SUPPORTING HANDOFF IN ASYNCHRONOUS COLLABORATIVE SENSEMAKING USING KNOWLEDGE-TRANSFER GRAPHS

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Results: Phase 2
- Between-subjects design with 18 participants
- Divided participants into groups of 3, "...the investigation started and what the thought process was and how [the graph] was developed." ~ Participant

Graph Panel
- Allow an investigator to build a 2D graph visualization of dataset Nodes and links can be created and labeled to encode abstract concepts as entities.
- Four basic types represented by marks, utilizing color and shape channels: To-do, Question, important, Hypothesis.

Dataset Panel
- Displays the data being investigated: references, assignee nodes and link to the source evidence documents or artwork in the dataset
- Comments are freeform text and can be used to encode thought process.
- Can be added to any node or link.

Dataset Panel (C)

Comment Panel

Timeline Panel:

Panels: Linked Multiple Views of KTGraph

Analysis Summary
- What: Data, graphs, images, messages, etc.
- Why: Tasks
- How: Encode, Facet, Link, Update, View, panels.

Knowledge Transfer Graph (KTGraph)
- Handoff of partial findings in asynchronous collaborative analysis is challenging: Gaps in communication may not be adequately resolved or captured.

User Study
- Phase 1: Studied activities of follow up analyst
- Phase 2: Studied activities of the starting and follow up analyst
- Compared KTGraph against baseline graph.

Results: Phase 1
- Between-subjects design with 20 participants
- Performance metrics: handoff score, de-briefing score, key documents score
- KTGraph compared to 71% Baseline score.

Results: Phase 2
- Between-subjects design with 18 participants
- Questionnaire provided to each participant
- KTGraph and baseline received similar ratings on usefulness

Critique
- KTGraph critique: KTGraph does not scale well.
- KTGraph requires manual organization.
- KTGraph is less effective at supporting handoff than baseline.

Works Cited
- doi: 10.1109/TVCG.2017.2745279