Cox Institute
for Journalism Innovation,
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American Top 40

Mobile Web and App Design in the 40 Top U.S. Web News Sites

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I. Background

In order to examine how leading English-language news organizations design the news consumption experience for their mobile audience, we identified the top 40 sites based on average monthly unique traffic, using data from Alexa and ebizmba.com. The selected sites included a variety of media affiliations, including national newspapers, local newspapers, magazine, and cable news, as well as Web-native organizations[1].

Each site was assigned to two trained students who categorized the information using the Safari browser on an iPhone 4s. The screen dimensions of the phones used were 640 x 960px. Each student downloaded the free-standing mobile application (app) for the site, if there was one available. For each site, students first categorized mobile Web variables by opening the site in the Safari browser. Following the coding the mobile Web variables, students opened the mobile app and coded the remaining variables[2].

29 of the 40 news organizations had a free iOS app.

29 of the 40 news organizations' mobile Web sites included navigation behind a"hamburger."

On average, mobile Web sites included 10.25 navigation categories.

II. Mobile Homepage Layout

Our first task was to figure out how news organizations were using the space on the mobile screen.

Features Appearing on Home Screen Without Scrolling (Mobile Web)	# of sites	%
Content Elements		
Site Banner	40	100%
At Least One News Story	40	100%
Images Related to a News Story	38	95%
Navigation Elements		
Navigation Sections Hidden Behind "Hamburger" or other Button	29	72.5%
A Navigation Bar or Menu With Sections Visible on Screen	12	30%
Section Labels Organizing Story Content on Homepage	7	17.5%

Advertising Elements		
Pop-over Advertisement	5	12.5%
Banner Advertisement	19	47.5%

There was considerable variation in how sites presented their mobile navigation. Nearly three-quarters of the sites (29) hid primary navigation categories behind a button with which the user could toggle the appearance of section categories. Other sites included more conventional Web navigation on-screen, at the expense of other uses of screen real estate. Fi

Navigation Headings

On average, site navigation included 10.25 navigation categories. While these varied widely, the most prevalent were as follows: Business (25/40 sites), Sports (24), News (20), Opinion (16), Entertainment (15), and Living/Lifestyle (15).

Recommended / Popular Stories

A majority of the mobile Web sites included some way for users to access stories based on popularity or editorial recommendation. Some of these included relatively ambiguous headings for "Top Stories," while others included specific labeling such as "Popular/ Most Popular" (13 Web sites) or "Most Read" (8 Web sites).

Number of stories linked

The news sites coded varied widely in how many news stories they linked on the homepage, which ranged from one story (in two cases) to 216 stories. The average mobile Web homepage featured 52 linked stories. As shown in the pie chart(right), a majority of the news sites had 50 or fewer linked stories on the homepage.

Number of Stories, Mobile Web Homepage

- 1 to 25
- 26 to 50
- 51 to 75
- 76-100
- 101+
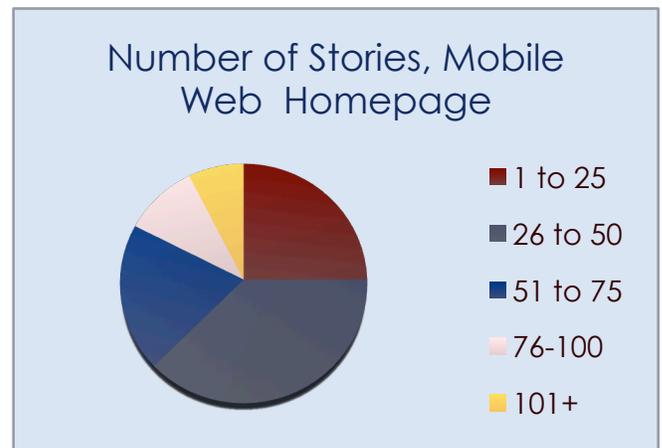
App promotion

Consumers accessing content through an organization's mobile Web site are often encouraged to download a dedicated mobile app instead. Of the 40 sites in our sample, 21 prominently encouraged app download by use of a pop-up or an on-page ad.

