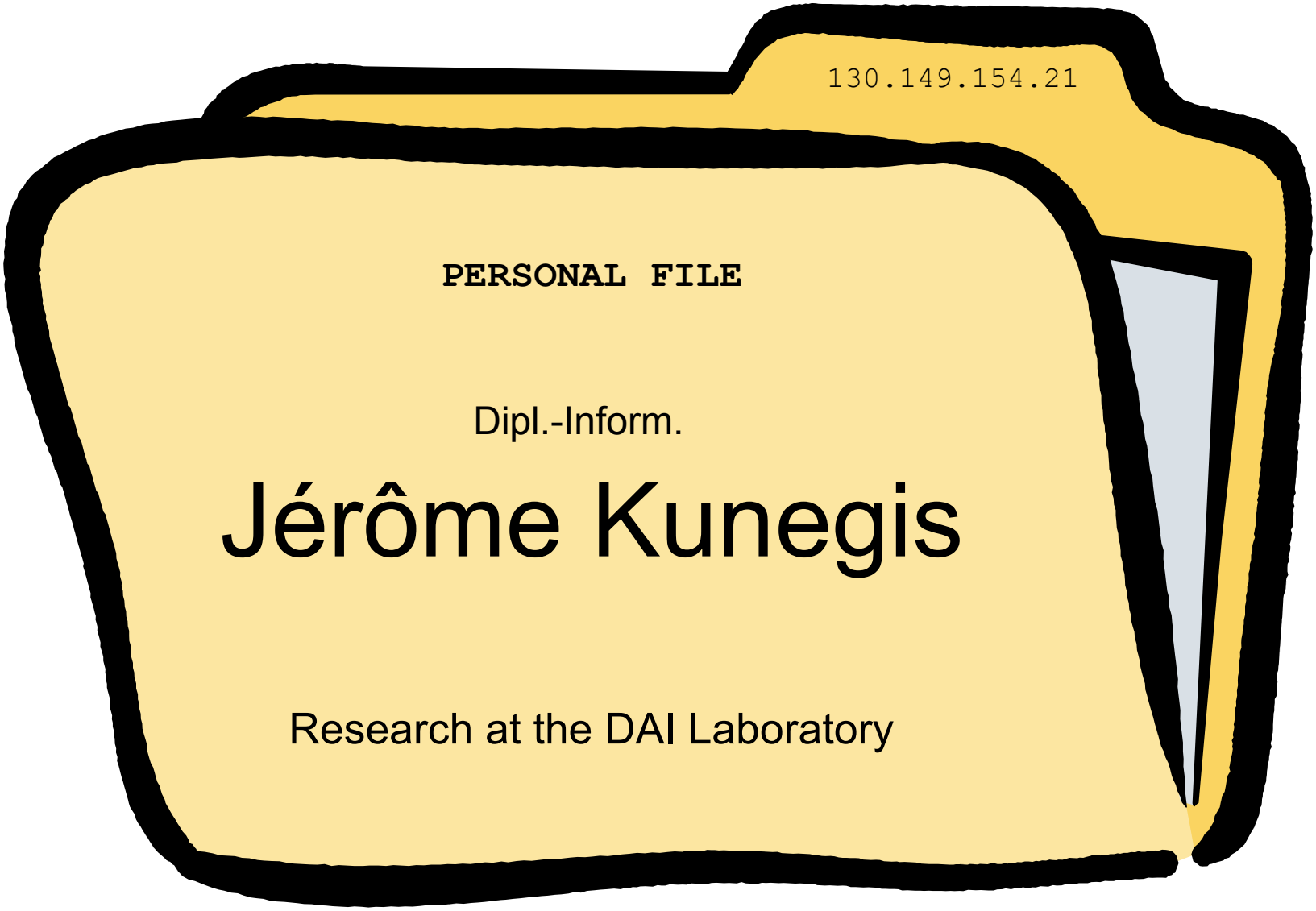

130.149.154.21
PERSONAL FILE
Dipl.-Inform.
Jérôme Kunegis
Research at the DAI Laboratory

Education

- Born 1981-03-27 in Berlin
  as **Jérôme Kunegis**
- First languages: French, German
- Second language: English

- 1987–1991 École Victor Hugo (Berlin)
- 1991–1999 Lycée français de Berlin (Physics, Math)

