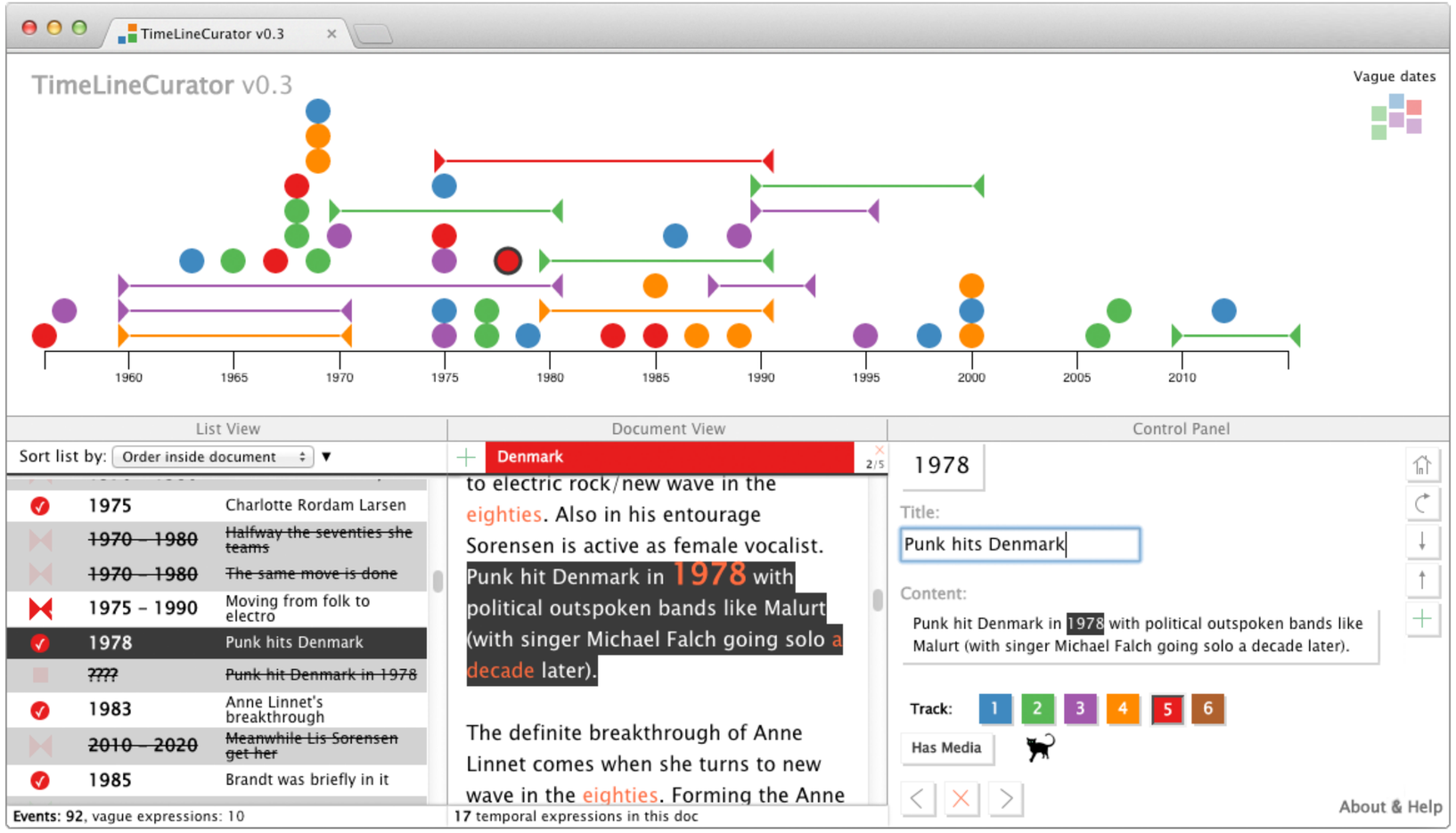
TimeLineCurator

Interactive Authoring of Visual Timelines from Unstructured Text



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Setting the stage

- Experience creating infographics in newsroom
- **Timelines** are popular, but tedious to create
- How could we make that easier?

