

How Are Ideas Connected? Drawing the Design Process of
Idea Networks in Global Game Jam

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These data were derived by the Global Game Jam from a survey conducted following the 2014 Global Game Jam. The GGJ specifically disclaims responsibility for any analyses, interpretations, or conclusions.

Abstract

The moment of inspiration is described by a rich vocabulary and a wealth of knowledge: the Eureka! moment (Gruber, 1981), the flash of illumination (Metcalf & Wiebe, 1987), epiphany (Dyess, 1964), and an unexpected stroke of insight (Taylor, 2006; Smith & Blankenship, 1989), to name a few. Many scholars agree that the primary sources of ideas and inspiration are external (Eckert & Stacey, 2000; Fredrickson & Anderson, 1999; Hagen, 2012; Lehrer, 2012; Thrash & Elliot, 2003; Zook & Riedl, 2013).

As ideas are understood and externalised through language, they are being communicated, and on a higher level, synthesised and reused. The notion of an idea network is implicitly and automatically constructed, and we argue this self-construction may be substantially comparable to Milgram's (1967) 'six degrees of separation' phenomenon.

In this paper, we propose idea networks as a tool for design-oriented qualitative research. We will outline the design process to develop idea networks, our rationale of using it on qualitative research, and suggest ways to extract insight from idea networks. The construction of an idea network was first proposed by Metcalfe (2007) for problem conceptualisation and framing.

We analysed the survey (n=1,788) from Global Game Jam 2014, during which 23,198 game developers made games in just under 48 hours. Global Game Jam presented a suitable opportunity to study idea generation, because it has a central theme given to all participants, and the time constraint kept ideas from becoming too complex.

Our research approach extends Metcalfe's design process, taking inspiration from fields of meta-research such as Wikipedia networks (Aragon et al., 2012; Massa, 2011) and citation

networks (Hummon & Doreian, 1989). We developed a design tool for scholars in research through design (Zimmerman et al., 2007), designers interested in exploring ideas as a network, and in general, researchers working with qualitative data. We followed a curiosity-driven research style (Strandburg, 2005), but the tool can also be applied for readers working with a set of precise research questions.

We will outline the design process of drawing idea networks in brief. Using the Global Game Jam survey as an example, we are interested in the ideation of game design from the survey, 2014 whose columns are isolated and filtered such that no empty rows exist in the columns concerning our research question: brainstorming and description of ideas.

To start, we identified idea statements and categorised them by developing an two-tier affinity diagram (Holtzblatt et al., 2005), and relating the identifying information (such as a numeric ID for the data row) to the statement. This step conveniently filters out irrelevant data, since only statements that identify ideas are included.

Starting from one affinity column, for each idea statement, we place them on a canvas. Idea statements that are identical are combined into one statement to avoid clutter, and similar statements are juxtaposed with a connecting line in between. We also record the connecting idea between two statements, which might share the same source of inspiration, or may have independently come to a similar design solution. The placement of each idea statement is logical by proximity. Figure 1 is an example of the idea network developed with a subset of the survey.

We employed a combination of notes taken through design process and examining the visual representation of our data set as a network. ‘Islands’ of common characteristics are identified to have shared across multiple participants in their brainstorming process. These

islands—clusters of points—can be seen in the figure. The aesthetic visualisation was also informally observed to strike up curiosity in a wider audience, which made it easier to engage in conversations about the research finding.

Design implications suggest to develop idea networks for other qualitative research studies; for example, a survey of popular culture references in indie games as a culture network. We will present at the conference a detailed design process of drawing the idea networks and key findings from Global Game Jam, and recommend ways to extract insight from the idea network visualisation.

To conclude, we propose idea networks as a design tool for qualitative research, and through this paper, we hope to intrigue our readers to explore the concept of an idea network. Future works include exploring idea networks as a potential aid in locating ideas, and using it to assist brainstorming scenarios.

Keywords: idea networks, brainstorming, game jam, design process, connectivity, graphs

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Figures

Global Game Jam 2014

Idea Network Visualisation v0.1a

Theme: "We don't see things as they are, we see them as we are."

