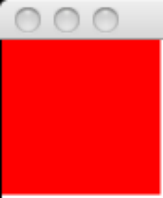


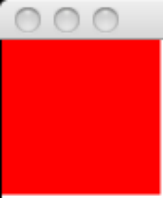
# JavaFX 2.0

**Michael Heinrichs, Oracle**

Technical Lead JavaFX Core Components



# **simple & powerful**



# **We are hiring!**

**[vendula.novakova@oracle.com](mailto:vendula.novakova@oracle.com)**



# Table of Contents

SceneGraph

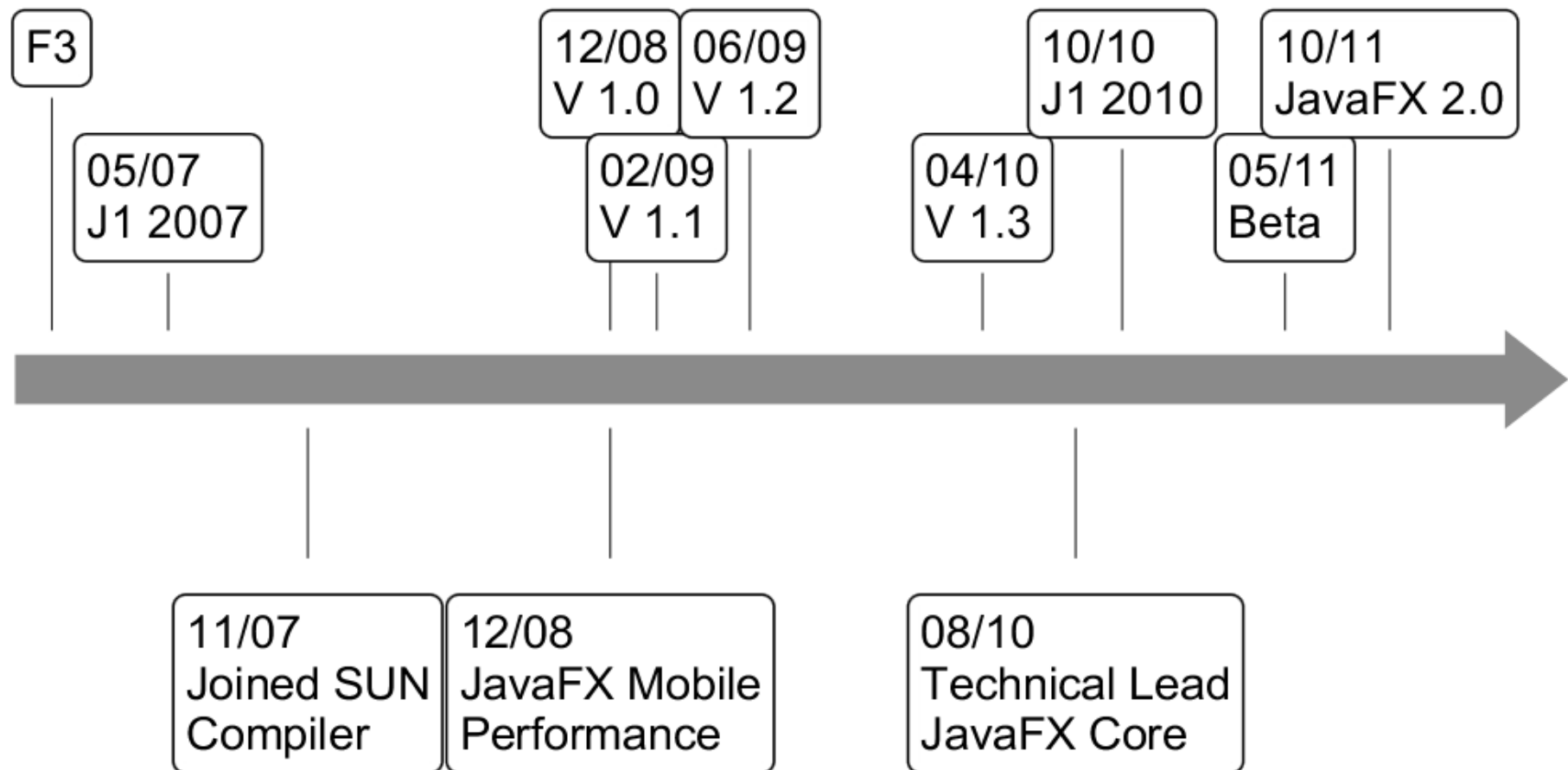
Animation API

Media API

UI Controls

Binding API

# Short History



# SceneGraph

# SceneGraph



**Name** Duke

**Adress** Santa Clara

**Phone** 555-1234

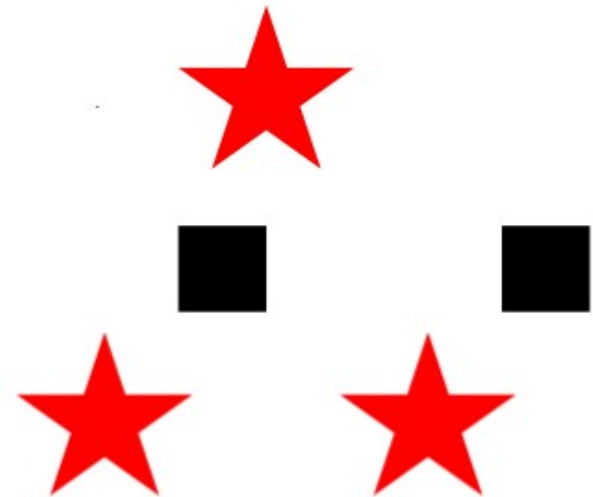
**Mail** duke@oracle.com

## Hobbies

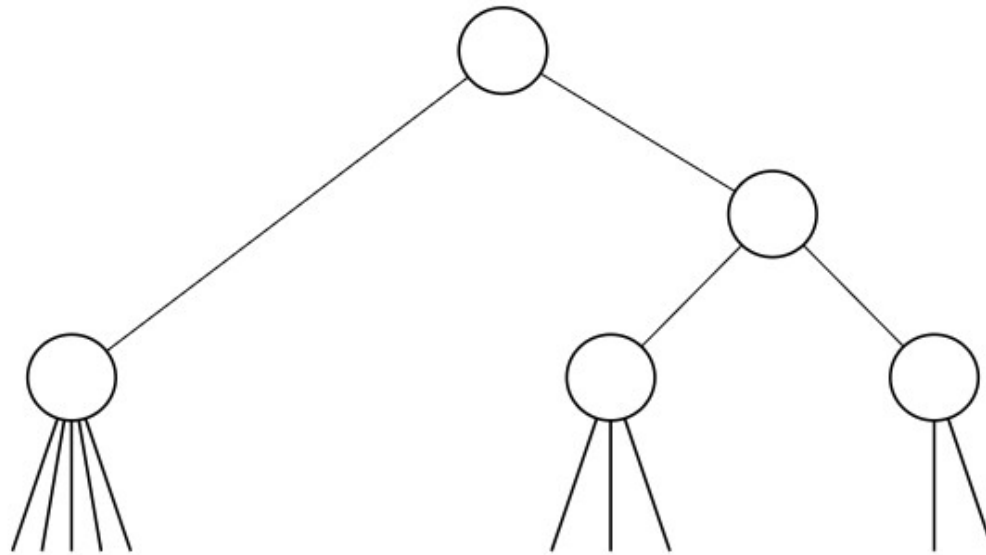
