LAK Dataset Visualization

Glenn Croes

Bram Gotink

Geert Van Campenhout

Capita Selecta MMC 2012-13

Contents

- Brainstorm session
  - Research questions
  - Possible visualizations
  - Final choice
- Demo
  - The Story
- Technical details and issues
- Lessons learned
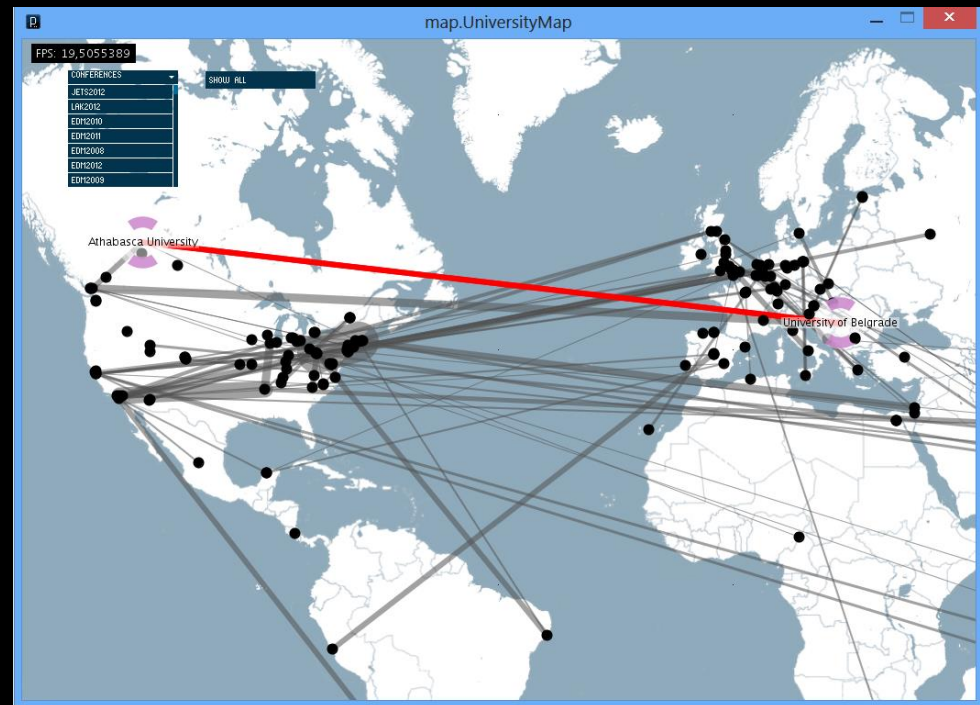- Evaluation method

Research questions

- Target:
  - Researchers
  - Conference organizers
- Questions:
  - What subjects are discussed during this conference? (keywords)
  - What other organisations are researching a certain subject?
  - How do conferences evolve over time?
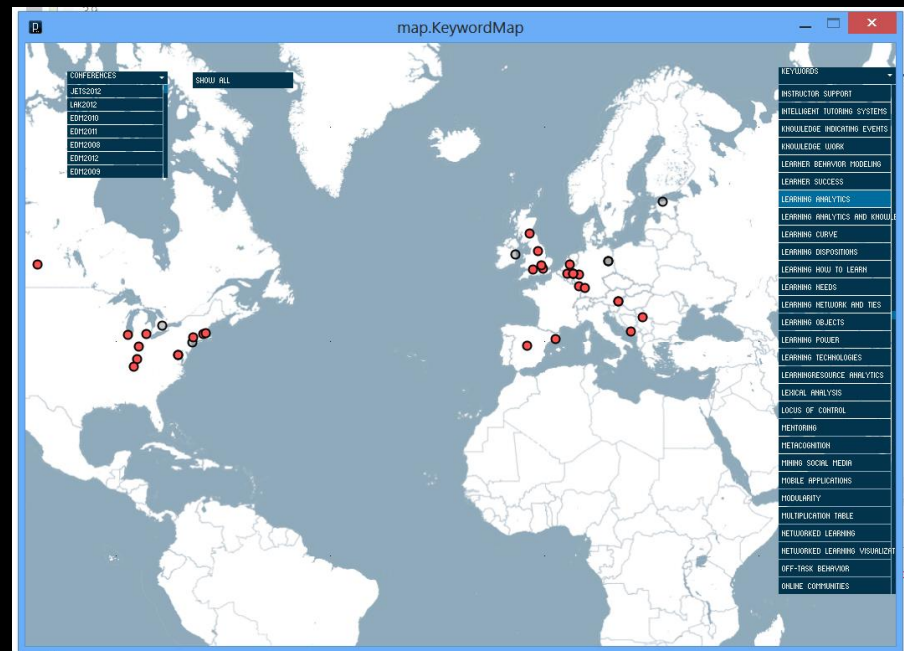 - How do conferences compare to each other?

