

Interaction Log and Provenance for Sensemaking

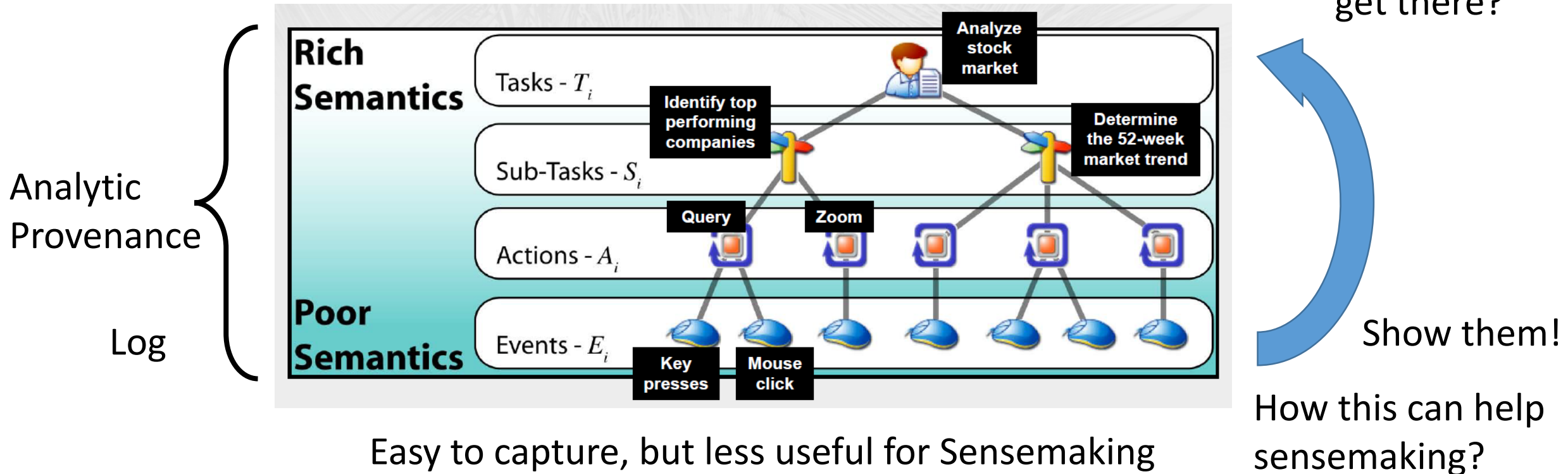
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<http://vis4sense.github.io/>

Log, Provenance, and Sensemaking

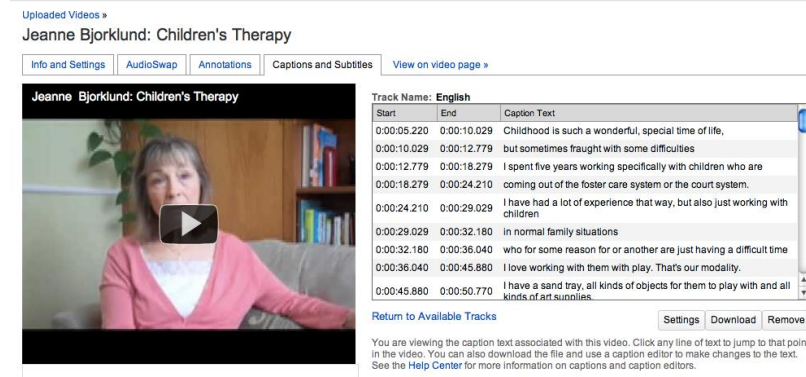
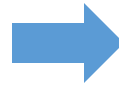
Difficulty to capture, but useful for Sensemaking



Support Qualitative Studies (the Sensemaking Task)



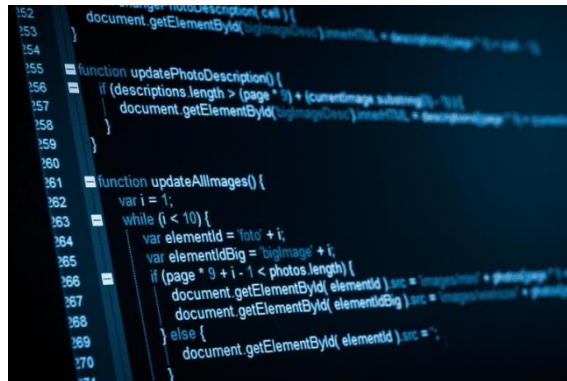
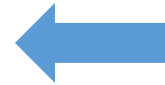
User Study



Data Analysis



Design



Implementation



SensePath: Understanding Online Sensemaking

The screenshot displays the SensePath interface, which is used for analyzing online sensemaking processes. It consists of four main panels:

- Top Left (B):** A web browser window showing the Best Western Georgetown Hotel & Suites website. The URL is book.bestwestern.com/bestwestern/US/DC/Washington-hotels/BEST-WESTERN-Georgetown-Hotel. The page includes a search bar, a photo gallery, and a booking form.
- Top Right (C):** A "SensePath - Replay View" window showing a video playback of the user's actions on the website. The video is labeled "C".
- Middle Right (D):** A "SensePath - Transcription View" window showing a table of user actions. The table is labeled "D".
- Bottom (A):** A "SensePath - Timeline View" window showing a sequence of user actions over time. The timeline is labeled "A".

