

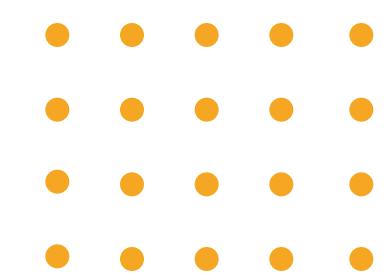
Portfolio

Sijia Xiao

Application Number: IU002116836

I certify that the work included in this portfolio is my own original work. Work included which was conducted as a part of a team or other group is indicated and attributed as such- the other team members are named and a true description of my role in the project is included.

Sijia Xiao



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Deal Of The Day mobile redesign

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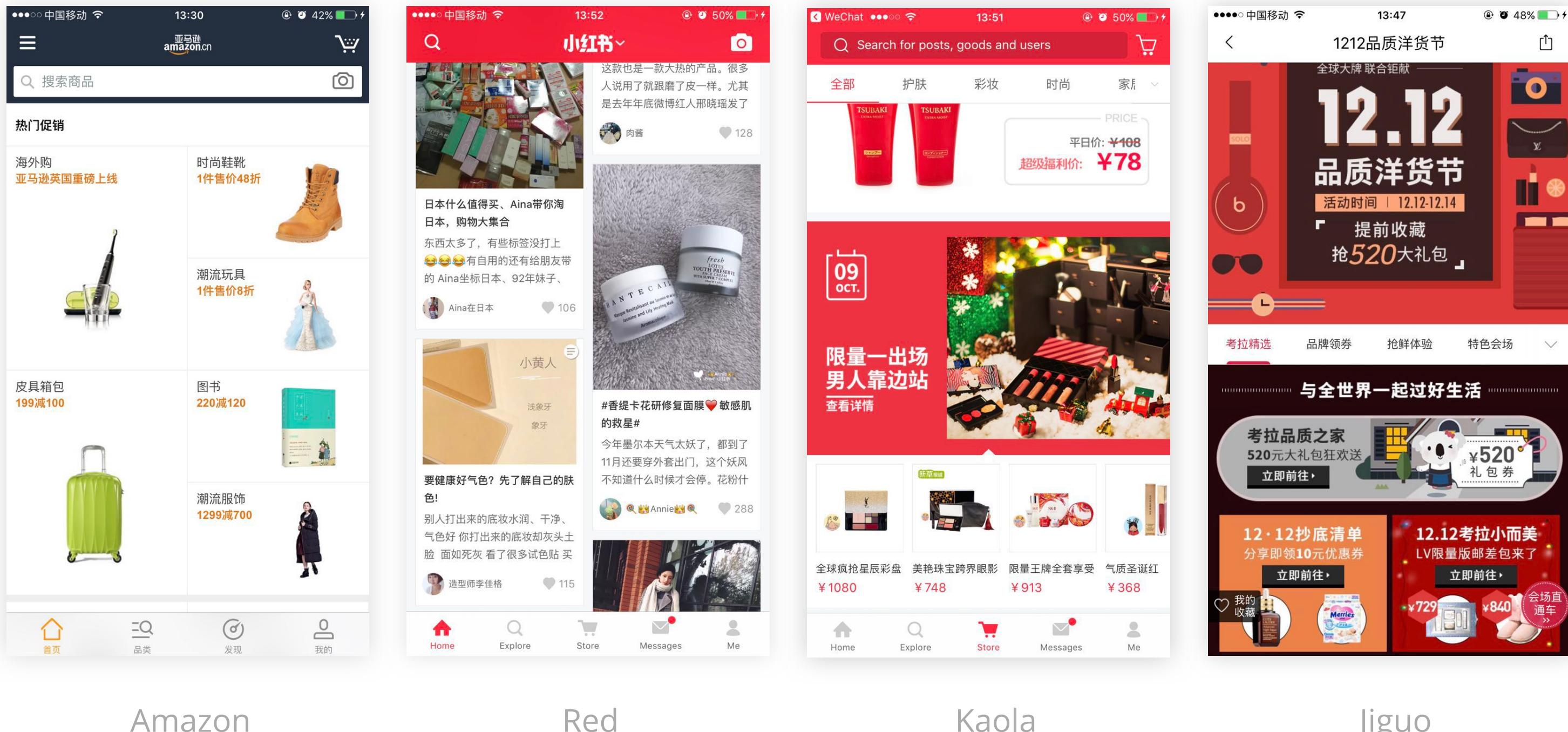
Scenario

Redesign special page layout of Deal Of The Day (DOTD) for Single's Day (Chinese version of Black Friday) for Amazon China mobile application.

Competitive Analysis

- Amazon's style is simple, which suits the shopping behavior of NA customers. However, traditional Chinese customers are more familiar with intense and crowded information on a page. Current DOTD layout does not have strong visual impact that arouse the desire to buy.
- Chinese layouts emphasize multiple things on one page, so sometimes there is no main focus at all.