III. Basic News Story Presentation

To examine basic story presentation, students clicked the topmost linked news story from the homepage to view how it was presented on the story page. Students viewed the stories and coded for several

characteristics of story headline and byline presentation, congruity of the story's on-page headline and the headline link accessed from the homepage.

Author bylines

We were interested in how author bylines were utilized based on different formats. Most sites included a byline on the story page, although the nature of this byline differed. Half of the sites (20 Web sites) included a text byline that was not clickable, and no image of the author. Thirteen sites included a byline that was clickable, which usually led to a list of additional content published by the author. The coded stories from the 4 sites were credited to no specific author (e.g., staff reports), and 3 sites had no bylines at all.

Out of the 37 sites that had story bylines, the byline was most commonly found solely between the headline and the story (31 sites, 76%), A few story pages (4 pages) featured double bylines, with one in between the headline and the story and a second at the end of the story. One site each had a single byline located at the end of the story text or above the story headline.

Story headline: homepage vs. story screen

One way of providing clarity and consistency between the homepage screen and the mobile app story page is for news organizations to utilize the same headlines on the homepage as on the story pages themselves. Of the story pages in our study, only 22 (55%) included the same headline that was use to link the story from the homepage. In ten cases (25%), the headline featured on the story page was a longer version of the homepage headline, while in three cases (8%), the story page headliner was a shorter version. Finally, in five cases, the story headline was used to communicate wholly different information than the homepage headline, serving as a de facto subheading.

Story sharing buttons

Because social media plays an increasing role in the dissemination of online news content, we coded for interface features that facilitated such sharing on the part of users. Such buttons are particularly useful on mobile devices, on which they can be used to launch standalone applications with pre-populated link text to facilitate sharing. Facebook and Twitter were the social media platform most integrated into story pages, with 32 story pages (80%)

Social Media Sharing Options on Mobile Web Story Pages
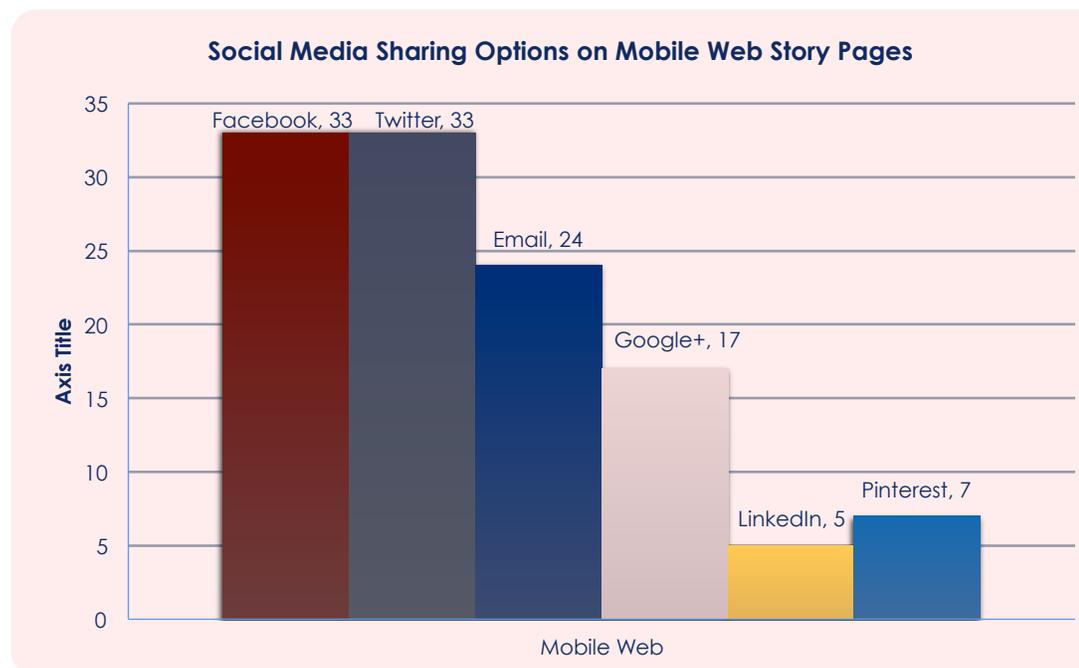
including a button that allowed users to easily share the story. The next most common social sites used in sharing buttons were links to share via email (24 sites), Google +(17 sites), and Pinterest (7) sites, with only a few sites providing buttons for Reddit (3), StumbleUpon (2), or Tumblr, MySpace, or Delicious (1 each). Only two sites did not include any story sharing buttons.