The transcription view (D) contains the following data:

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, chkoutdate=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'
00:07:34	00:08:12	page revisited 1 times		39 seconds spent in browsing 'Destwestern.com, the World's Diggest hotel Family@'

Action Type

search



keyword search



location search



route search



filtering

browsing



highlighting



annotation

Relationship



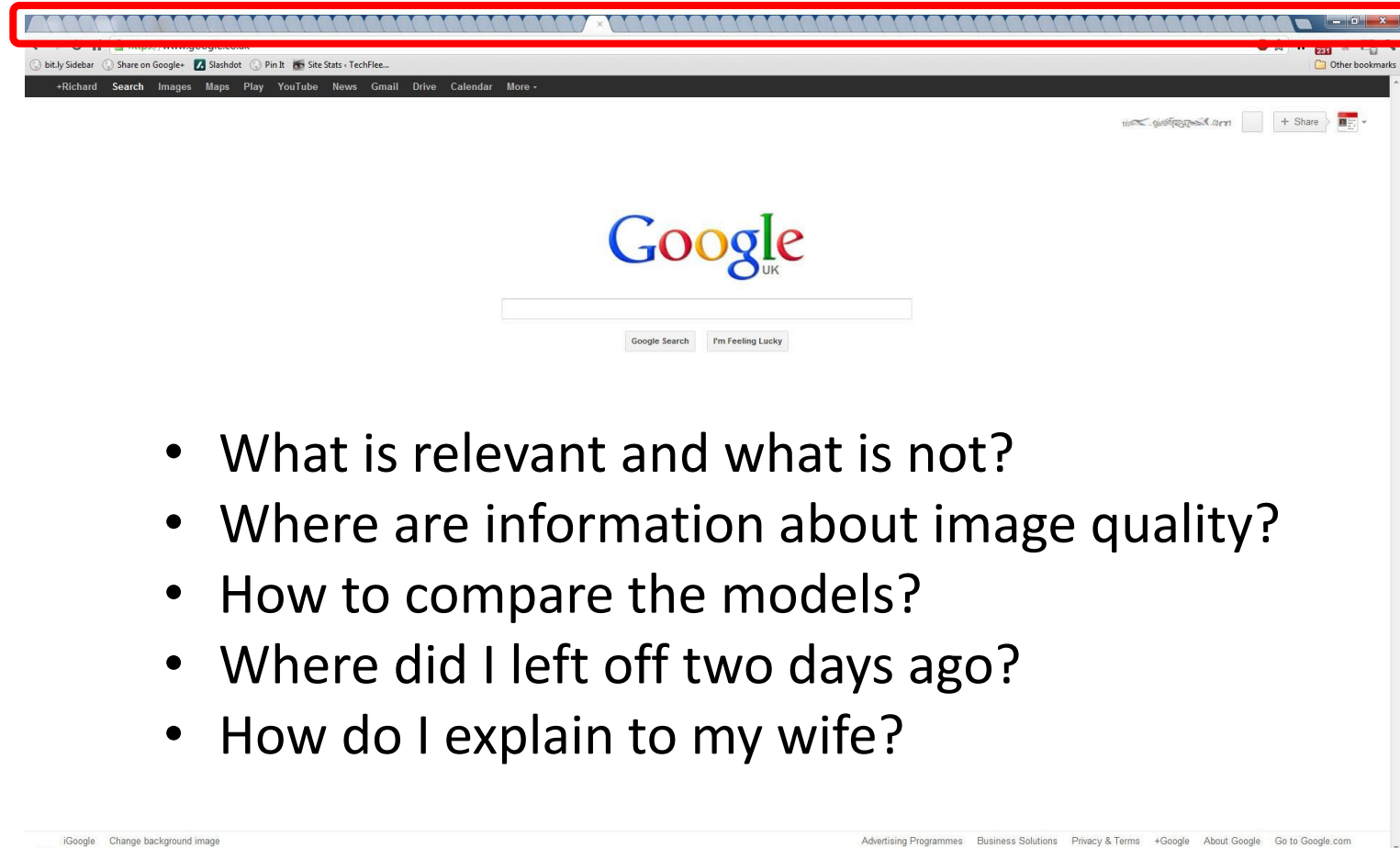
link