DOTD Designs



Amazon

Red

Kaola

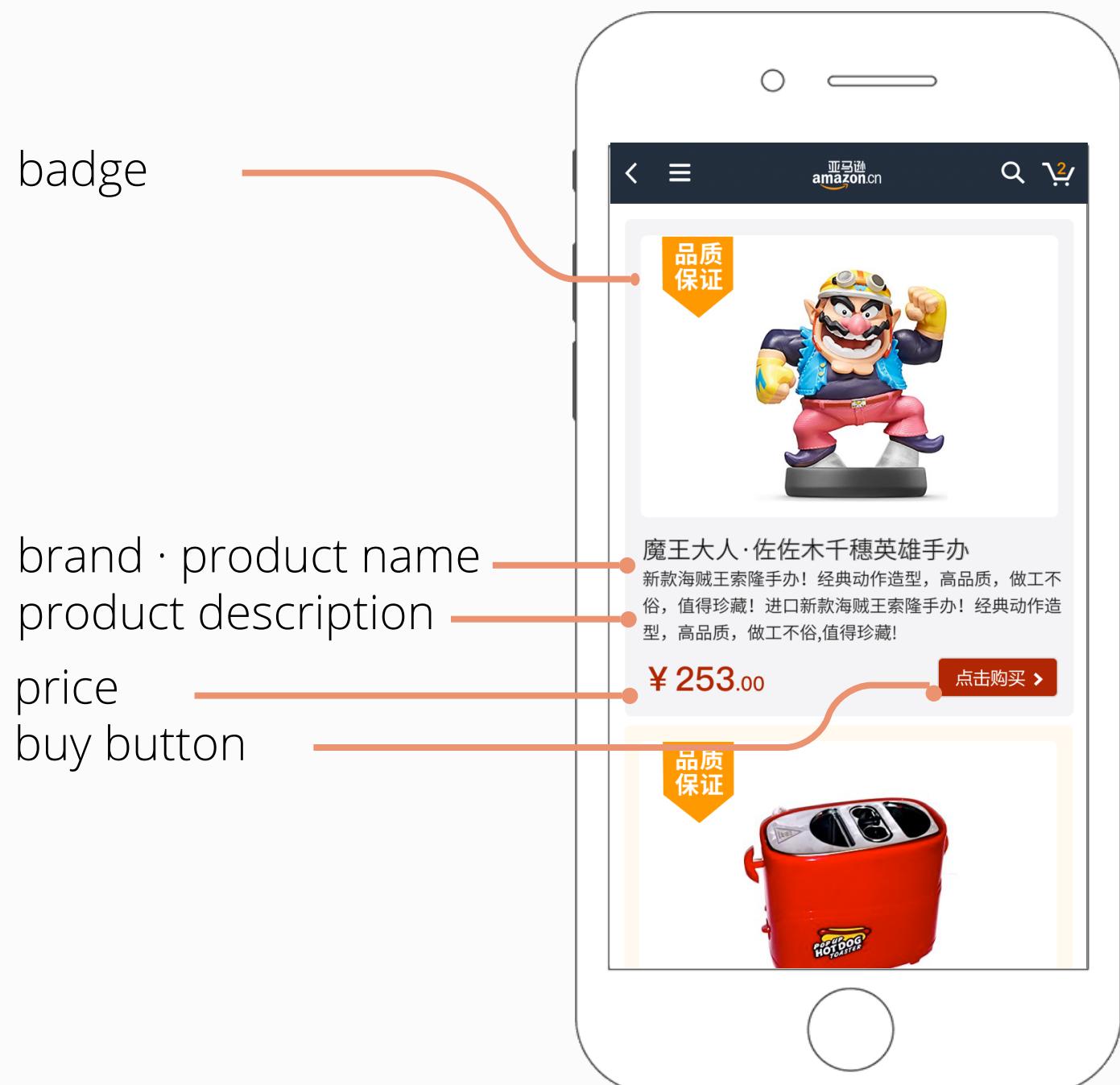
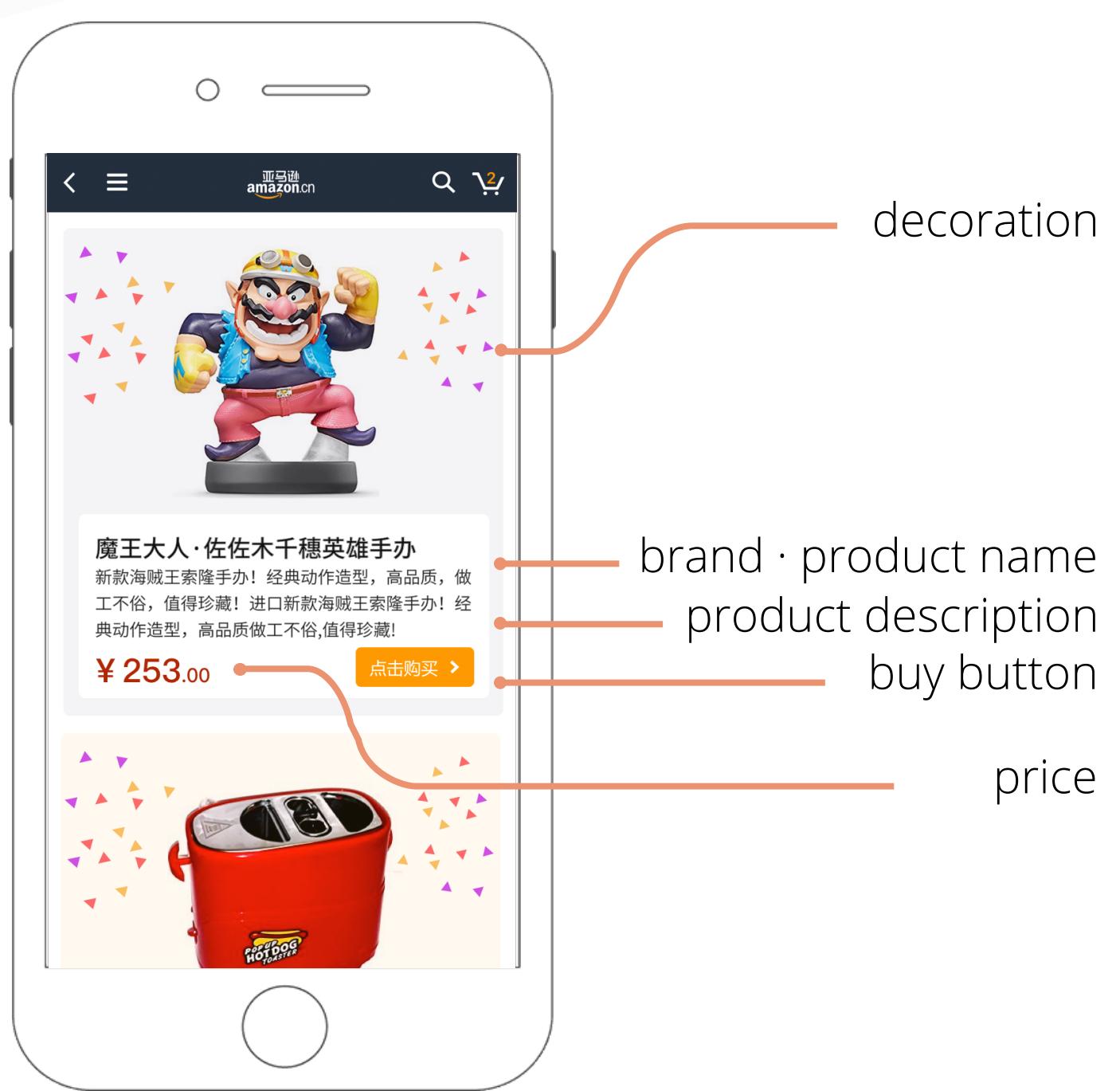
Jiguo

