

VRVis

Zentrum für Virtual Reality und Visualisierung Forschungs-GmbH
Vienna, Austria

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Competence Centers for
Excellent Technologies



FFG



Bundesministerium
für Verkehr,
Innovation und Technologie



Bundesministerium für
Wirtschaft, Familie und Jugend



zit

Die Technologieagentur
der Stadt Wien





VRVis = Technology Transfer Institution



based on

- Successful projects with many companies
- Strategic research
- Intensive scientific networking

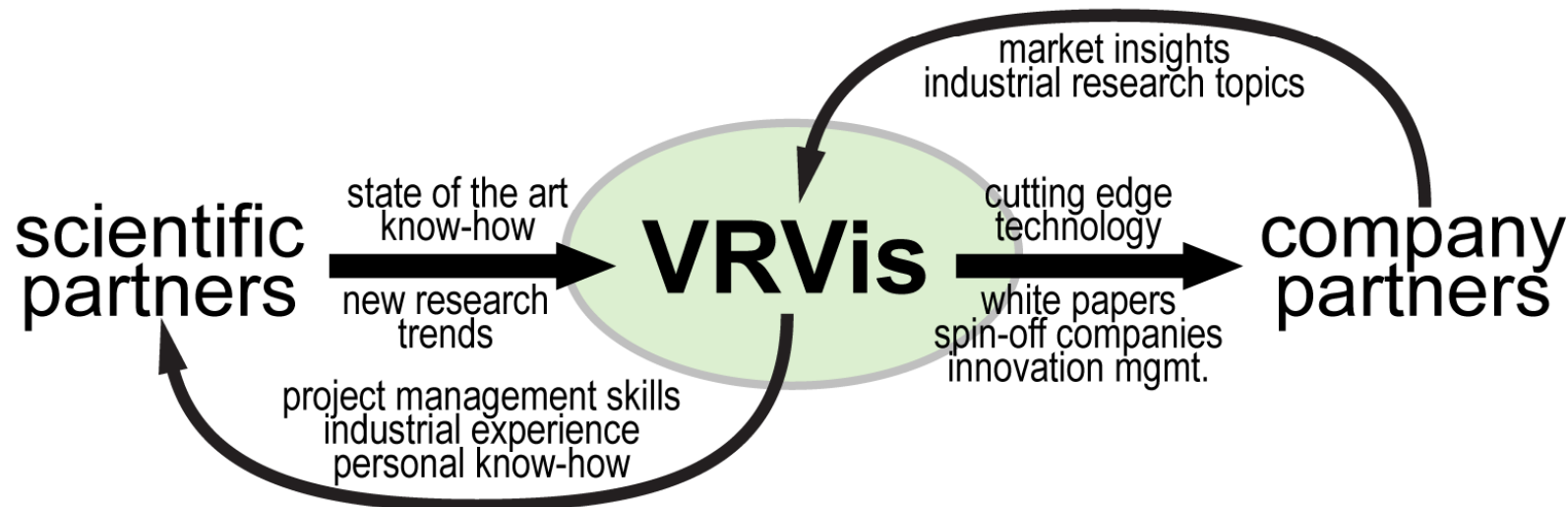
VRVis Fast Facts

- **Focus:** **R&D in Visual Computing**
Rendering, Visualization, Visual Analysis, Reconstruction, Vision
- **Organization: GmbH (ltd. company)**
 - founded 2000 as a  **Kplus** Center
Kompetenzzentren-Programm
 - since 2010 funded by  **FFG** as a **COMET** Center
 - 2013 confirmation of **COMET** funds until 2016
- **Goal:** **Linking Science to Industry**
- **Turnover:** ~ 4,6 Mio € (2012)
- **Staff:** 62 FTE
- **Location:** TechGate Vienna



Method of Operation

Bridging the gap = Linking Science to Industry by:

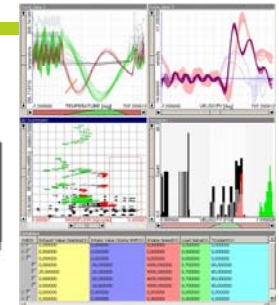
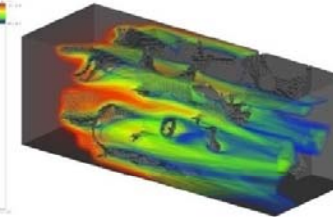


- **Strategic Projects:** Basic research with the participation of all partners; long term and visionary topics
- **Applied Research Projects :** Industrial oriented research projects with two or more partners; topics will be individually defined
- **Services:** For example consulting, lectures, expert opinions

Addressed Market Segments

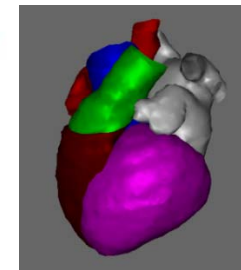
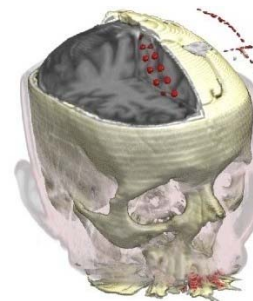
Engineering & Automotive

- design, simulation, construction, NDT (non-destructive testing), ...