revisit

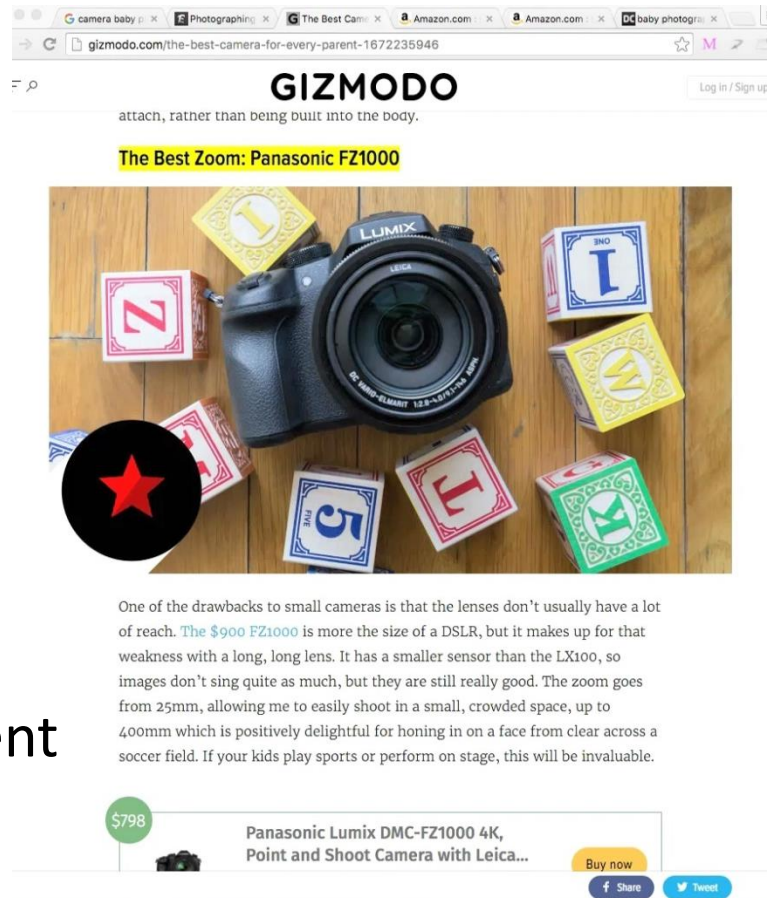
Nguyen, P. H., Xu, K., Wheat, A., Wong, B. W., Attfield, S., and Fields, B. 'Sensepath: Understanding sensemaking process through analytic provenance'. TVCG vol. 22, no. 1, pp. 41-50, 2015

What does Sensemaking Look Like?

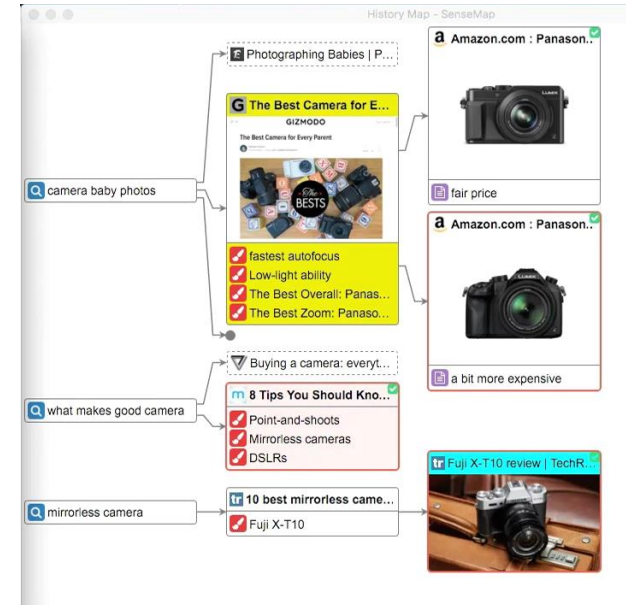


- What is relevant and what is not?
- Where are information about image quality?
- How to compare the models?
- Where did I left off two days ago?
- How do I explain to my wife?

