

VLAMsterdam

Abstract Machine Toolbox

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Outline

- Introduction
- Objectives
- VLAM Components
- VLAM Experiments
- VLAM Abstract Machine
- Conclusions

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VLAM

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A collaborative analysis environment
for applied experimental science

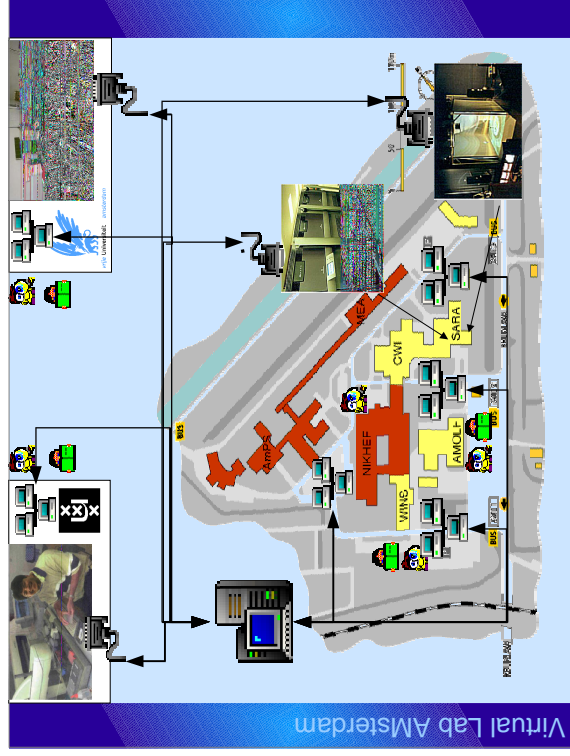
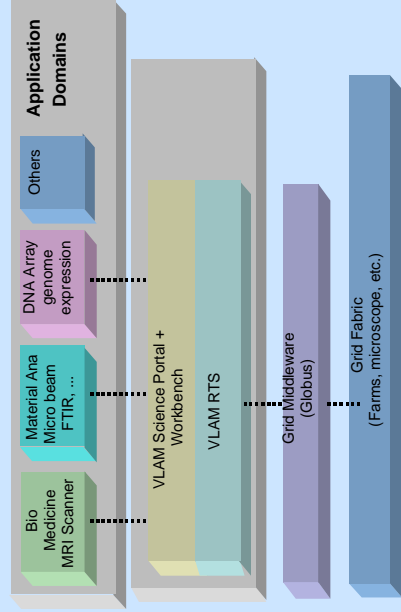
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Objectives

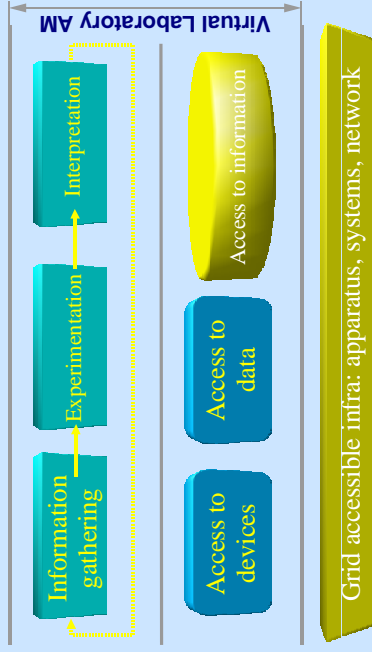
- Designing **middleware**:
bridge gap between **Grid**- and **application**-layer
- Enable VL users to **define, execute**, and **monitor** their experiments
- Provide to VL users:
 - location independent experimentation,
 - familiar experimentation environment
 - assistance during his experiment