IV. Multimedia Elements

Video News Stories

Twenty-nine of the sites contained a video news story linked on the homepage. We selected the topmost video story on the page and viewed the story to code for several variables. Of these links, all but 1 included a static thumbnail image from the video as part of the clickable link. A total of 27 of the 29 videos played on an iPhone without error, while the other two would not play because the file was "incompatible with this device."

Advertising within video stories

Because of the high rate of video content on news sites, were interested in the degree to which sites are monetizing this content specifically through the use of "pre-roll" video advertisements that play before the main video. Out of the 27 playable video stories, 17 (63%) included no pre-roll advertisement at all. Nine videos included a pre-roll advertisement that the user could not skip, and two included a pre-roll advertisement that the user could skip.
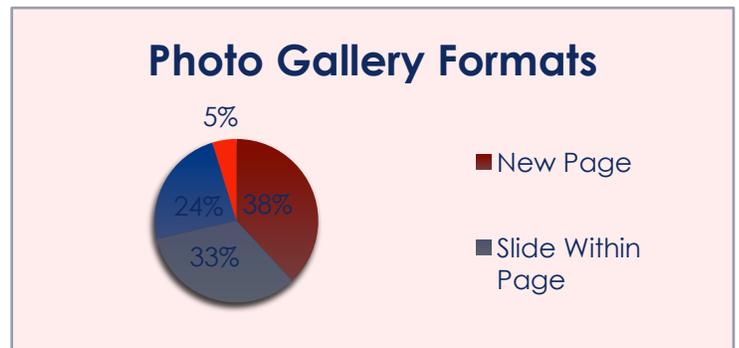
Photo Gallery Formats

5%

New Page

24% 38%

33%

Slide Within Page

Photo Credit Location (21 Galleries)	
Within caption	9 galleries
Below the image	7 galleries
Behind "i " button	2 galleries
Beside the image	1 gallery
Prior to the gallery	1 gallery
No credits	1 gallery

Photo Galleries

Twenty-one of the sites contained a photo gallery – a story consisting solely of photographs and captions -- linked on the homepage. These galleries were formatted in several different ways.   Eight of the galleries loaded a new page for each photograph. Seven galleries swapped content within the same page, and five of the galleries opened in a separate pop-up window or frame. One additional gallery contained all the photographs on a single page, through which the user could scroll vertically at her own pace. All of the galleries gave the user control over when to advance to the next photograph. Nineteen of the 21 galleries presented this control using some form of back/next buttons, while 13 of the galleries allowed swiping or

scrolling to view the next picture.

Photo credits on the photos used in the galleries were handled differently between galleries, as shown in the table to the left.

How does the gallery end?

Most of the galleries (14 of 21, or 67%) ended with the final image in the slideshow. Two additional galleries ended with a single image along with links to additional galleries. Three galleries ended solely with links to other galleries, most of which seemed unrelated to the original gallery. The remaining two galleries ended by taking the back to the first page or image of the gallery.

V. Apps vs. Mobile Web

Twenty-seven of the 40 news organizations (75%) had a standalone, freely available new app. In these cases, we installed the app on iPhones, and conducted a second round of site coding. One of the 27 apps (Financial Times) was not able to be installed due to repeated download failures, leaving 26 sites for which we were able to make direct comparisons between the mobile Web and the standalone app.

Out of the 26 sites for which we could make direct comparisons between the mobile Web and the standalone app, there was not much difference in terms of story volume on the homepage. The average number of stories on the mobile Web homepage for these sites was just higher than our overall average for all 40 sites, with 53 stories per page. On the mobile app homescreens, the average number of stories was 49.

