Optimizing the User Experience of a Social Content Management Software for Casual Users

10.08.2015, TU München

Florian Katenbrink, Thomas Reschenhofer, Prof. Dr. Florian Matthes

Software Engineering for Business Information Systems (sebis)
Department of Informatics
Technische Universität München, Germany

wwwmatthes.in.tum.de

Overview

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1. **Motivation & Problem Statement**

2. **Research Framework**

3. **Contribution**
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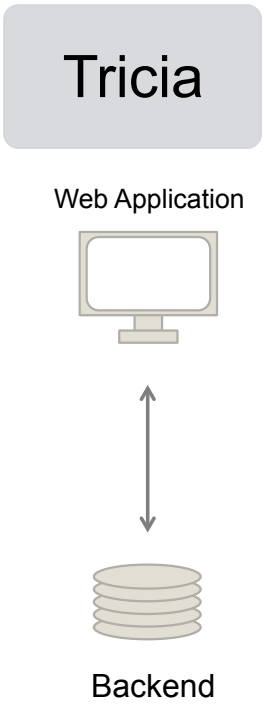
   - Search

4. **Conclusion & Outlook**

Motivation –Tricia & SocioCortex



Needs User Experience Improvements:

- Does not separate power and **casual users**
- Not optimized for mobile browsers
- Both minor and major elements need refinement

Motivation –Tricia & SocioCortex

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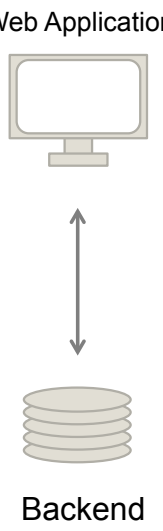
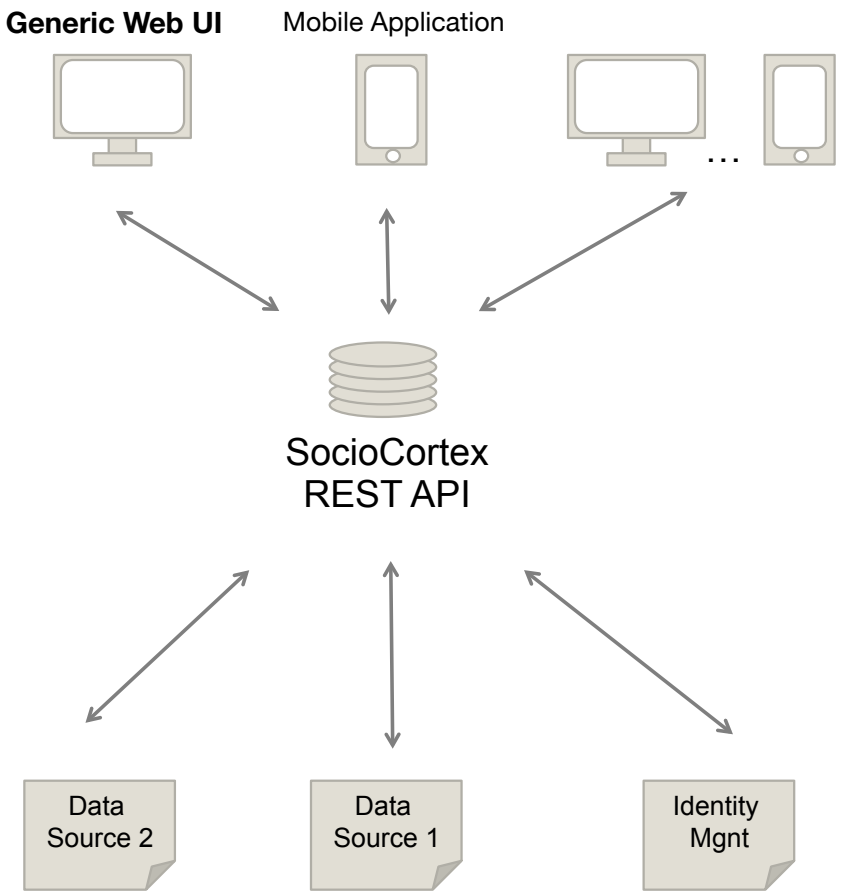
Tricia



SocioCortex



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Research Framework

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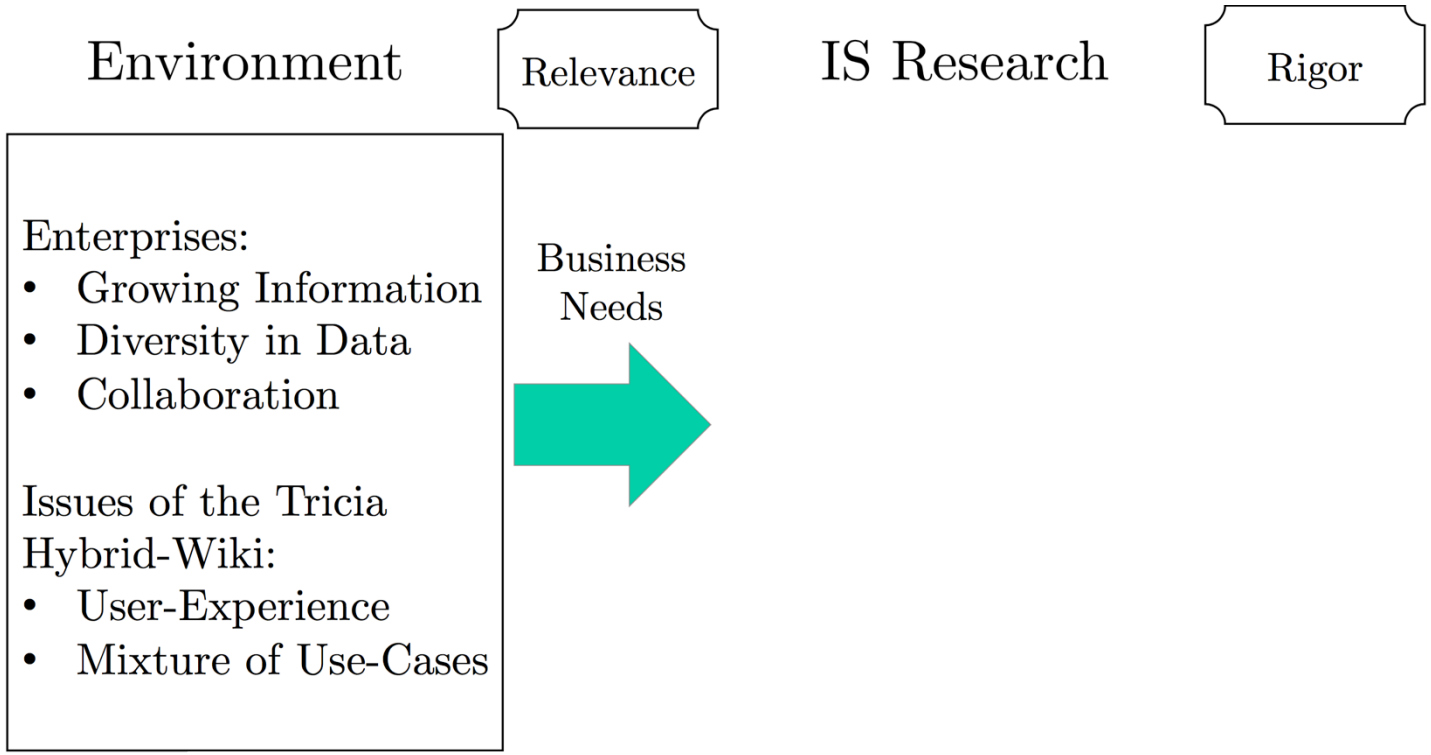

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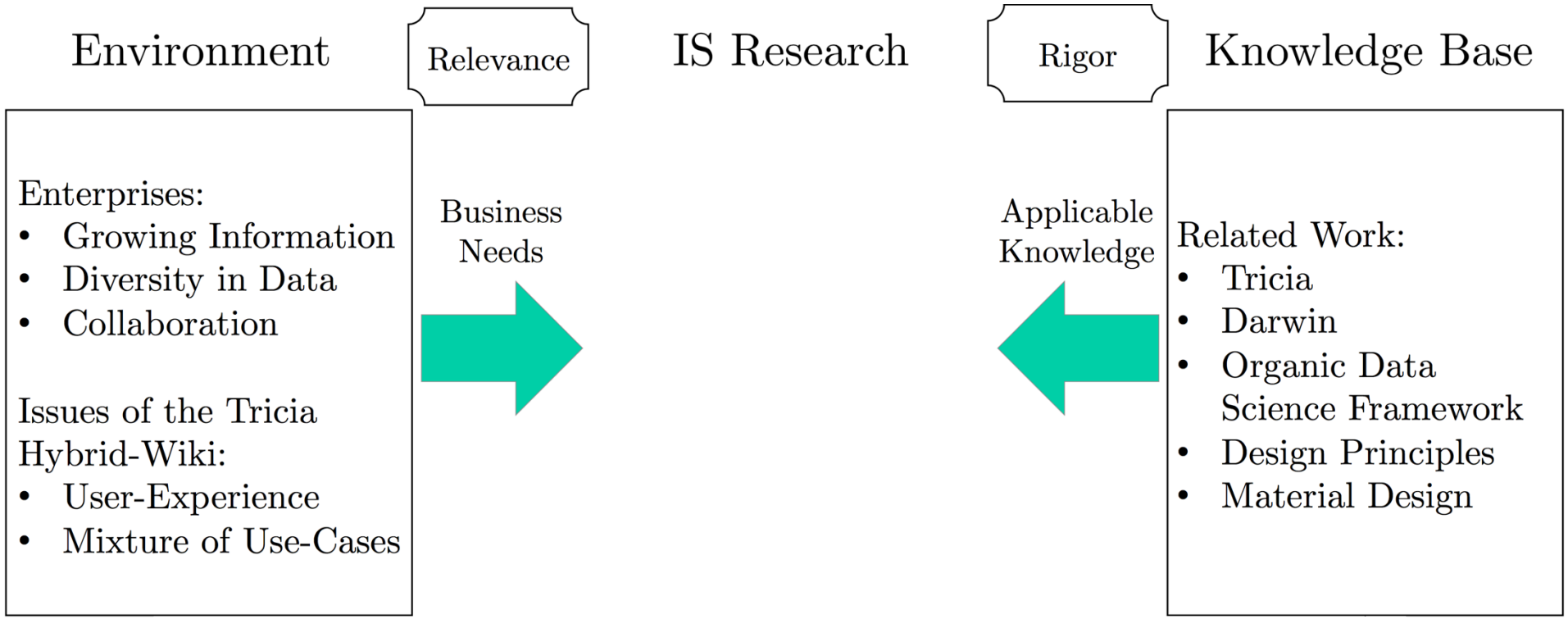