Java, JavaFX

## Motto

Write once, run anywhere!



# SceneGraph



**Name** Duke  
**Address** Santa Clara  
**Phone** 555-1234  
**Mail** duke@oracle.com

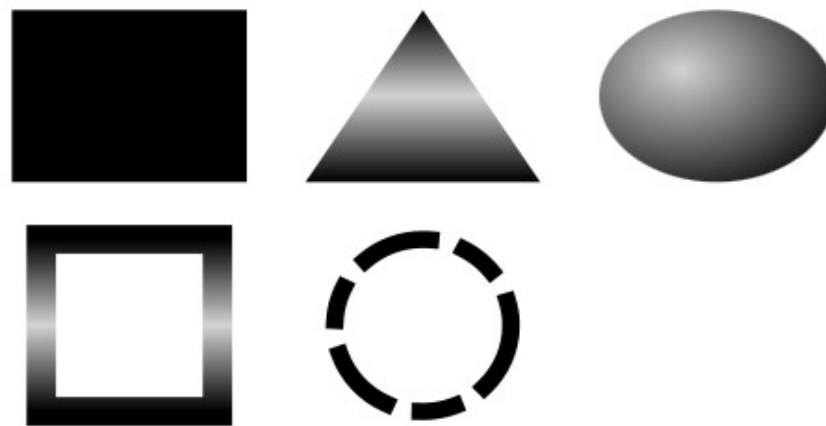
**Hobbies**  
Java, JavaFX

**Motto**  
Write once, run anywhere!





# Leaf Nodes



Shapes

# Leaf Nodes

Shapes



Images

# Leaf Nodes

Shapes

Images

Lorem ipsum

Lorem ipsum

Lorem ipsum

Text

# Leaf Nodes

Shapes

Images

Text



# WebView

# Leaf Nodes

Shapes

Images

Text

WebView



## Media

# Leaf Nodes

Shapes

Images

Text

WebView

Media

Hello World!

.....

