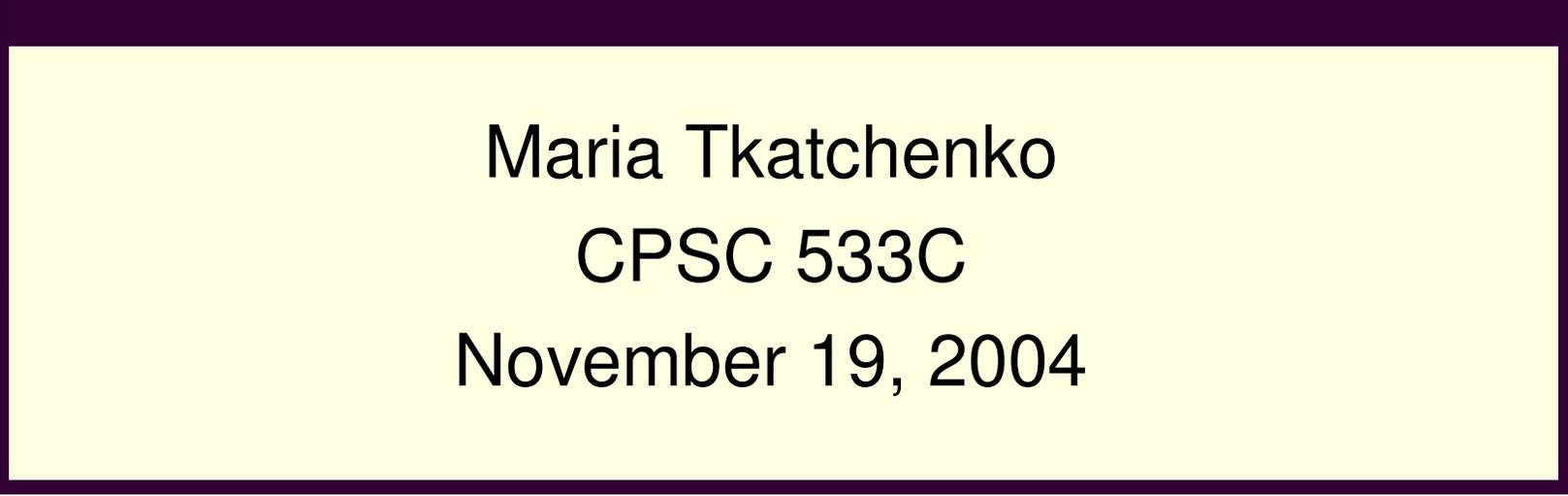




Survey Visualization



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CPSC 533C
November 19, 2004

Problem

- Survey composed of
 - Questionnaire
 - Collected data
- Want to explore relationships between responses to various questions
 - Correlation
 - Correlation matrix not efficient

Data set

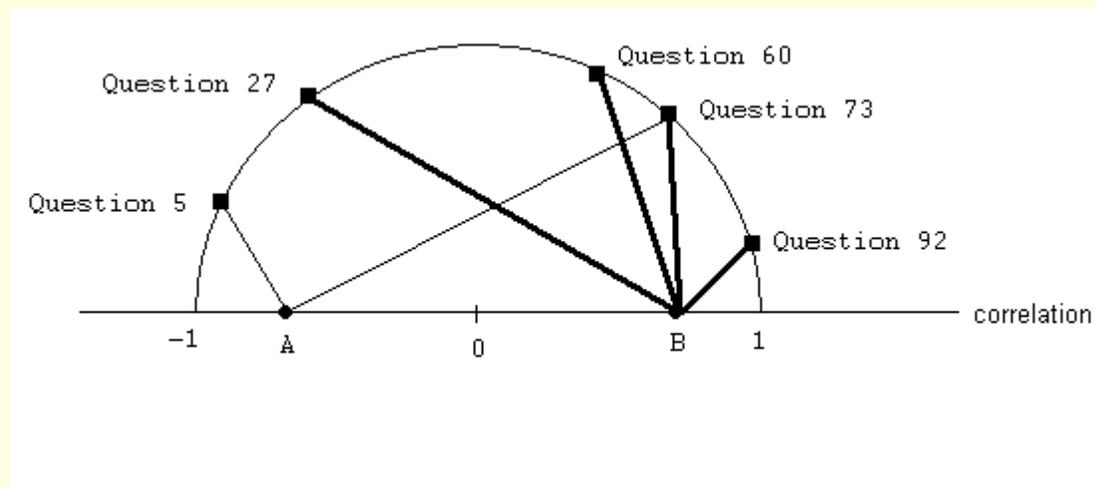
- National Election Studies center's pre- and post-election surveys
- National Center for Chronic Disease Prevention and Health Promotion Behavioral Risk Factor survey
- 1K - 100K respondents
- 100s of questions (dimensions)