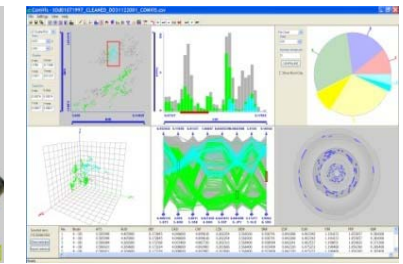
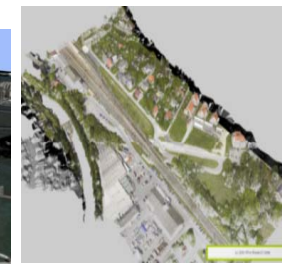
Medicine & Biotech

- visualization, segmentation, surgery planning, ...



Infrastructure & Geo-Info Systems

- 3D models (var. sensors, images ...) metadata, overviews, ...



Media & Culture

- animation, presentation, cultural heritage, ...



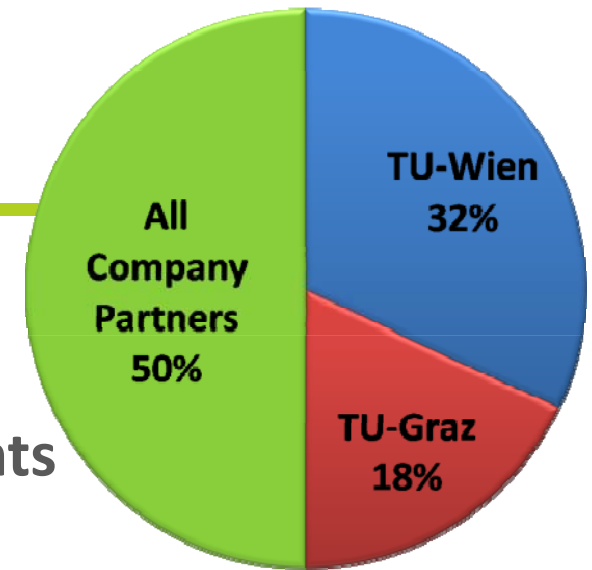
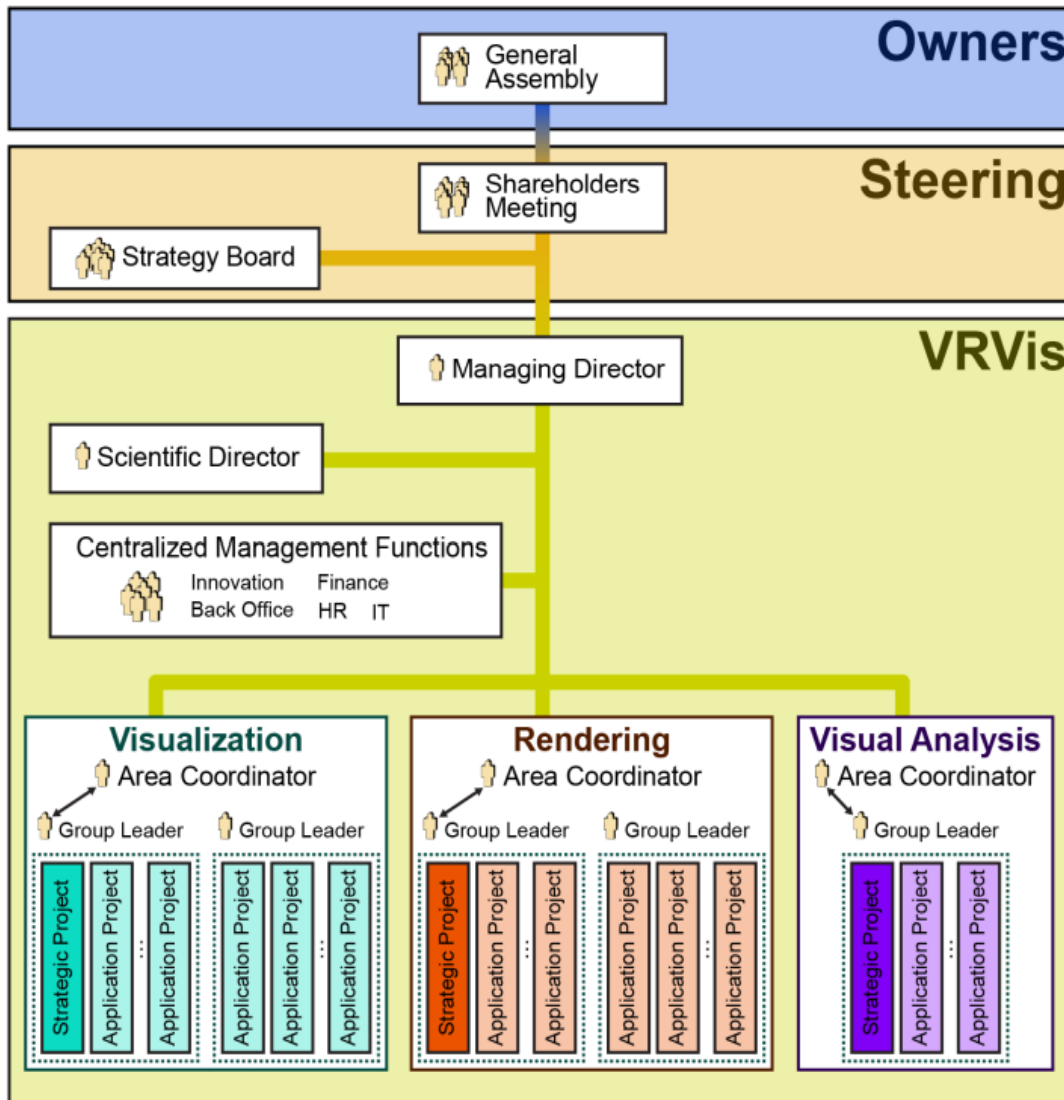
... and others