## Controls

# Leaf Nodes

Shapes

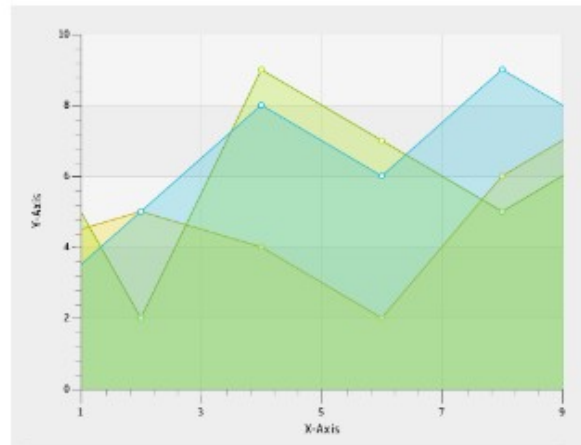
Images

Text

WebView

Media

Controls



## Charts

# Leaf Nodes

Shapes

Images

Text

WebView

Media

Controls

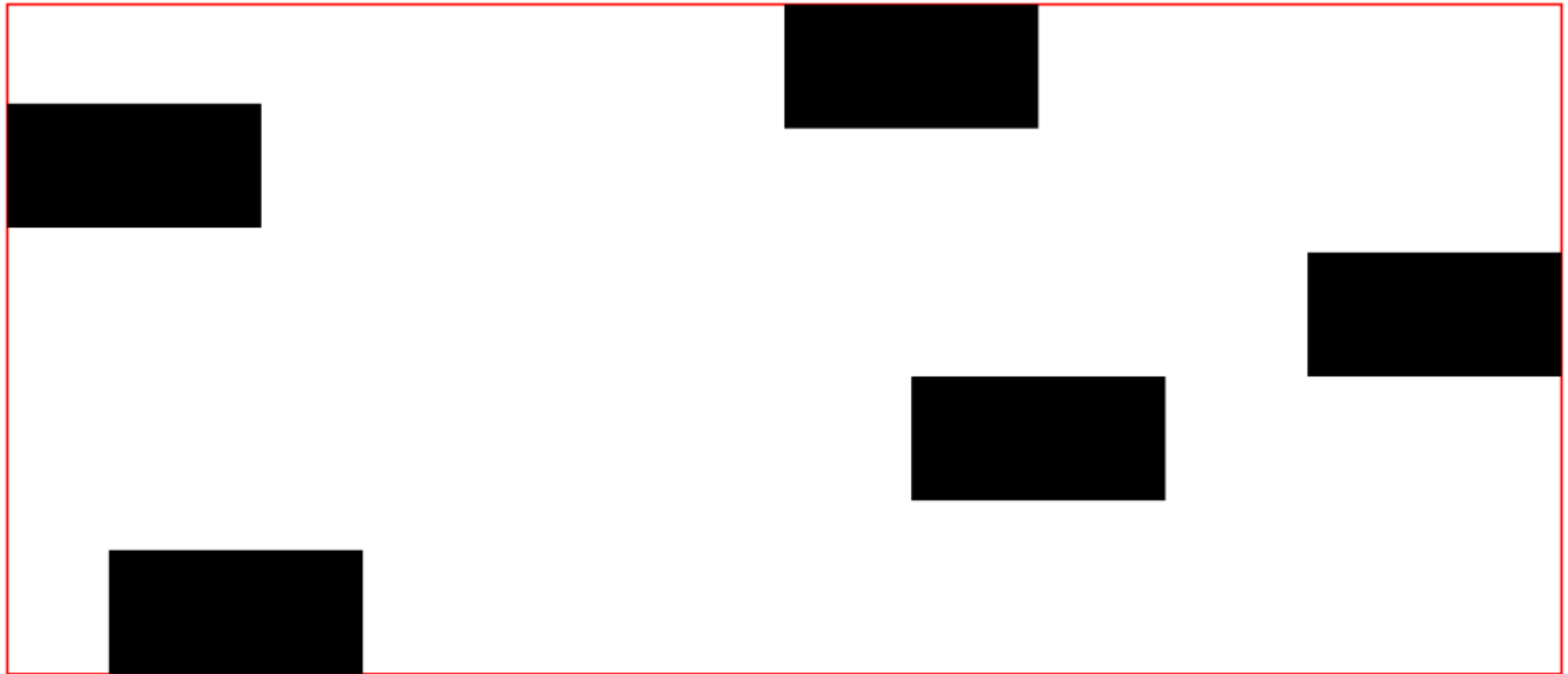
Charts



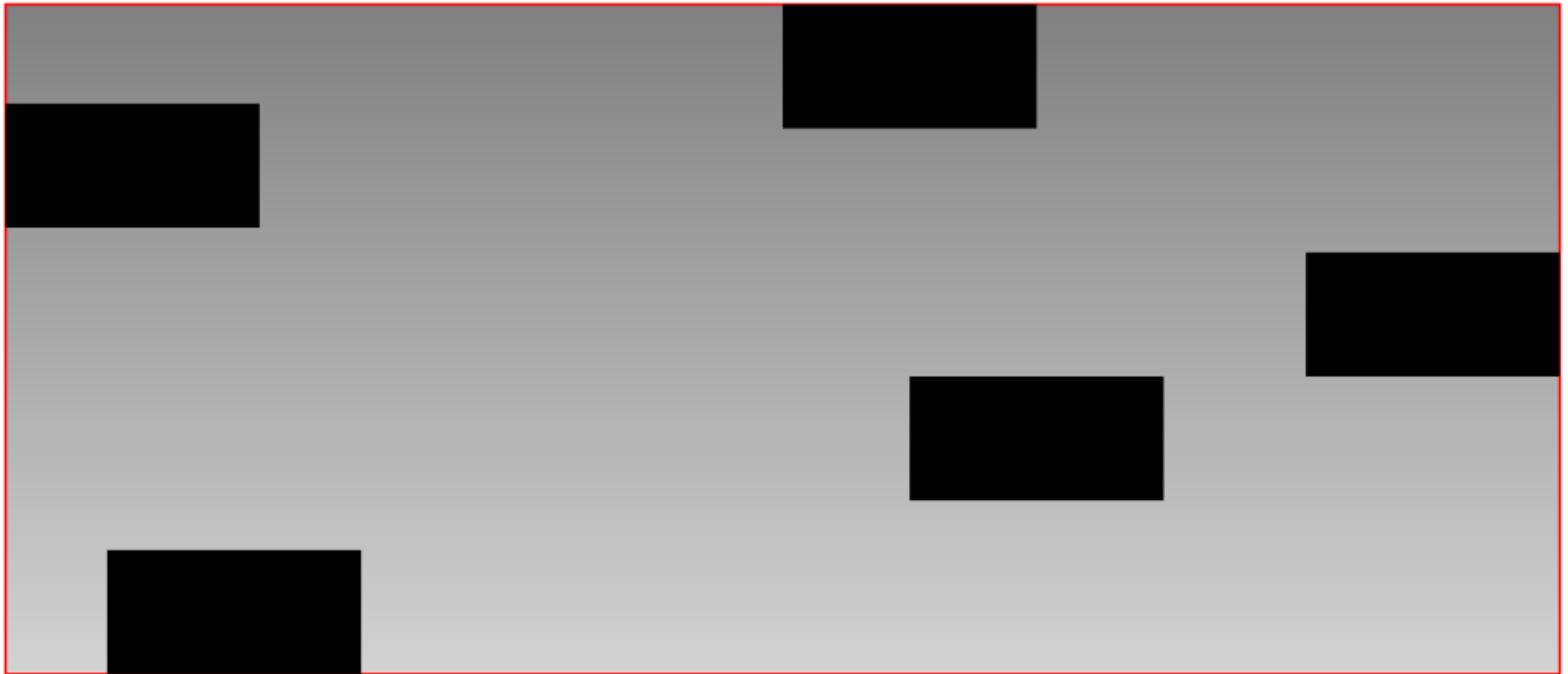
# Parent Nodes



# Parent Nodes



# Parent Nodes



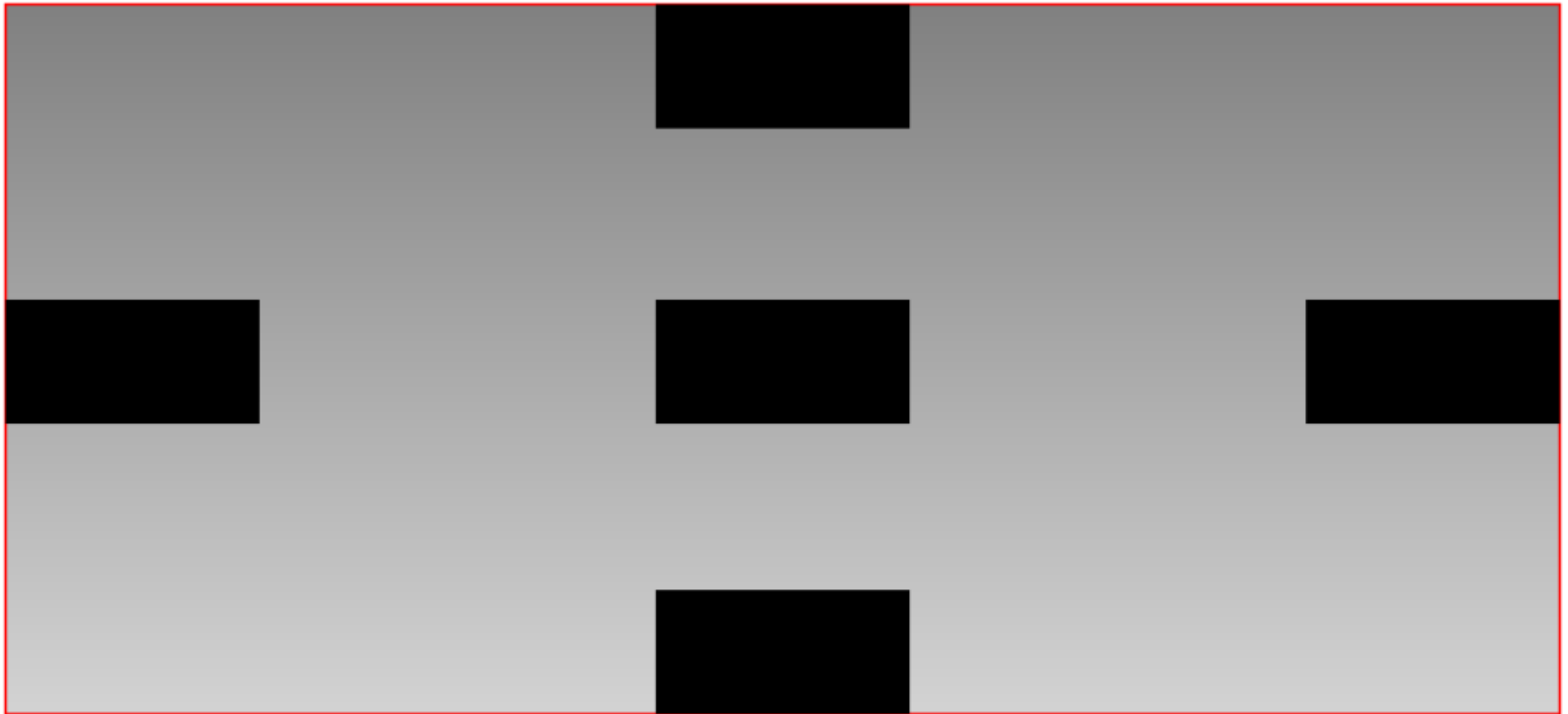