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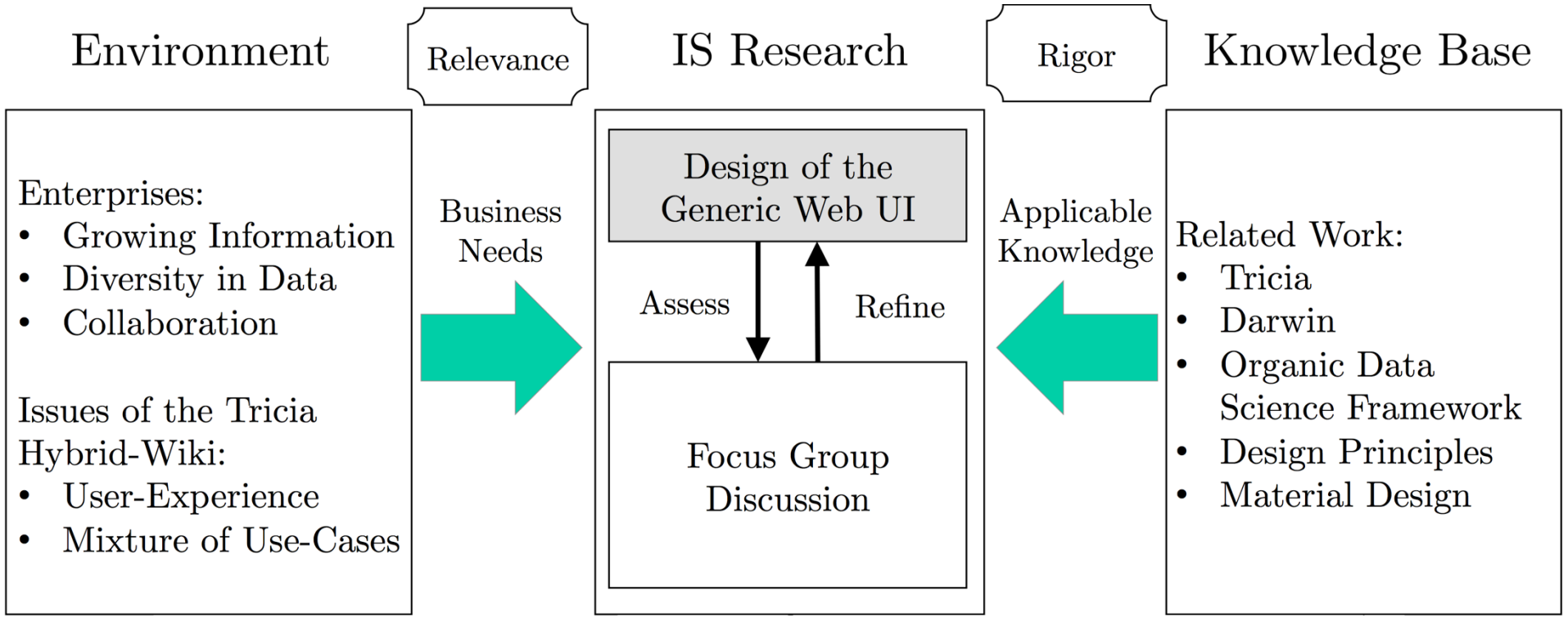

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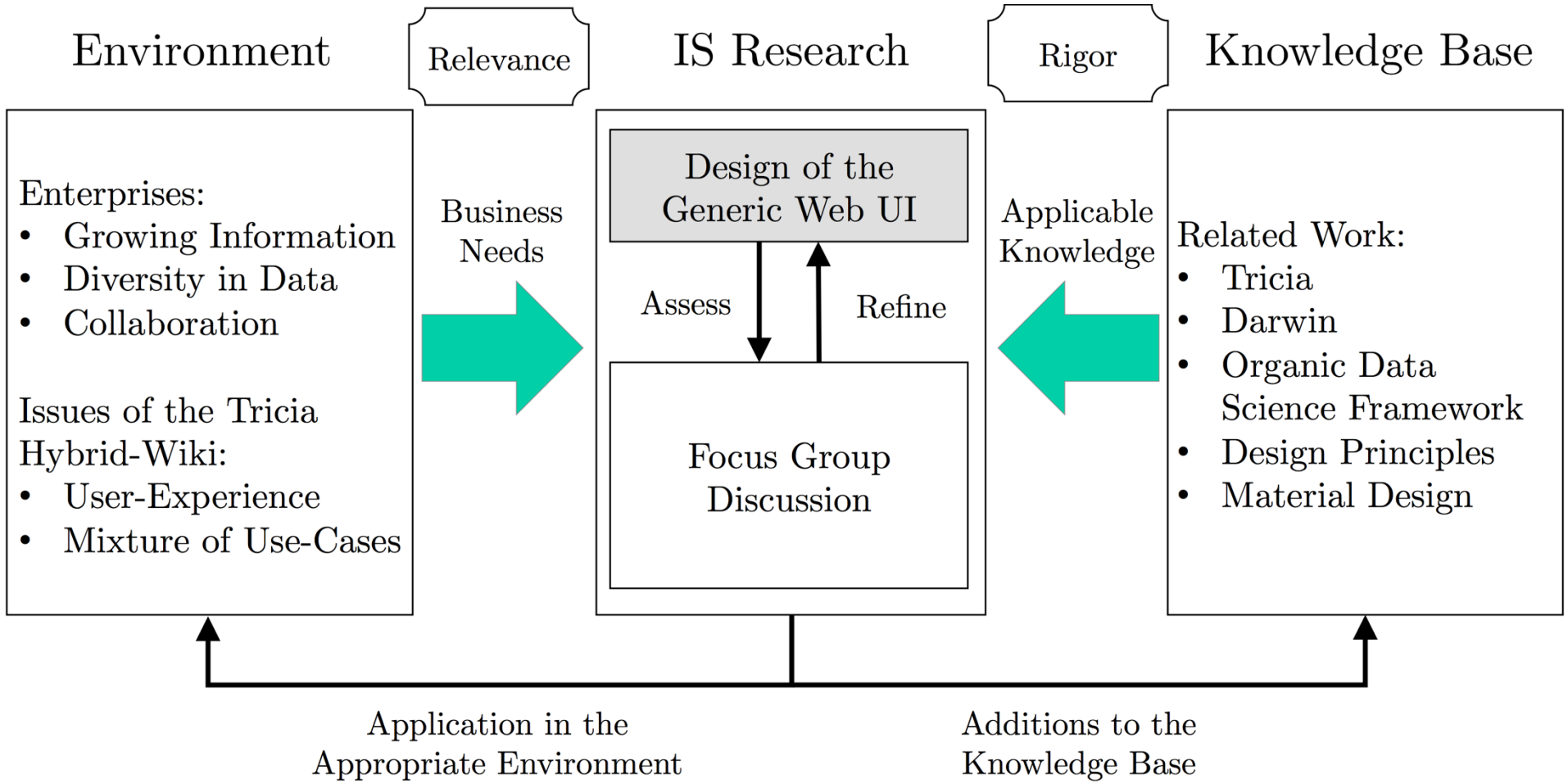

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Software Engineering for Business Information Systems (sebis)

Our Research

Enterprise Architecture Management

We are discovering how to advance the enterprise as a whole by scientific engineering.

Social Content & Model Management

We are developing a wiki-like content mangement with high emphasis on user collaboration.

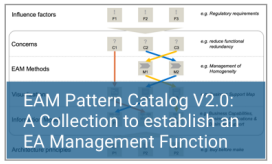
Vertical Social Software Engineering

We are discovering how to enhance software development by collaboration.

Modeling & Managemenent of Legal Norms

We are unveiling the complexity in legal texts driven by automatic analysis.

Featured Projects



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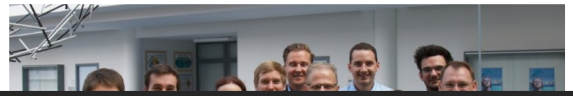

Research News

May 29th: Paper on a Task-Centered Framework for Science Collaboration at e-Science accepted

May 20th: LexAlyze - Interdisciplinary Research Program, see www.lexalyze.de

May 6th: Paper on Software Support of Knowledge-Intensive Processes accepted

Apr 30th: Paper on a virtual crowdsourcing community for open collaboration in science published

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Apr 29th: Master Thesis in the area of Web-Based Social Software

Dec 5th, 2014: JetBrains Night @ TUM, 11.12.2014, 6 pm

Nov 19th, 2014: Gastvorlesung zu prozessgesteuertem Software Engineering für das Internet der Zukunft von Dr. Volker Stiehl (SAP)

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Engineering

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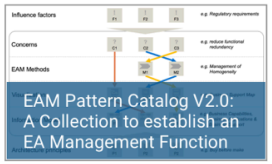

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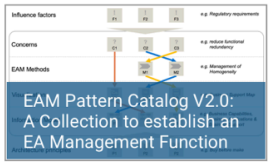

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Prof. Dr. Florian Matthes

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Fax	+49 89 289 17136
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Secretary	Aline Schmidt
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Xing	https://www.xing.com/...
Skype	f1matthes
Twitter	@matthes
Attribute name	Attribute value

Florian Matthes holds the chair Software Engineering for Business Information Systems at Technische Universität München. The current focus of his research is on technologies driving the digital transformation of enterprises and societies: Enterprise architecture management, social content and model management, and semantic modeling of legal texts (LexAlyze).
As head of the software architecture working group of the Gesellschaft für Informatik, member of the advisory board of the Ernst Denert-Stiftung für Software Engineering and organizer of several workshops and conferences in the area of enterprise architecture he puts special emphasis on the cooperation between practitioners and scientists in informatics and information systems.
Since 2014 he is extending this theory-based and practice-oriented cooperative work to also include scientists and practitioners from the legal domain to foster a better shared understanding of the interaction between informatic, economic and legal models of an increasingly digital society. He is co-founder and chairman of CoreMedia (1996) and infoAsset (1999) , co-founder of further small software and service university spin-off, and scientific advisor of UnternehmerTUM, the center of innovation and business creation at TU München.
Earlier stations of his academic career are the Goethe-University Frankfurt (Diploma 1988) the University of Hamburg(PhD 1992), the Digital Systems Research Center (now HP SRC Classic) in Palo Alto, USA (Researcher 1992-1993), and the Technical University Hamburg-Harburg (Associate Professor 1997-2002).
Until 2010 he served as dean of studies at the Faculty for Informatics and member of the teaching board of TU München.
Florian and his wife Nastaran Matthes are proud parents of two daughters.

