



VIS 2015

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SensePath: Understanding the Sensemaking Process through Analytic Provenance

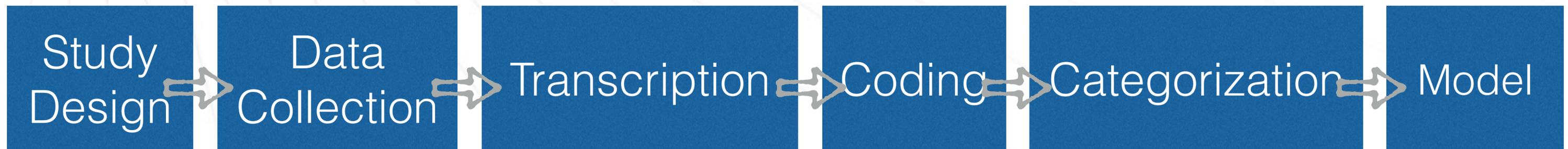
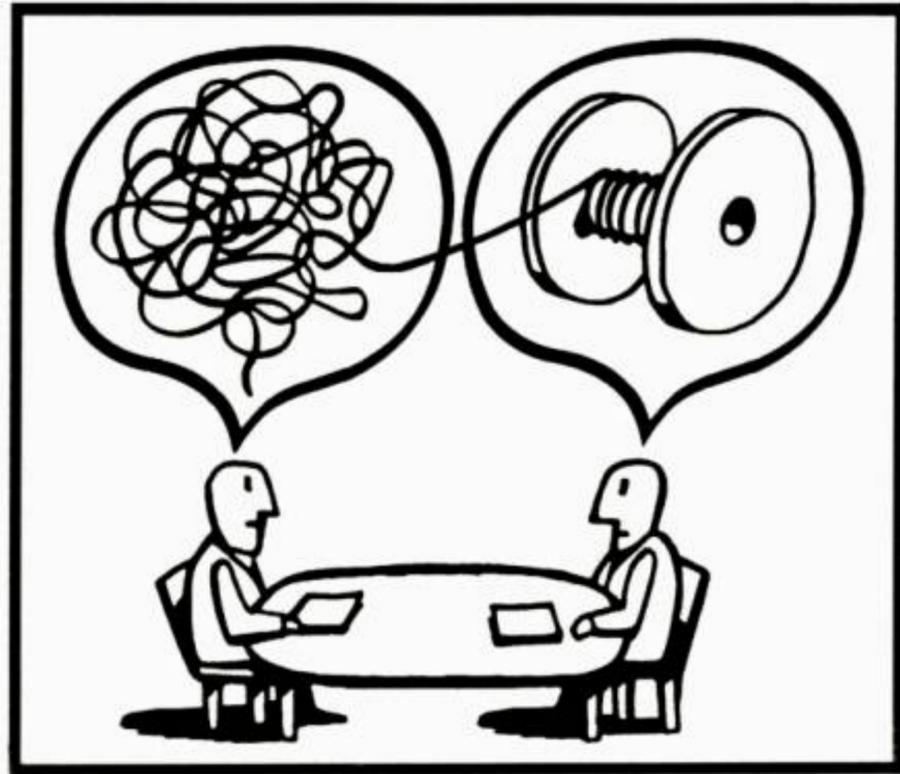
Phong H. Nguyen, Kai Xu, Ashley Wheat,
B.L. William Wong, Simon Attfield, and Bob Fields



Sensemaking

- What?
 - gain insight, produce knowledge, inform action
 - holiday planning
- Why understand?
 - build effective tools to improve current processes