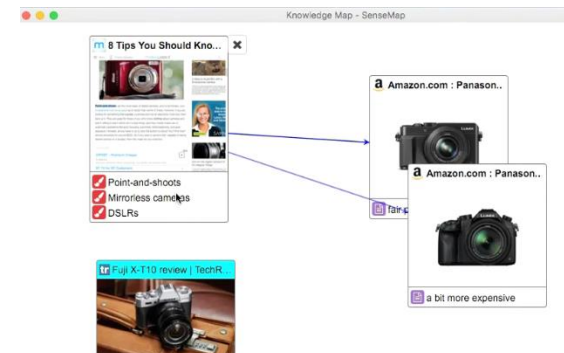
SenseMap – Support Sensemaking ‘Navigation’



Browser
enhancement



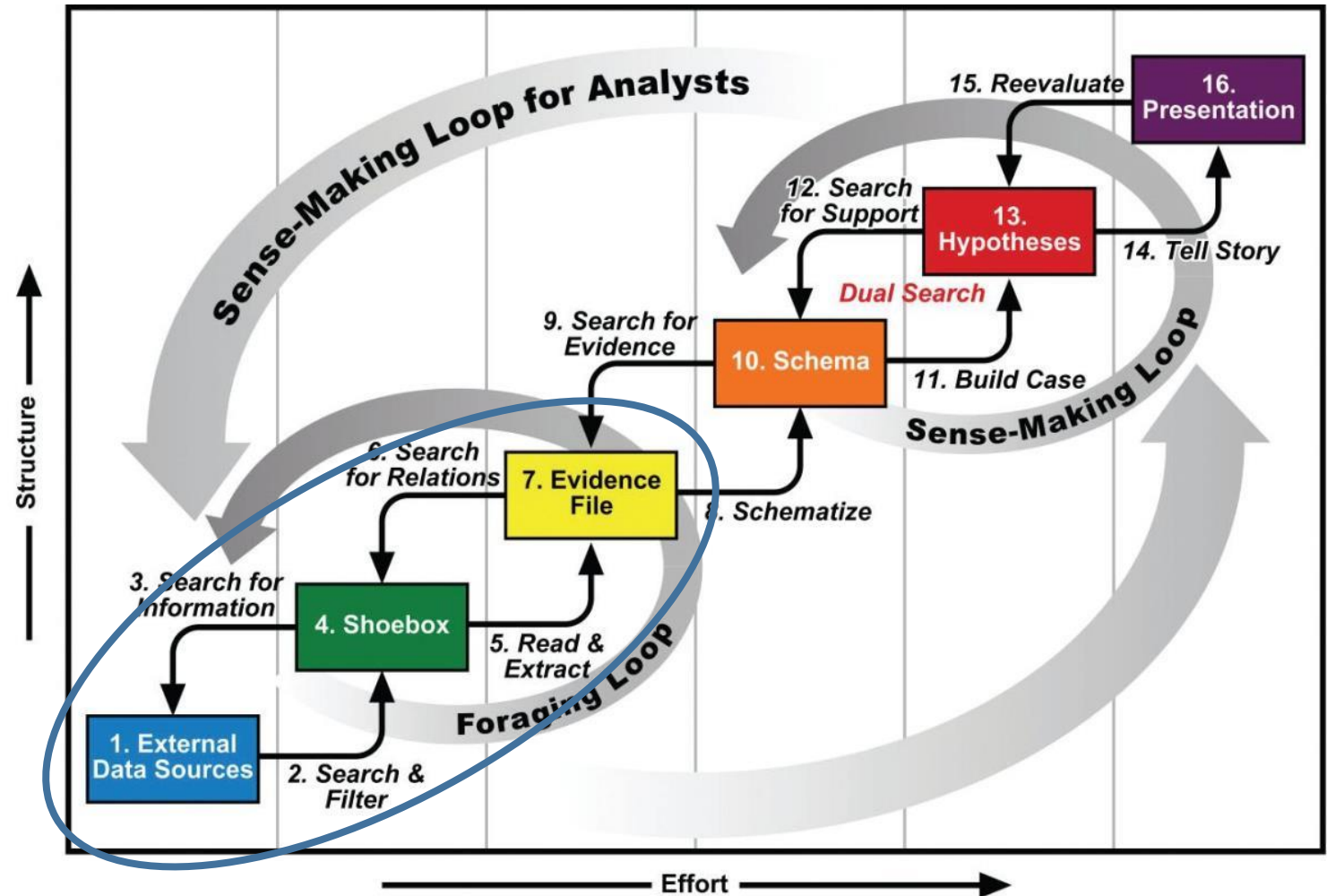
History
Map



Knowledge
Map

Phong Nguyen, Kai Xu, Andy Bardill, Betul Salman, Kate Herd, William Wong, 'SenseMap: Supporting Browser-based Online Sensemaking through Analytic Provenance'. *IEEE VAST*, 2016

Future Work



K. Xu, S. Attfield, T.J. Jankun-Kelly, A. Wheat, P. H. Nguyen, and N. Selvaraj, “Analytic Provenance for Sensemaking: A Research Agenda”, *IEEE CG&A*, 35, 03 (2015), 56-64.