# Parent Nodes



# Parent Nodes



# Parent Nodes



# Animating a group



**Name** Duke  
**Adress** Santa Clara  
**Phone** 555-1234  
**Mail** duke@oracle.com

## Hobbies

Java, JavaFX

## Motto

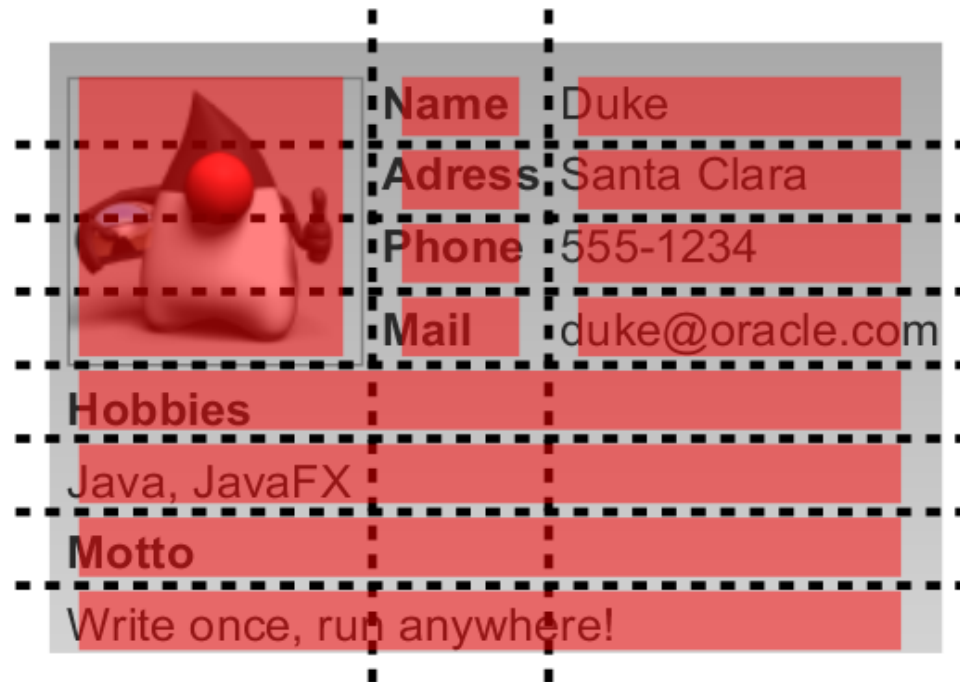
Write once, run anywhere!

# Animating a group





# Animating a group



# Animating a group



**Name** Duke

**Adress** Santa Clara

**Phone** 555-1234

**Mail** duke@oracle.com

## **Hobbies**

Java, JavaFX

## **Motto**

Write once, run anywhere!

# Animating a group



**Name** Duke

**Adress** Santa Clara

**Phone** 555-1234

**Mail** duke@oracle.com

## **Hobbies**

Java, JavaFX

## **Motto**

Write once, run anywhere!

# Animating a group



**Name** Duke

**Adress** Santa Clara

**Phone** 555-1234

**Mail** duke@oracle.com

## **Hobbies**

Java, JavaFX

## **Motto**

Write once, run anywhere!