Introducing **TimeLine**Curator

Video:
vimeo.com/jofu/tlc

Creating Timelines

2 common approaches

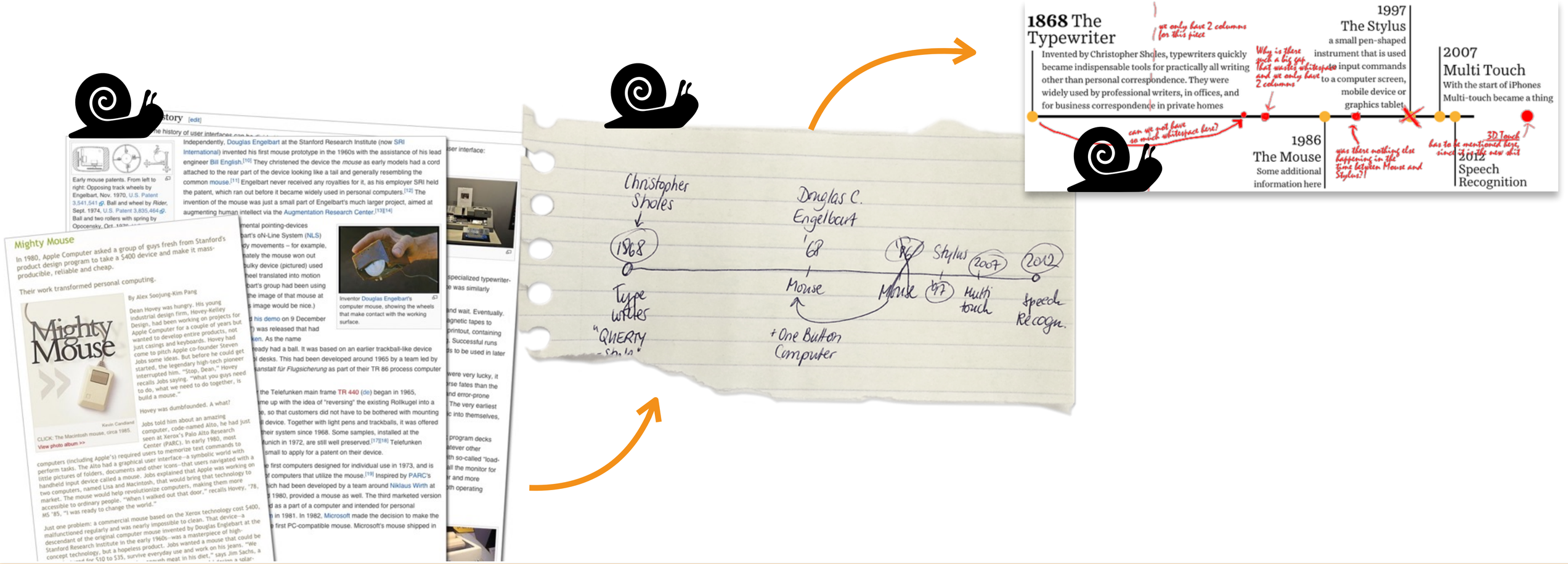
- **Manual creation**
  Creating **static timelines**, e.g. for print
- **Structured creation**
  Creating **interactive timelines**, e.g. for online use

