

Höller & Hüttner AG

Digital Expression Profiling using Topic Map Technologies

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Heidelberg Innovationsforum

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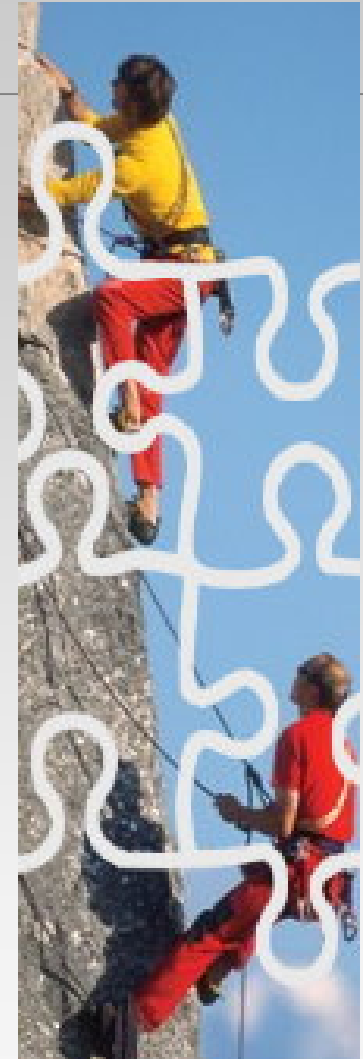
Hölle & Hüttner Group

Business Units

- Engineering Solutions
- Life Science Software
- Life Science Instruments & Services (Intavis AG)

Locations

- Tübingen  **Hölle & Hüttner AG**
Informationstechnologie
- Heidelberg
- Köln
- Chicago, USA



Our Vision

Understand requirements...

- Life Science
- Engineering Solutions
- Laboratory Instruments & Lab Services

Find the right way...

- IdeenScout™:
Ideas for better processes and new products

Hit the mark...

- Software Development
- Software Services
- Software Modules



The Problem

- ✓ 25.000 genes (Human)
- ? 250.000 – 1.000.000 proteins (Human)

- ? Identify the function of gene and protein
- ? Understand the regulation process



New Method for Proteomics Research



Understanding Requirements

Possibilities

- Parallel sequencing technologies
- Expression profiling is required to identify the function of a gene
- Faster & cheaper new technique for expression analysis