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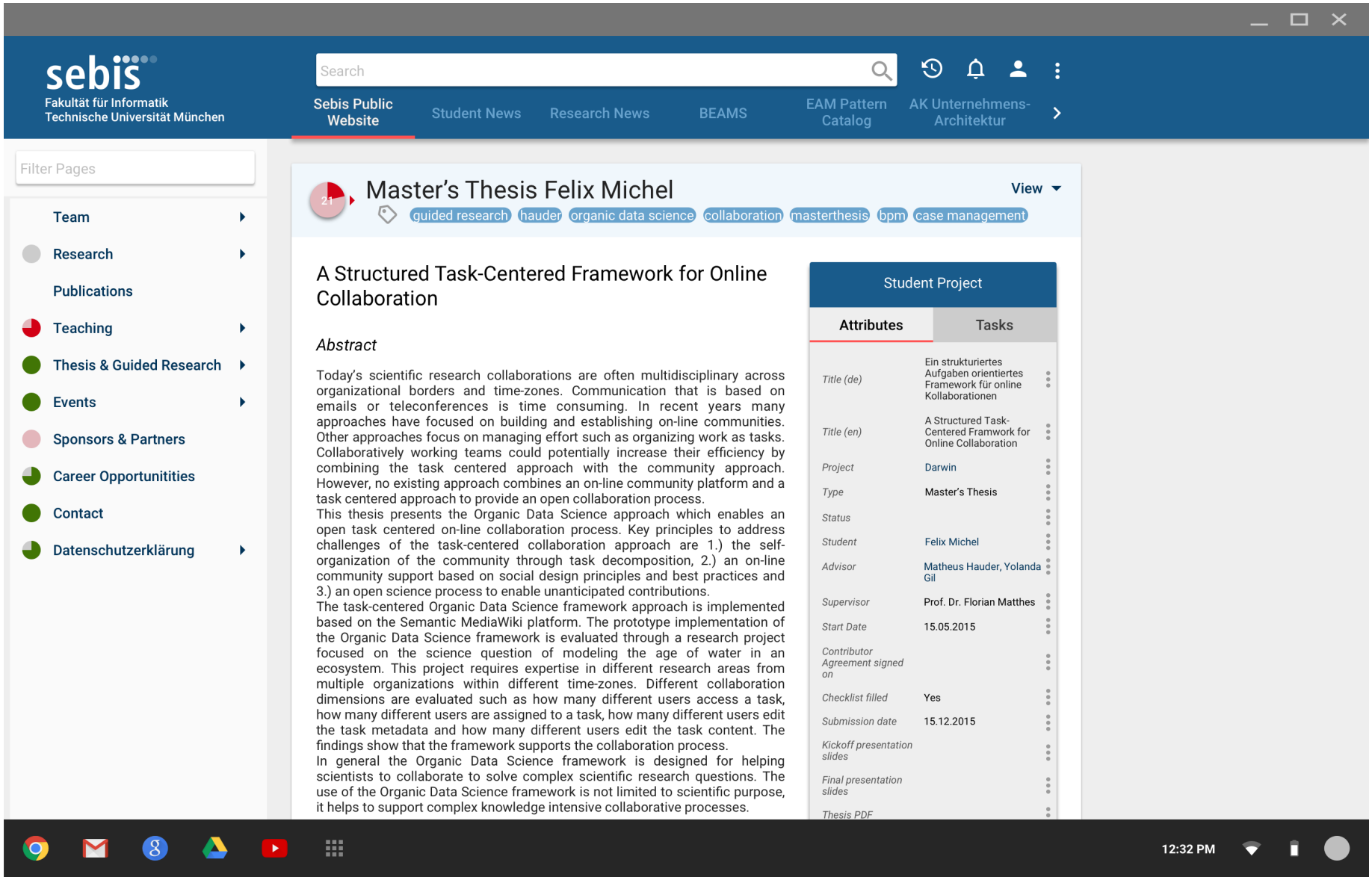

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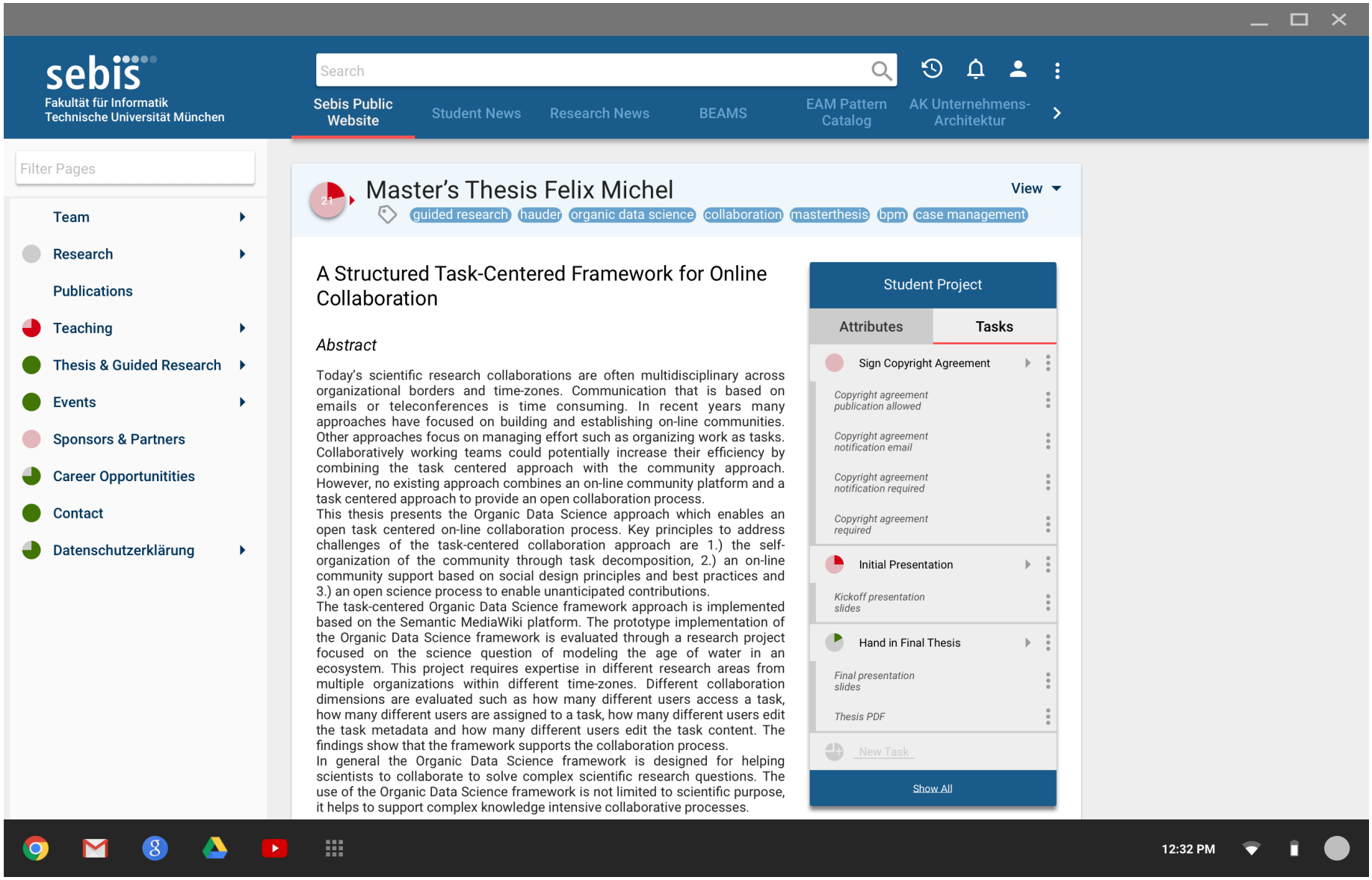

