Understand

goal: gather, observe, and research available information to find the needs of the user

artifacts: design requirements

generate

1) identify the challenge & users

WHAT Diversity lack
WHO Comic fans/readers, general public
WHAT Known: male writters-readers 67% bought by men (now)
Unknown: minorities representation ~~female repr.~~
e.g. are they mostly good/bad, num. of appearances
WHEN 1935 - 2013
HOW That's what we want to see

2) find questions & tasks

Change over the years (mosty by diversity)
Explore the results of data analysis we do, and visualize it for them. — HIGH
Ability to compare the attributes and even a comic itself.
Low Level: The blue-eyed people are "specific" (good/bad)

3) check with users or explore data

Around 23000 unique characters
Missing 17.8 % data points
Mem. size: 4 MB
Reference HTML

4) brainstorm design requirements

- Time is definitely one of the axis (opportunity)
- ~~Word cou~~ Lack of data variety because of the comics not data itself (constraint)
- data scalability (opportunity)
- templating/reporting

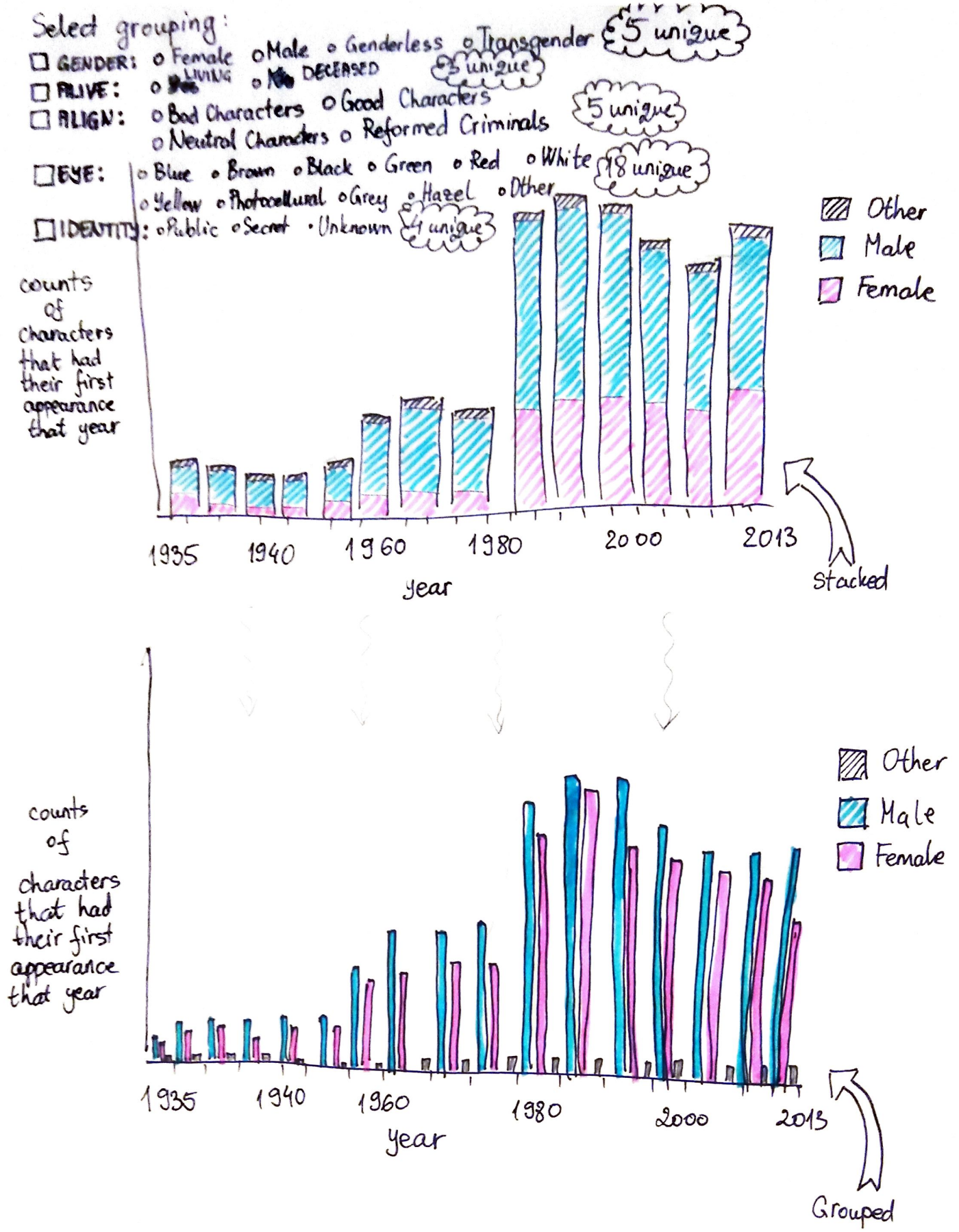