Prototyping

- Amazon has unique advantage in goods. Rather than hard-sell, we just list down the key facts clearly. During the period of shopping celebration, we want to enhance the **festive atmosphere** when keeping Amazon's **simple and neat** design .
- I first conduct a small survey among people around, which shows that the main focus of customer are **price** and **quality**. Since it's a shopping celebration, people anticipate low price. At the same time, they don't want to be cheated by fake. So I use Price and Quality as two standards in my prototypes.



- Staggered, colored mask create occlusion relation and novelty (festive atmosphere)
- Short product description to motivate buy action (quality & price)
- Horizontal layout enables more product in one page, information is more concentrated
- Less element on page to emphasize on existing element(simple, neat)



- Closer to Amazon's style (simple, neat, quality)
- White box for product to emphasize on product itself (quality)
- Label for promotion words (quality & price)

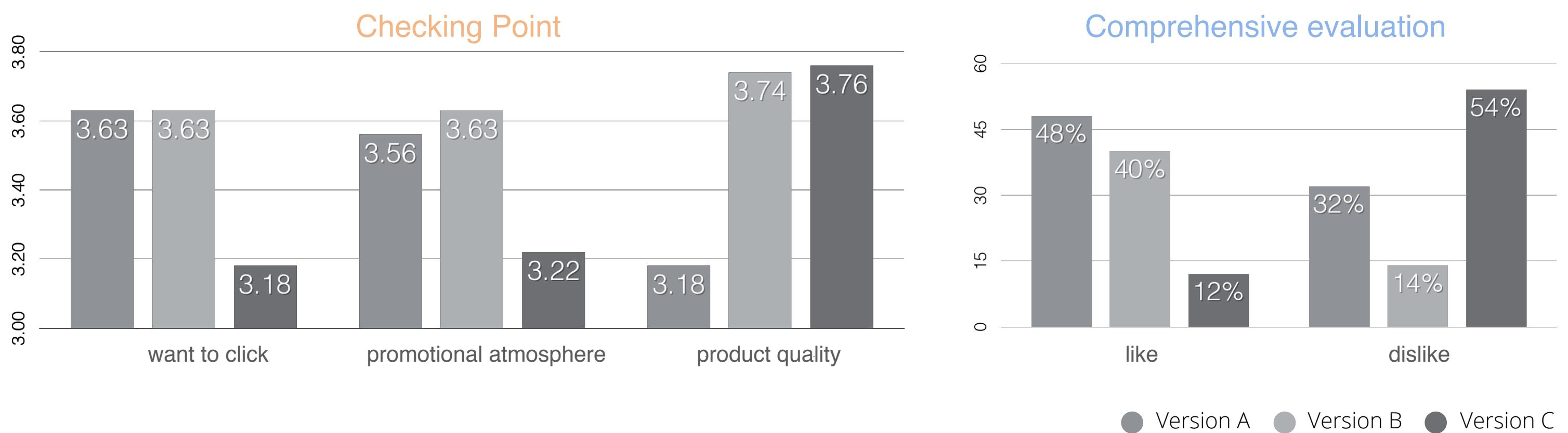
Proof Of Concept

Questionnaire Design



at coggle.it

Data Analysis