5 tasks to go through

Browse → Extract → Format → Show → Update

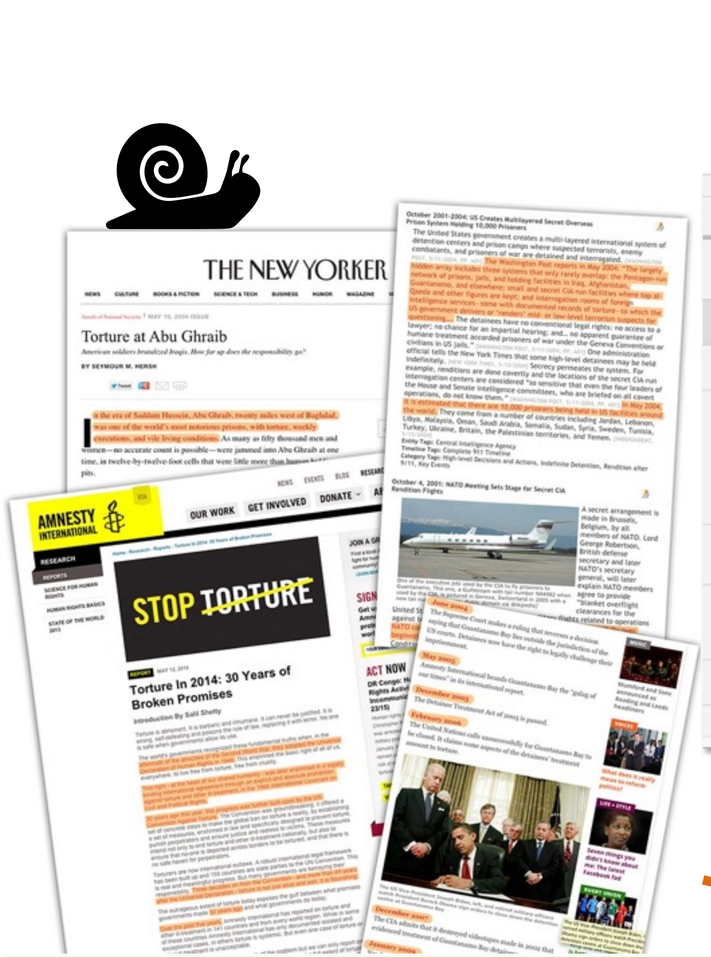
Manual creation process

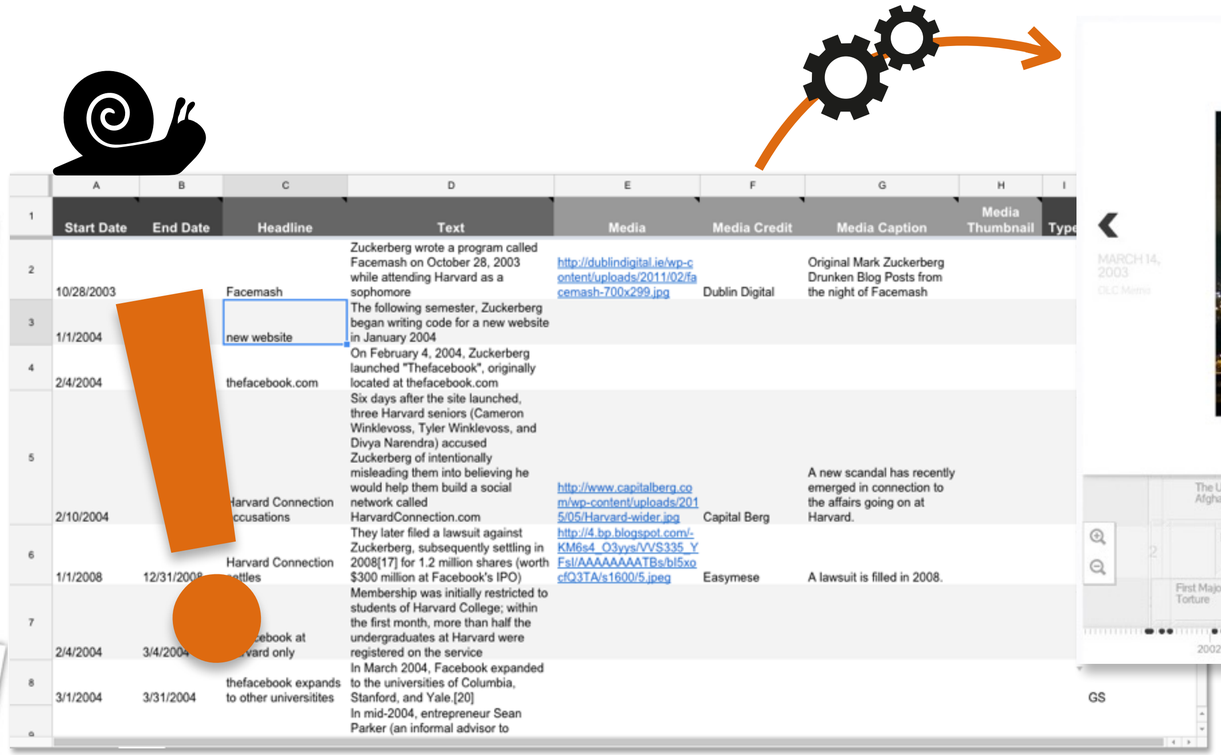
Browse → Extract → Format → Show → Update



