



3. **VizzAnalyzer Tool**

Rüdiger Lincke

ARiSA™ - Applied Research in System Analysis

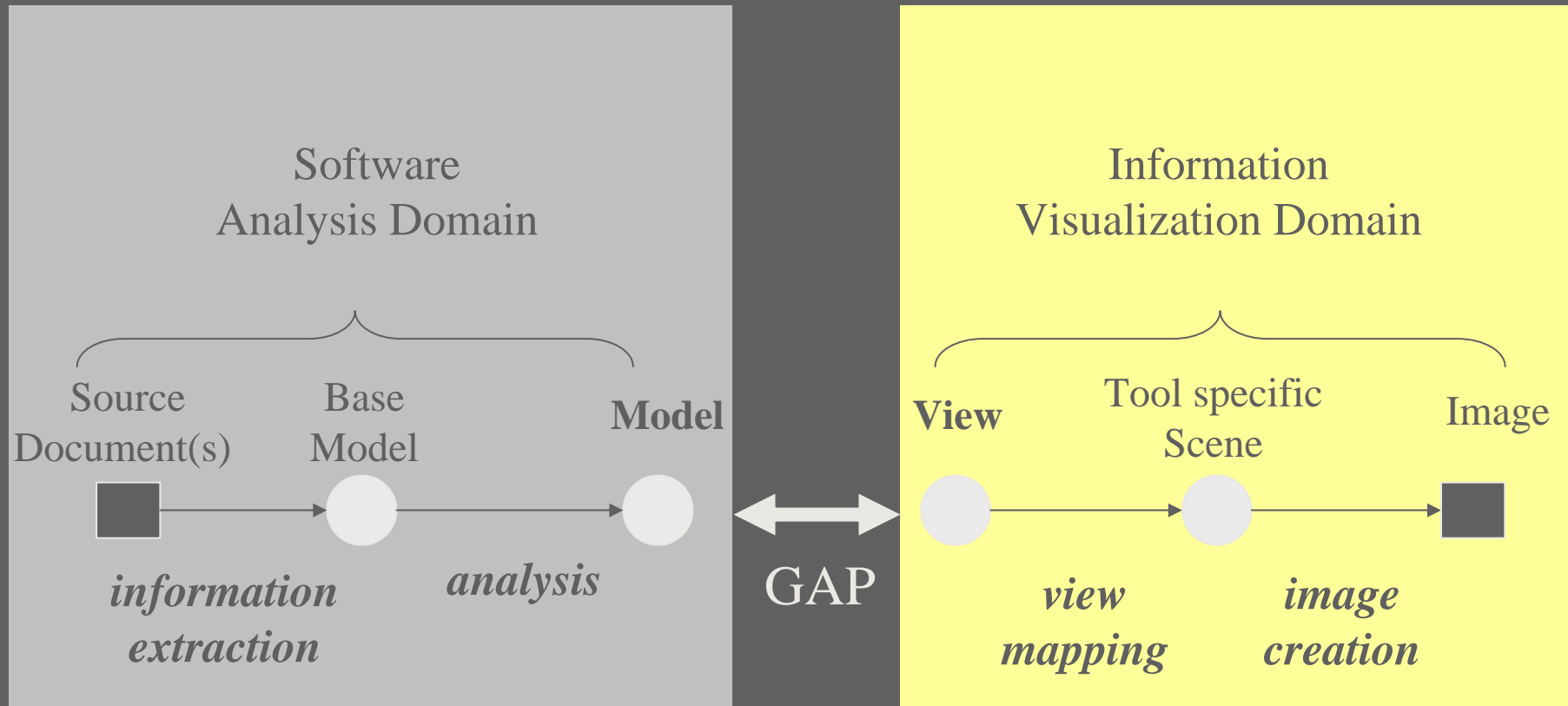
<http://www.arisa.se>

Växjö, 19 August 2005

Agenda

- ⇒ Introduce VizzAnalyzer concepts
- ⇒ Tool Demonstration

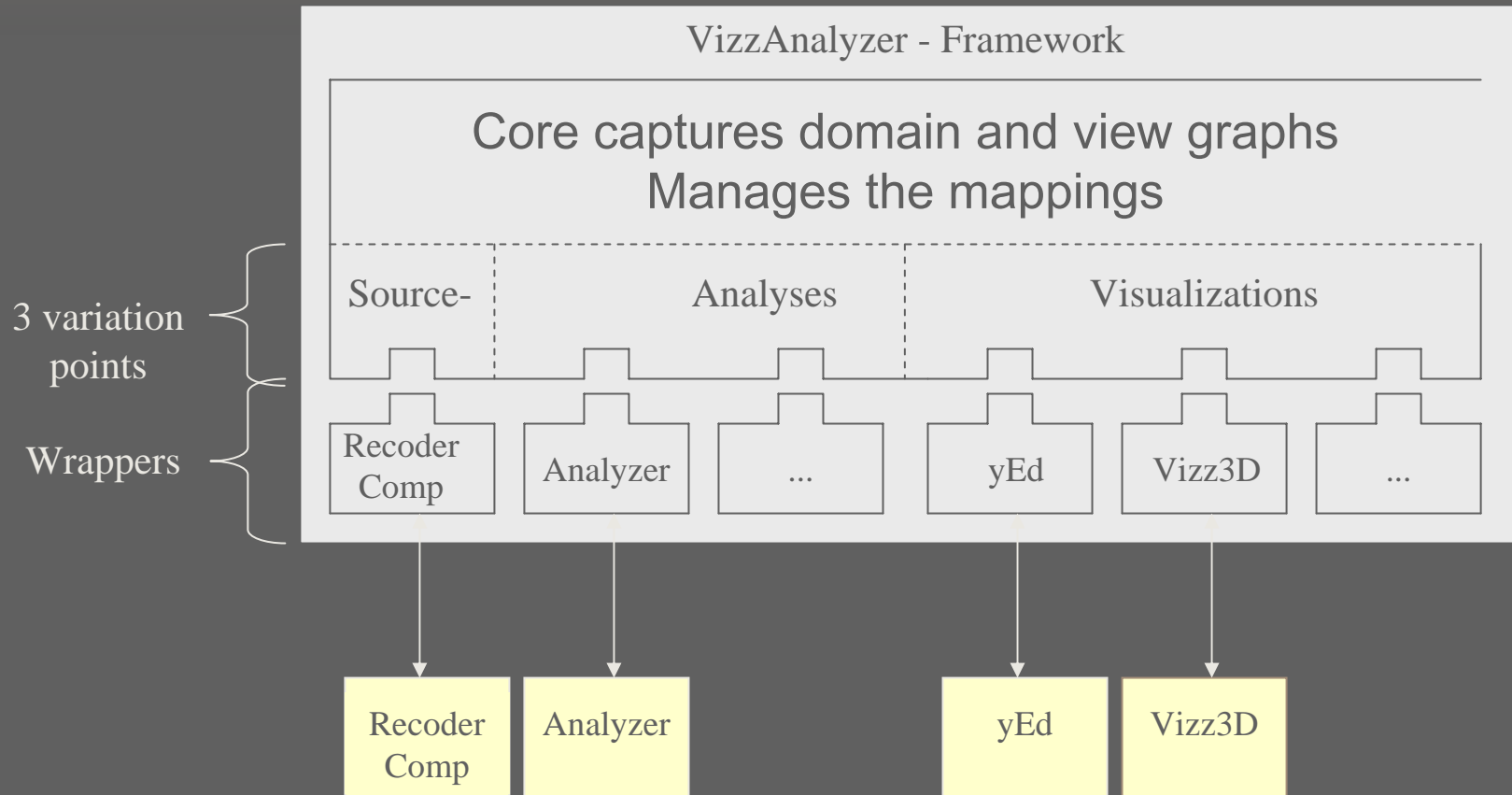
Software Measurement Tools



Problems and Goals

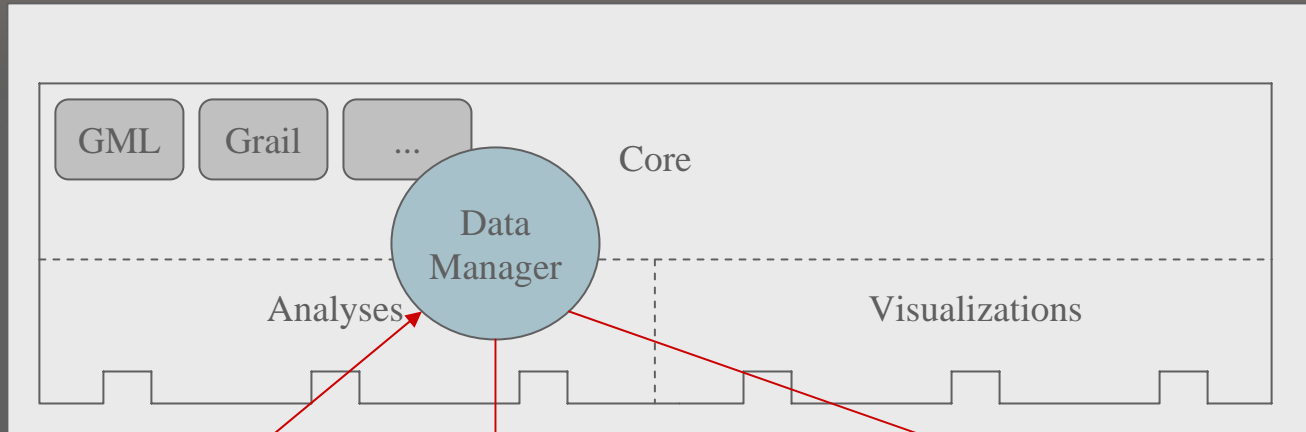
- ⇒ Different goals for software quality measurement
 - Different kind of projects to investigate (programming languages, coding- design- documentation- testing conventions, development processes ...)
 - Different clients (roles of people, company culture ...)
- ⇒ Time: if quality is an issue time is an issue too
- ⇒ **Rapid development of measurement tools**
 - Compose software tools from components
 - Configure the composition (instead of programming)