- We conducted a survey among 500 amazon employees, considering the factor in gender, age, etc.
- For nearly all the questions, version C has a relatively low score. So version C is skiped first. Version A and Version B have similar score on first two checking points questions but scored low on product quality.
- People like A most (48%), with B followed(40%). Fewer people dislike B (14%) compared to A (32%). So it seems safer to use version B. However, after qualitative analysis of the reason why people like or dislike those versions, we found that people dislike A mostly for the lack of description, but people who dislike B give a variety of reasons. And people who like B says that they like the detailed description.
- Therefore, we combine the advantage of A and B by adding longer descriptions to version A and make it the final version.

Final Delivery

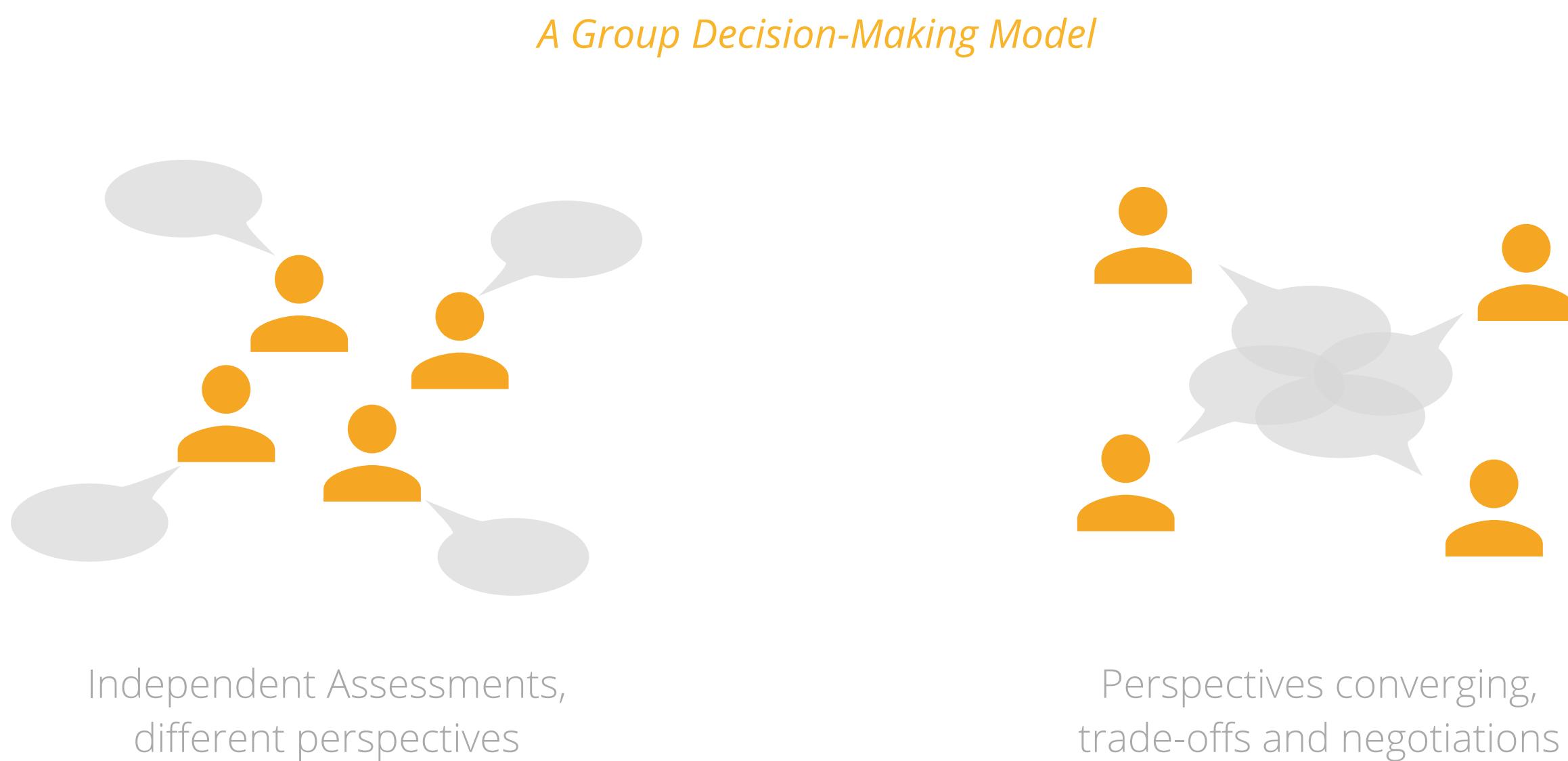
DOTD contributes to 8.9% of mobile gateway's profit on Single's Day, which occupies near 1/3 of profit on gateway key zone (29.8%). Compared to the previous version, the click through rate of DOTD on Single's day have a considerable improvement (8%).

