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TALLINN UNIVERSITY OF TECHNOLOGY

Visualization of evolutionary cascades of messages using force-directed graphs

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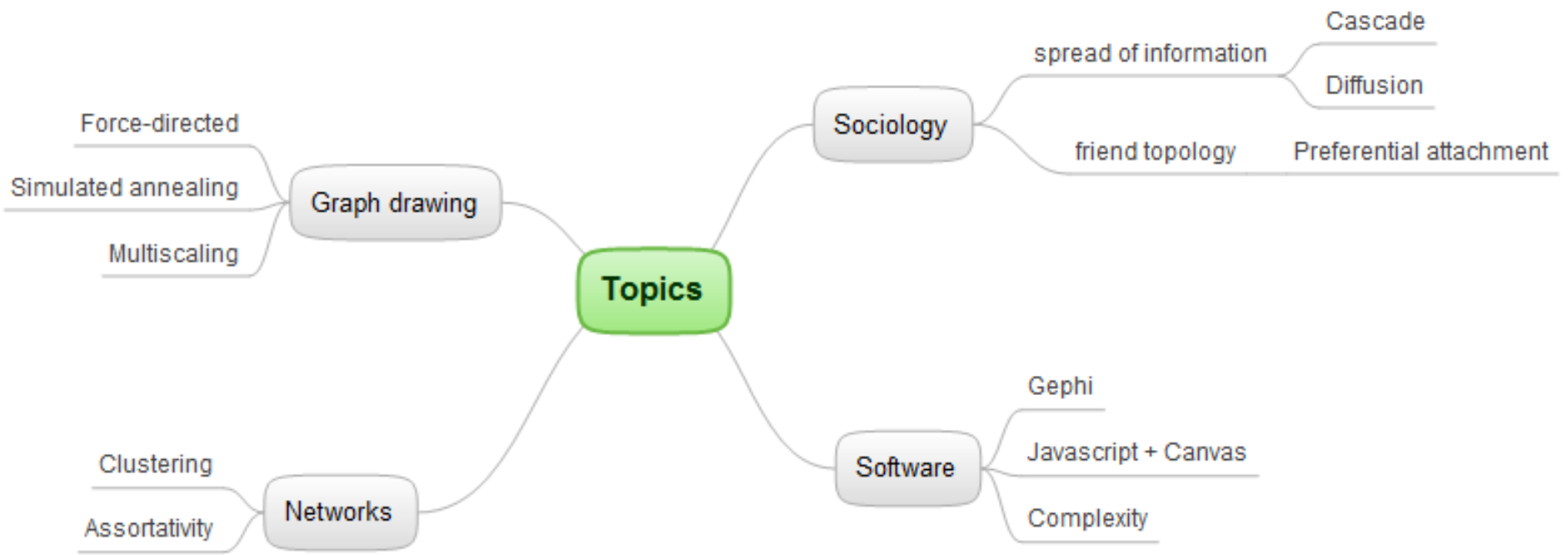
Agenda

- Background
- Practical work
  - Pling.ee,opensource Gephi
  - Web-tool demo and twitter

Background

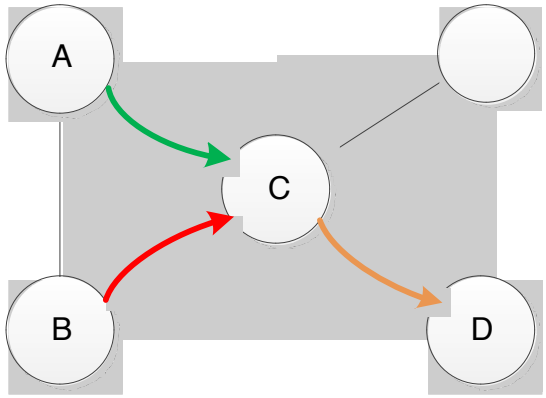
- Types of networks
- Properties / areas of application
- Research interest