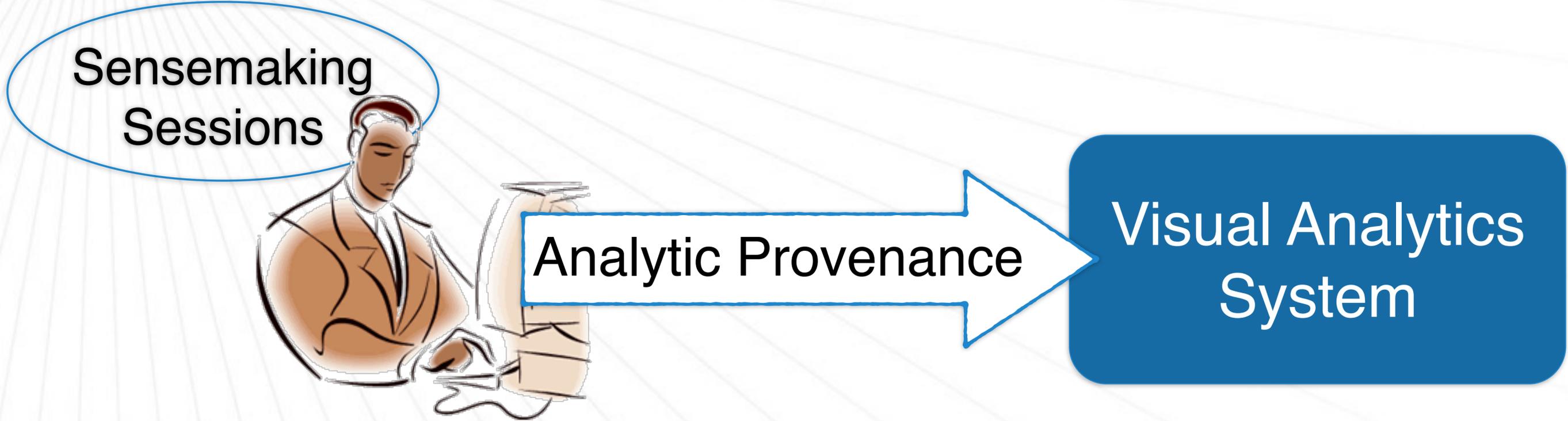
How to Understand the Sensemaking Process?



Requirements

- Support **thematic analysis**
- Accelerate **transcription** and **coding**
- Integrate with existing workflow