Problems

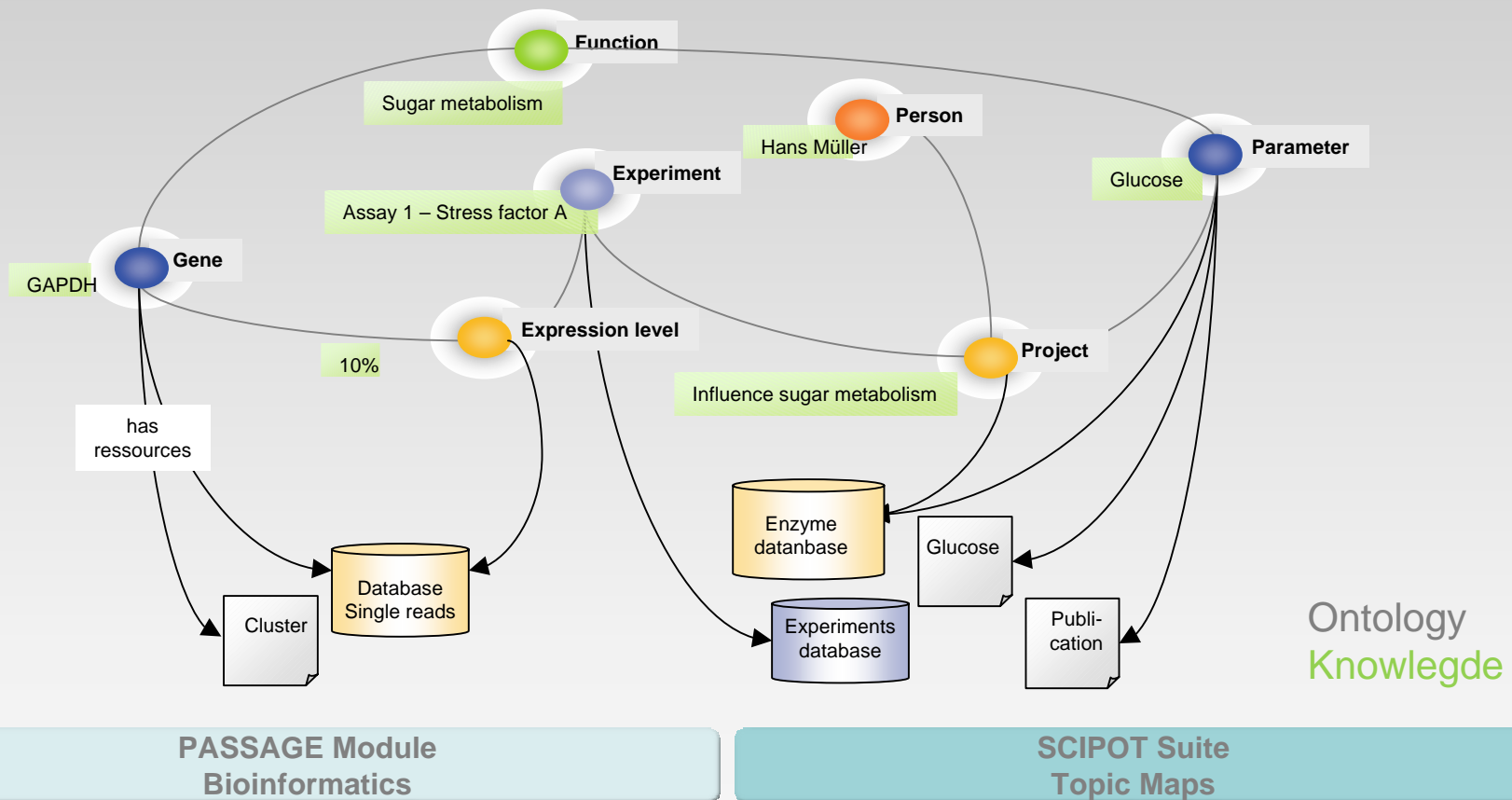
- New Bioinformatic algorithm required
- Correlation of results to existing databases
- Include Comparisions and statistics
- Include annotations
- Include other experimental data
- Free workflow for research people

Application specific...

more standard IT...