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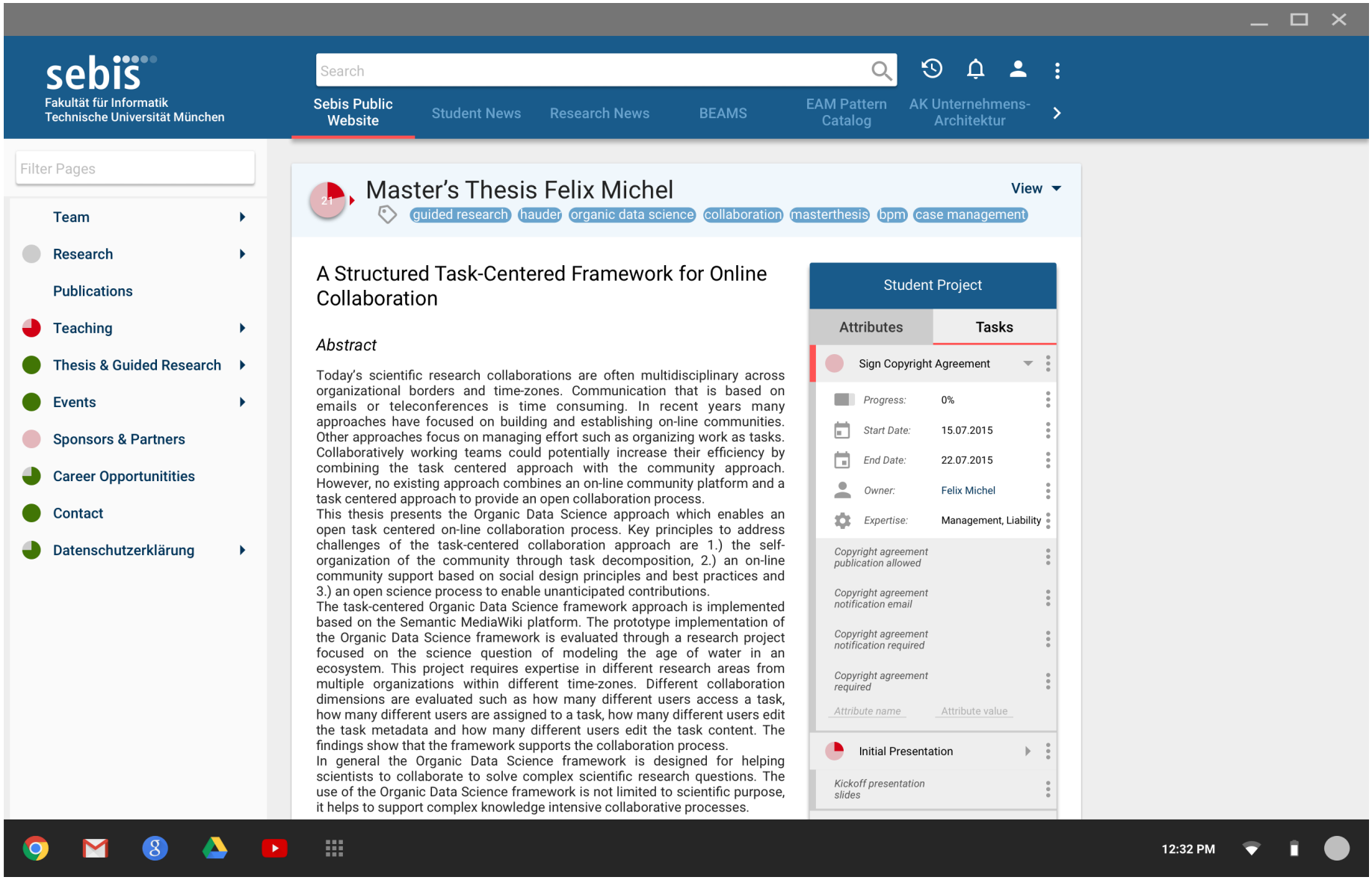

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Master's Thesis Felix Michel

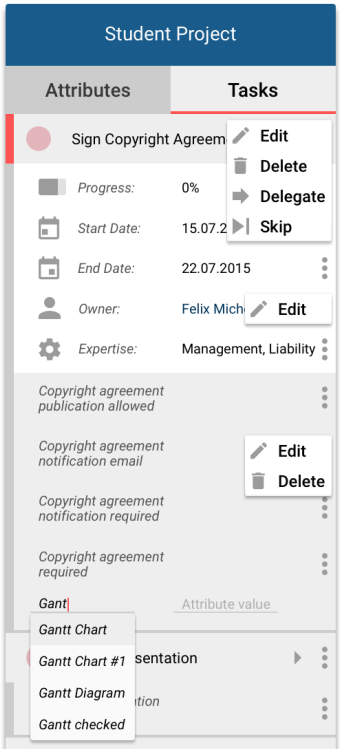
View

guided research | hauder | organic data science | collaboration | masterthesis | bpm | case management

A Structured Task-Centered Framework for Online Collaboration

Abstract

Today's scientific research collaborations are often multidisciplinary across organizational borders and time-zones. Communication that is based on emails or teleconferences is time consuming. In recent years many approaches have focused on building and establishing on-line communities. Other approaches focus on managing effort such as organizing work as tasks. Collaboratively working teams could potentially increase their efficiency by combining the task centered approach with the community approach. However, no existing approach combines an on-line community platform and a task centered approach to provide an open collaboration process.
This thesis presents the Organic Data Science approach which enables an open task centered on-line collaboration process. Key principles to address challenges of the task-centered collaboration approach are 1.) the self-organization of the community through task decomposition, 2.) an on-line community support based on social design principles and best practices and 3.) an open science process to enable unanticipated contributions.
The task-centered Organic Data Science framework approach is implemented based on the Semantic MediaWiki platform. The prototype implementation of the Organic Data Science framework is evaluated through a research project focused on the science question of modeling the age of water in an ecosystem. This project requires expertise in different research areas from multiple organizations within different time-zones. Different collaboration dimensions are evaluated such as how many different users access a task, how many different users are assigned to a task, how many different users edit the task metadata and how many different users edit the task content. The findings show that the framework supports the collaboration process.
In general the Organic Data Science framework is designed for helping scientists to collaborate to solve complex scientific research questions. The use of the Organic Data Science framework is not limited to scientific purpose, it helps to support complex knowledge intensive collaborative processes.



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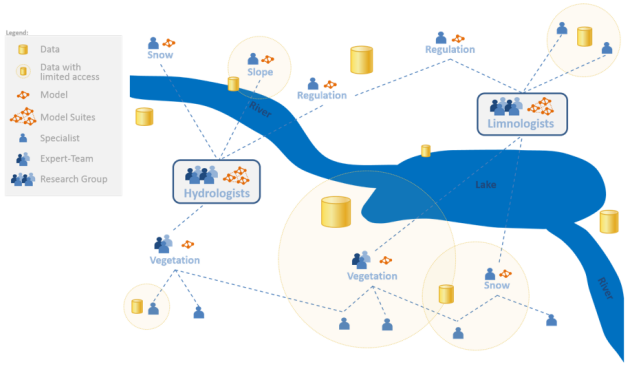
scientists to collaborate to solve complex scientific research questions. The use of the Organic Data Science framework is not limited to scientific purpose, it helps to support complex knowledge intensive collaborative processes.

Studied Project (Science Goal: The Age Of Water)

The thesis theory is prototypically implemented and tested with the organic data science project. Science goal of the organic data science project is to define collaboratively "The Age of Water". Basically there are two main research teams with their sub-groups. For every research disciple, domain specific models exist. To answer the defined science goal a holistic approach is needed. Collaboration is one key factor.



Challenges:

- Self-Organization of the Community: People with diverse backgrounds are supposed to first discover one another and common ground to collaborate.
- On-line Community: Since people need clear incentives to remain involved for the long period of time that such projects are active.
- Open Science Process: The complexity of large scientific project complicate keep track of all ongoing activities.

Last modified by Felix Michel , Jun 10th

Gantt Diagram
Gantt checked
Hand in Final Thesis
Final presentation slides
Thesis PDF
New Task
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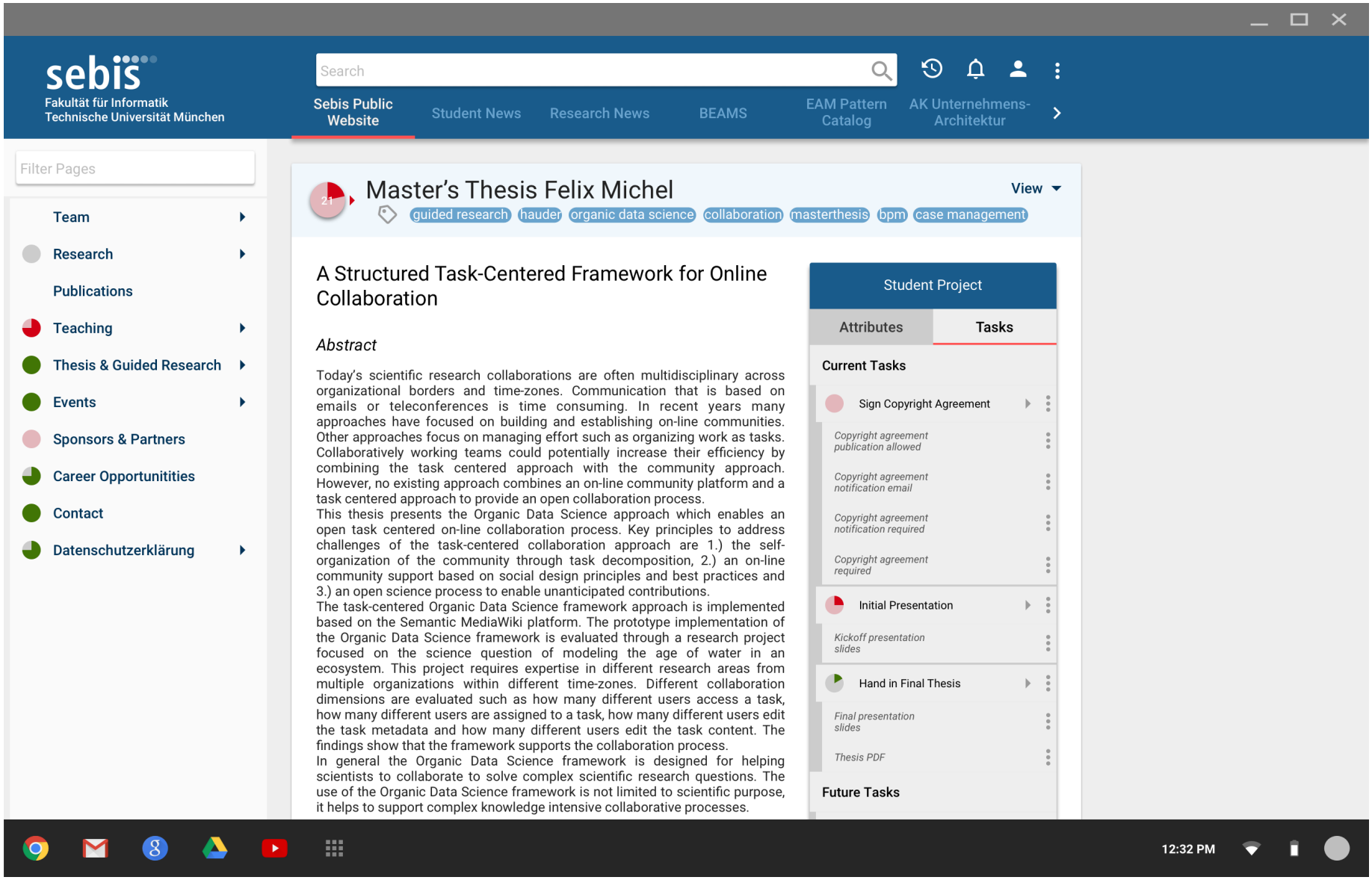

