

Revealing the News: How Online News Changes Without You Noticing

John Fass

Royal College of Art,
London, SW7 2EU
John.fass@gmail.com

Angus Main

Central St Martins,
London, N1C 4AA
gusmain@gmail.com

ABSTRACT

This paper describes an ongoing design project relating to online news and how alterations to news stories are hidden from the reader. As the delivery and consumption of news content online continues to overtake other channels in reader numbers and market penetration, so methods of transparency and reliability developed over centuries continue also to be tested by digital media. We have carried out content analysis on existing stories and developed low fidelity prototypes and an interaction model to test the design approach. The outcomes are in production and will result in a digital artifact that reveals editorial changes to news items. The implications of the project relate to the wider question of news truth-telling, trust and online news credibility.

Author Keywords

Online news, interaction design, design methods, design processes.

ACM Classification Keywords

H.5.m. Information interfaces and presentation; J.7 Publishing; K.8.m Personal Computing.

General Terms

Human Factors; Experimentation; Human Factors.

INTRODUCTION

The collection, consumption and distribution of news content has been dramatically disrupted by technological developments and the digital world. This has had a significant impact on how the news is collected, where and how it is consumed and who writes the news [2]. Credibility of online news has emerged as a research topic, with some scholars [1] finding ‘a growing public distrust of online sources of information’ because of the perceived freedom of access it offers and the lack of scrutiny it demands from news authors. Although television news could be said to have ushered in the era of the 24 hour news cycle [7], microblogging services such as twitter, tumblr

and Jaiku often mean traditional news organisations struggle to keep up with second-by-second news updates. (The discovery and subsequent death of Osama Bin Laden in Pakistan in May 2011 is a recent example of this phenomenon [4]). With news stories updated in close-to-real time it is not at all uncommon for a single online news story to be presented in 4 or 5 different versions in the course of a single day. These alterations in the face of rapidly changing facts are usually hidden from the reader. What changes were made? Why were changes made? Who made them? This paper describes an ongoing design project that attempts to reveal to readers when, by whom and why online news stories are changed.

MEDIA

Printed news embodies an automatic sense of recency. The latest version of the story is the one in front of you. Tomorrow’s edition will be updated to reflect any new facts that might emerge. It is straightforward to read the history of the story in previous printed editions. This sense of time is implicit in the medium and in the means of production (a new edition is printed every day). Television news bulletins work in a similar way but previous version are less available; the ten o’clock evening news features more recent information than the lunchtime broadcast, with the story shown at lunchtime no longer available. In the case of 24 hour rolling news, updates are constant throughout the day but the principle remains the same; the version of the news you are watching right now is the most recent version. The sense of time is situated in the time of day the news is presented. There is a cut off point for ‘episodes’ of the news – either when the paper is printed, or when the program finishes. The next episode will be different. But with rolling news and online news there is no cut-off point.

A news article no longer represents a snapshot in time, but is rather a continually corrected, living reflection of that news story. The clear chronology of the news is therefore disappearing, and it is harder to determine how a story unfolds, or how the facts have come to light. Editorial mistakes and wrong assumptions are removed, and an online news article can therefore tell you accurately what people are thinking now, but not what they were thinking 5 minutes ago and why. Arguably, this makes online news more accurate, but the ability of news outlets to immediately rewrite the news, rather than making more

explicit changes or retractions is to the detriment of clarity and honesty. The news inspector shown here is intended to mitigate against this sense of invisible correction.

PRESENTATION

Online news often shows unfolding events in a wiki or blog format with minute-by-minute updates appearing above previous posts in a constantly unrolling visual stream. More commonly there is no indication of a time stamp to the story or that a story has been altered. Web based news rarely has the same implicit sequences or chronological cues of printed and television news.

The internet can be accessed at any time, it is not time constrained. The ‘Galaxy of News’ [11] refers to a massively variable news ecosystem, with the many different stories unfolding across the globe, the same story is seen across different news organisations, (taking on diverse editorial slants) but also the same story is repurposed for multiple media channels within the same publisher i.e. print, tweet, web streaming, SMS and online text versions. This has been identified as a problem for news journalists termed ‘hamsterization’ [8] and refers to the constant demands on journalists as they carry out ‘an ever growing set of digital duties’. The requirements to deliver different versions of the same story for various media often comes at the expense of fact checking, long form writing and in-depth investigation. How the news is presented effects how it is understood; there has been a marked convergence in visual news presentation across different media [5]. This has been characterised as a tendency towards easily consumed news bites. Screen-based news layouts are designed to take advantage of the speed of digital technology and to be rapidly scanned and skimmed by the reader. Layouts prioritise highly modular designs that can be ordered through screen menus and categorisation systems such as meta-tagging.