Proposed solution (1)

- A way to visually present
 - questions
 - correlation relationships between them
- Would allow to answer questions that are very hard to do with the correlation matrix

Proposed Solution (2)

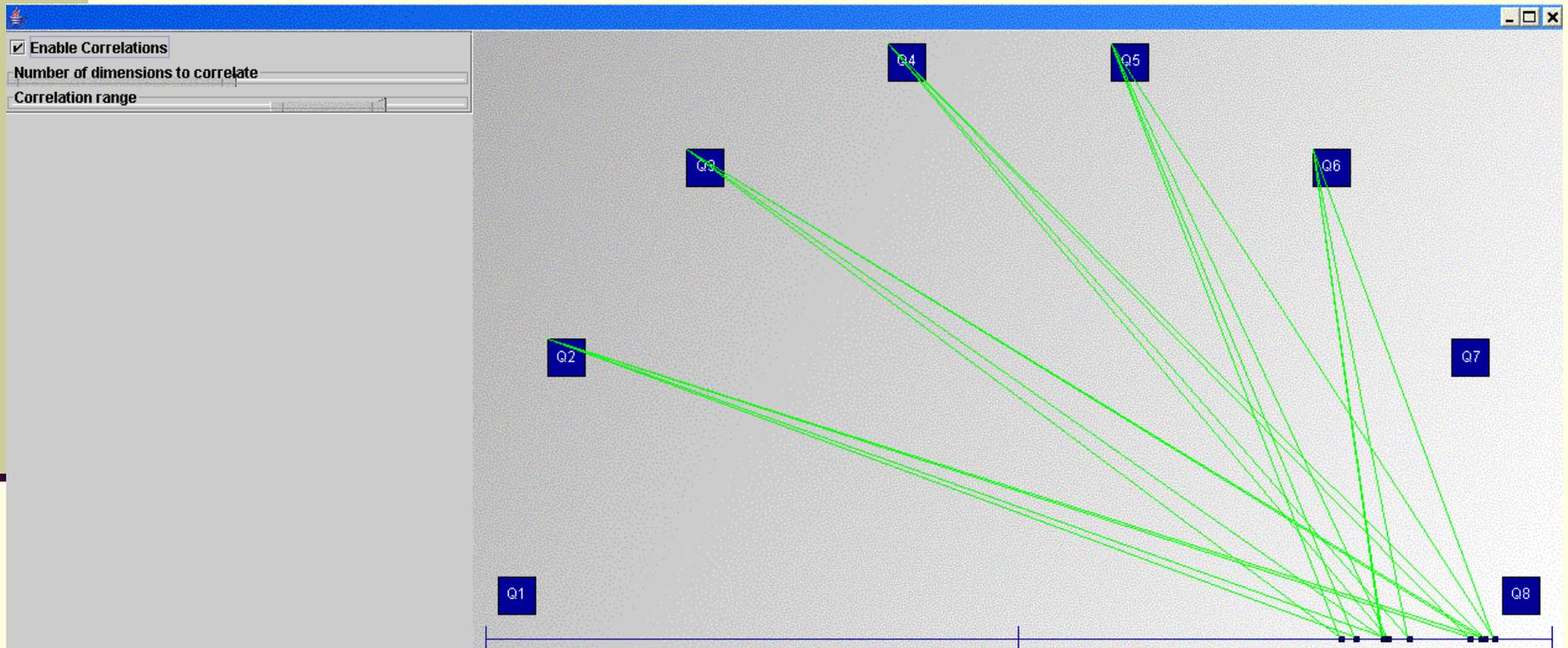
- Points representing questions positioned along a semi-circle
- Correlation axis along diameter