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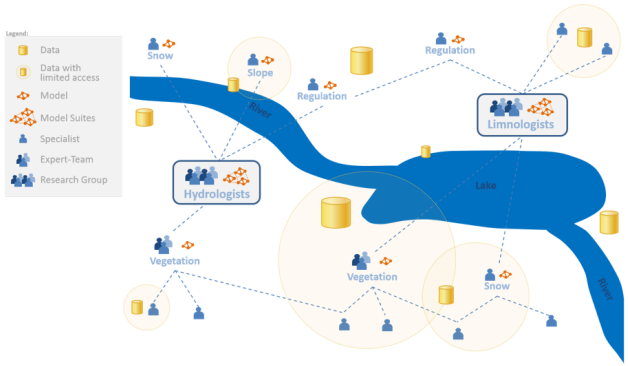

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Future Tasks

Change Status to Completed

Status

Completed Tasks

Project Setup

Title (de)	Ein strukturiertes Aufgaben orientiertes Framework für online Kollaborationen
Title (en)	A Structured Task-Centered Framwork for Online Collaboration
Type	Master's Thesis
Student	Felix Michel
Advisor	Matheus Hauder, Yolanda Gil
Supervisor	Prof. Dr. Florian Matthes
Start Date	15.05.2014
Submission date	15.12.2014

New Task

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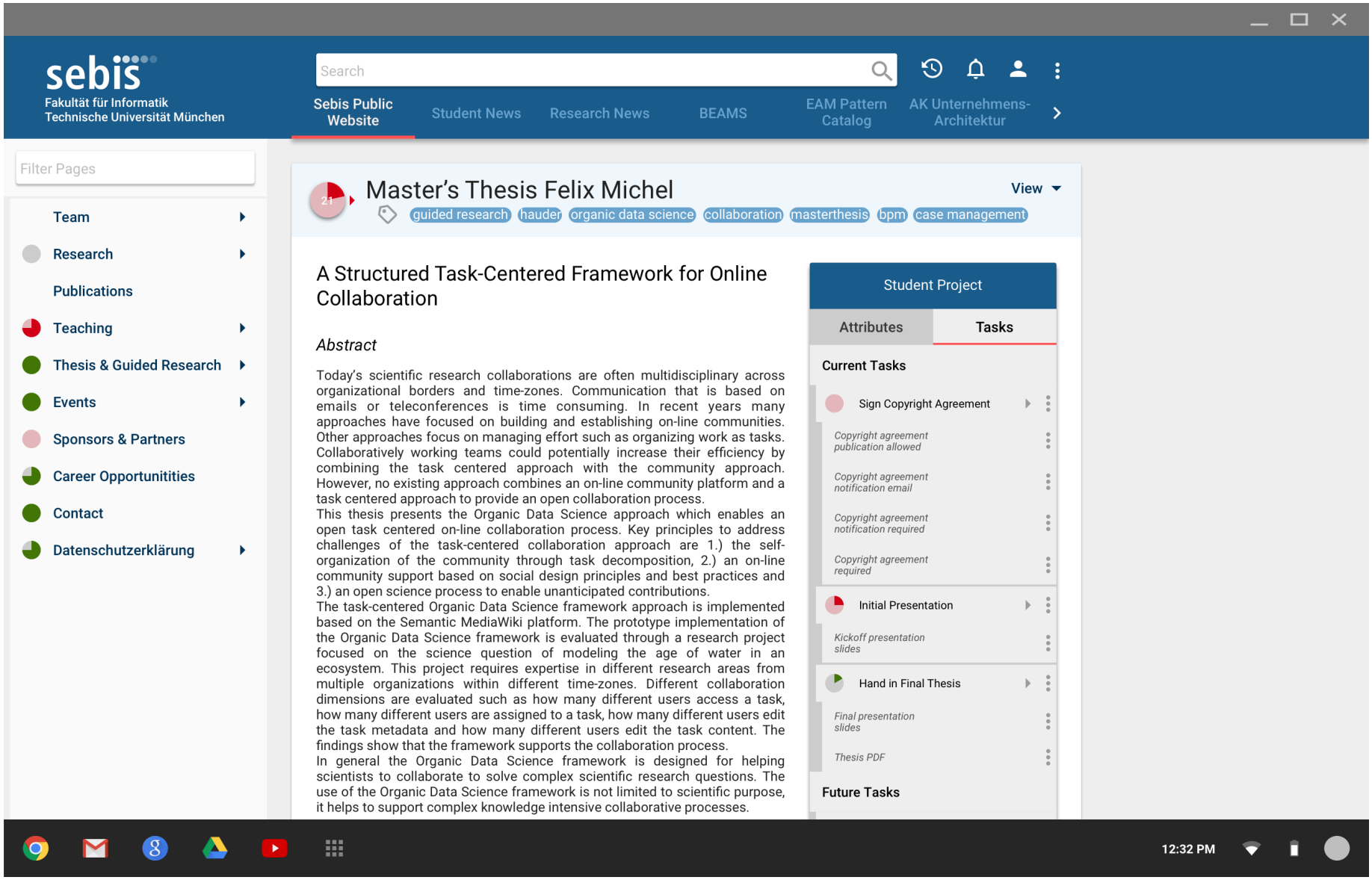

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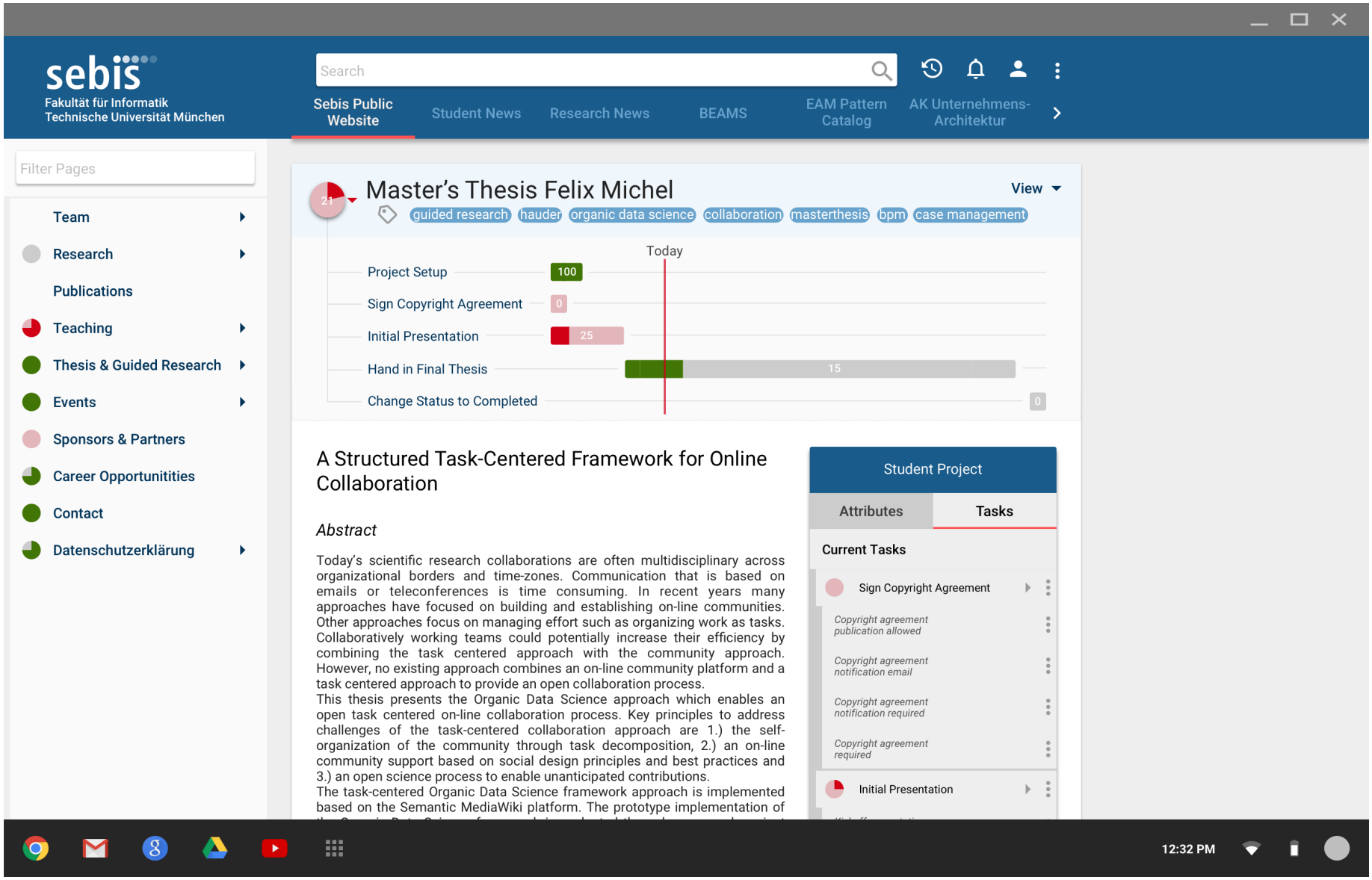