Online news is also rigidly hierarchical in its presentation, with space for only a limited number of words per story, per screen. Further detail, comment or contextualizing information is hidden behind multiple navigation levels. It is a highly structured environment that some researchers have suggested leads to highly structured understandings and similarly structured memory recall [2]. The online news inspector is intended to promote reflection, to expose the meta-narrative at play in the story, and to shed light on how news-truth comes about.

PROTOTYPES

The news inspector is designed to be a layer over the screen based news environment. It does not provide news, aggregate or filter news stories, it is intended to function like a magnifier on top of an online news story. It works like a widget or plug-in that addresses a preexisting information system. Early work on the project consisted of some diagrammatic prototypes of how the interface could look and what kind of interaction would best serve the

project objectives. These diagrams do not feature highly detailed specifications and are intended as a means of visual thinking [9].

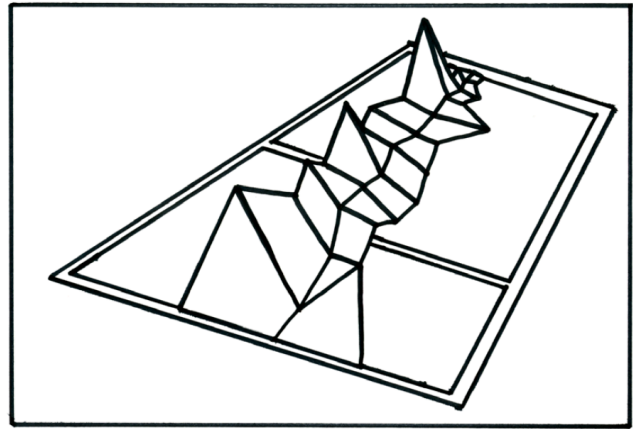


Figure 1; Prototype diagram

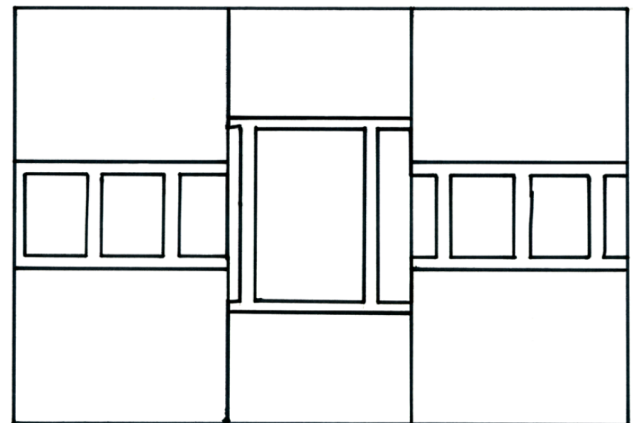


Figure 2; Prototype diagram

The paper prototypes allowed us to think about visual presentation and about how to address interaction. The page paradigm is a consequence of ‘print bias’ in screen interactions and news outlets seem particularly prone to presenting their content as if it were laid out on printed pages. Most articles do not contain extensive hyperlinks in the body copy and often extend through different pages on the same screen. How can the article page be mined to reveal hidden content? Can we think of the page as a landscape of information and overlay the metadata? Could we navigate the alterations in a simulated three-dimensional datascape? What metaphors might be useful? Some ideas explored included an above ground/underwater metaphor, timelines, a rollover magnifier and a parent and child structure.

ANALYSIS

The diagrams led to a textual analysis of an online news story published on www.bbc.co.uk on May 2 2012. The article, which reports on court proceedings, was altered

significantly over the course of 5 hours. Between 12.47 and 15.12 over 65% of the story was rewritten. The BBC does include an indication of online article updates at the top of the screen but only specifies when a report was updated not what changes were made by whom or why.