Possible visualizations

- Common-paper map
  - Our original idea
  - Edges indicate joint research papers between orgs
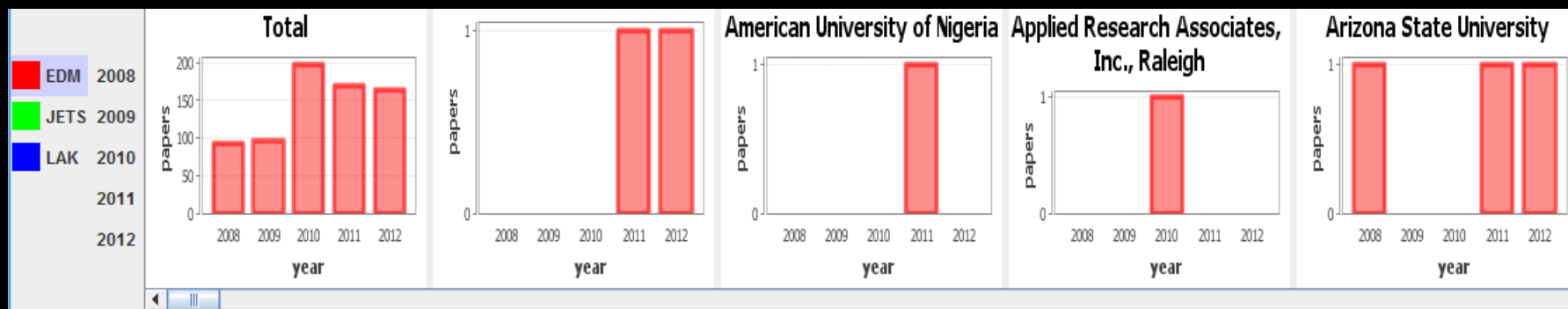 - Thickness indicates amount of common papers

Possible visualizations

- Keyword map
  - List of keywords
  - Show subjects of conference
  - Show orgs of subject
  - Show subjects of org

Possible visualizations

- Barcharts to show:
  - Evolution of #papers conference over time
  - Evolution of #papers of org over time