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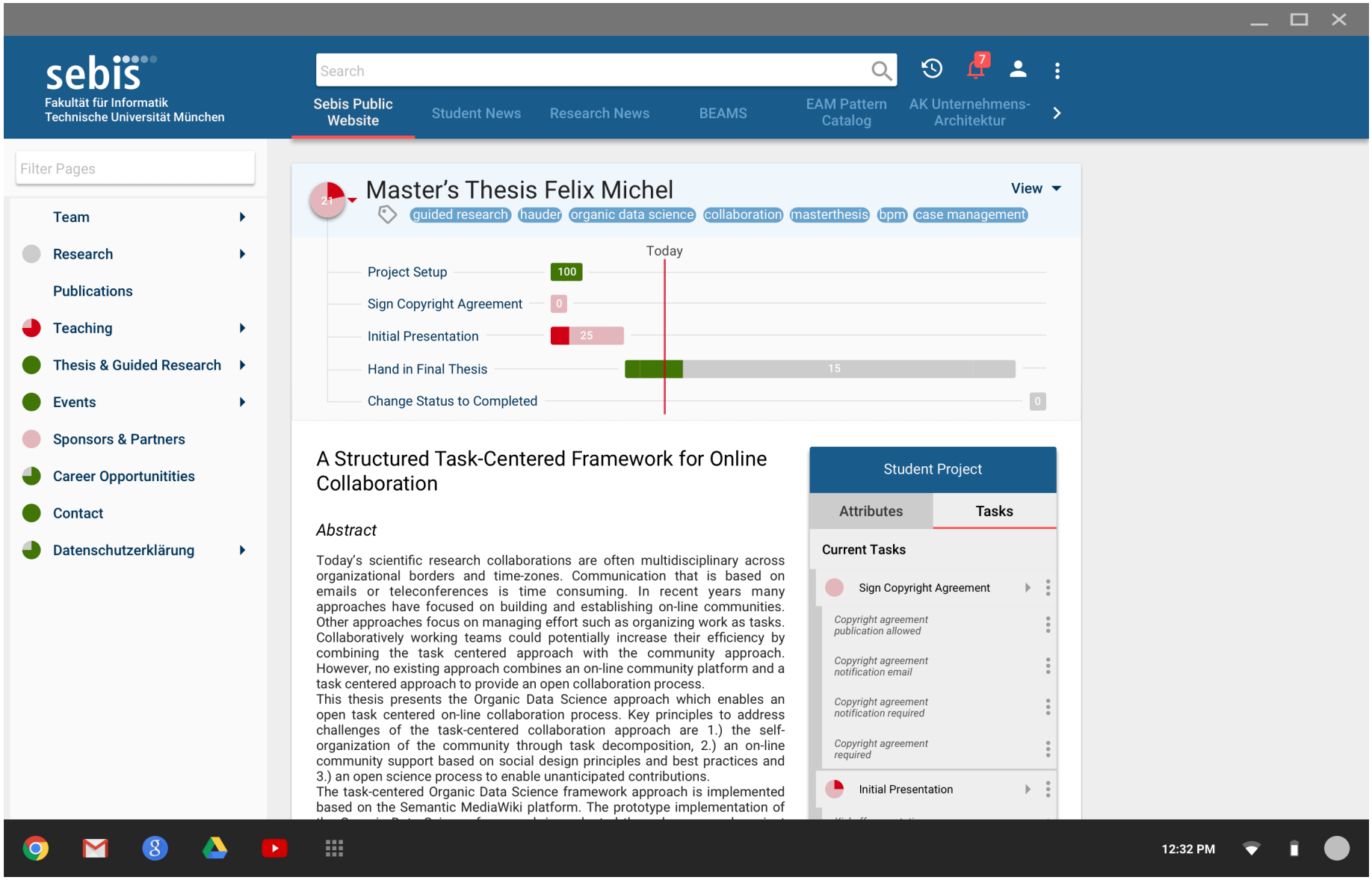

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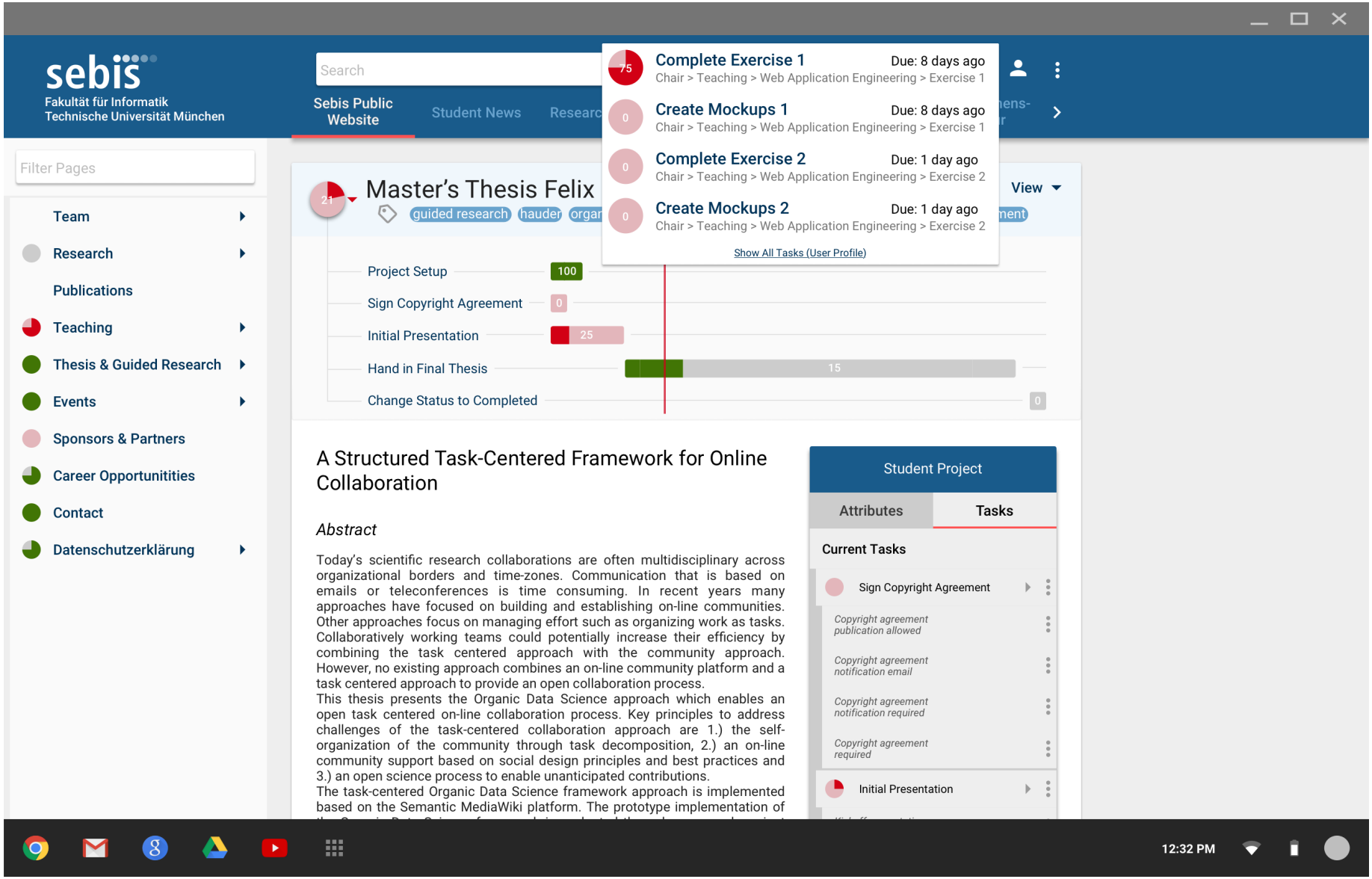

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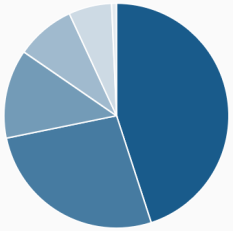
Expertise



- Collaboration: 45%
- Computer Science: 26.8%
- Software Engineering: 12.8%
- Literatur Research: 8.5%
- Soft Skills: 6.2%
- Others: 0.7%

Florian Katenbrink

Current Tasks

75 **Complete Exercise 1** — Due: 3 days ago
Chair > Teaching > Global Software Engineering > Exercise 1

0 **Create four mockups for the use cases** — Due: in 10 days
Chair > Teaching > Web Application Engineering > Project 3

0 **Complete Exercise 2** — Due: in 10 days
Chair > Teaching > Global Software Engineering > Exercise 2

Future Tasks

0 **Develop the SSSP Algorithm** — Starts: in 5 days
Chair > Teaching > Algorithms 1 > Exercise 1

Completed Tasks

100 **Create two use-case diagrams** — Completed: 5 days ago
Chair > Teaching > Web Application Engineering > Project 2

100 **Complete Hello World Exercise** — Completed: 7 days ago
Chair > Teaching > Web Application Engineering > Project 1

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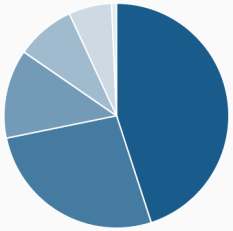