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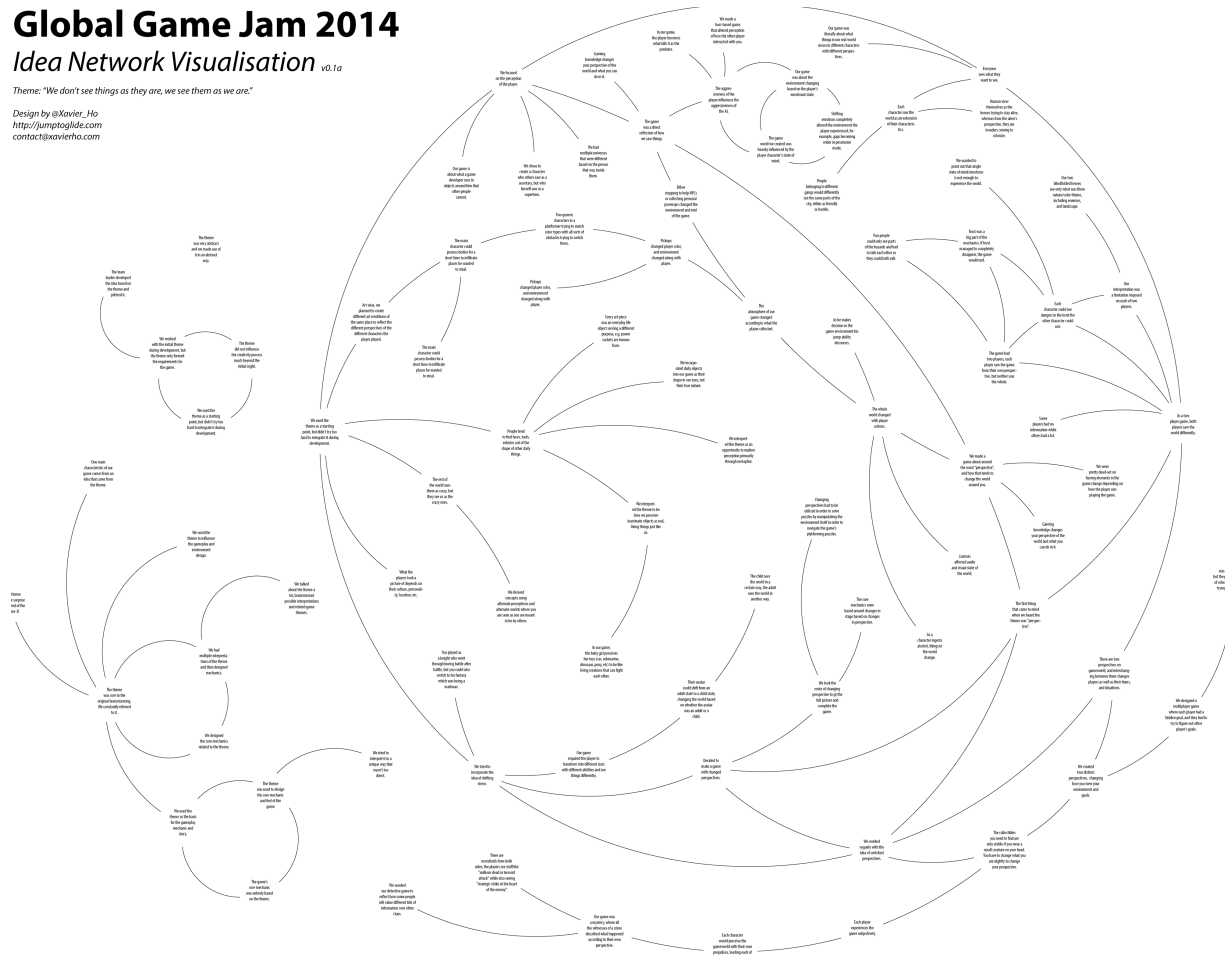


Figure 1. Idea Network Visualisation. Developed using the Global Game Jam 2014 survey subset (n=178).