5) compare and rank design requirements

evaluate

1) Literature Review ✓

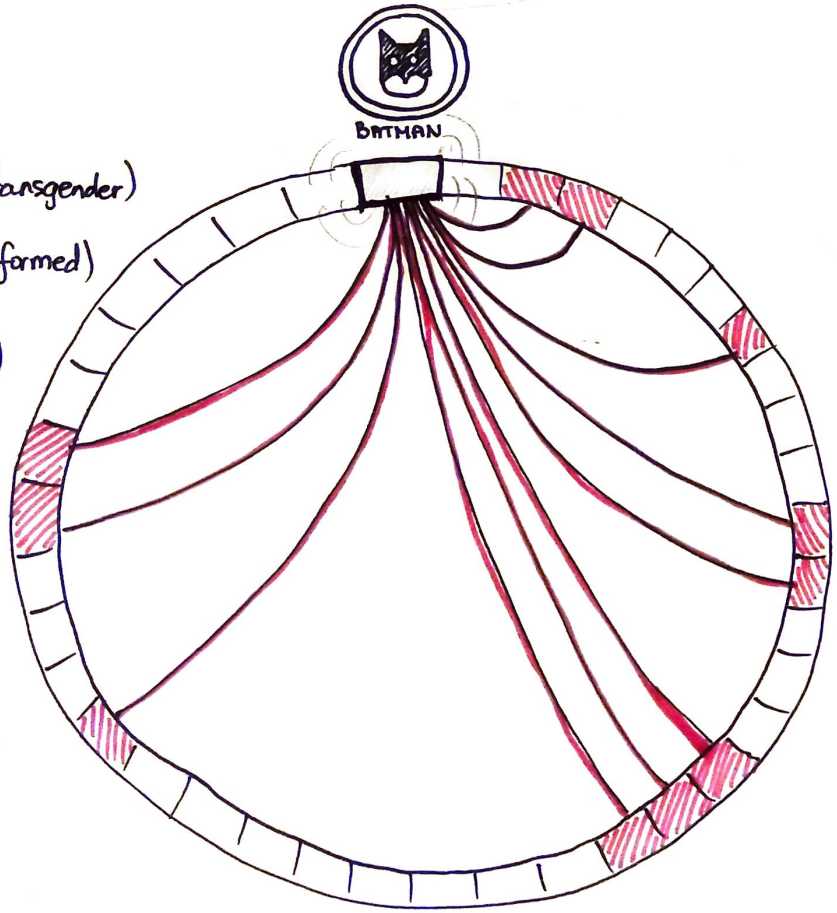
2) Coding ✓

3) ~~Lit Review~~ Consistency Inspection
- Histogram
- Stacked-to-Grouped Bars
- The Facebook offering
- binary proportions —

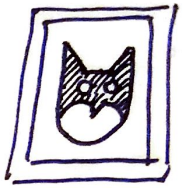

Select grouping:
GENDER: Female Male Genderless Transgender
5 unique
ALIVE: LIVING DECEASED
3 unique
ALIGN: Bad Characters Good Characters
Neutral Characters Reformed Criminals
5 unique
EYE: Blue Brown Black Green Red White
Yellow Photocellural Grey Hazel Other
18 unique
IDENTITY: Public Secret Unknown
4 unique
counts of characters that had their first appearance that year
1935
1940
1960
1980
2000
2013
year
Other
Male
Female
Stacked
counts of characters that had their first appearance that year
1935
1940
1960
1980
2000
2013
year
Other
Male
Female
Grouped

Choose aspect:

- [x] enemies
- [ ] friendship
- [ ] teammates
- [ ] year of first appearance
- [ ] gender (female, male, genderless, transgender)
- [ ] align (bad, good, neutral, reformed)
- [ ] eye color (blue, yellow, brown, ...)

