The Adventure of Comic Panels – from the Paper Land to the Digital World

Comics, once only in printed format, are nowadays more and more read on electronic devices. Compared with printed comics with pages as its natural segmentation unit, Industrial Design researcher Xinwei Wang explored how digital comics - d-Comics - can be designed for different screen-based devices with different interaction possibilities. She discovered and defined a new vocabulary for describing the basic unit of panels in digital comics. Based on this new vocabulary, three design strategies to support authors were identified.

Comics is a storytelling medium. For over hundred years, comics are presented on paper-based carriers such as magazines and books. With the development of new technologies, the comics industry had the opportunity to embrace a new carrier – the digital environment in electronic devices.

The journey of the comics industry towards digitalization started from 1980 as more and more comics appeared on this new carrier. This transformation between carriers did not only change how comics are displayed but also how readers can read comics and how authors can create comics. Direct translations of printed comics into digital formats will limit the development and expressions of digital comics. This research aims to explore how comics is constructed in the digital environment and to provide insight about designing d-Comics for electronic devices.

We want to gain knowledge about comics and its carriers and to design for digital comics. The research started from wondering how the physical pages influenced comics; is there a unit in d-Comics similar to the page? We used several existing web comics from ZenPencils to conduct a web-based experiment and an expert review. Then, to validate the findings, I created my own interactive comics which were tested in a lab-based experiment. The results can be summarized as follows:

• Segmentations of panels in d-Comics can create two types of panel units: phasel and fadel. A phasel (created by combining ‘phase’ and ‘equel’) in d-Comics is represented by one panel or multiple panels that belong to each other. The author cannot decompose these further into smaller phasels. A phasel describes a strong relation among a certain number of panels and a significant difference with other phasels, determined by the author’s interpretation. A fadel (created by combining ‘fade’ and ‘sequel’) is represented by one panel that the author or the reader considers to be part of the previous phasel and the next phasel. A fadel describes an overlapping transitional relation between two phasels, and it contains both the fading of the previous phasel and the starting of the next phasel determined by the author’s interpretation.

• There are three strategies that can be considered when designing segmentation of panels in d-Comics: narrative structure (e.g. story time), visual space (e.g. environment, character, object, symbol, text, frame/panel shape, camera angle, and drawing style), and interaction. Interaction is considered as the most unique strategy in designing d-Comics. Compare to flipping a page in printed books, there could be multiple ways to trigger the display of the segmented panels (such as tapping, scrolling, or physically moving the device), and the reactions of the triggered panels (such as different moving speed, or different visual feedback).
The main contribution of this thesis is the establishment and description of a panel level relation vocabulary that is independent of the carrier. This vocabulary, together with the strategies of segmentation can be considered as the framework for the creation of d-Comics. The d-Comics author can create panels without considering the concrete carrier. Based on the relations between panels segmentation strategies can be applied to strengthen or weaken the relations among panels. As a result, the spatial relations and interactions may vary among different electronic devices, but the author’s storytelling intention can remain coherent.

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