Consensus: Supporting Multi-Criteria Group Decisions by Visualizing Points of Disagreement

Weichen Liu, **Sijia Xiao**, Jacob Brown, Ming Yang, Steven Dow
ACM Transactions on Social Computing, in submission

Introduction

Groups often face difficulty reaching consensus. For complex decisions with multiple criteria, verbal and written discourse alone may impede groups from pinpointing fundamental disagreements. To help support consensus building, we introduce ConsensUs, a novel visualization tool that highlights disagreement by asking group members to quantify their subjective opinions across multiple criteria.



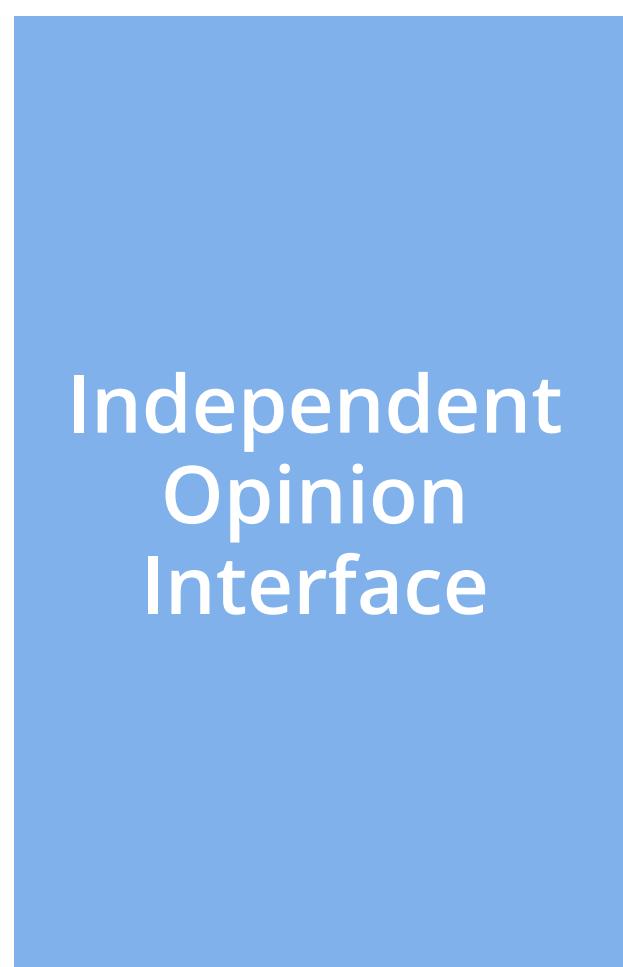
Challenges

- Anchoring bias
individual members may be subject to an anchoring effect where people are attached to their initial opinion and unmoved by a group's opinion.
- Identification of Conflict
Finding the crux of the conflict within the group remains troublesome and inefficient.
- Complexity
Groups often have a lack of structure in their process, such can be time consuming. Trying to organize a list of criteria and incorporating everyone's perspectives is difficult.

Research Question :

How can technology better support group decision-making?

System Overview



(a) criteria (b) alternatives

Through dragging the colored dots, users rank alternatives relative to each other on a number of criteria.



(a) Average ratings of the group with two kinds of biggest points of disagreement highlighted.

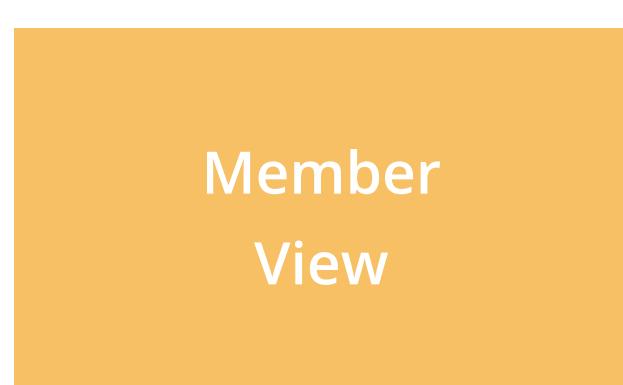
(b) Legend of disagreement between the user and the rest of the group.

(c) Legend of disagreement (variance in ratings) within the group.



