



NatTable

Introduction on Nebula NatTable

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NatTable

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NatTable

Agenda

- What's NatTable?
- Other tables/trees/grids
- NatTable Architecture
 - Data access
 - Configuration
 - Supported Functions
- Roadmap
- Further information

NatTable

What's NatTable?

- N(ot) a(nother) t(able)
- Framework for building tables/grids/trees
- Designed to handle large datasets
- Provides a lot of functionality out of the box

NatTable

Some examples

Validierungsergebnisse (1 Fehler) ✕

- Die Komponente Component One ist mit keiner Komponente des Kriteriums Getriebe baubar. Bitte überprüfen Sie Ihre Baubarkeitsdefinitionen.
- Die Risiko-Bewertungen aller Komponenten des Kriteriums Rohbau sind identisch (Risiko="8"). Bitte überprüfen Sie diese Bewertungen und nehmen ggfs. Differenzierungen vor.
- Die Komponente Component Five zieht mit mind. zwei unterschiedlichen Komponenten des Kriteriums Rohbau einen Raff-Dauerlauf an. Passen Sie bei Bedarf bitte Ihre Bewertungen an.
- Die Komponente Component Six zieht mit mind. zwei unterschiedlichen Komponenten des Kriteriums Rohbau einen Triebstrang-Dauerlauf an. Passen Sie bei Bedarf bitte Ihre Bewertungen an.

	Component One	Component Two	Component Three	Component Four	Component Five	Component Six	Component Seven	Component Eight	Component Nine
Component One	3	-	-	1	3	1	4	5	1
Component Two	-	6	-	1	4	4	5	1	9
Component Three	-	-	8	4	1	5	5	1	6
Component Four	1	5	1	7	-	1	1	7	3
Component Five	5	1	1	-	4	1	1	7	3
Component Six	1	1	1	-	-	1	1	7	3
Component Seven	1	4	5	5	1	1	1	7	3
Component Eight	4	1	7	1	9	1	1	7	3
Component Nine	1	1	7	3	6	1	1	7	3

	ISIN	TestGroup		Issue Date	Pricing Type	TestGroup1 Bid	Size (mil)
		Sec Desc	rating				
1	US2535	B Ford Motor	a	10-22-12	Manual	-579,000000	1.500.000
2	ABC8046	A Alphabet Co.	AAA	04-07-23	Automatic	-26,000000	10.000
3	US4789	C General Electri...	B	02-22-25	Manual	-583,000000	1.500.000
4	US9738	E Nissan Motor ...	AA	01-10-45	Manual	-590.0	80.000
5	US5190	D Toyota Motor ...	aaa	01-23-51	Manual	-772,000000	450.000
6	US416	F Honda Motor ...	aa	06-10-83	Manual	-586.0	6.500.000
7	US5300	G General Motor...	B-	06-21-36	Manual	-151,000000	2.585.000
8	US2339	H Yahoo! Inc	C	10-22-12	Automatic	-755.0	99.000
9	US1713	I Microsoft	BB	06-19-79	Automatic	-395,000000	6.250.000
10	US1848	J Google Inc.	AAA	05-18-82	Automatic	-254.0	8.550.000
11	US9830	K Research In M...	AA	04-17-19	Manual	-114.0	55.000
12	US1024	L Apple Inc.	AAA	08-17-07	Automatic	-916,000000	115.000