# Animating a group





# Animation API

# Predefined Transitions

**R o + e ↗ e**



# Predefined Transitions

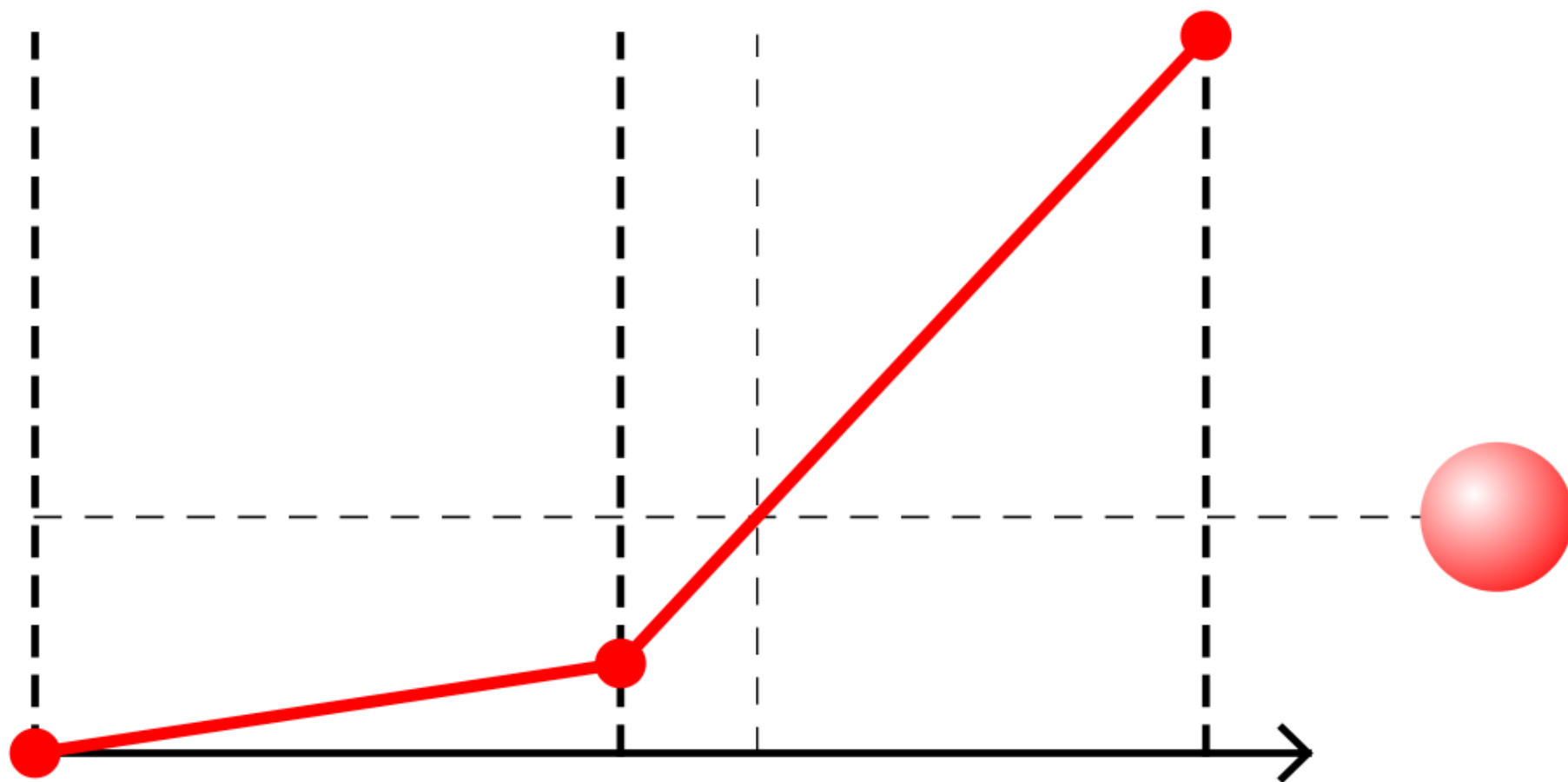
**Scale**



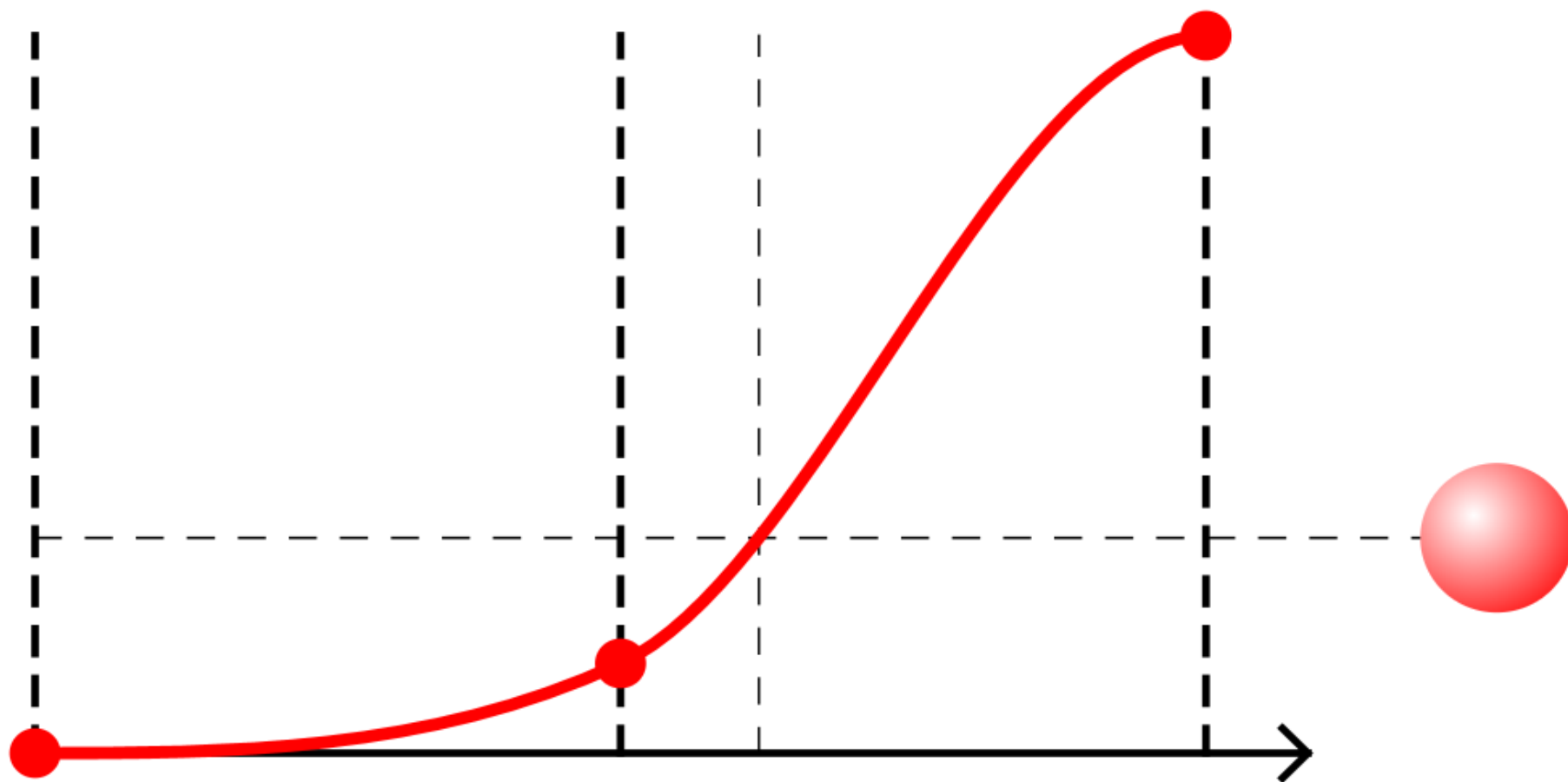
# Predefined Transitions

*Path animation*

# Timeline



# Timeline



# Media API

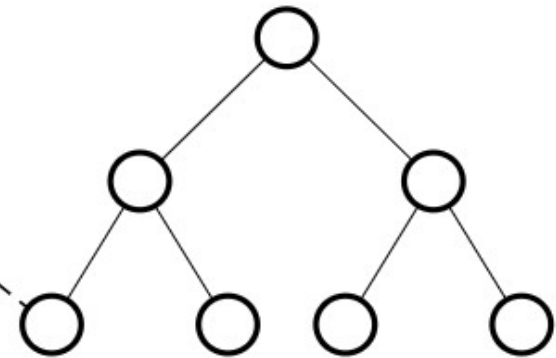
# Media Classes



Media



MediaPlayer

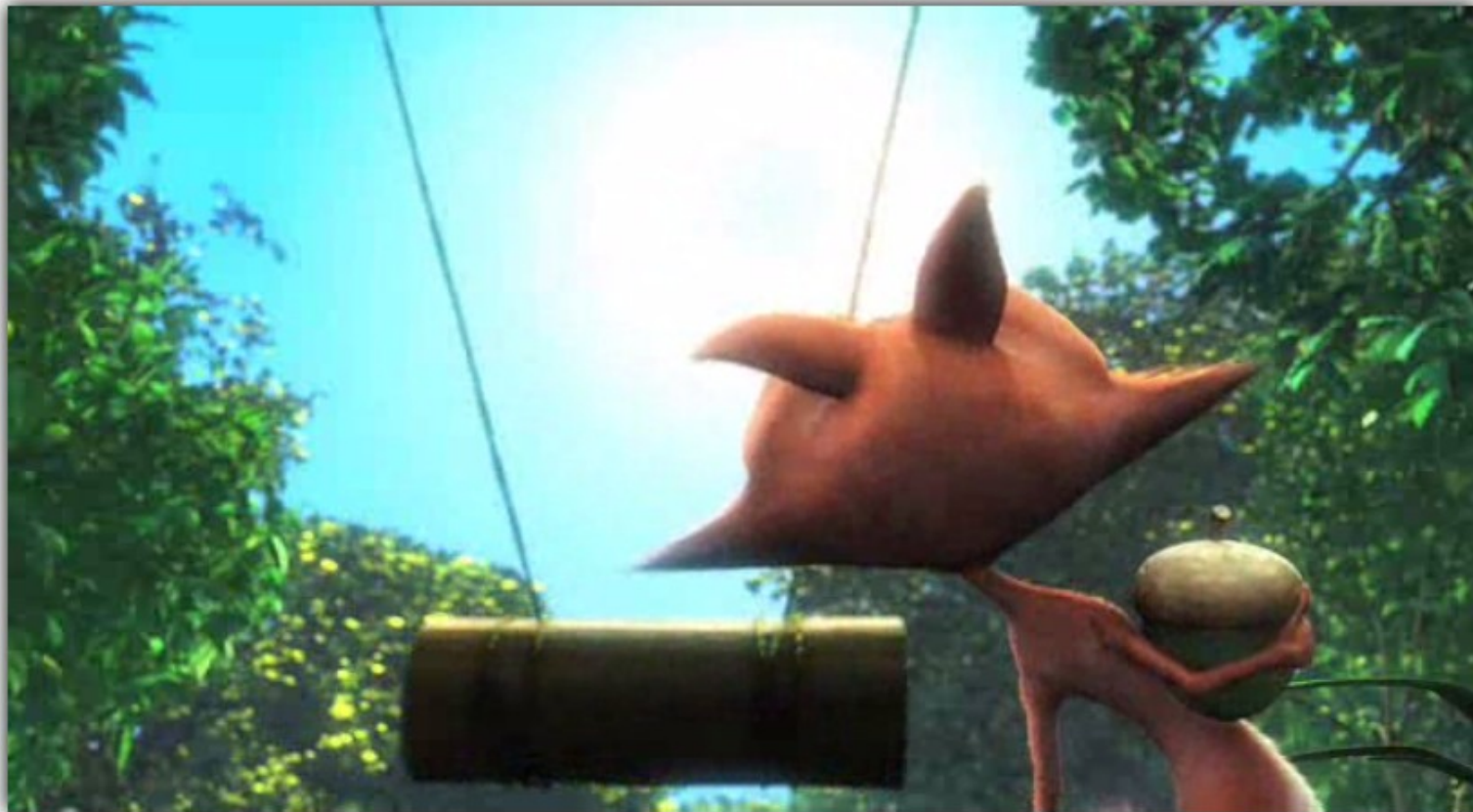


MediaView

# Video & Effects



# Video & Effects





# Video & Effects





# Video & Effects



# Video & Effects



# Video & Effects



# Video & Effects





# UI Controls

# UI Controls



## Buttons

# UI Controls

## Buttons

Label

TextBox

Hyperlink

•••••

## Text Controls

# UI Controls

Buttons

Text Controls

| First    | Last     | Email                        |
|----------|----------|------------------------------|
| Jacob    | Smith    | jacob.smith@example.com      |
| Isabella | Johnson  | isabella.johnson@example.com |
| Ethan    | Williams | ethan.williams@example.com   |
| Emma     | Jones    | emma.jones@example.com       |
| Michael  | Brown    | michael.brown@example.com    |
| Adeline  | Brown    | adeline.brown@example.com    |