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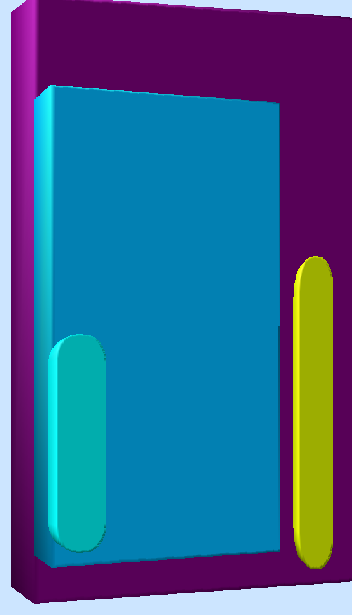
VLAM Functional View



Experimental Workflow



The VL Architecture



VL-AM Kernel DB

- Stores user support information:
 - experiment topology definitions
 - module descriptions
 - user information
- Provides cross-links to experiment annotations
- Based on object-oriented database technology
- Extends resource directories now used in Grid

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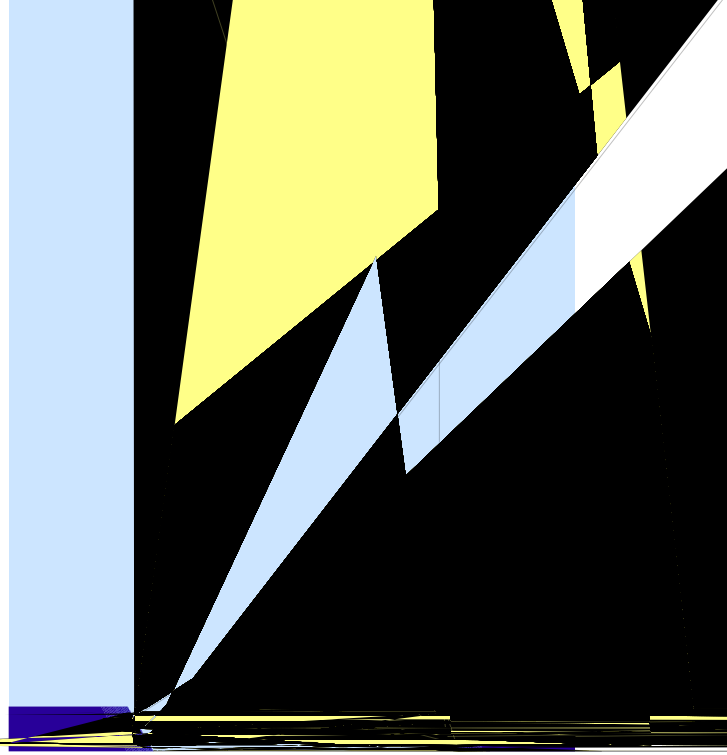
Application Domain DB

- Characteristics of typical application
 - Scientist(s) performing the experiment
 - On objects and preexisting information & data
 - On which processes operate
 - That use apparatus with specific properties
 - Resulting in new data and information
- A domain-specific **flow of processes**

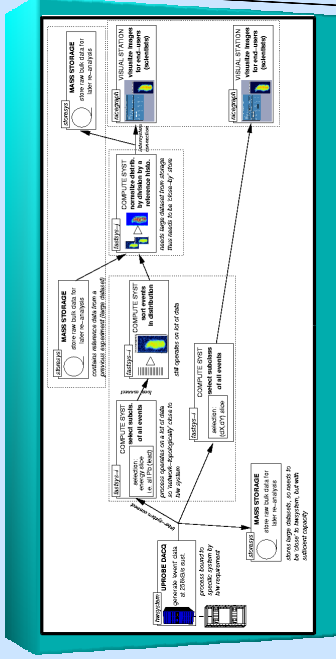


Examples:
Expressive, MACS, EFC, ...