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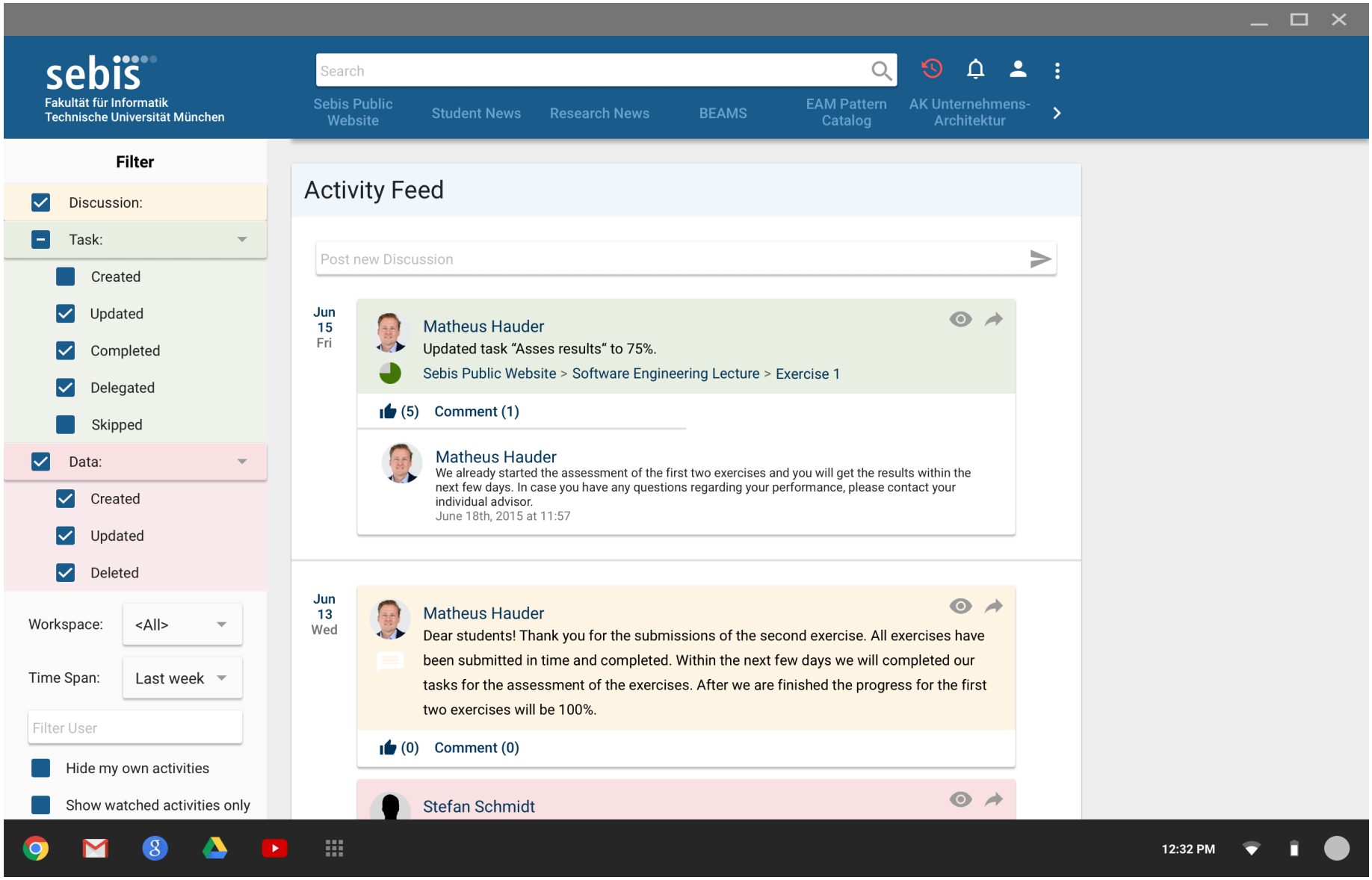

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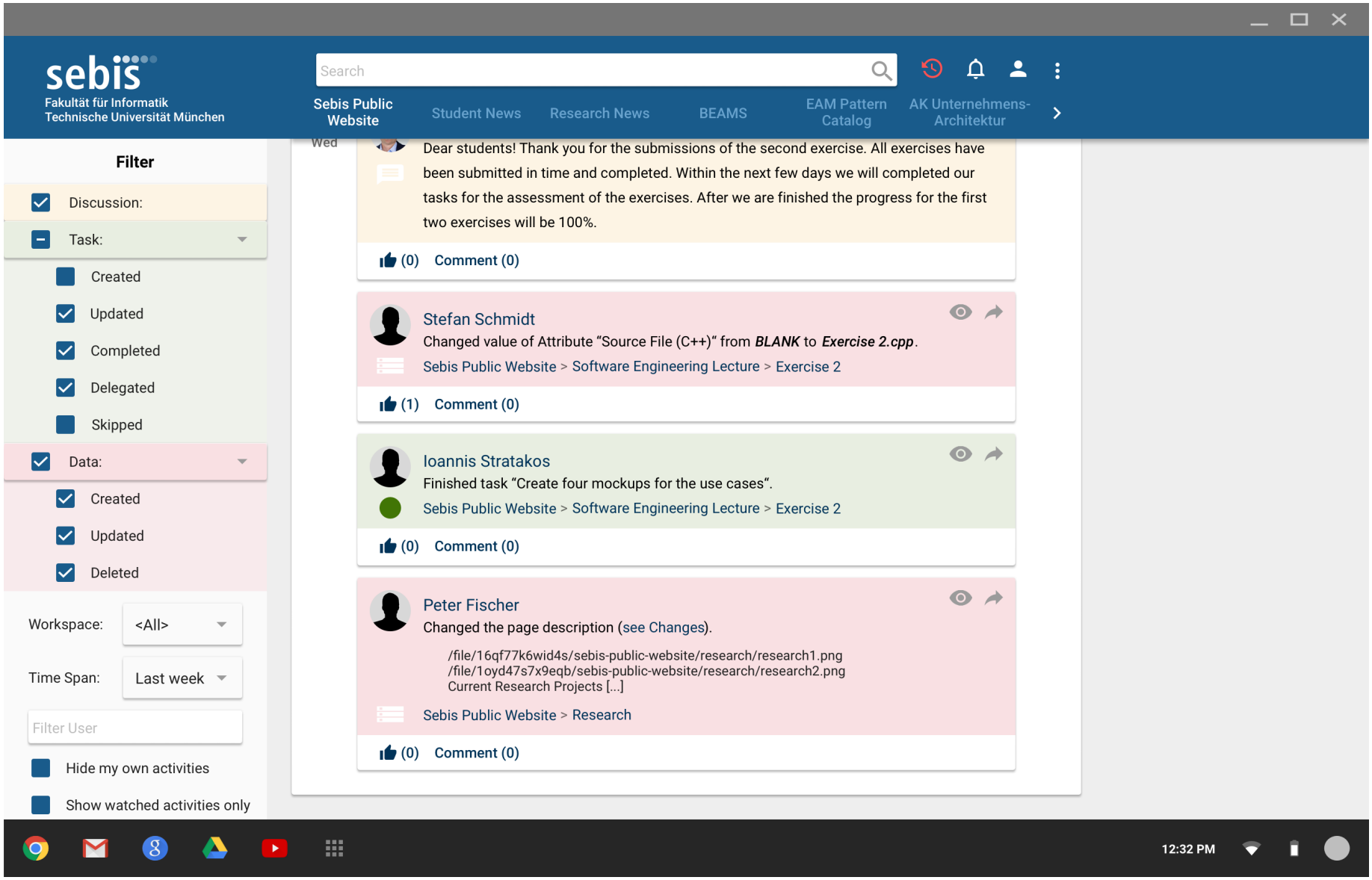

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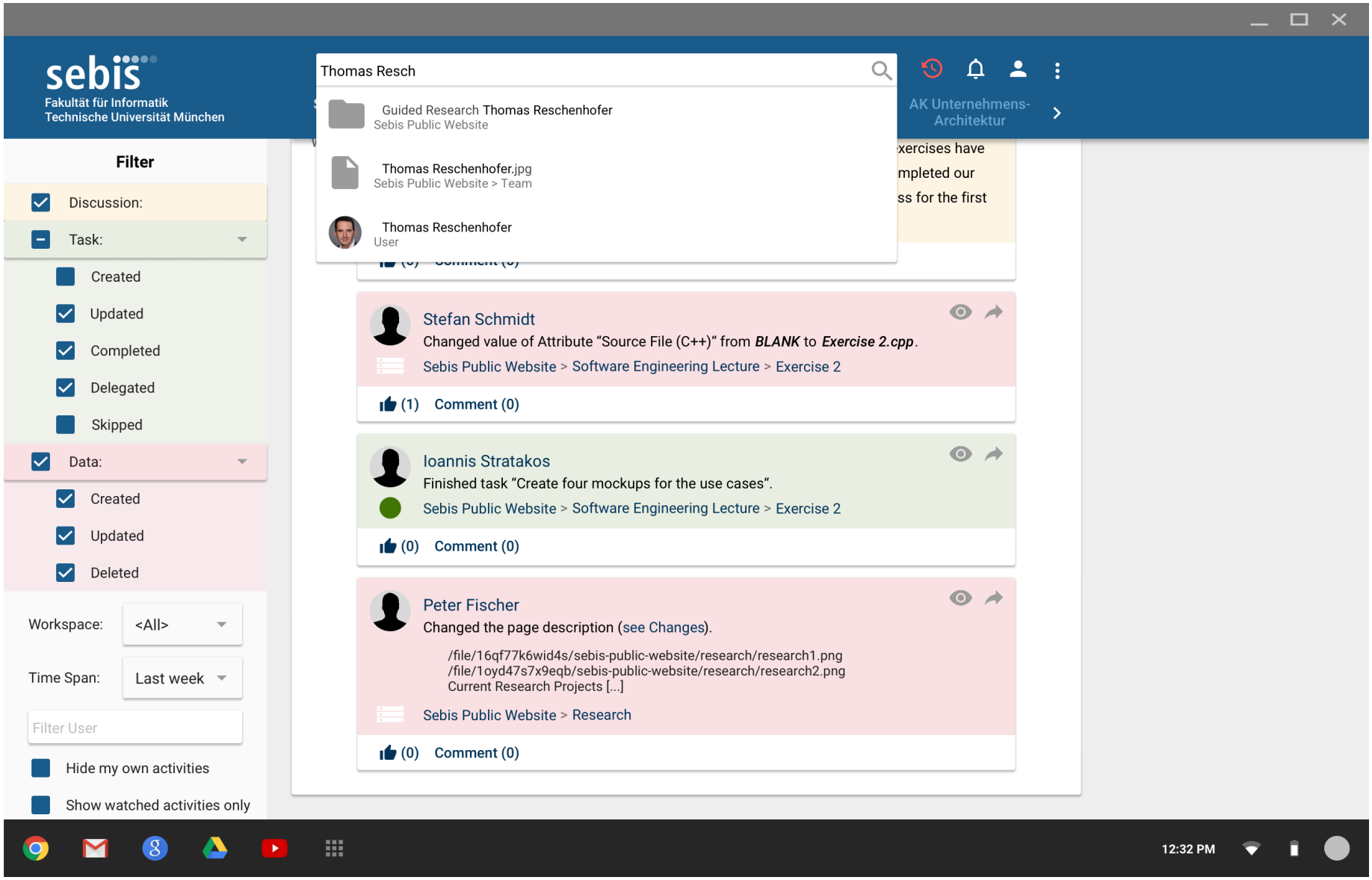

