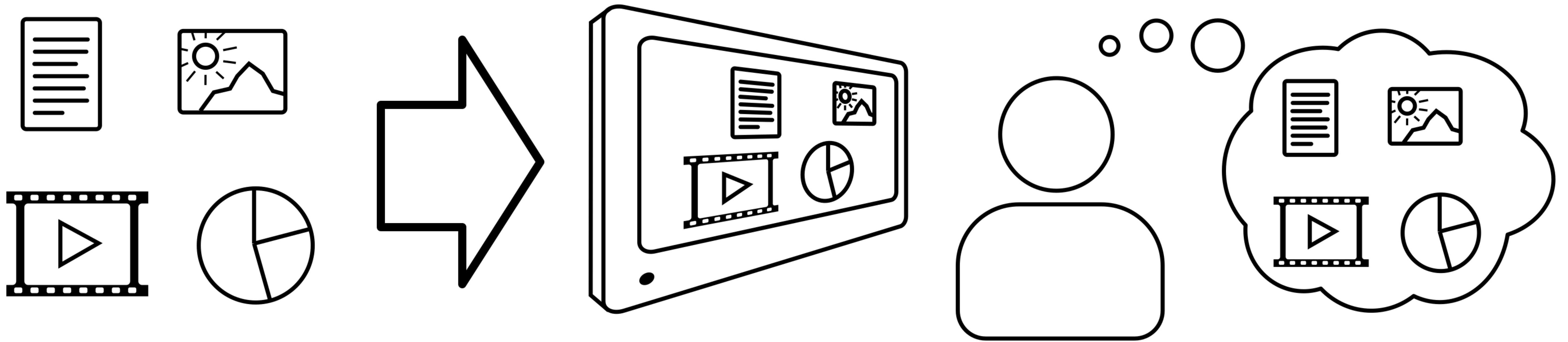


How Content Drives Interaction With Public Displays

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This diagram summarizes the role of content for public displays. Content artifacts, regardless of their origin, first exist as abstract pieces of information, presumably stored somewhere as digital data, before being shown on a public screen at a concrete point in time and in a specific location. If someone is present in front of the display when the content is shown, there is a chance that the user will process and remember some of the content they saw. Any public display deployment is at least in part motivated by the chance of having users notice and engage with the content.

MOTIVATION AND IDEA

- Digital public displays have become ubiquitous, but face challenges such as display blindness.
- Research into public displays goes back several decades and has produced many recommendations on how to achieve user engagement.
 - Most of these recommendations, and the empirical studies in which they are grounded, focus on aspects of design and ergonomics.
- What does the research landscape have to say about the **content** of public displays? How does content of specific kinds or with specific properties influence user engagement and interest?

METHODOLOGY

Semi-formalized literature survey:

- Keyword search in relevant literature databases (ACM Digital Library, IEEE Xplore) and academic search engines (Google Scholar, Elsevier Scopus, Internet Archive Scholar)
 - Result: about 200 potentially relevant articles
- Cull irrelevant preliminary results based on title, abstract, article content. Engage in detail with articles that mention aspects of public display content.
- For relevant articles, follow promising citations in reference list. Repeat until no new relevant results are found.

Result: 21 papers that discuss aspects of content on public displays, many more with empirical studies on public displays which do not discuss content at all.

LIMITATIONS

- Our research approach does not fulfill all criteria of a systematic literature review, and should rather be regarded as a literature probe demonstrating preliminary results.
- The reason for the above is that this work was conducted by students in a university course, where a full systematic literature review would have been out of scope, and this research is unlikely to be continued by the same team. For that reason, we present it for community discussion in its current form.

RESULTS

- Major challenge: display content that the person in front of the public display perceives as personally relevant to increase user engagement.
- **Local or locally relevant content has been independently shown by different studies [9, 16, 22] to increase perceived relevance.**
- **Timely content and content being up-to-date (not perceived as “stale”) similarly help increase perceived relevance [1, 2, 3].**
- **User-contributed content has also been shown by at least two studies to increase user engagement [9, 14], even though another study [13] showed that it can also appear uninteresting due to being overly specialized or already familiar to the audience.**
- At least one study concludes with different kinds of content having no discernible effect on user engagement [13].
- **Other than the above-mentioned, the literature allows for few conclusions on aspects of public display content. Most empirical studies do not consider or discuss the effects of content at all.**
- We encourage researchers and operators of public displays to consider the criteria listed above when designing their content strategy, but also to document aspects of their content to help fill this gap in the research landscape.



See the paper for the full list of numbered references.