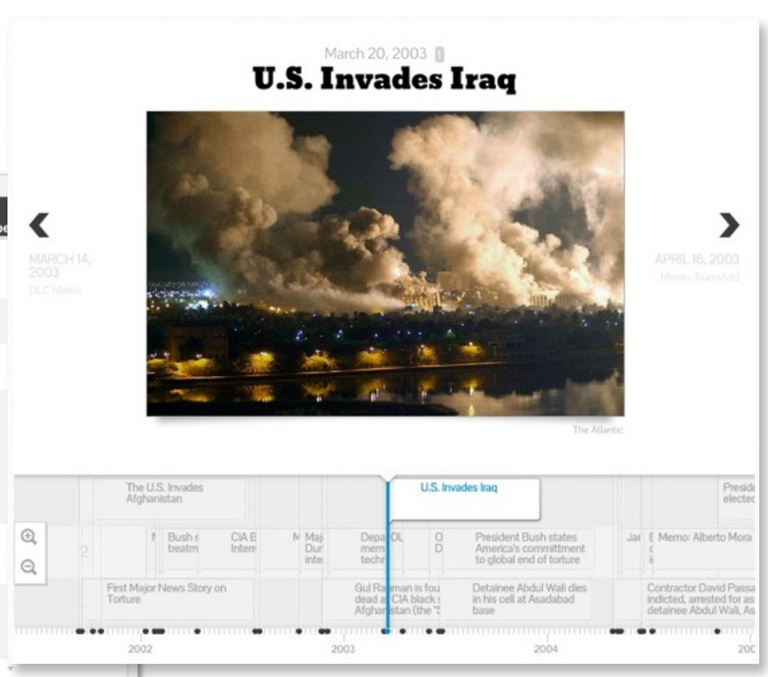
Structured creation process

Browse → Extract → Format → Show → Update





	A	B	C	D	E	F	G	H	I
1	Start Date	End Date	Headline	Text	Media	Media Credit	Media Caption	Media Thumbnail	Type
2	10/28/2003		Facemash	Zuckerberg wrote a program called Facemash on October 28, 2003 while attending Harvard as a sophomore	http://dublindigital.ie/wp-content/uploads/2011/02/facemash-700x299.jpg	Dublin Digital	Original Mark Zuckerberg Drunken Blog Posts from the night of Facemash		
3	1/1/2004		new website	The following semester, Zuckerberg began writing code for a new website in January 2004					
4	2/4/2004		thefacebook.com	On February 4, 2004, Zuckerberg launched "Thefacebook", originally located at thefacebook.com					
5	2/10/2004		Harvard Connection ccusations	Six days after the site launched, three Harvard seniors (Cameron Winklevoss, Tyler Winklevoss, and Divya Narendra) accused Zuckerberg of intentionally misleading them into believing he would help them build a social network called HarvardConnection.com	http://www.capitalberg.com/wp-content/uploads/2015/05/Harvard-wider.jpg	Capital Berg	A new scandal has recently emerged in connection to the affairs going on at Harvard.		
6	1/1/2008	12/31/2008	Harvard Connection ettles	They later filed a lawsuit against Zuckerberg, subsequently settling in 2008[17] for 1.2 million shares (worth $300 million at Facebook's IPO)	http://4.bp.blogspot.com/-KM6s4_O3yys/VVS335_YFsI/AAAAAAAATBs/bl5xocfQ3TA/s1600/5.jpeg	Easymese	A lawsuit is filled in 2008.		
7	2/4/2004	3/4/2004	ebook at vard only	Membership was initially restricted to students of Harvard College; within the first month, more than half the undergraduates at Harvard were registered on the service					
8	3/1/2004	3/31/2004	thefacebook expands to other universitites	In March 2004, Facebook expanded to the universities of Columbia, Stanford, and Yale.[20] In mid-2004, entrepreneur Sean Parker (an informal advisor to					



TimelineJS

timeline.knightlab.com/

Timeline Authoring Model time required for each task

	Browse	Extract	Format	Show	Update
Manual Creation	 slow	 slow		 slow	 slow
Structured Creation	 slow	 slow	 slow	 automated	 fast
TimeLine Curator	 fast	 automated	 automated	 fast	 fast

Previous Work

LeadLine, Jigsaw

e.g. TERNIP

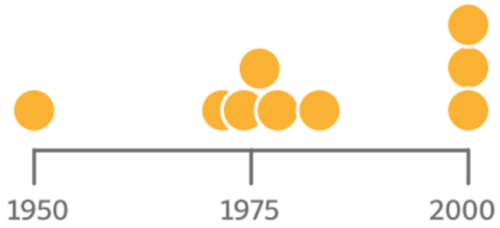
Unstructured Text

LifeLines, Google News Timeline, TimelineJS

col1	col2	col3
50	birth	some more text
65	graduation	that belongs
74	first job	to the topic and
76	next job	was curated
80	discovery	very carefully to
90	nobel prize	give a lot of info

