount}(\text{molecule}, [\text{pH}]) \leq 10)$

- acceptor(index, [pH])
- acceptor(molAtom, [pH])
- acceptorCount(molecule, [pH])
- acceptorSiteCount(molecule, [pH])

Structure

Structure viewer displays the chemical structure of 1-L-myo-inositol-1-phosphate.

acceptor

calculates atomic acceptor multiplicity

Parameters

- index: atom index
- pH: the major microspecies pH (takes the input molecule itself if omitted) (optional)

Returns

the atomic acceptor multiplicity

1-L-MYO-INOSITOL-1-P

DB name: BioCyc

Formula: C6H13O9P

Pubchem demo: 68 out of 1,000 rows.

Jarvis

The screenshot displays the NetBeans IDE interface with the following components:

- Window Title:** NetBeans Platform 200612070100
- Menu Bar:** File, Edit, View, Navigate, Source, Refactor, Build, Run, CVS, Tools, Window, Help
- Toolbar:** Standard IDE icons and a search field containing "Agency FB Fett".
- Files Panel:** Shows a project structure for "JavaApplication7" with source packages, test packages, and libraries.
- Design View:** Displays a report template for "BiblioSphere Pathway Edition" titled "Ranking Report". The report includes:
 - Page Header:** "Ranking Report" and "new Date()".
 - Column Header:** A section for the main data.
 - Chart:** A stacked area chart with the following data series:

Year	Series 1 (Green)	Series 2 (Purple)	Series 3 (Red)
1999	1.0	1.0	0.0
1999.5	1.5	1.0	0.0
2000	1.0	1.0	0.0
2000.5	1.5	1.0	0.0
2001	1.0	1.0	0.0
2001.5	1.5	1.0	0.0
2002	1.0	1.0	0.0
2002.5	1.5	1.0	0.0
2003	1.0	1.0	0.0
2003.5	1.5	1.0	0.0
2004	1.0	1.0	0.0
2004.5	1.5	1.0	0.0
2005	1.0	1.0	0.0
 - Column Footer:** "Copyright © Genomatix Software GmbH 1998-2005 - All rights reserved.http:..."
 - Page Footer:** "Copyright © Genomatix Software GmbH 1998-2005 - All rights reserved.http:..."
 - Summary:** A section at the bottom of the report.
- Palette:** Contains various chart types (Area, Bar, CandleStick, Line, Pie, StackedBar, XY) and fields/parameters for the report.
- StaticText - Properties:** A table showing properties for the selected static text element:

Property	Value
X	188
Y	12
Width	159
Height	26
Forecolor	
PrintWhenGroupChanges	null
PrintWhenExpression	null
Style	null
StretchType	Default
PositionType	Default
Mode	Default
IsRemoveLineWhenBlank	<input checked="" type="checkbox"/>

Wie ist die API aufgebaut?

Ähnlich Swing: Components sind als Baum organisiert

Widgets = Graphische Grundeinheit (entspricht JComponent)

Scene (Wurzelement)

ObjectScene

Graph Scene

GraphPinScene

LayerWidget

LabelWidget

ImageWidget

...

Demo...

Demo

Neue TopComponent "Visual Library Demo" erzeugen
und JScrollPane hinzufügen

Im Konstruktor einfügen:

```
Scene scene = new Scene();  
// LayerWidget ist eine unsichtbare Layer (wie in Photoshop...)  
LayerWidget layerWidget = new LayerWidget(scene);  
scene.addChild(layerWidget);  
Widget widget = new LabelWidget(scene, "Hallo Welt!");  
layerWidget.addChild(widget);  
jScrollPane1.setViewportView(scene.createView());
```

Ausführen

Wie ist die API aufgebaut?

Viele Factory-Klassen um Verhalten zu erzeugen

Border:

LineBorder, BevelBorder, DashedBorder, ImageBorder, ResizeBorder...

```
widget.setBorder(BorderFactory.createLineBorder(Color.BLUE,5));
```

Demo...

Farben:

Vordergrund und Hintergrund

widget

Demo...

Wie ist die API aufgebaut?

Layouts:

AbsoluteLayout, FlowLayout, CardLayout,
OverlayLayout

```
layerWidget.setLayout(LayoutFactory.createVerticalFlowLayout());
```

Demo...

Actions:

MoveAction, HoverAction, ZoomAction,
PanAction...

Every Widget has a WidgetAction.Chain to
receive Events and forward them to the
matching Action

```
widget.getActions().addAction(ActionFactory.c  
reateMoveAction());
```

Demo...

Anpassen der Aktionen - Providers

Providers um das Verhalten anzupassen:

```
ActionFactory.createXXXAction(new MyXXXProvider ());
```

Beispiel:

```
private static class MyHoverProvider implements HoverProvider {  
  
    public void widgetHovered(Widget widget) {  
        if (widget != null){  
            widget.setBackground(Color.BLUE);  
            widget.setForeground(Color.WHITE);  
        }  
    }  
}
```

Demo...

Eigene Widgets erzeugen

```
public class IconLabelWidget extends Widget {  
  
    public IconLabelWidget(Scene scene, String icon, String  
label) {  
        super(scene);  
        setOpaque(true);  
  
        setLayout(LayoutFactory.createVerticalFlowLayout(LayoutFactory.  
SerialAlignment.CENTER, 4)); // use vertical layout  
  
        Image image = Utilities.loadImage(icon);  
        addChild(new ImageWidget(scene, image));  
        addChild (new LabelWidget (scene, label));  
    }  
}
```

Demo...

Mehr Informationen

Dokumentation, Demo Projekte &
Tutorials:

<http://graph.netbeans.org/documentation.htm>

<http://graph.netbeans.org/examples.html>

Visual Database Explorer

Workshop

http://platform.netbeans.org/tutorials/nbm-visual_library2.html