Industrial & Scientific Partners (selection)



Organization



Voting Rights

IPRs	strategic res.	application res.	non-COMET
VRVis	IPR owner	right to use & exploitation	IPR contract dependent
project partners	right to use & exploitation in K1-projects	IPR owner	
other K1 projects		right to use	
all K1 partners		preferential conditions	
third parties	commercial conditions		

Development & Results 2010 - 2012

People:

- growth from 44 to 62 FTE

Partners:

- 9 additional COMET partners

Projects

- 13 COMET projects
- 23 additional nonCOMET projects > 100 K€
and ~50 small projects (consulting ...) < 100 K€

Publications:

- 120 peer-reviewed publications

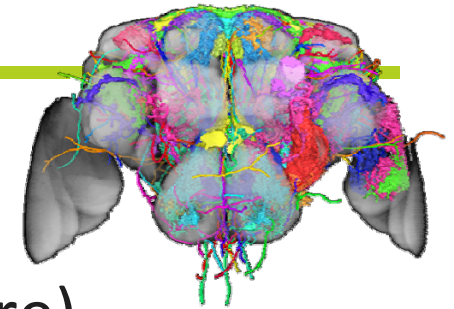
Patents:

- 5 filed patents, 10 software licenses



VRVis: Structured in 3 Areas

Visualization (head: Katja Bühler)



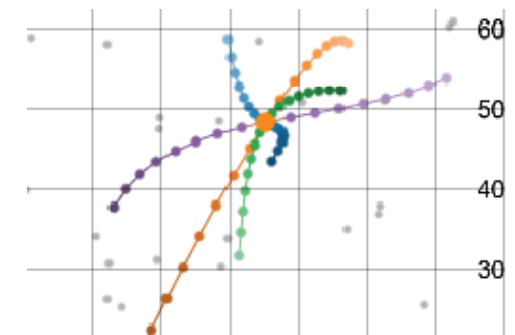
displaying & analyzing of volume data (& more)
2 groups, 23 FTE, 7 projects

Rendering (head: Stephan Mantler)



capturing & displaying of realistic objects
2 groups, 15 FTE, 18 projects

Visual Analysis (head: Harald Piringer)

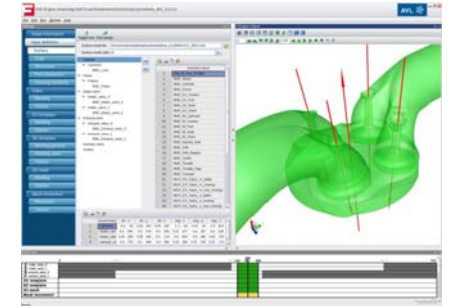


interactive visual analytical reasoning
1 group, 6 FTE, 5 projects

VRVis Areas: Mission

Area Visualization

“To provide *scalable, semantic* approaches to *interactive, user-centered* visual depictions that go *beyond classical scientific visualization*.”