The smaller screen of the mobile app allows fewer design elements. We found the following prevalence of elements visible *without scrolling* on the homepage: All 26 apps included links to at least one story, 24 included at least one story-related image, 23 included some sort of banner/heading for the app, and 9 included some for of display advertising.

Navigation within the mobile app was most commonly only presented to users upon request. Twenty of the 26 news apps included a button (often the three-line or "hamburger" button) that the user could press to view navigation on the screen. Only 5 of the apps utilized headings for story sections on the homescreen of the app, and only 3 apps had clickable links to sections displayed on the homepage.

Locating Stories Across Platforms

One key feature of being able to use a news Website across platforms is the ability to find stories or headlines previously viewed on another platform. One aspect of evaluating similarity between the mobile Web and app products was the homepage layout. In 21 of the 26 mobile app versions, the most prominently featured news story was the same as on the mobile Web homepage.

When users tried to locate a specific story from the mobile Web version within the app, they generally had success, finding it for 23 of the 26 the sites (88%). Of the 23 stories that were located in both platforms, 19 of the stories appeared with the same headline, and 4 had a different headline.

Conclusions

Our content analysis of the state of the industry in U.S. news design for mobile primarily shows a variety of design practices across Web sites. However, several findings stand out clearly to us.

First, it's notable that a majority of the Web sites analyzed have put some effort into reaching their mobile audience through both mobile Web and app design. While consumer trends in preference for mobile Web vs. apps tend to oscillate, this shows that news sites are covering their bases in this respect.

Secondly, although multimedia content is present on most multimedia sites, it's not presented consistently across sites. Photo galleries differ widely with respect to structure and the user navigation experience, including how the user gets out of the photo gallery content and back to other content. Video content occasionally differs with respect to format (cross-device compatibility), and presence of pre-roll ads.

From the perspective of value to the industry, it's interesting to find advertising is not particularly prevalent within mobile app and mobile Web content. Only 60% of mobile Web homepages examined utilized any form of advertising, and only 35% of mobile apps. The story was similar when it came to video content, only 37% of which included advertising.

We hope that this white paper presents a valuable snapshot of the mobile news landscape as of Fall 2014, and that its findings can inform practitioners and researchers in helping develop more usable and more consistent experiences for their mobile consumers.

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The Grady Mobile News Lab is a student training initiative of the Cox Institute for Journalism Innovation, Management and Leadership

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The James M. Cox Jr. Institute for Journalism Innovation, Management and Leadership prepares students and professionals for leadership roles in the news media. The Cox Institute is part of the Grady College of Journalism and Mass Communication at the University of Georgia. By sponsoring intensive training programs and funding applied research, the Cox Institute is at the forefront of addressing the strategic challenges faced by contemporary news organizations. The Cox Institute was established in 1990 by the late Conrad Fink, a legendary journalism professor in the Grady College. It is named for the late James M. Cox Jr., who headed Cox Enterprises and Cox Broadcasting Corporation from 1957 until 1974.

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[1] The news publishers included in this analysis were, in alphabetical order: ABC News, Atlanta Journal Constitution, AZ Central, BBC News, Bloomberg News, Buzzfeed, Chicago Tribune, Christian Science Monitor, CNBC, CNN, DailyMail, Dallas News, Denver Post, Detroit Free Press, Financial Times, Forbes, Fox News, Google News, Houston Chronicle, Huffington Post, LA Times, Miami Herald, National Geographic, NBC News, New York Post, New York Times, NJ.com, NWSource.com, Philly.com, Reuters, San Jose Mercury News, The Atlantic, The Guardian, Time , US News, USA Today, Wall Street Journal, Washington Post, Washington Times, and Yahoo News.

[2] Student coders categorized the variables based on a coding book created during a formative stage of the research. Raw coder agreement ranged from 88% to 98% on variables that were not based on stories selected by individual student coders (which nearly always differed). Cases of coder disagreement were resolved by a third coder. For story-specific variables, any variable marked as present on a story page by at least one coder was counted as present, and numerical values were averaged.