Structured Data

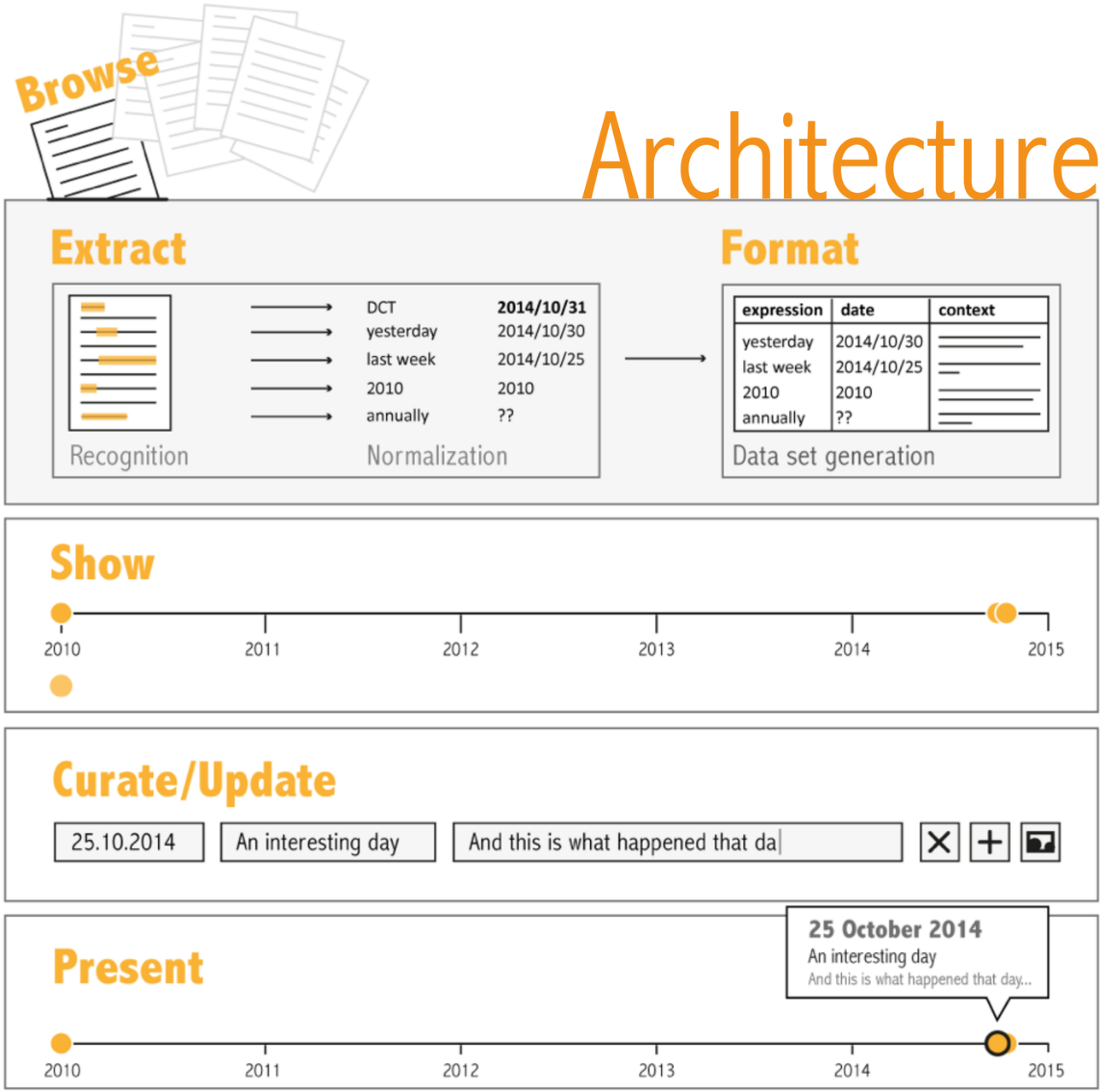
Tableau, Lyra



Vis Authoring Tools

TimeLineCurator

Architecture



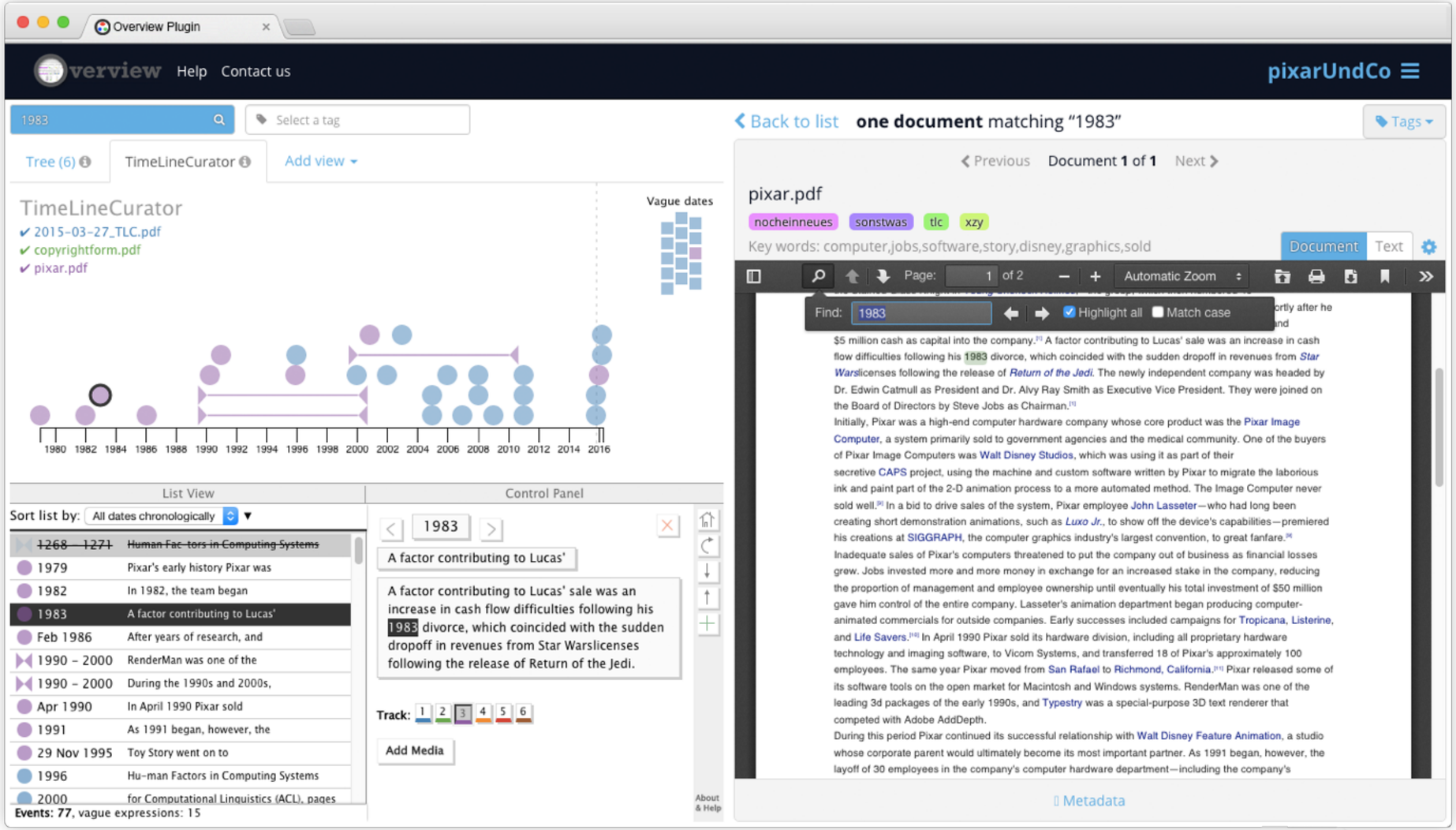
Validation

- **“Into the wild” feedback**
  - Used for actual projects

    Deaf churches in England, company profile
  - Promoted by Nick Diakopoulos at NICAR15
  - Mentioned in „Making Timelines“ from Lena Groeger (ProPublica)

- **Ideas for further development**
  - NLP-related: *Including B.C. dates, Including other languages*
  - Integration with existing tools and workflows: *e.g. Overview*

Overview for analyzing large sets of documents: www.overviewdocs.com



Validation

- **User Experience Comparison**
  - Comparing TimelineJS approach with TLC
  - All participants strongly preferred visual authoring environment
- **Solicited potential users**
  - semi-structured interviews with 8 potential users

    7 journalists, 1 policy researcher

For the less geeky journalists who might be scared of timelines, this is a brilliant super-easy way to see what it might look like.

[A step to] break the barrier between the artiste writer and the data journalist

Discussion

- Analysis use case turned out to be popular
- **“Human in the loop”** needed for **curation and deciding** what’s important and interesting

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TimeLineCurator.org

Project page about.TimeLineCurator.org

Example gallery gallery.TimeLineCurator.org

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