Computer Science Studies

- 1999–2002 Technische Universität Berlin, Grundstudium Informatik
- 2002–2006 Hauptstudium
  - Theoretical computer science (Prof. Ehrig)
  - Algorithmische diskrete Mathematik (Prof. Grötschel)
    - Graph and network algorithms (Prof. Grötschel)
    - Linear optimization
  - Agent technology

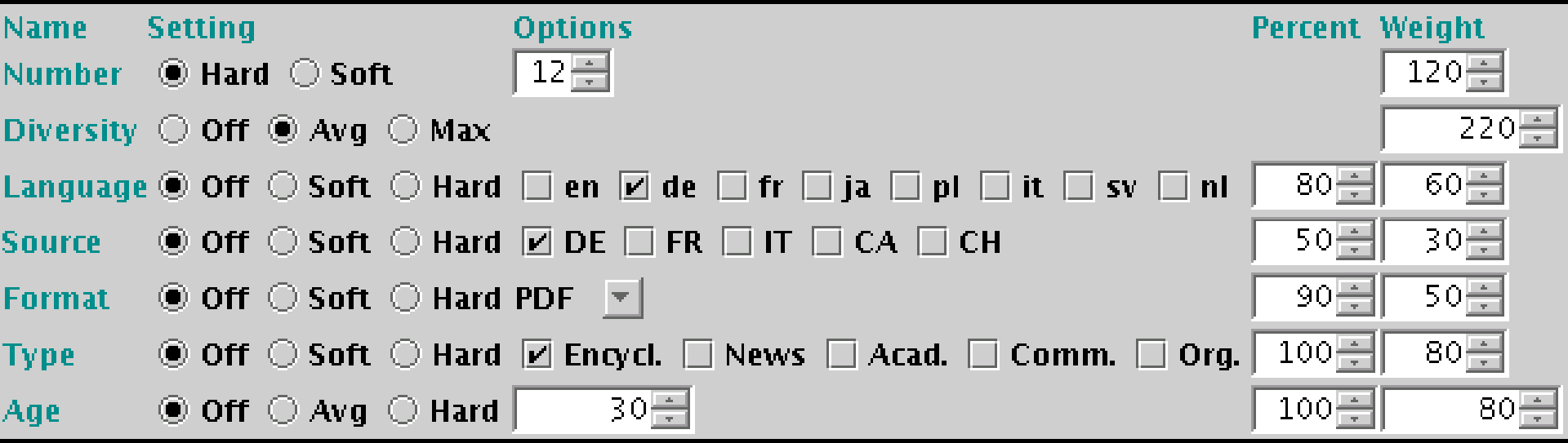
DAI Laboratory

- 2002-2006: student co-worker
- Project Corinna & Cornelius (concluded)
- Project: PIA – Personal Information Agent (current, founding co-worker)