Topics crossroads

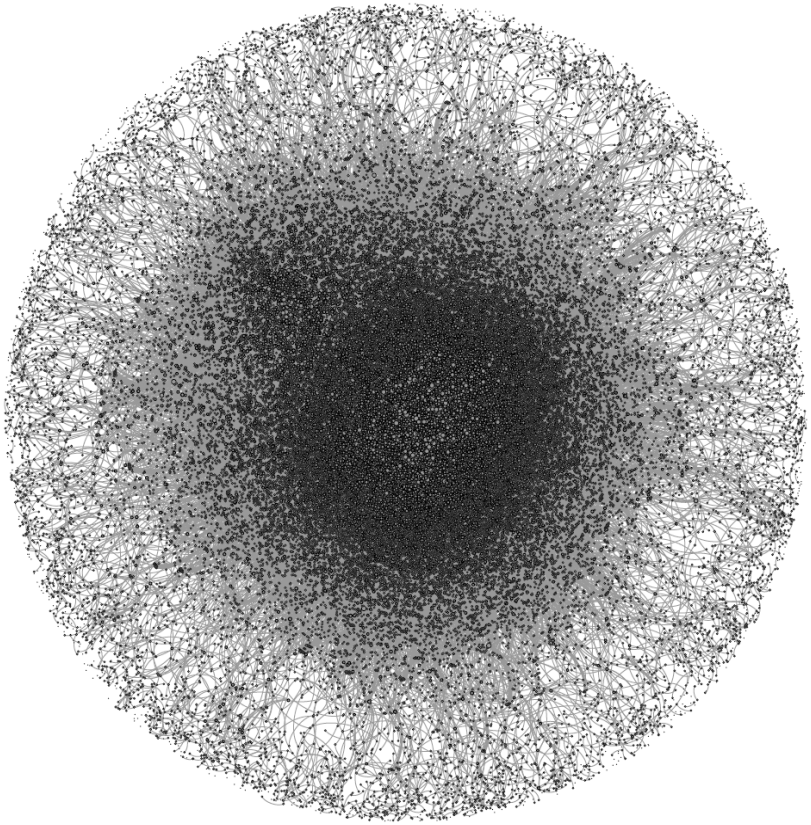


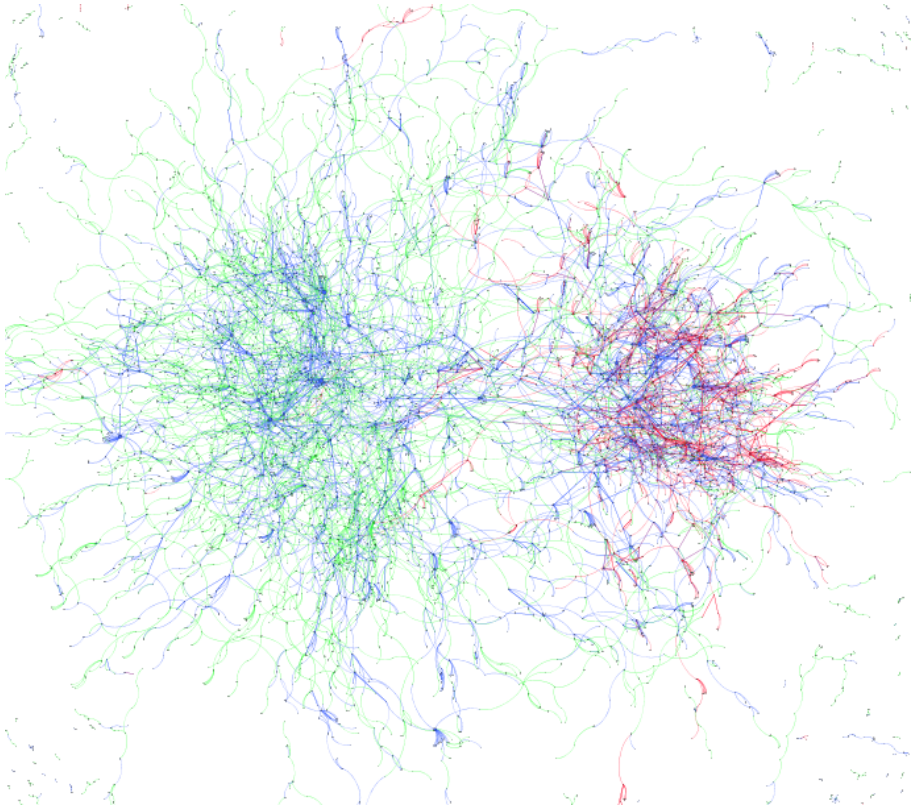
Goals

- Visualize social networks (preferably in Estonia)
- Compare friends and messages topology
- Try to mine data visually using cascades



Pling





Pling – Qualitative measure

	Friends	Messages
Average clustering coefficient	0.135	0.043
Average degree	4.313	2.202
GCC diameter	20	38
Average GCC diameter	5.38	13.009

Topic and interface matters

- Out of 18.6 mln messages - no (clearly visible) cascade

Possibly because

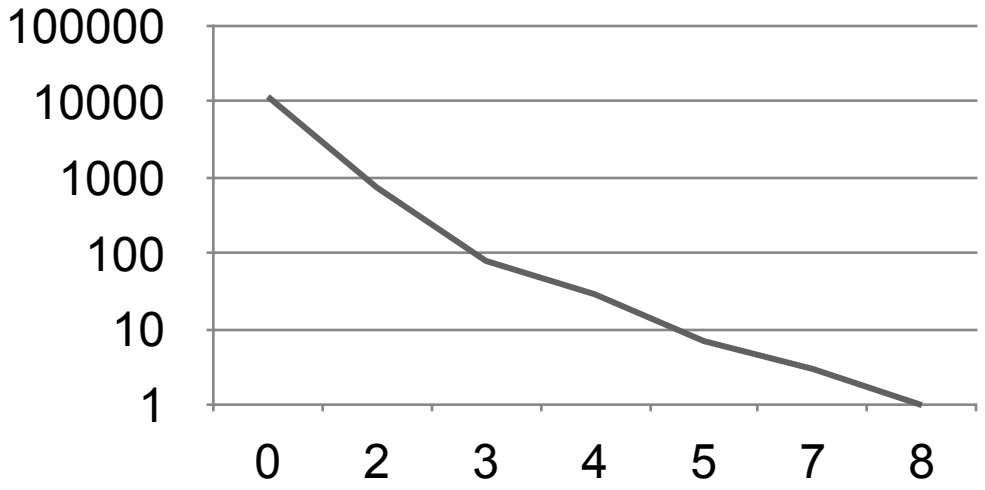
- 89% private
- 86% sent using phone

Javascript tool

- Up to 1000 nodes
- Can add nodes on the fly
- Navigation and filtering
- Properties calculation
- Recursive algorithm

Twitter

- Friendship and message network mined
- 218 users / 12643 messages, 6.89% retweets



Thank you

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Questions?

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