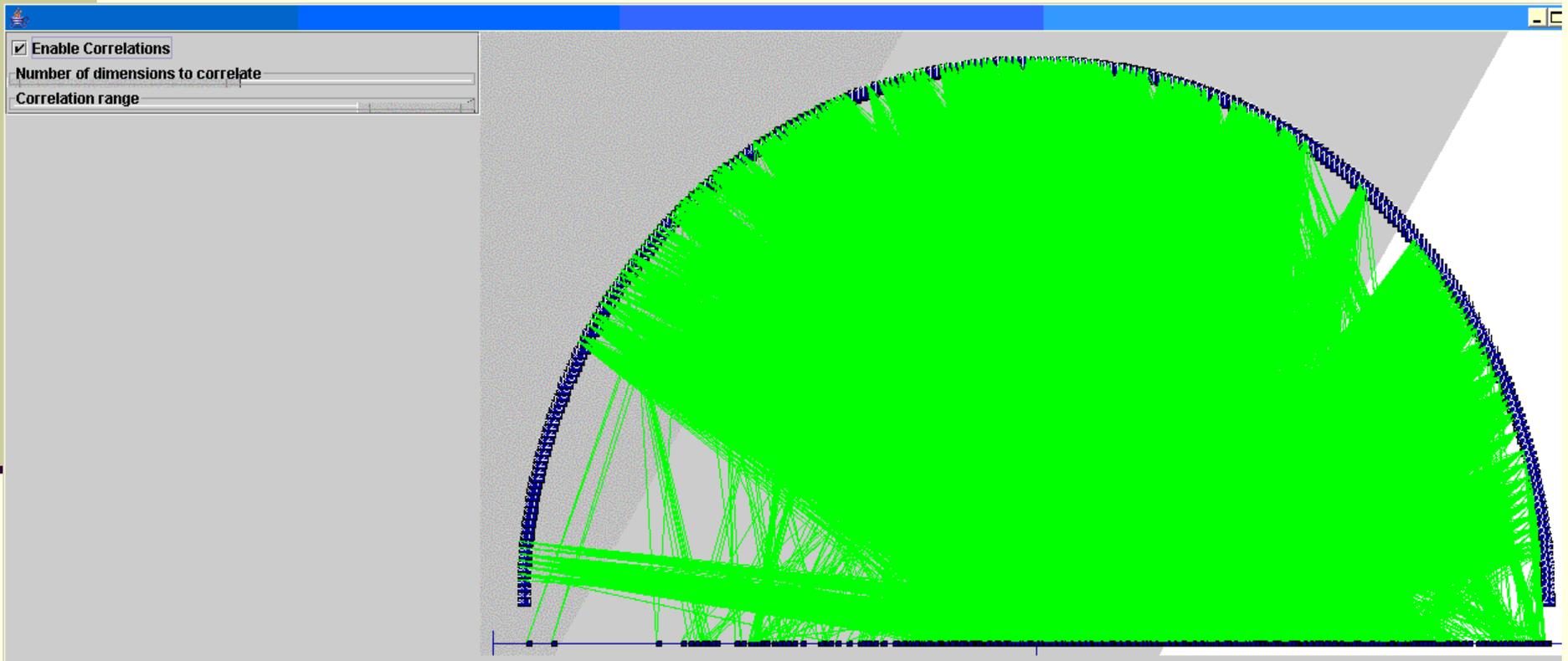
Tool

- Implementation so far relies on InfoVis Toolkit and Java 2D
- Found source that implements matrices and calculations for Spearman's rank correlation coefficient
 - <http://intrepid.mcs.kent.edu/~blewis/stat/index.html>
- Input data format
 - CSV, converted to InfoVis toolkit's TQD format
 - simple parsers can be written to extend the tool to handle other formats, as well

Screenshots (1)



Screenshots (2)





Questions?

Challenges so far

- InfoVis toolkit
- Statistical calculations and matrix manipulations in Java
- Statistical measures of multi-dimensional correlation



Suggestions?