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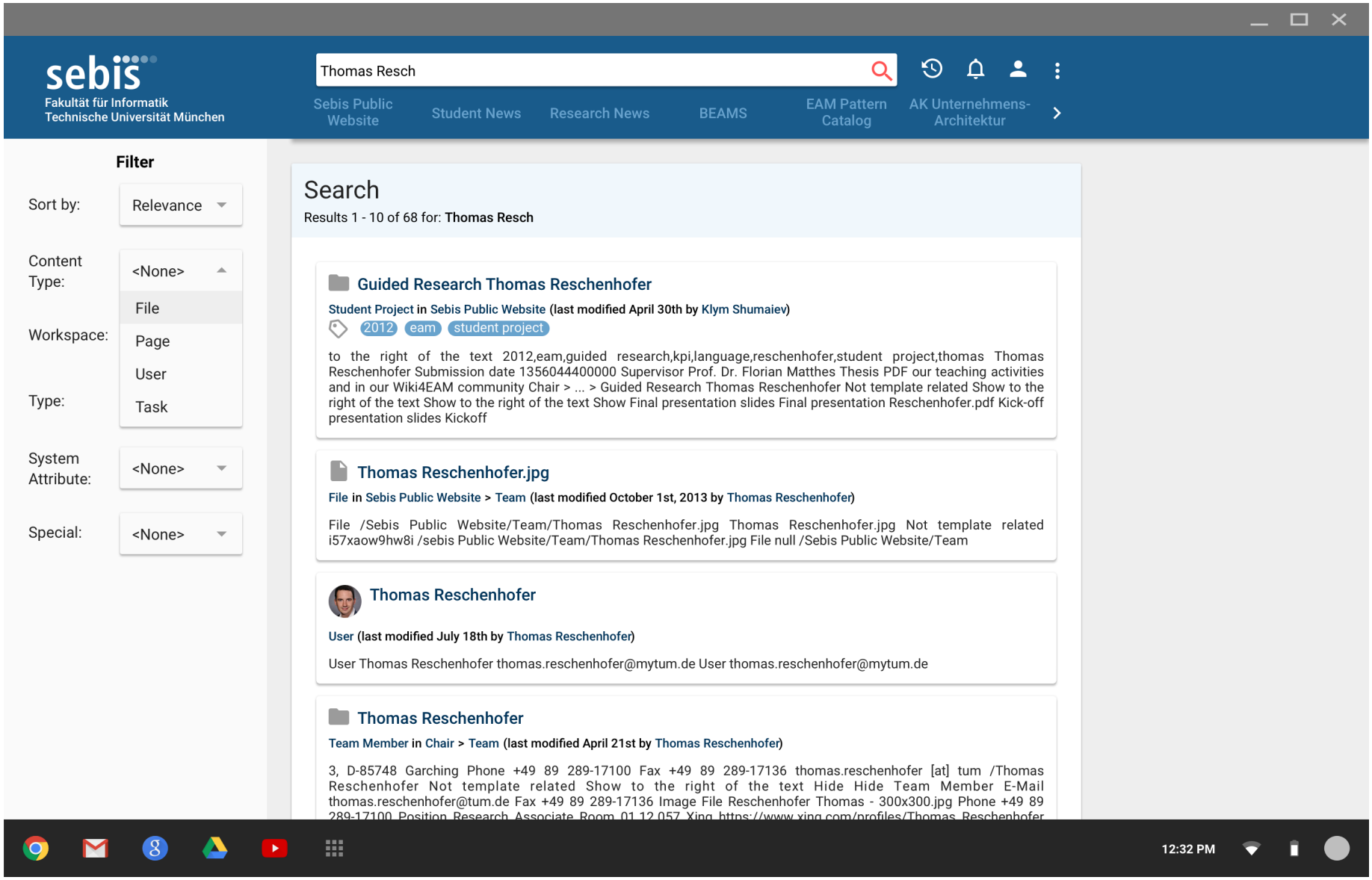

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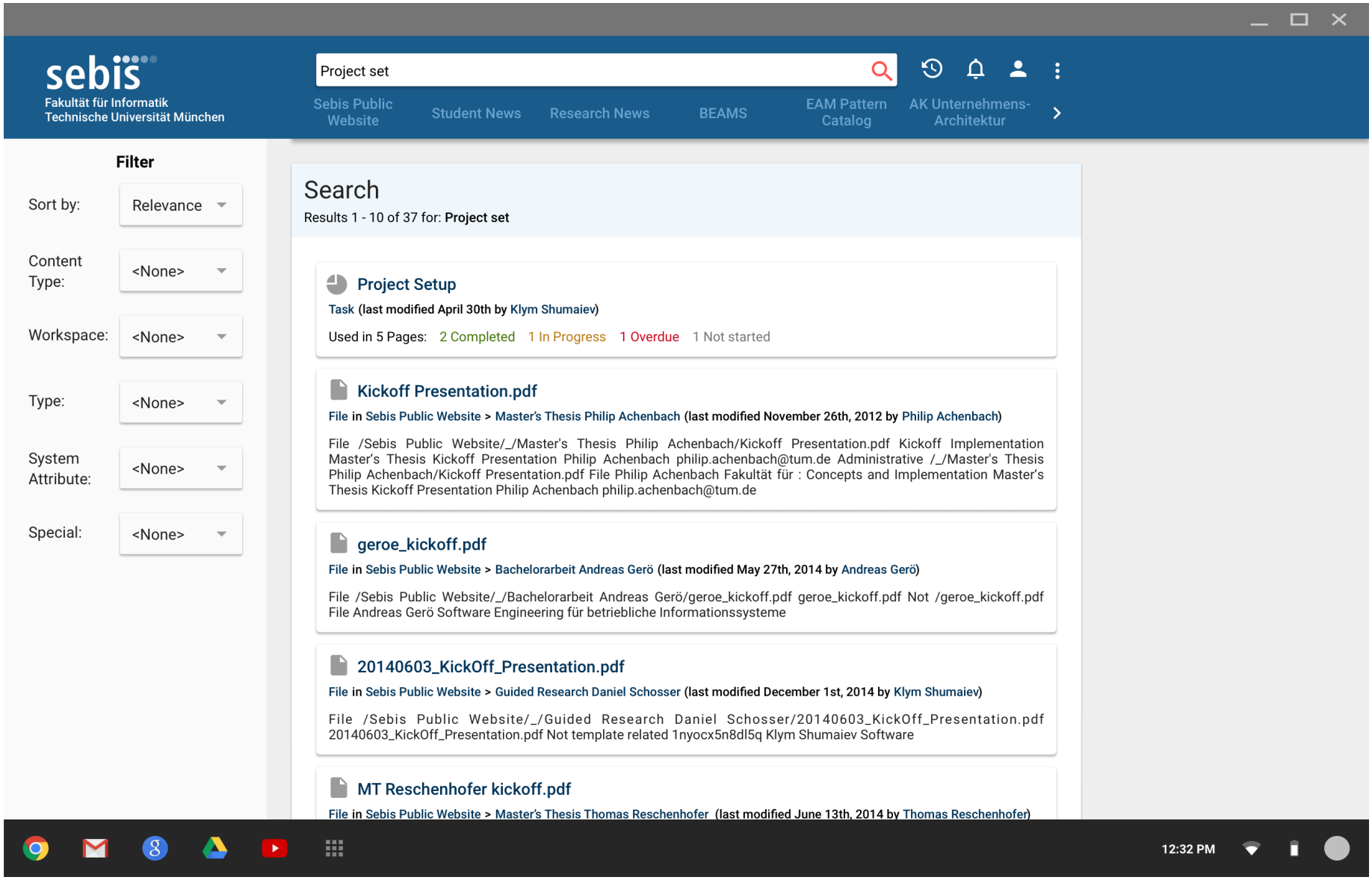

Conclusion & Outlook

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Generic Web Application:

- Accomplished through well-established research framework
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- Improved user experience by applying design principles
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Outlook:

- Designing edit functionalities
- Designing a generic mobile application
- Researching how content structure, names, labels influence the user experience
- Individualization of the user interface by users

Thank you for your attention. Questions? Remarks?

Florian Katenbrink

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Enterprise Architecture Management

We are discovering how to advance the enterprise as a whole by scientific engineering.

Social Content & Model Management

We are developing a wiki-like content mangement with high emphasis on user collaboration.

Vertical Social Software Engineering

We are discovering how to enhance software development by collaboration.

Modeling & Managemenent of Legal Norms

We are unveiling the complexity in legal texts driven by automatic analysis.

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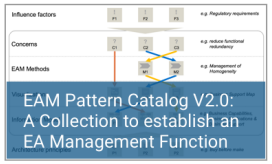

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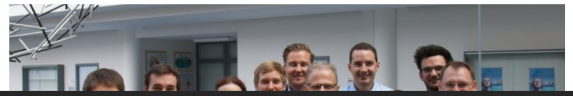

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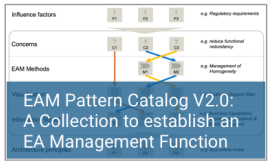

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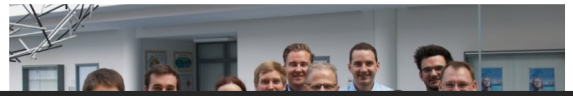

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Florian Matthes holds the chair Software Engineering for Business Information Systems at Technische Universität München. The current focus of his research is on technologies driving the digital transformation of enterprises and societies: Enterprise architecture management, social content and model management, and semantic modeling of legal texts (LexAlyze).
As head of the software architecture working group of the Gesellschaft für Informatik, member of the advisory board of the Ernst Denert-Stiftung für Software Engineering and organizer of several workshops and conferences in the area of enterprise architecture he puts special emphasis on the cooperation between practitioners and scientists in informatics and information systems.
Since 2014 he is extending this theory-based and practice-oriented cooperative work to also include scientists and practitioners from the legal domain to foster a better shared understanding of the interaction between informatic, economic and legal models of an increasingly digital society. He is co-founder and chairman of CoreMedia (1996) and infoAsset (1999) , co-founder of further small software and service university spin-off, and scientific advisor of UnternehmerTUM, the center of innovation and business creation at TU München.
Earlier stations of his academic career are the Goethe-University Frankfurt (Diploma 1988) the University of Hamburg(PhD 1992), the Digital Systems Research Center (now HP SRC Classic) in Palo Alto, USA (Researcher 1992-1993), and the Technical University Hamburg-Harburg (Associate Professor 1997-2002).
Until 2010 he served as dean of studies at the Faculty for Informatics and member of the teaching board of TU München.
Florian and his wife Nastaran Matthes are proud parents of two daughters.

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