Survey of Photojournalism Technical Workflows

Kristy Roschke
Arizona State University
kristy.roschke@asu.edu

***Abstract*—As journalism organizations have taken most of their work online, their routines and workflows have adjusted to fit new publishing platforms. Photojournalism is an aspect of digital publishing that is particularly technically intensive, and the workflow related to editing, compressing, and publishing can be useful in establishing an image's provenance and credibility. This technical paper contains the full results of a survey researchers conducted to determine the extent to which news organizations have standardized their photojournalism workflows — and how standard they are across the industry. The results were summarized in the paper, "Source Attribution for News Articles by Image Compression Analysis," which will be [1] published at IEEE WIFS in December 2021.**

The technological disruption that upended journalism practices and business models in the late 20th century has continued in earnest in the 21st century. Newsroom routines have undergone dramatic changes, impacted both by advancements in digital technology and staff cuts. Especially for digital newsrooms, the tasks journalists perform have changed in profound ways.[2]

Additionally, as newsrooms have shrunk across the industry, tasks like photo editing may be handled by journalists and editors without extensive photojournalism expertise. While newsrooms employ many of their own routine practices and workflows, particularly around content editing, practices may not be uniform across the industry. To provide additional context, researchers developed an exploratory survey to determine the extent to which photo editing processes are standardized within newsrooms and to glean insight into the most commonly used photo editing techniques.

This photojournalism workflow survey comprises 13 questions using the National Press Photographers Association's code of ethics as a guide. The code of ethics mostly includes guidelines for engaging with subjects while taking photos, but also addresses editing, noting that "photographs can also cause great harm if they are callously intrusive or are manipulated."[3]

The survey covers the standards and processes newsrooms employ for editing, categorizing, attributing, storing, and publishing photos and graphics. Though the current research is related specifically to the compression rate of photos, the survey was expanded to include other aspects of the editing and publishing process in order to establish any consistencies across respondents.

Questions covered the use of software for digital asset management and photo editing, commonly used photo editing techniques, newsrooms standards for photo file size, type and compression rate, and standards set within the newsrooms' content management software that may impact image compression.

The researchers used a convenience sampling method to solicit responses from professional journalists in the U.S. The survey was distributed in March and April 2021 through email distribution and Twitter via the National Press Photographers Association and the Arizona State University News Co/Lab, as well as through a journalism industry Slack distribution list. News Co/Lab researchers also shared the survey with their professional networks on Twitter and Facebook.

Question 1. How many journalists/photojournalists are in your newsroom?

At the time of the initial paper submission, 11 journalists had responded to the survey. Since then, one response has been added. The additional response does not materially change the reported results. The twelve respondents represented newsrooms that ranged in size from fewer than 10 journalists/photojournalists to more than 100.

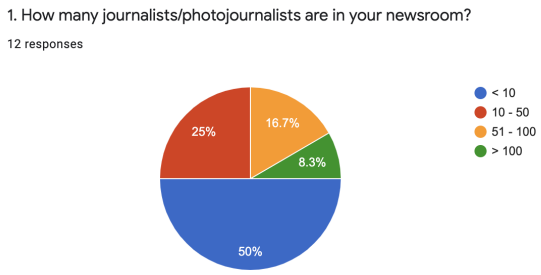

Fig. 1. Responses to survey question 1: How many journalists/photojournalists are in your newsroom?

Question 2 and 3: Do you use digital asset management software (e.g., Adobe Lightroom, PhotoMechanic, MerlinOne, etc)? If so, which one?

Independent of size, most of the respondents' newsrooms utilized a digital asset management software—PhotoMechanic was the most commonly named (41%)—and all of them used photo editing software, with Adobe Photoshop being the most common answer (58%).

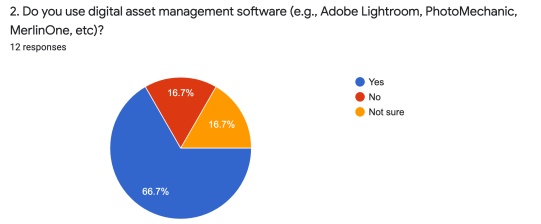

Fig. 2. Responses to survey question 2: Do you use digital asset management software (e.g., Adobe Lightroom, PhotoMechanic, MerlinOne, etc)?

Question 4: What software does your newsroom use for photo editing?

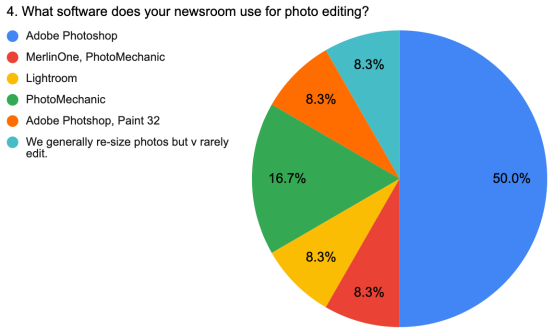

Fig 3. Responses to survey question 4: What software does your newsroom use for photo editing?

Question 5-7: Does your newsroom follow a standard workflow for editing, saving and compressing images for digital publication? If yes, please list the specifications for file type, resolution and compression size. What kinds of photo editing operations are most common in your newsroom (e.g. crop, adjust tone, etc.)?