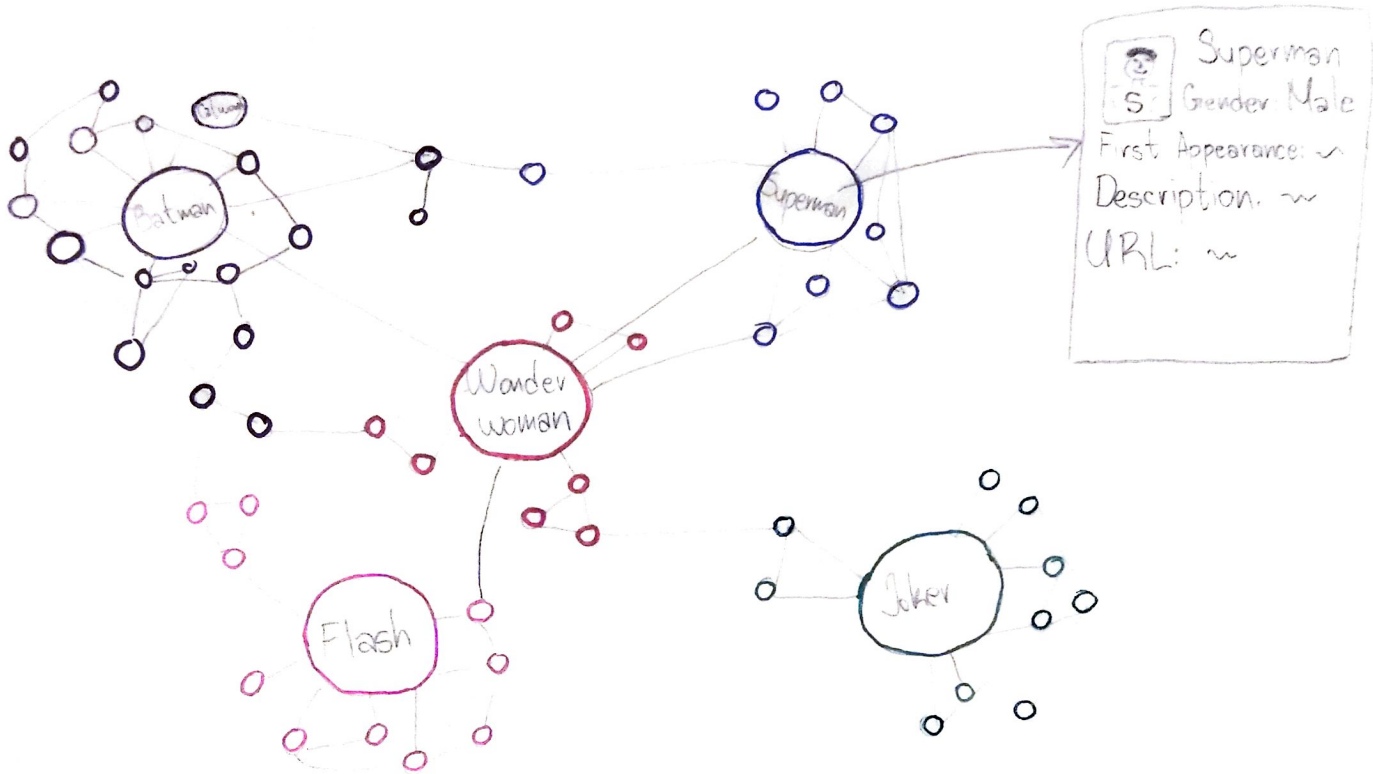


BATMAN



Gender: Male
Appearances: 4103
Description:
Bla bla bla bla blabla blabla bla bla blabla blabla bla bla bla bla bla bla.
Connections: 103
First Appearance: 1939

Wanna to find out more?
Click here.


Batman
Superman
Wonder woman
Flash
Joker
Superman
Gender Male
First Appearance: ~
Description. ~
URL: ~

Sketching Paper:
sneakpeekit.com - printing small browsers

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Circle:

- characters' social connections — Friends teams, Enemies teams, Team
- proportions and how they are connected
- proportions over time
- movies characters were in together

Make

goal: concretize ideas into tangible prototypes which are approximations of a product in some aspects

artifacts: prototypes

generate

1) set an achievable goal

- Exploring D3 visualization exp
- Implement chart D3 vis
- Try prototype first with some dummy data, then put the real one

2) plan encodings & layouts

- Different Colors can represent different character origin
- Connection can be based on friendship, enemy, teammember type

3) plan support for interactions

- Click on node (character)
- Popup new window above chart showing more data about the character
- Darker nodes show connection

4) sketching additional views

- Some side histograms?
- popups
- Whole card with detaild info about character

5) build the prototype and check-in

evaluate

@

Ideate

#

goal: generate good concepts and ideas for supporting some of the project's design requirements

artifacts: ideas & sketches

generate

1) select a design requirement

Exploring dataset through:
- social connections
- time
- proportions (good vs. evil)

2) sketch first idea

@

Histogram with proportions of different groups during the years

3) sketch another idea

@

Graph where nodes are comic charact and relationships between them.