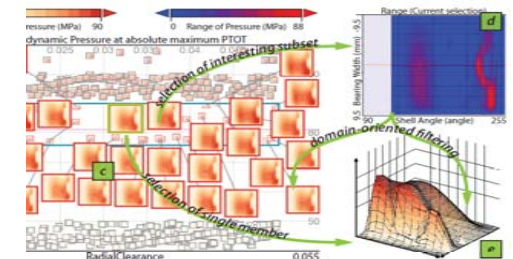
Area Rendering

“ To provide tools and solutions for the interactive exploration and manipulation of realistic geometric models of arbitrary size ”



Area Visual Analysis

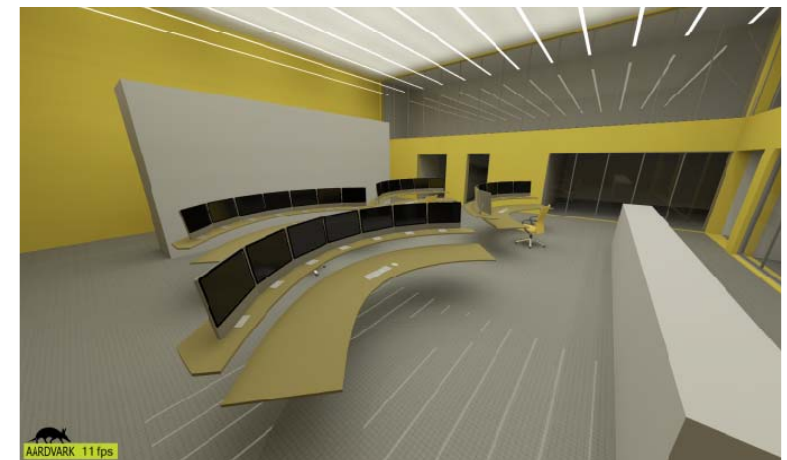
“Visual Analysis combines automated analysis techniques with interactive visualizations for an effective understanding, reasoning and decision making on the basis of very large and complex datasets.” [Keim et al.]

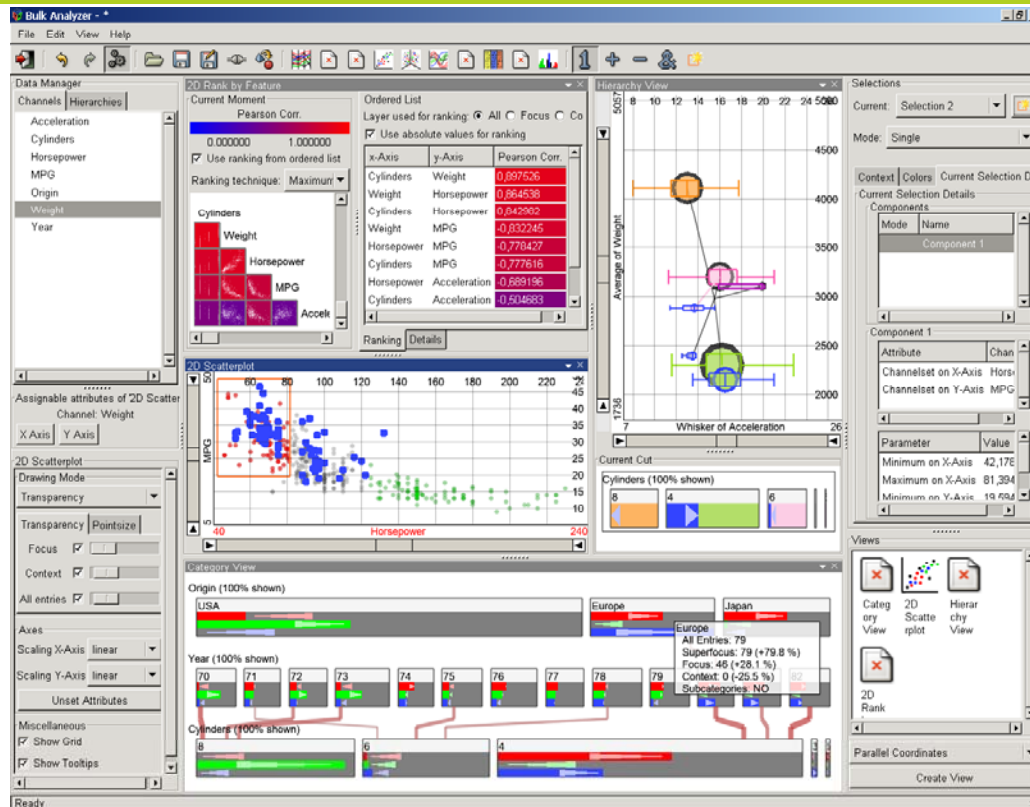


Sample Project: HILITE (Interactive High-Quality Lighting)

Architectural & interior lighting design

- interactive, realistic lighting simulation
 - “physically plausible”
 - GPU-based for optimal performance
- complex lighting and materials
 - indirect diffuse and specular effects
 - measured materials and lights
- interactive manipulation for efficient development of design variants
 - this includes light sources!





Thank you for your Attention!

www.vrvis.at