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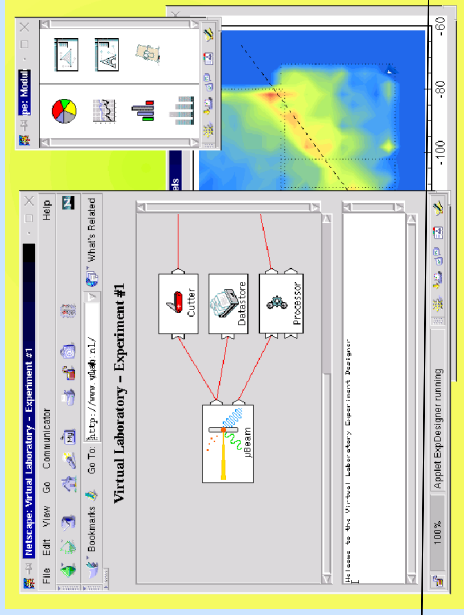


Macslab Experiment

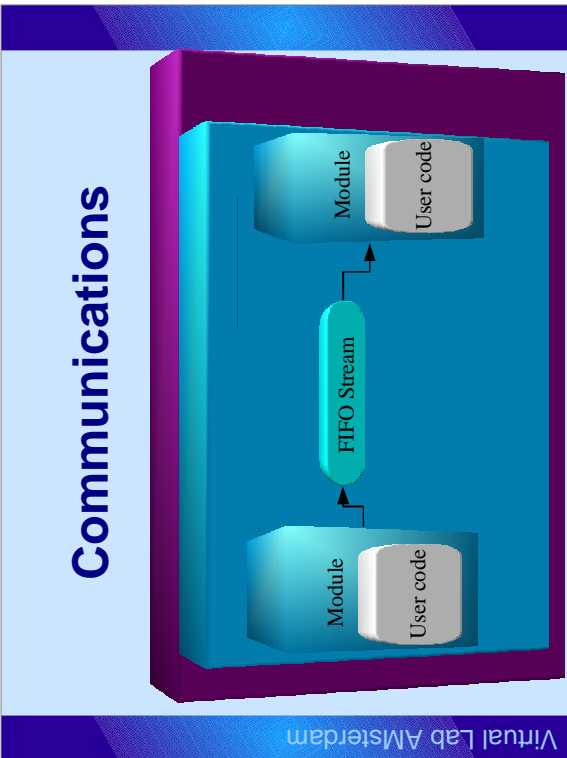
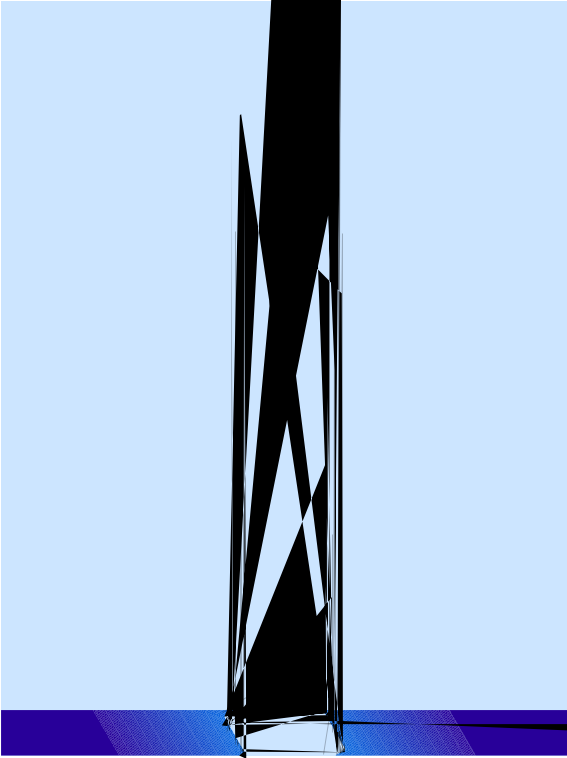


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VL-AM Front End



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Conclusions

- VLAM: a science portal for exp. analysis
 - Workflow support for **Bio-informatics, Materials Science and Biomedical Simulation & Visualisation**
 - Seamless access to distributed resources and content
- **Resource Management:** based on Globus
- **Content Management:** VLAM middleware
- **Current status:** *integrating first prototypes*