Possible visualizations

- Aggregate universities to countries when zoomed out far enough
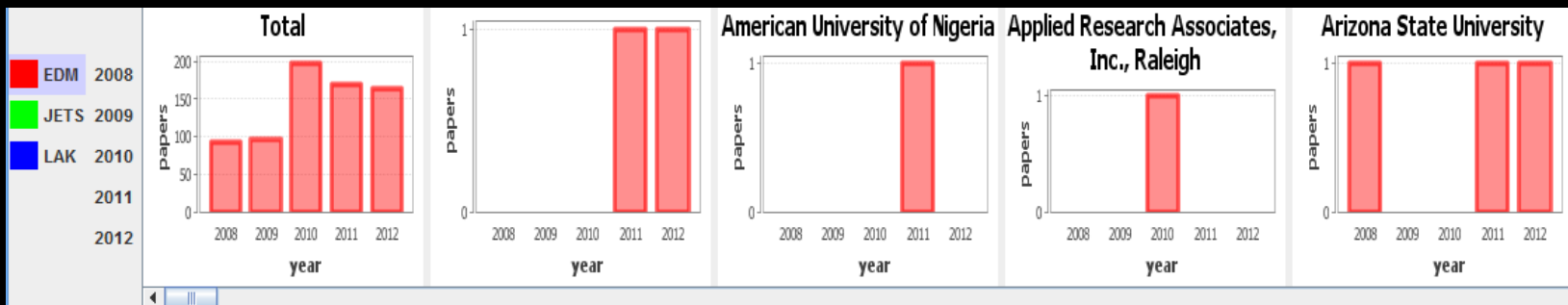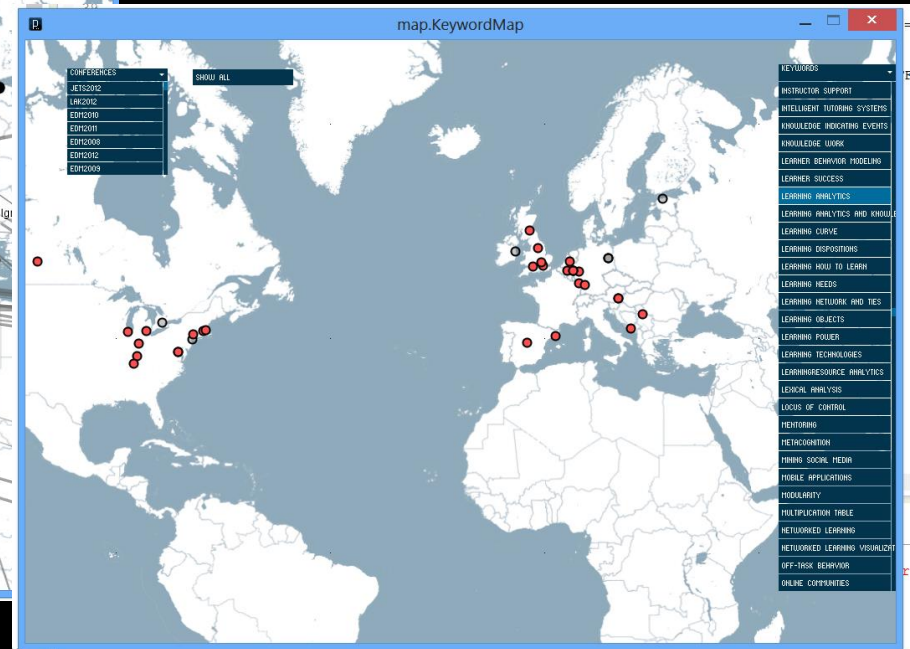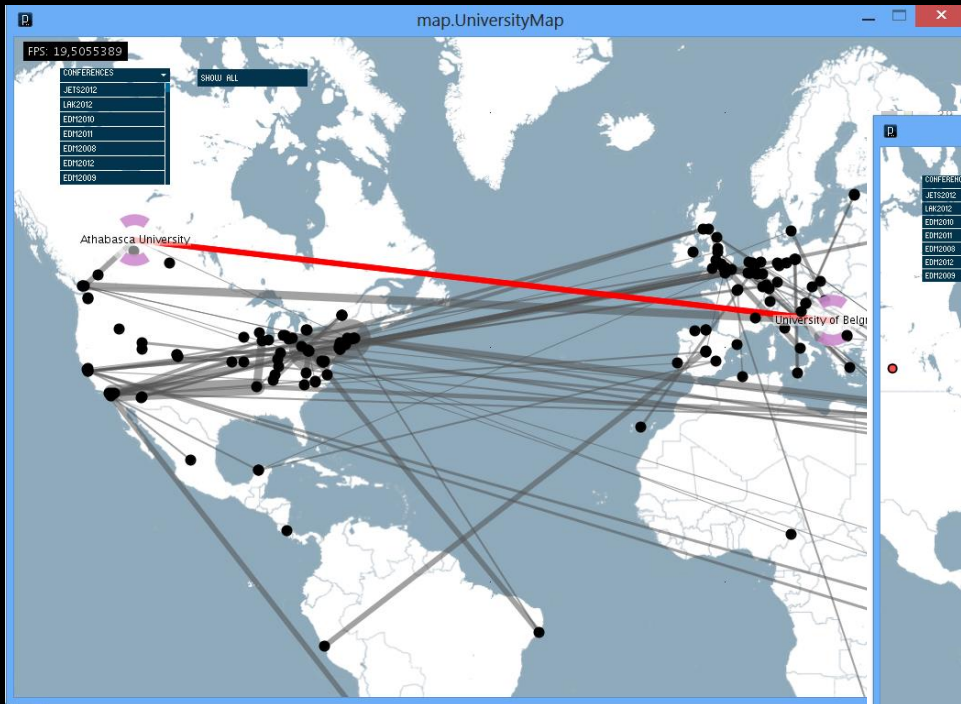
Final choice

- Currently working on combining all of the previous suggestions
- BarCharts + aggregate + common-paper map merged
- KeywordMap still separate
  - Maybe keep it that way?

Demo

Technical details

- Processing + Unfolding
- RDF: JENA
- UI: ControlP5 and Swing
- Animation: Ani
- Charts: JFreeChart
- Logging: Log4j
- Organisation locations fetched from Google Places (and cached)

Lessons learned

- The hardest part is looking for good questions to ask (with an interesting result or story)
- ControlP5 does the trick but is far from ideal
- It's easy to get 'something' visualized, but it's hard to get all the details right

Evaluation method

- Expert evaluation
  - Till
  - prof. Duval
  - Joris, other assistants
  - our fellow students...