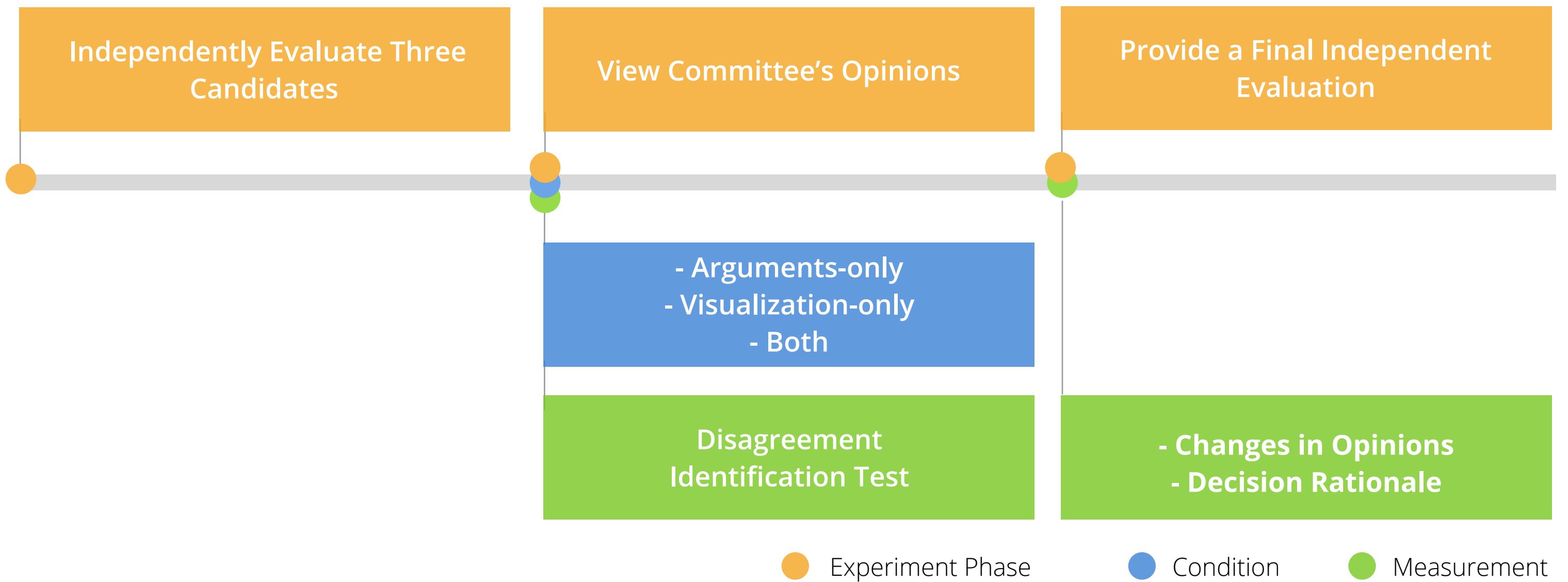
(d) Each member's relative ratings for a certain criterion of a certain candidate (shown by clicking the big dots).

(e) Each group member's arguments.



(f) Left column to explore a certain member's opinions(as shown in the member view).