Find the right way: Map of Knowledge

Combination: Semantic technology and molecular biology



Hit the Mark: SCIPOT Topic Maps Solution

Bioinformatic Application

Semantic Solution Suite

Data

PASSAGE

Experimental results

SCIPOT

Map

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ITS2.fasta - Editor
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flx_1_criteria_1.txt - Editor
Datei Bearbeiten Fgmat Ansicht ?
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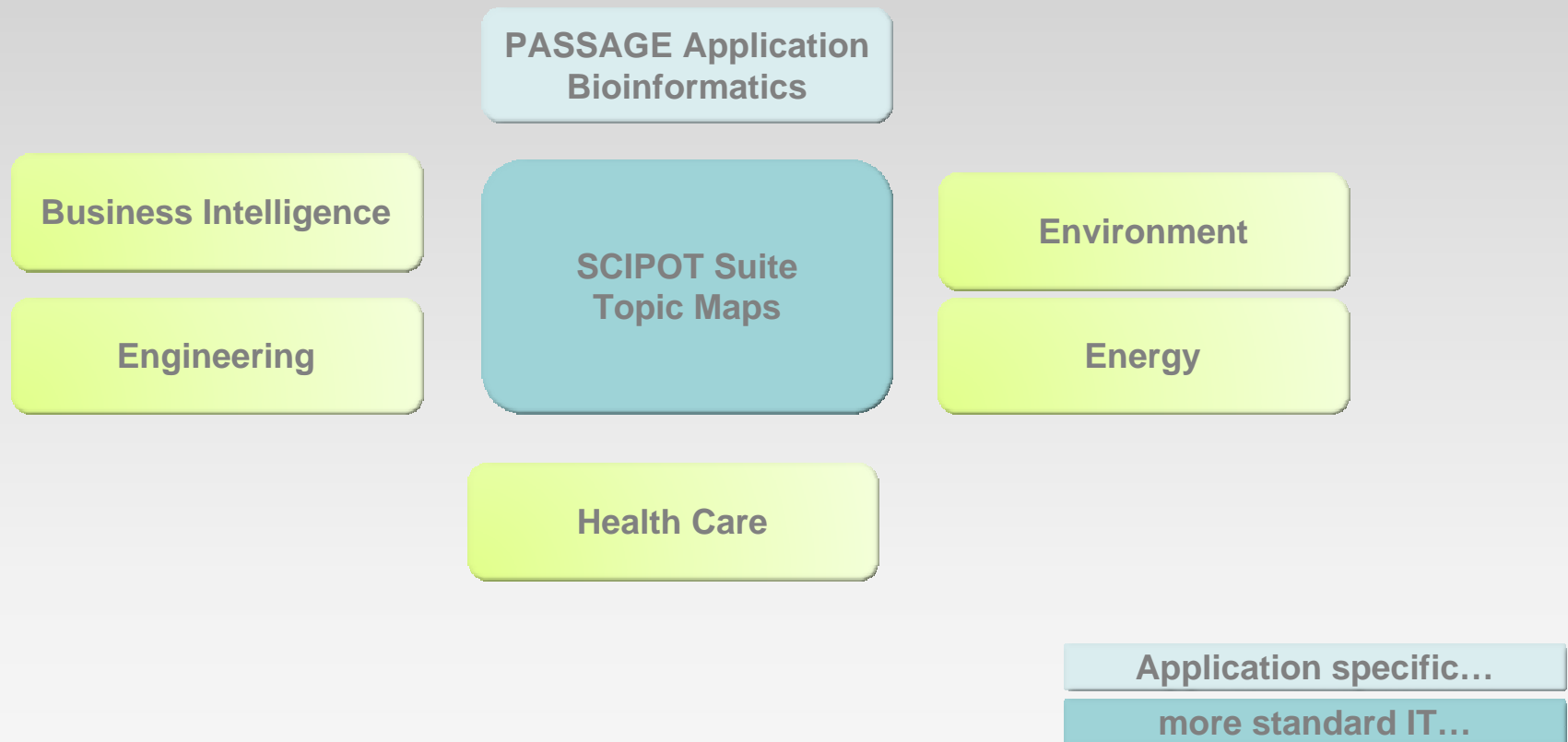
H14 Navigator - Mozilla Firefox

Mean Result (51 records)

Sample	Category	Mean arith.	Mean genes	Unit	% of	Min. lab. value	Max. lab. value	Tests reported	Values considered	Min. lower	Max. upper	
NC	Effect on terrestrial bacteria	n.a.	n.a.	% dilution	n.a.	n.a.	n.a.	8	3	n.a.	n.a.	
NC	Effect on terrestrial plants	29,69	29,4	% dilution	0,087	0,278	3,1	53,7	22	17	7,23	93,29
NC	Effect on aquatic animals	5	n.a.	% dilution	n.a.	n.a.	n.a.	7	7	n.a.	n.a.	
NC	Effect on terrestrial plants	25,18	23,9	% dilution	0,033	0,319	2,3	50	21	17	4,82	91,26
NC	Effect on aquatic animals	4,8	n.a.	% dilution	n.a.	n.a.	n.a.	4	4	n.a.	n.a.	
NC	Effect on aquatic animals	3,14	2,71	% dilution	0,056	0,21	0,9	9	54	38	1,06	7,33
NC	Effect on aquatic plants	13,14	8,8	% dilution	0,08	0,407	2,1	30,7	21	13	1,18	65,66
NC	Effect on terrestrial animals	31,8	28,7	% dilution	n.a.	n.a.	n.a.	4	4	4	5,1	98,4
NC	Effect on terrestrial animals	13,7	n.a.	% dilution	n.a.	n.a.	n.a.	3	3	n.a.	n.a.	



Outlook: New Applications, new Markets



Business Goals

We are looking for:

Business partners to OEM our technology into markets outside the life science research area

We need:

about € 500.000 for 18 months