Diploma Thesis

- Written at the DAI Lab in English
- September 2005–March 2006

  “**Using Integer Linear Programming for Search Results Optimization**”
- Projected to be integrated in PIA, but was not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Setting
Options
Percent
Weight
Number
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120
Diversity
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Avg
Max
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Language
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nl
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CA
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50
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Format
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PDF
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Type
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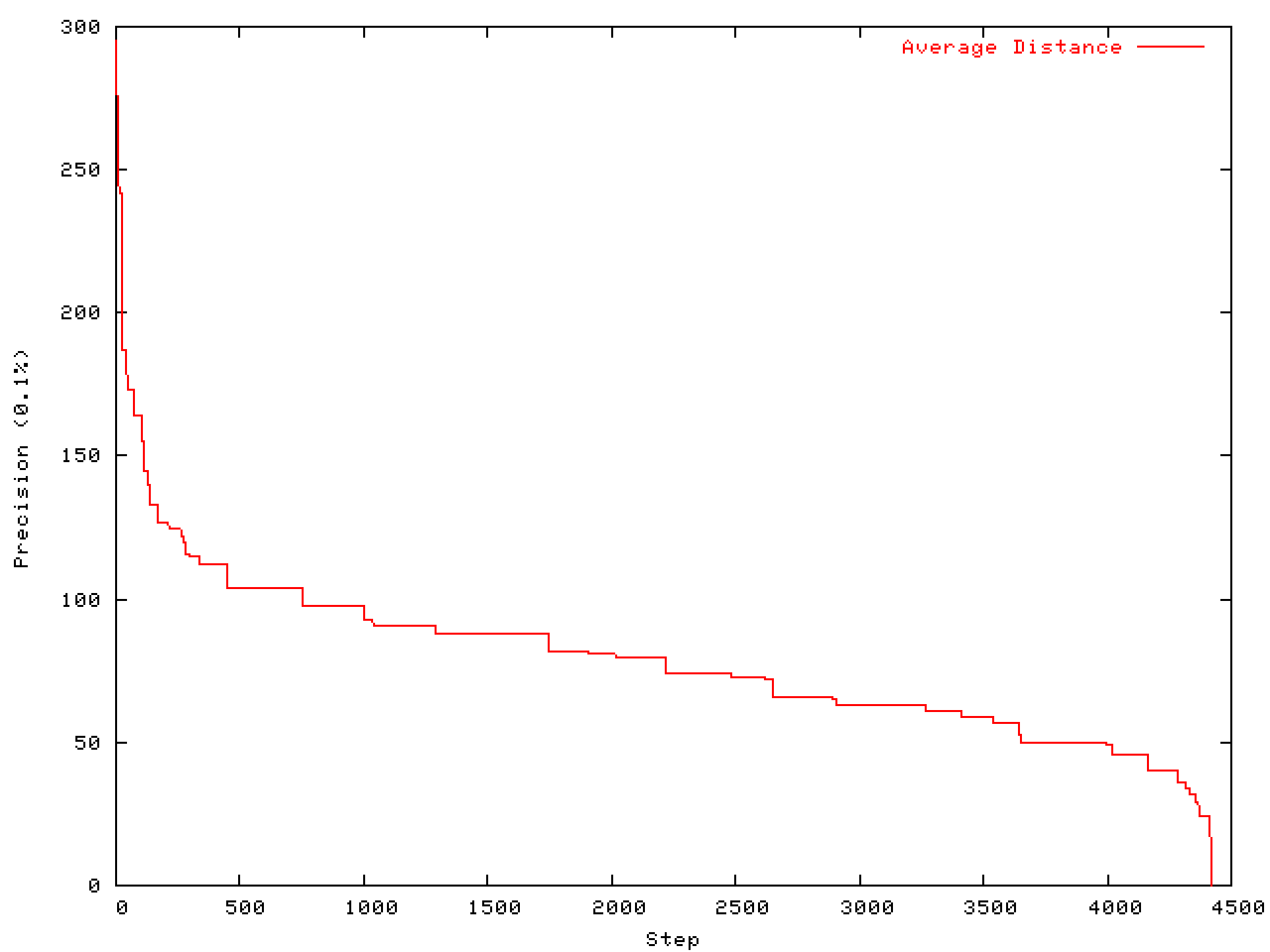
Average Distance
Precision (0.1%)
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50
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3500
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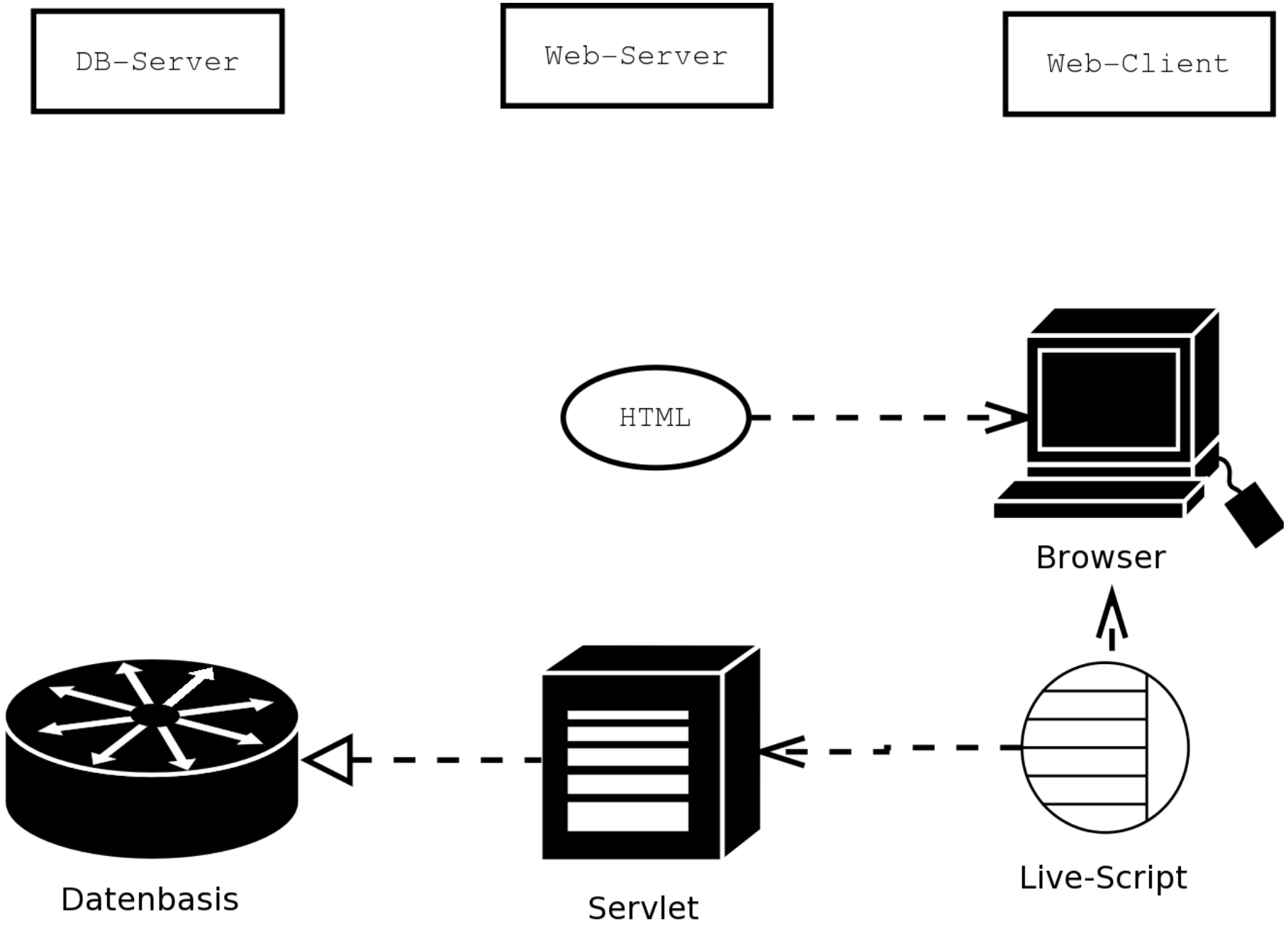
4500
Step