Experiment



Result

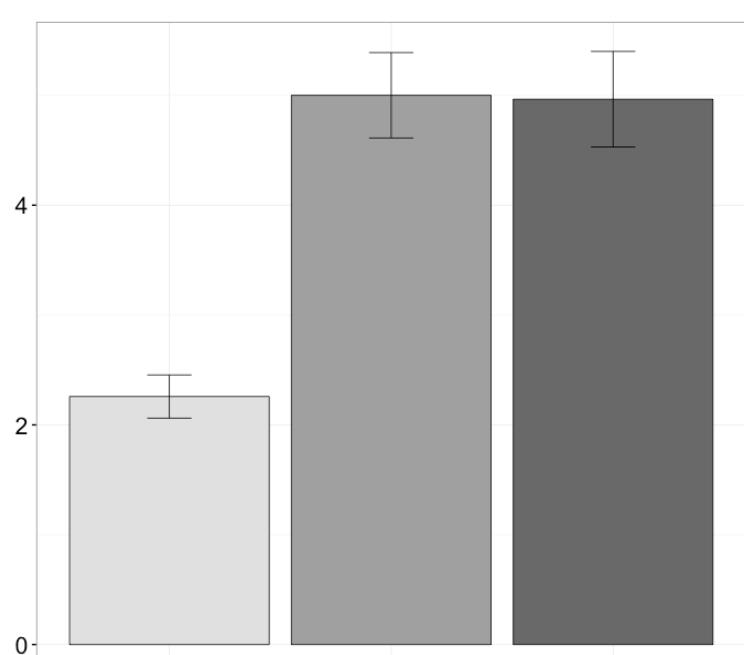


Fig. 1 Number of right questions

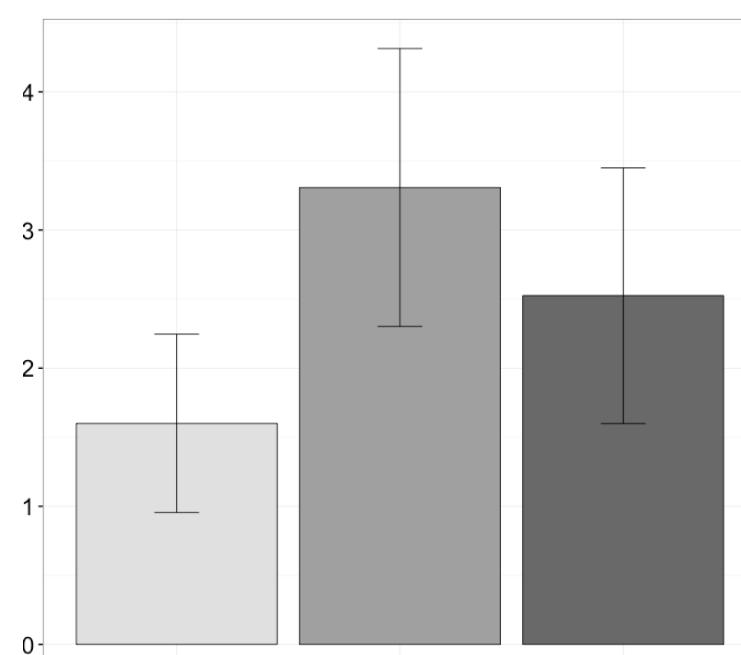


Fig. 2. Subjective liker scale of the ability to identify disagreements

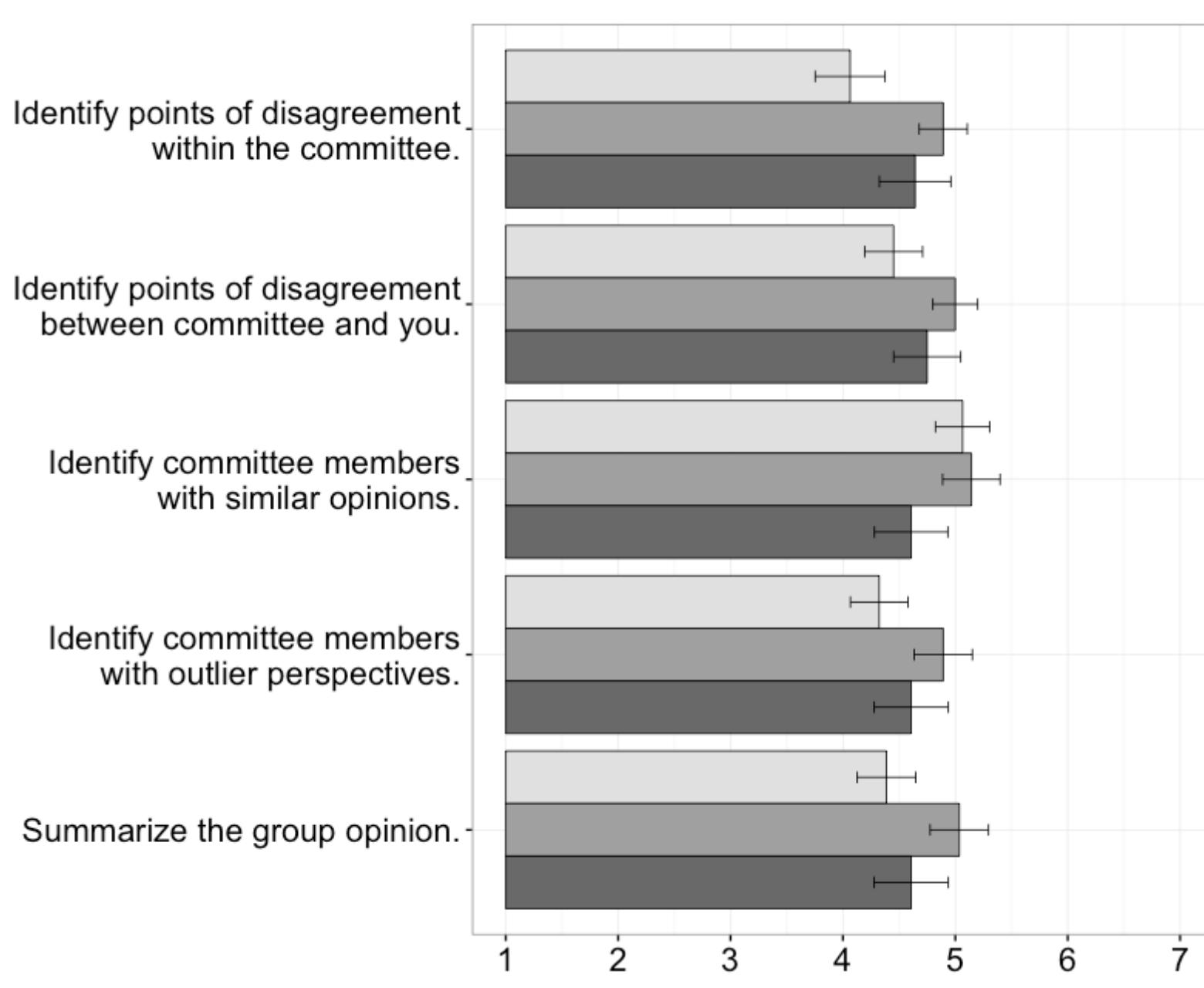


Fig. 3. Change in Rank

Arguments-only

Visualization-only

Both

Disagreement Identification Test

we asked eight multiple-choice questions which all have objective answers that can be calculated based on ratings from the participants and the confederate committee (see Fig 1). After the answering the objective questions, participants answered five self-assessment questions on their ability to reason about the committee and to identify disagreements (See Fig. 2).

Changes in Opinion

We measured how participants changed their ratings from before to after viewing the group opinions by their ratings change (See Fig. 3).