4) sketch a final idea

@

Chart visualization, like circle table of king Artur

evaluate

5) compare and relate your ideas

sketch #1	sketch #2	sketch #3
+ accent on time so we can observe how something changed over time - very general, maybe will be implemented as a side visualization	+ visualization that can show how chars are connected - some of the nodes would not be seen if density is high	+ simplified visualization of how the characters are connected + easier to read

CATEGORY	DESIGN IDEA	SUB-SUB-CATEGOR	EVIDENCE	AUTHOR	#	NOTES
affinity diagramming			"process used to externalize and meaningfully cluster observations and insights from research, keeping design teams grounded in data as they design"	JB	4	https://www.google.ch/search?q=affinity+diagramming&tbm=isch&source=iu&ictx=1&f
bull's-eye diagramming			"ranking items in order of importance using a target diagram. . . . gather a set of data (e.g. issues, features, etc.) . . . plot the data on the target, and set priorities" [20]	JB	12	
card sorting			"participatory design technique that you can use to explore how participants group items into categories and relate concepts to one another" [18]	JB	14	
coding	applied data analysis techniques (ADA)		"break data apart and identify concepts to stand for the data [open coding], [but] also have to put it back together again by relating those concepts [axial coding]" [23	JB	16	
cognitive map			"reveal how people think about a problem space, and visualize how they process and make sense of their experience . . . most effective when used to structure complex problems and to inform decision making" [18]	JB	17	
consistency inspection	D3.JS discussion?		"verify consistency across a family of interfaces, checking for consistency of terminology, color, layout, input and output formats, and so on" [22]	JB	25	
five W's	table/sheet		\popular concept for information gathering in journalistic reporting . . . captures all aspects of a story or incidence: who, when, what, where, and why" [24, 21]	JM	39	https://advocacyassembly.org/en/news/43/
importance/difficulty matrix	table/sheet		\a quad chart for plotting items by relative importance and difficulty . . . make a poster showing a large quad chart, label horizontal axis Importance, label vertical axis Difficulty . . . plot items horizontally by relative importance, plot items vertically by relative difficulty . . . look for related groupings, and set priorities" [20]	JM	48	https://spin.atomicobject.com/2018/03/06/design-thinking-difficulty-importance-matrix/
literature review	papers we have already found, with some additional on the topic of comics, but as well sequence representation in D3		\distill information from published sources, capturing the essence of previous research or projects as they might inform the current project" & \collect and synthesize research on a given topic" [18]	JM	53	
love/breakup letters	short form		\personal letter written to a product . . . [to reveal] profound insights about what people value and expect from the objects in their everyday lives" [18]	JM	54	I thought this would be easier to get the opinions of people than interviewing them, but I think it is better to do this after we have some prototype
personas	table/sheet		\consolidate archetypal descriptions of user behavior patterns into representative profiles, to humanize design focus, test scenarios, and aid design communication" [18]	JM	63	
POEMS framework	??		\observational research framework used to make sense of the elements present in a context. . . . five elements are: People, Objects, Environments, Messages, and Services" [14]	JM	66	
prototyping	using wireframe		\tangible creation of artifacts at various levels of resolution, for development and testing of ideas within design teams and with clients and users"	SK	67	for feedback at various levels
storyboarding	with a timeline?		\visually capture the important social, environmental, and technical factors that shape the context of how, where, and why people engage with products" & \build empathy for end users" [18]	SK	84	how social parameters shaped the creation of comic characters
technology probe			\simple, exible, and adaptable technologies with three interdisciplinary goals: the social science goal of understanding the needs and desires of users in a real-world setting, the engineering goal of Field-testing the technology, and the design goal of inspiring users and researchers to think about new technologies"	SK	87	
weighted matrix			\matrix ranks potential design opportunities against key success criteria" & \help identify and prioritize the most promising opportunities" [18]	SK	97	
wireframing			\schematic diagramming: an outline of the structure and essential components of a system" [20]	SK	98	
MISC	ideas to get from: https://mckennapsean.com/website-resources/supplemental/design-activity-framework.pdf					

Deploy

goal: bring a prototype into effective action in order to support real world users' work & goals

artifacts: visualization system

generate

1) pinpoint a target audience

- professor
- other colleagues
- readers of comics

2) fix usability concerns

3) improve points of integration

4) refine the aesthetics

evaluate

5) consider a method to evaluate your system