NatTable Other tables/trees/grids

SWT/JFace

Nebula XViewer

Nebula Grid

KTable

inactive since 2009

Jaret table

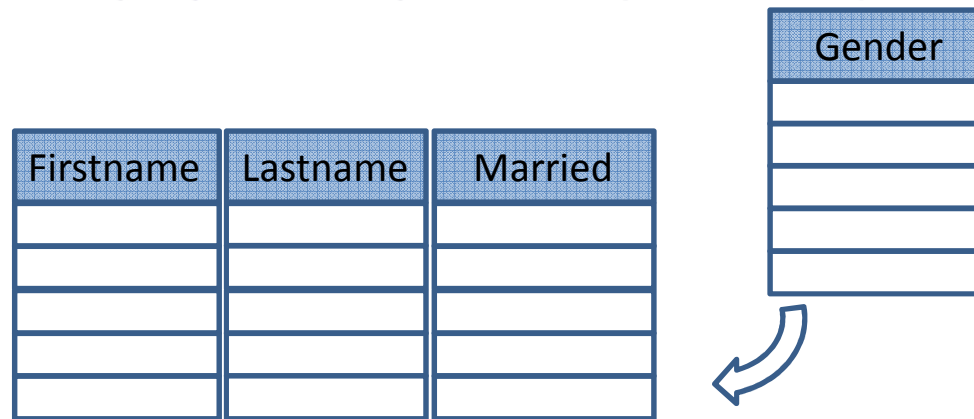
inactive since 2010

NatTable

Other tables/trees/grids

```
TableViewer viewer = new TableViewer(parent,  
                                     SWT.BORDER/SWT.H_SCROLL/SWT.V_SCROLL);  
...  
  
TableViewerColumn column =  
    new TableViewerColumn(viewer, SWT.NONE);  
column.getColumn().setText("Firstname");  
column.getColumn().setWidth(100);  
column.setLabelProvider(new CellLabelProvider() {  
    ...  
});  
column.setEditingSupport(new MyEditingSupport());  
...
```

NatTable Other tables/trees/grids



- Created column by column
- Several objects for every column
 - Column object, LabelProvider, (EditingSupport)
- Using native OS widgets

NatTable

Creating a NatTable

```
String[] propertyNames = {"firstName", "lastName", "married"};

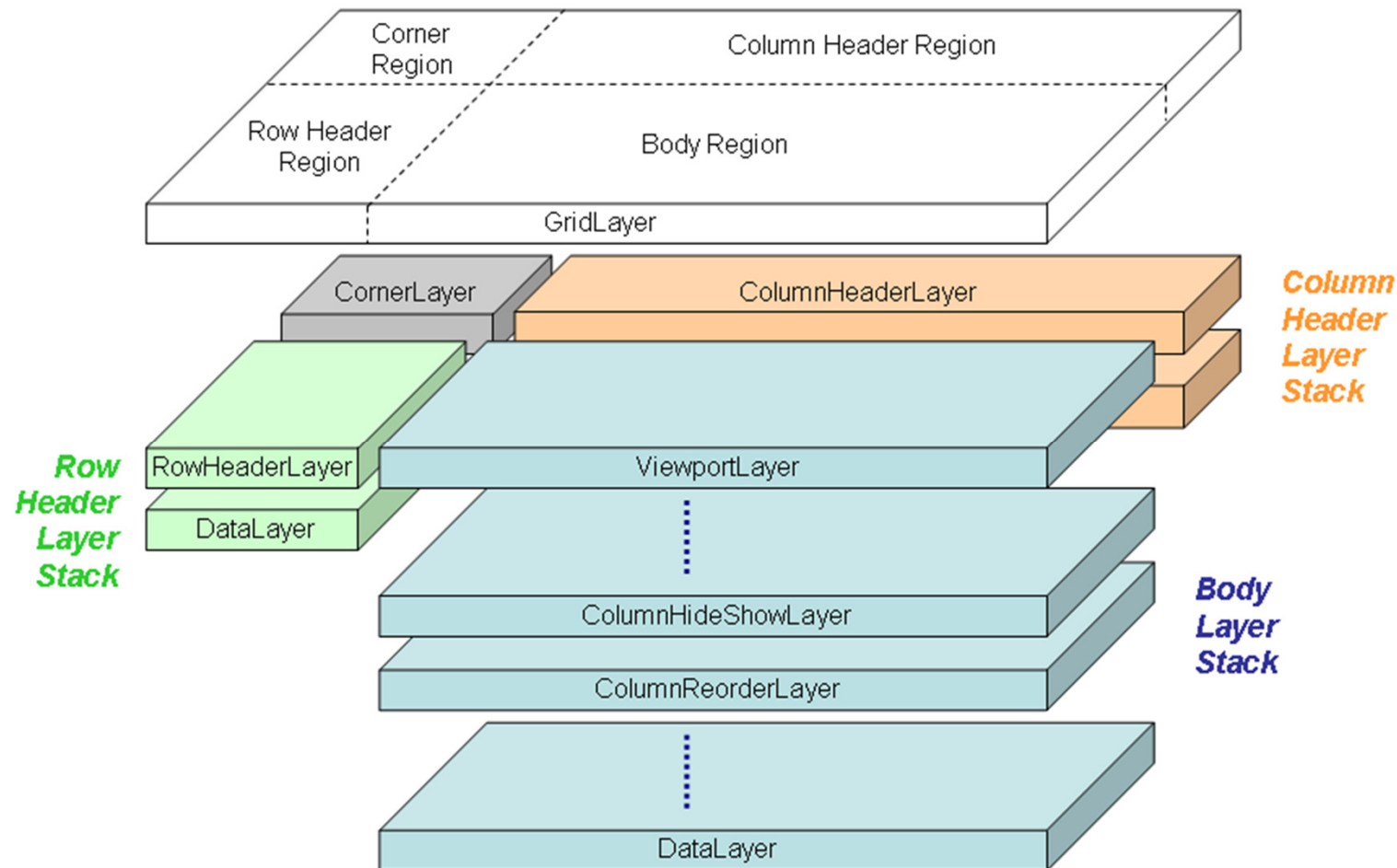
Map<String, String> propertyToLabelMap =
    new HashMap<String, String>();
propertyToLabelMap.put("firstName", "Firstname");
propertyToLabelMap.put("lastName", "Lastname");
propertyToLabelMap.put("married", "Married");

DefaultGridLayer grid =
    new DefaultGridLayer(
        persons, propertyNames, propertyToLabelMap);

NatTable natTable = new NatTable(parent, grid);
...
```