Decision Rationale

After the group stage, participants were asked an open-ended question to articulate the reasons for their decision. We analyzed the percentage of words devoted to concrete rationale versus statements about their process or strategy for making a decision. The results show that an average of 51% of the words in each participant's rationale in the Arguments-only condition can be categorized as concrete rationale, compared to 28% in Visualization-only and 29% in Both condition.

Visualizing Visualization Research Network in China

Sijia Xiao

Scenario

We want to develop a convenient tool which helps users understand visualization research social network in China in both macroscopic and microscopic ways. The tool is supposed to answer these questions:

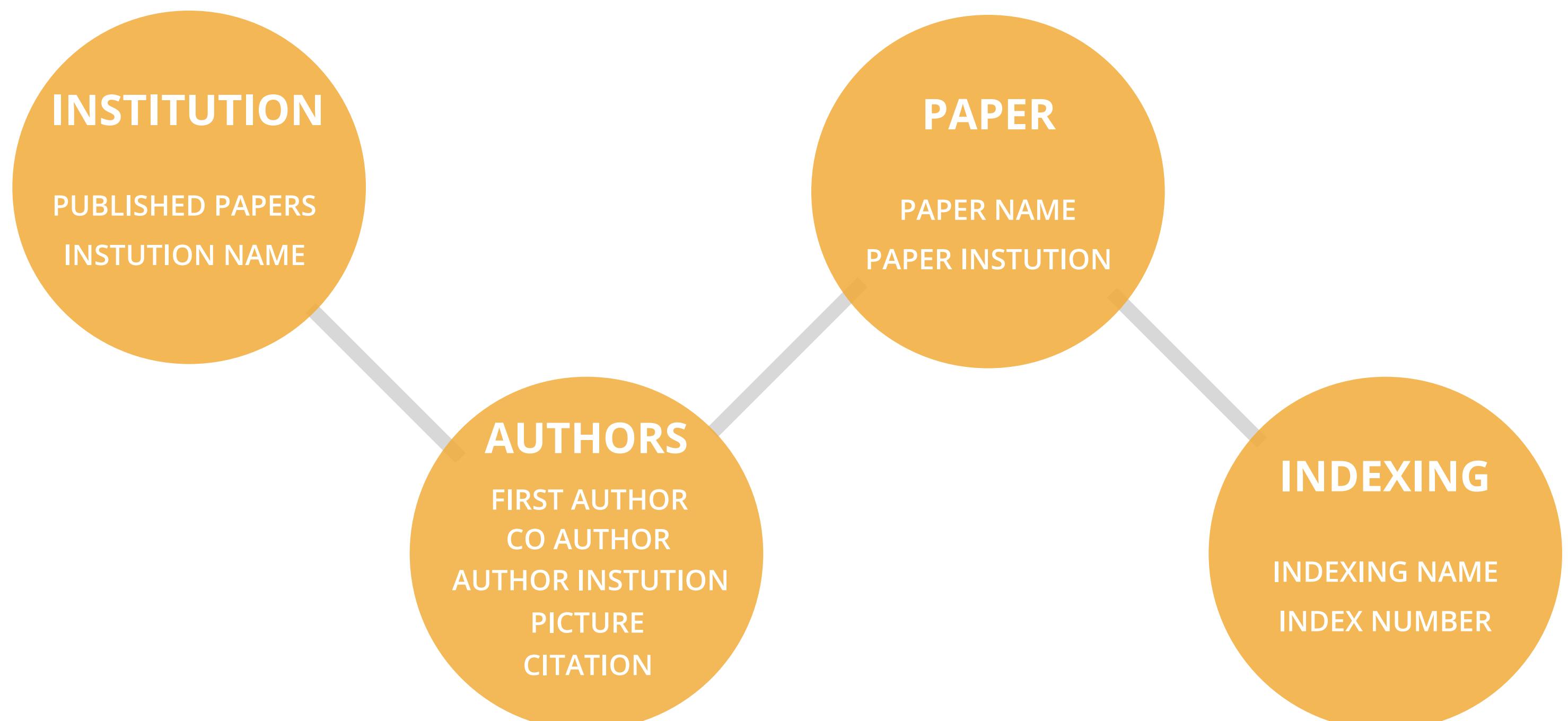
- *What is the most productive institution in China in the field of information visualization?*
- *Who stands on the forefront in visualization research in China?*
- *If I'm interested in a certain topic, how can I find the right institution?*
- *What is the interest point of a researcher?*

System Design

Raw Data



System organization



Implementation

Institution

The size of circle represents the number of published papers of the institution. Besides the circle lays the abbreviation of the institution name. When hovering, the institution full name and the number of papers published will appear.

Author

This part is a dynamic force-directed graph. Each author is represented by a dot and the size indicates citation of the author. The first author connects co-author, institution (left column) and paper (right column). When hovering, the basic information of an author will appear in a box, including name, citation, institution and picture. When clicking the dot, the lines connected with the institution, co-author, paper and indexing will be highlighted. The dot can be both moved and fixed in a certain place.

Paper

Besides the dot shows the first 30 character of the paper name. When hovering, the full name of paper, first author and institution will appear.

Indexing

The size of dots represents the times that index appears in the paper description. Placed in the order of descendance. When hovering, the full name of index and the times the index appears will be shown.