The viewer can piece together the details of the changes only by printing out or saving the article every hour or so (perhaps even more frequently in a rapidly evolving news situation such as the recent Utoya shootings incident in Norway). By highlighting these changes visually on screen grabs of the article, alterations become immediately visible. Using this method allowed the scale of changes and their exact nature (by direct side by side comparison) to emerge. While highlighting changes revealed the extent of alterations to one particular article, it does not represent a scalable finding and further research of this type is necessary.

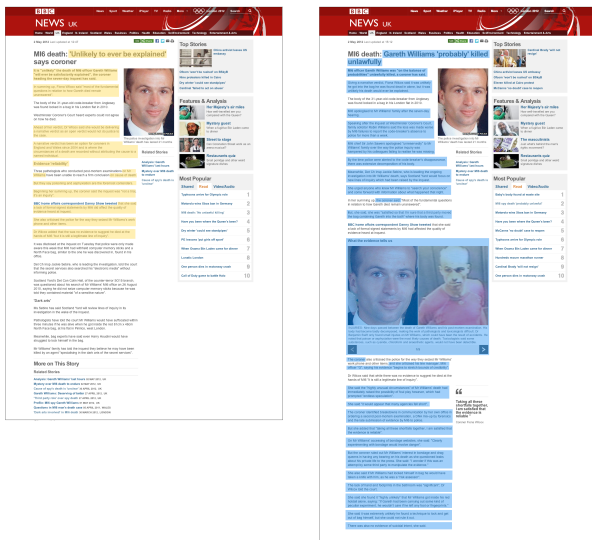


Figure 3; Article comparison.

INTERACTION

Online news articles exist in a carefully structured interactive environment, often evolved over many years. The screen real estate features many different options for rich interaction. The story shown in Figure 3 is placed within the pre-existing visual framework and information structure of all BBC online news content, it contains over 75 separate immediately visible interactive elements. Including hidden menu items and sub navigation accessible with one click, this number rises to 145. Interaction is sited on this page, (in the sense that the page has a unique URL), but it is also situated within the broader interactive ecology of BBC news content.

Articles are framed by their navigational context and its visual presentation. For example, the navigational depth of the information architecture is consistent throughout the site

and finely graded visual cues lead the visitor to the content they wish to consume.

Because the news inspector is intended to work across diverse sites, and therefore varied information structures, it demands a coherent interaction approach of its own, independent of the page it overlays. The challenge is to design a behavioural interactive texture with clearly indicated constraints and a distinct proprietary character. The purpose of the inspector should be immediately apparent, the learning threshold low and cost of engagement minimal.

Constraints are a way of limiting the actions that can be performed on a system [3]. They help to enhance usability and reduce the probability of error. Psychological constraints include symbols, conventions and mapping [3]. In the case of the news inspector, symbolic constraints are indicated by highlight colour, by textual labeling of functions and by implied tactility. Conventions are exploited by using the familiar metaphors of looking through a window at an external subject and being able to manipulate that window, (open, close, adjust). Finally, mapping is indicated by proximity (the magnifier reveals the details of the article that lies directly beneath it), and by making different parts of the underlying article visible as the magnifier scrolls over it.

When a system has a *low learning threshold* it is easy to work out what it does and how it does it. What actions are possible? How difficult are they to perform? The threshold can be lowered; by reducing depth of interaction, by minimizing or eliminating navigation and menus, and by providing useful default settings. The news inspector, once launched, does not need to be activated, it moves in one axis only and has multiple input redundancies.

Cost of engagement refers to the level of intrusion into the online news experience the magnifier causes. The system should be easy to add and remove to the news page, there should be a minimal or zero disruption to the reading process and it should respond instantly to user input. These qualities notwithstanding, the news magnifier does deliberately set out to interrupt the reading of online news. It enforces a certain reflective distance by causing the expected layout and appearance to be filtered through an 'alterations filter'. This way of estranging the content from its context is an example of defamiliarisation or ostranenie [6], an established post modernist strategy for revealing new meanings.

CONCLUSION

This paper has described the broad context of the project, some of the concerns relating to online news and the institutional and production environment it depends on. We have examined how online news embodies a specific view of time and recency, and how presentation influences

understanding. Prototypes and visual thinking was explored as a tool for design development and analysis. Finally how to design for interaction in this context. The news inspector is a work in progress and the design process continues to take account of all these factors as the project develops. This paper should be seen as design case in development that engages with various strands of thought within HCI.

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