NatTable

NatTable Architecture



NatTable

Data access

- DataLayer
 - IDataProvider (e.g. ListDataProvider)
 - IColumnAccessor (e.g. ReflectiveColumnPropertyAccessor)
- No databinding support at the moment, as data is retrieved/modified directly
- GlazedLists support

NatTable

Data access

```
public interface IDataProvider {  
    Object getDataValue(int columnIndex, int rowIndex);  
    void setDataValue(int columnIndex, int rowIndex,  
        Object newValue);  
    int getColumnCount();  
    int getRowCount();  
}
```

```
public interface IColumnAccessor<T> {  
    Object getDataValue(T rowObject, int columnIndex);  
    void setDataValue(T rowObject, int columnIndex,  
        Object newValue);  
    int getColumnCount();  
}
```

NatTable

Configuration

- ConfigRegistry per NatTable instance
 - Styling
 - Painters
 - Styles
 - Bindings
 - Key bindings
 - Mouse bindings
 - Conditional configuration by labels
 - Separation of data and rendering/styling

NatTable

Supported Functions

Context Menus

Custom Bindings/Commands

Sorting

Text Editor

Password Editor

Editing

Checkbox Editor

Editing Rules

Combobox Editor

(Conditional) Styling

Column Reordering

Column Hide/Show

Filtering

Freezing

Excel Export

Percentage Sizing

Selection

Column/Row Grouping

Table/Grid/Tree

Summary Row

Blinking Updates

NatTable

Nebula NatTable 1.0

- Smooth Scrolling
- Simplification of NatTable configuration
- Refactoring of column and row grouping
- (Refactoring of event handling)
- Further enhancements and bugfixes

NatTable

Nebula NatTable 2.x

- Upgrade dependencies to Eclipse 4
- Introducing Dependency Injection
- Introducing EMF based configuration
- CSS styling
- Support different rendering engines

NatTable

Further Information

- Nebula NatTable Website
<http://eclipse.org/nattable/>
- Nebula NatTable Forum
http://www.eclipse.org/forums/index.php?t=thread&frm_id=240
- Mailing List
nattable-dev@eclipse.org
- Articles (German)
<http://www.beone-group.com/publikationen.html>