Patents

- 2005: Pioneered DAI Lab patent submission
- *Implicit feedback in PIA* was chosen in a DAI-wide contest
- Evaluation by IPAL before patent office submission recommended not to submit

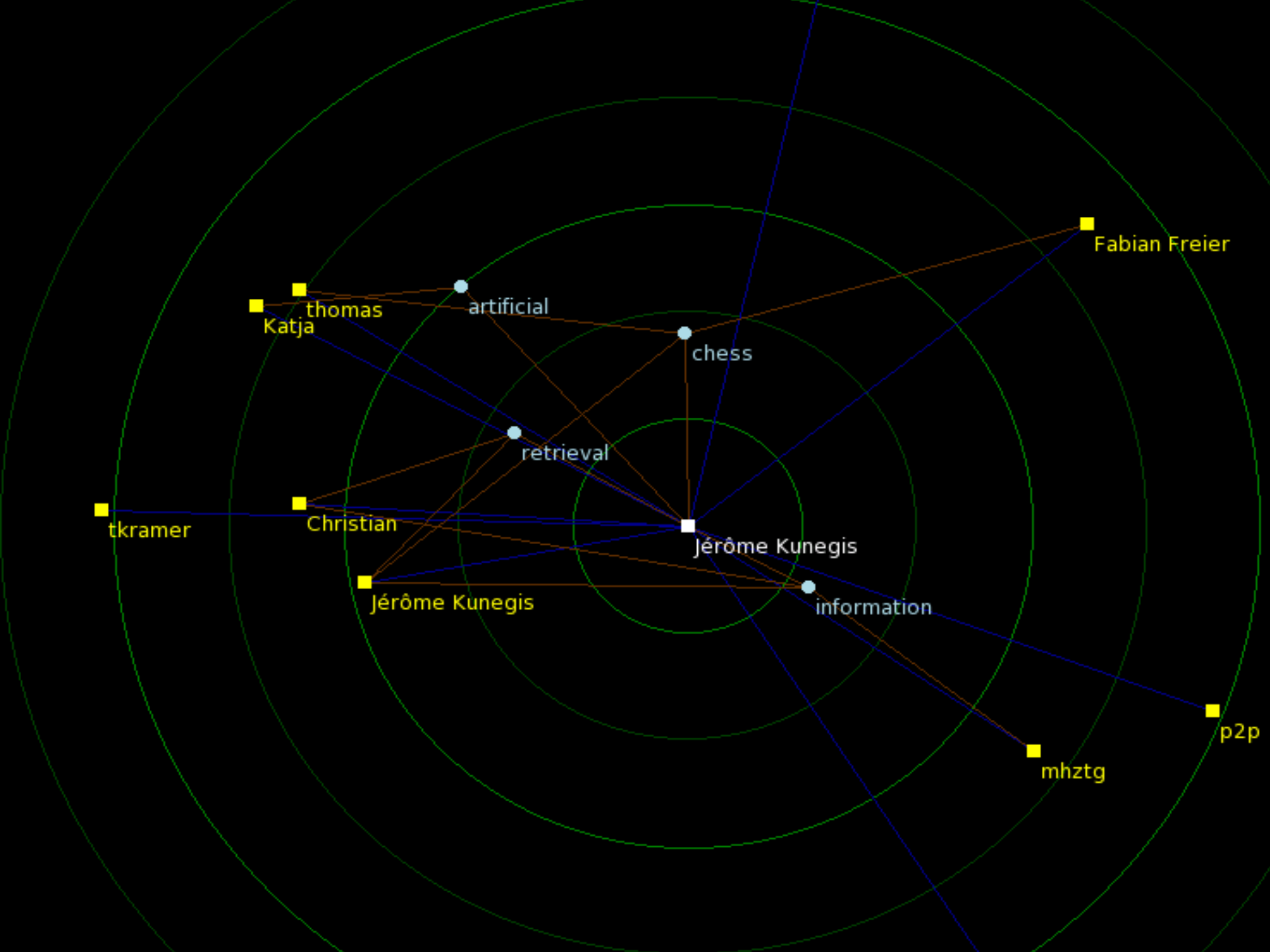

DB-Server
Web-Server
Web-Client
HTML
Browser
Datenbasis
Servlet
Live-Script

Scientist at the DAI Lab

- April 2006: Scientist, Ph. D. student
- Took over community services group from Narcisse who left the Lab
- Coincided with launch of project Synergie where community-supporting functions are added to PIA

Community Services

- Researched collaborative filtering to implement document recommendation in Synergie
- Focus on graph-based approaches
- Implement approach based on electrical resistances in bipartite user-item-rating graph improved by special treatment of negative edges
- Called the approach “Biragra”
- Implemented the “user radar”: Find similar users in PIA


Fabian Freier
thomas
artificial
Katja
chess
retrieval
tkramer
Christian
Jérôme Kunegis
Jérôme Kunegis
information
p2p
mhztg

Paper: Modeling Similarity using Electrical Resistance Networks with Negative Edges

- Lead to paper collaboration with Stephan Schmidt (CC SEC, with whom I took math courses)
- Submitted to IJCAI 07, rejected
- Optimistic Plans: ICDM (02-18)
- Better: Find a suitable conference with deadline in March

Paper: Comparison of Rating Predictors

- Implemented several rating predictors for PIA
- Compared them using MovieLens corpus using multiple linear regression
- Result: Combined predictor may be better than individual predictors
- Write paper about with Andreas and Martin
- 3½ page abstract submitted for GES07, awaiting answer March 1st
- More algorithms to be implemented

Other Research Ideas

- Implement more rating prediction algorithms
- Implement “Efficient Identification of Web Communities” in PIA
- Find PIA user communities using linear optimization
- Online modification of communities

Research Policy

- General topic of Ph. D. thesis:

  Graph-based collaborative methods
- Keep research on this track
- Integrate all research into PIA
- “No Day without Research”
- Balance reading/implementing/writing
- [[Benutzer:Jérôme/Forschung]]

My Students

- Bastian: AJAX
- Conny: webdesign/usability

- To do: Supervise diploma theses in line with my research

Interests not Fulfilled by Lab Work

- Linear programming
- Computer chess

Marginally

- Language processing
- Computational complexity theory
- Programming languages: C, C++

Information

- I very much like wikis, in particular the Wikimedia projects and our DAI Lab wiki
- Encodings: Use UTF-8!
- I use
- [[Benutzer:Jérôme]]
- GOR101

Thank You!