

Point of View on Annotations in Reading Systems

Highlighting and note-making are separate annotation actions, but current reading systems treat note composition as a part of text selection. I believe that creating the note's content first and then anchoring to the document can lead to better annotations, new use cases, and tighter integration with printed text.

Notes refer to the content of the surrounding text but are not tightly bound to a specific character range as a text highlight is. Authors may spend as much time researching, writing and editing their own footnotes and endnotes as they do with the main content, with the final position in the text shifting as the context evolves. Readers should be able to create notes as complex and well researched as the authors own.

Separating the writing of these annotations from the anchoring process means developers can create more full-featured editing tools for annotations than what would fit in a pop-up. This could include tools to add links, images, tables and charts or just more space to compose HTML or markdown. Readers could navigate between parts of the text while composing their annotation. When finished writing, they could choose the anchor spot by clicking on a text node or element to set it as the target. They could later re-anchor to a different location in the same way or add an additional note to the same anchor.

While highlighting is a natural affordance of digital text, the text selection gesture is overloaded with different tasks. These include copying, highlighting, defining, sharing and note making. Reading systems have had to introduce modes and pop-ups to select the desired action, complicating a simple and straightforward gesture. Hopefully, separating out the anchoring of notes would relieve some of the crowding on text selection events.

Finally, good notes can be integrated into the original text with ease, as their anchors reflect a clear position in the printed text. Content creators can present these notes in many more ways than is possible with text highlights, in both digital and print formats. Traditional numbers, marginalia, hover boxes, sidebars and simple fragment identifiers can all be used to display the annotation body content when the content is separated from the anchor.

Suggestions for Browser-based Reading Systems.

- Use a robust note authoring environment based on **content editable** and existing wysiwyg tools.
- After composition, allow readers to anchor (and re-anchor) the note by clicking any text node or element and using **caretPositionFromPoint** to get the target location.
- Leave text selecting for highlighting. Create notes with a different event (such as **dblclick**) or a buttons in a toolbar or in the margin.
- Display notes in marginalia, sidebars or other methods that account for note content that is many paragraphs long and may include elements such as images or tables.
- Define styles for notes in CSS print stylesheets that allow printing out text with reader generated endnotes.