## TableView



# UI Controls

Buttons

Text Controls

TableViews



Apples

Oranges

Peaches

▼ Root

▶ Group 1

▶ Group 2

▶ Group 3

## Complex Views

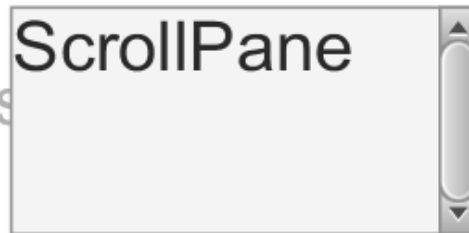
# UI Controls

Buttons

Text Controls

TableView

Complex View



TabPane



## Panes

# UI Controls

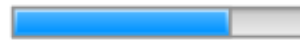
Buttons

Text Controls

TableView

Complex Views

Panes



## Others



# UI Controls

Buttons

Text Controls

TableView

Complex Views

Panes

Others

# Controls & CSS



**Name** Duke  
**Address** Santa Clara  
**Phone** 555-1234  
**Mail** duke@ora...

**Hobbies**  
☒ Java ☒ JavaFX

**Something**

OK Cancel

# Controls & CSS



**Name** Duke

**Address** Santa ...

**Phone** 555-1234

**Mail** duke@o...

**Hobbies**

☒ Java ☒ JavaFX

**Something**

OK Cancel



# Properties & Bindings

# JavaFX Property

```
public double getSize();  
public void setSize(double newSize);
```



# JavaFX Property

```
public double getSize();  
public void setSize(double newSize);  
  
public DoubleProperty sizeProperty();
```

# DoubleProperty

```
double get();  
void set(double newValue);  
  
Double getValue();  
void setValue(Number newValue);
```

## Getters and Setters



# DoubleProperty

Getters and Setters

Listeners

# DoubleProperty

Getters and Setters

Listeners

`size ← a + b`

## Unidirectional Bind

# DoubleProperty

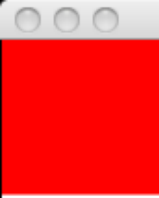
Getters and Setters

Listeners

Unidirectional Bind

`size ↔ slider.value`

## Bidirectional Bind



# DoubleProperty

Getters and Setters

Listeners

Unidirectional Bind

Bidirectional Bind

## Fluent API



# DoubleProperty

Getters and Setters

Listeners

Unidirectional Bind

Bidirectional Bind

Fluent API

# Example Bindings

```
// size = a + b  
size.bind(a.add(b)) ;
```



# Example Bindings

```
// a + b - c
```

```
a.add(b).subtract(c);
```

# Example Bindings

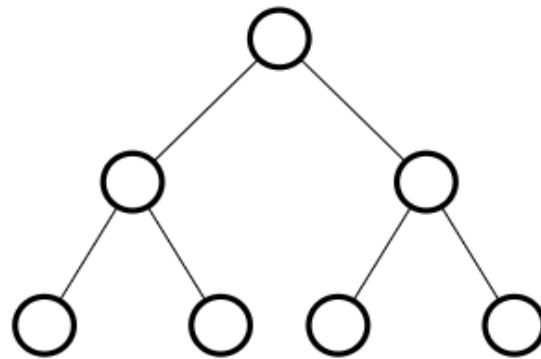
```
// String.format("%.2f", size)  
size.asString("%.2f");
```

# Example Bindings

```
// cond? a : b
```

```
when (cond) .then (a) .otherwise (b) ;
```

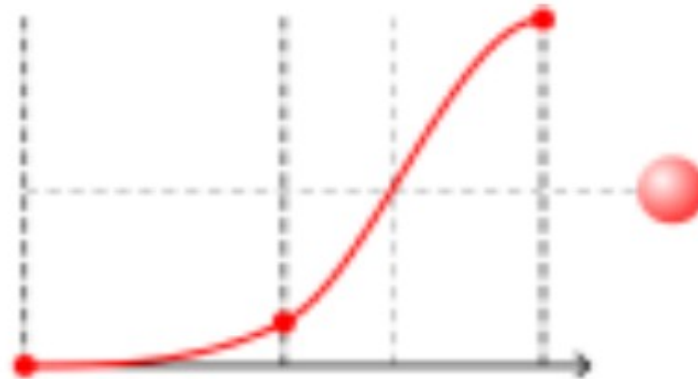
# Summary



## SceneGraph

# Summary

SceneGraph



## Animaton API

# Summary

SceneGraph  
Animation API



# Media API

# Summary

SceneGraph

Animation API

Media API

Hello World!

.....



## UI Controls

# Summary

SceneGraph

Animation API

Media API

UI Controls

```
a.add(b);
```

## Binding API



# Summary

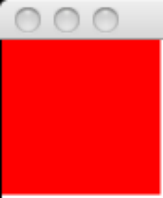
SceneGraph

Animation API

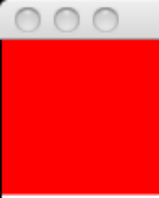
Media API

UI Controls

Binding API



# **simple & powerful**



# **The End?**

# **[www.javafx.com](http://www.javafx.com)**

# Contact

Mail: [michael.heinrichs@oracle.com](mailto:michael.heinrichs@oracle.com)

Blog: <http://blog.netopyr.com>

Twitter: [@net0pyr](https://twitter.com/net0pyr)

Documentation & Download: <http://javafx.com>

JIRA: <http://javafx-jira.kenai.com>

JavaFX Forum: <https://forums.oracle.com>