Eighty-three percent of the respondents indicated they had standards for editing, sizing, and saving images, though those standards varied by newsroom, in part depending on if the image output is for digital or print publishing. All but one newsroom indicated they crop images, and 75% said they may adjust the color or tone of images.

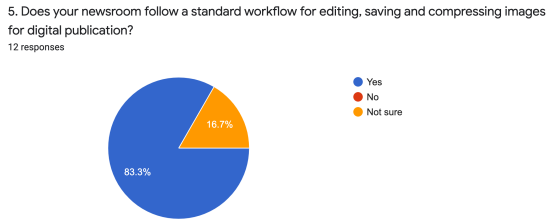

Fig. 4. Responses to survey question 5: Does your newsroom follow a standard workflow for editing, saving and compressing images for digital publication?

Question 8-11: What size images do you use from wire services? (e.g., 727 x 484 px; 2125 x 1416 px.) Do you further compress wire service images? Does your content management system compress images at the upload stage? Does your website's content delivery network (CDN), further adjust image compression or resolution (if applicable)? (E.g. to improve website appearance or download speeds.)

There was less certainty among respondents about image compression; 66% of respondents indicated they save photos as JPEG files, but most were unsure what specific compression rate was used for original images. Most did not know if wire service images were further compressed in their newsroom or if their content management system or content delivery network (for those that use one) compressed photos prior to upload. Two respondents indicated their newsrooms compress wire service images, and that their content management system and/or content delivery network further compresses images. Compression rate standards were mixed for those who did know.

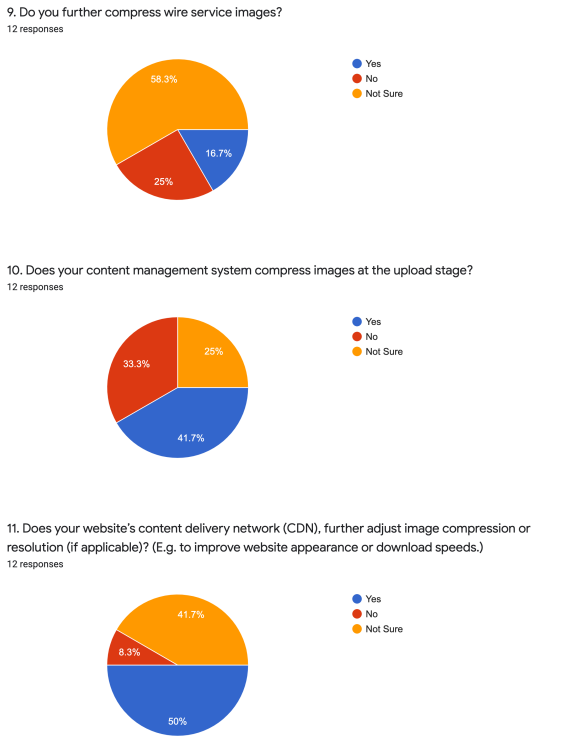

Fig. 5. Responses to survey question 9, 10, 11: Do you further compress wire service images?; Does your content management system compress images at the upload stage?; Does your website's content delivery network (CDN), further adjust image compression or resolution?, respectively.

Question 12: For the images in your news articles: do you record any information into image file headers ("EXIF" metadata) to record information about the images?

Five of the respondents (42%) indicated their newsrooms recorded EXIF data in their images, with the most common information being original source information, including date, time and photographer, and caption.

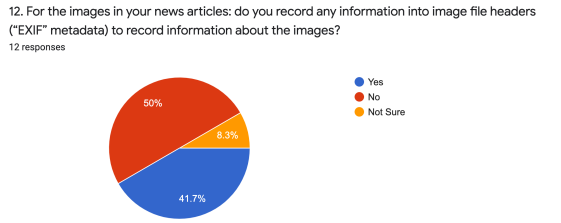

Fig. 6. Responses to survey question 12: For the images in your news articles: do you record any information into image file headers (EXIF metadata) to record information about the images?

Survey results indicate that newsrooms are likely to have standardized photojournalism processes, regardless of newsroom size. There are some differences in the preferred software for photo management and editing, but results indicate that there is consensus on the most popular and widely used software platforms. There were similarities among respondents about the most common and acceptable photo editing techniques, but there is less clarity around the workflows related to sizing, compressing and publishing photos. For these tasks, respondents were much less likely to be aware of a standardized workflow within their newsrooms. One possible explanation for this is that photojournalists' priority is the quality of the content of the image itself as opposed to its digital footprint. That said, several respondents did have knowledge of their image compression practices and most use some sort of EXIF data to mark provenance and ownership.

This exploratory survey offered insight into common photojournalism routines that can be useful for computer scientists and others seeking to identify key characteristics of authentic media. An opportunity for future research would be to administer a more robust version of the survey to a representative sample of newsrooms in different countries to see how routines and standards vary in different geographies.

References

[1] M. Albright, N. Menon, K. Roschke, and A. Basharat, “Source Attribution for News Articles by Image Compression Analysis,” IEEE WIFS, December 2021.
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