 - Define new components if necessary
 - Neither predefined tool nor hand coding would do

The VizzAnalyzer Framework

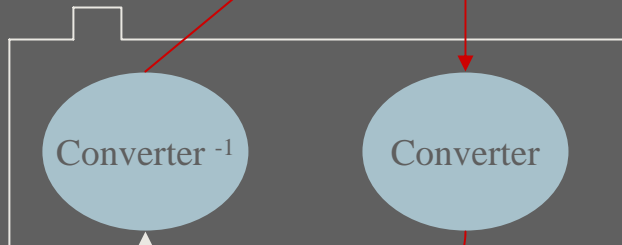


Integrating new components

VizzAnalyzer

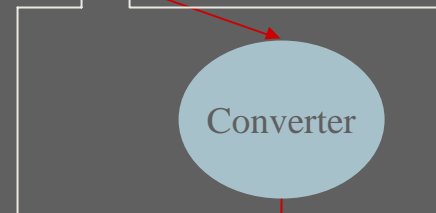


Wrapper



New Components

Analysis/
Metric
Tool



Viewer

Bridging the Model View Gap



Properties of model nodes

- Type, Label
- LOC
- CC
- WMC
- DIT
- RFC
- ...

Configurable
binding functions

Properties of view nodes

- Label
- Shape, Color, Texture
- Width, Height, Depth
- X,Y,Z
- Version

Configurable Binding Functions

```
1. <?xml version="1.0" encoding="UTF-8"?>
2. <!DOCTYPE Bindings PUBLIC "www.msi.vxu.se/Vizz3D" "VAbinding.dtd">
3. <Bindings>
4.   <NodeBindings>
5.     <Binding>
6.       <Source>Type</Source>
7.       <Target>Node Shape</Target>
8.       <Function> <IndexBinding/> </Function>
9.     </Binding>
10.    <Binding>
11.      <Source>Package</Source>
12.      <Target>Node Color</Target>
13.      <Function> <DefaultColorBinding/> </Function>
14.    </Binding>
15.    ...
16.  </NodeBindings>
17. </Bindings>
```


VizzAnalyzer Conclusion

⇒ Tool for software measurement and visualization

- Information extractors

- Java, Java-Bytecode
- Extracted software entities configurable

- Predefined standard metrics (and other analyses)

- 2D and 3D visualization (configurable binding model – view)

⇒ Framework, Plug-ins for new

- Frontends, information extractors:

- C (ROSE),
- Mixed-Language for different .Net languages C#, VBA, J# (X-Develop)

- Analysers (new statistics etc.)

- Visualizations (new viewers)

Agenda

- ➡ Introduce VizzAnalyzer concepts
- ➡ Tool Demonstration