General Approach



SensePath

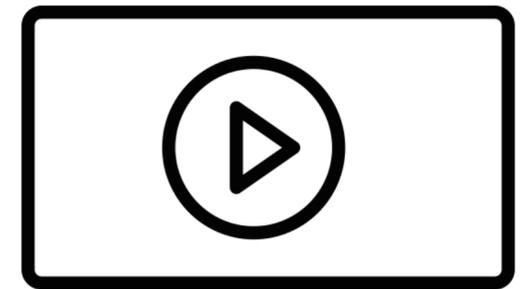


Analytic Provenance

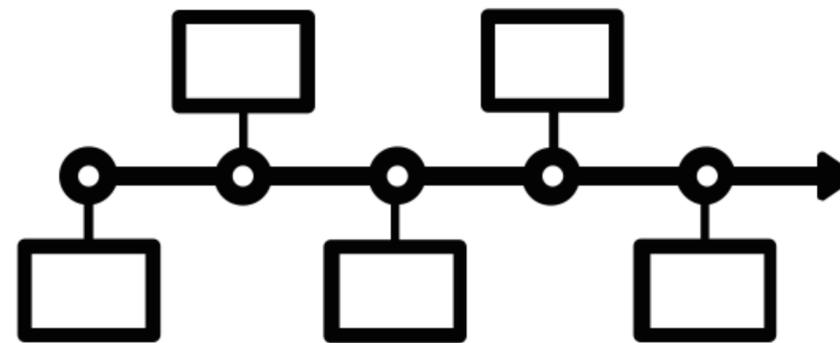
4 linked visualizations



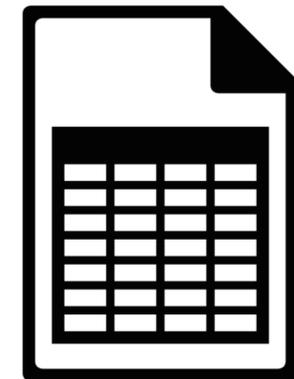
Browser



Replay



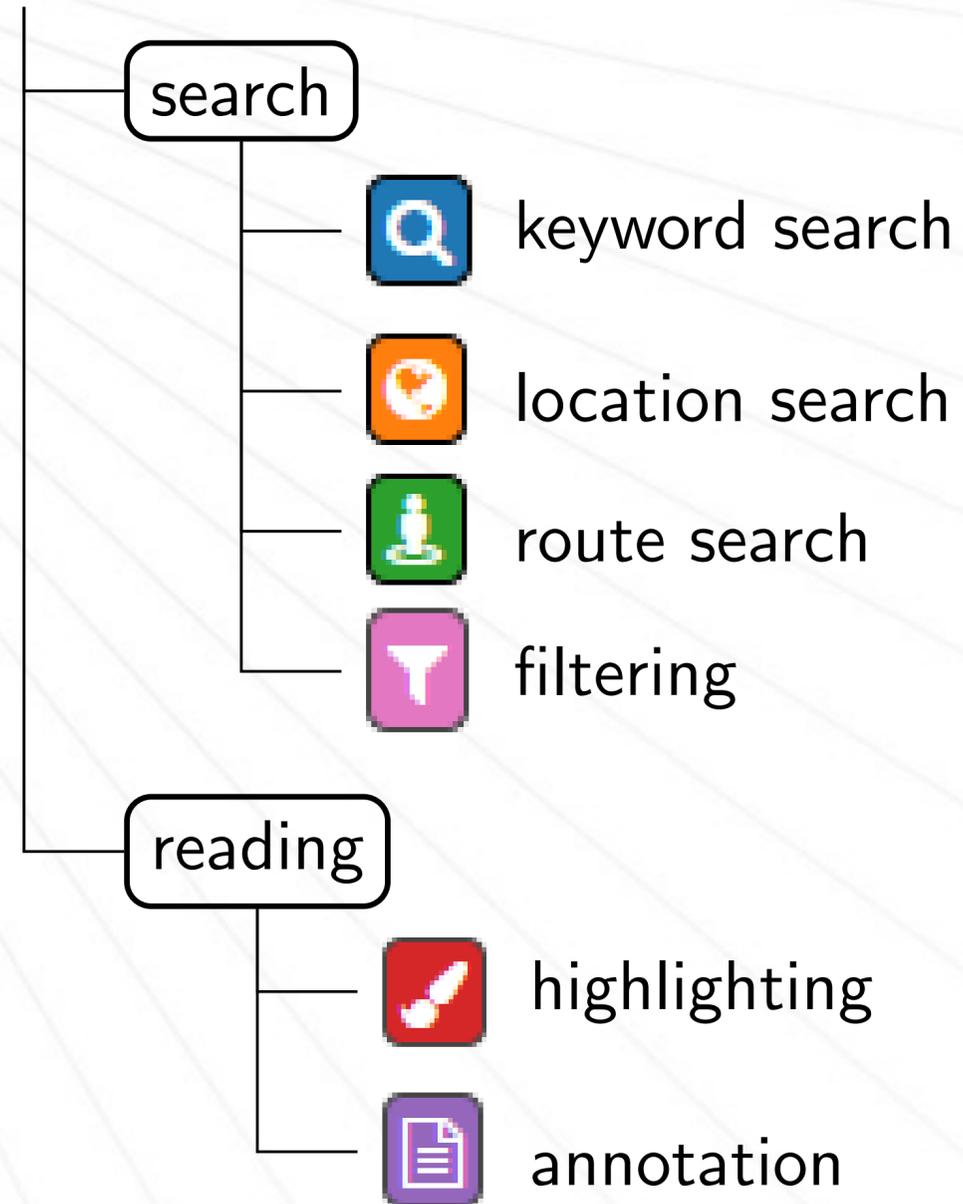
Timeline



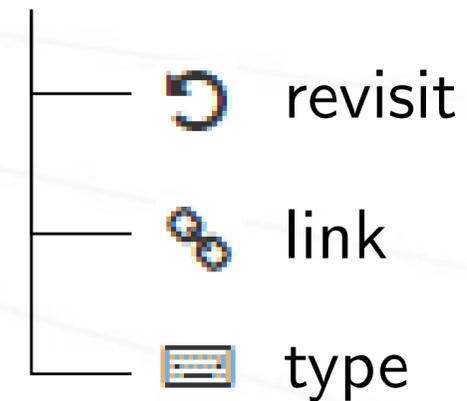
Tabular

Capture Analytic Provenance

Action Type



Relationship



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Room(s): 1 | Adult(s): 1 | Child(ren): 0

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Play Within Selection

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Export Transcript

Start time	End time	Action	Theme	Description
00:05:32	00:06:08	location search	location search of hotel	37 seconds spent in searching 'BEST WESTERN GEORGETOWN HOTEL AND SUITES'
00:06:18	00:06:46	link follow		29 seconds spent in browsing 'Washington DC Hotels BEST WESTERN Georgetown Hotel & Suites Embassy Row Hotel'
00:06:49	00:07:12	link follow	hotel booking	23 seconds spent in browsing 'Bestwestern.com, the World's Biggest Hotel Family@'
00:06:56		filter		At second 7, add: checkInDate=5/13/2015, checkoutdate=5/16/2015, isAvailabilityCalendar=true, radioType=rates
00:07:14	00:07:31	page revisited 1 times		17 seconds spent in browsing 'Best Western Georgetown Hotel & Suites - Google Maps'
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SensePath - Timeline View

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Evaluation

- Design
 - Dataset: capture of *travel planning* task
 - Participant: a 7-year experienced HCI researcher
 - Task: use SensePath to understand the user's sensemaking process
- Findings
 - reduced half the time
 - able to summarize steps, identify rough strategy
 - timeline: good overview, easy pattern detection
 - linked timeline + video: save plenty of time

Demo

Conclusion

- SensePath speeds up the transcription and coding processes
- SensePath integrates with qualitative analysis softwares
- A general approach potentially apply to other qualitative research fields