

ROAD 2.0: Digitizing Outdoor Advertising

Final Report, Jun 2012

Award Number: NAR09-RD-10017-09

Grantee: Duke University

Summary of Project Accomplishments

ROAD 2.0 (2009-2012), an NHPRC-funded project undertaken by Duke University Libraries' Hartman Center for Sales, Advertising & Marketing History, accomplished its goal: to scan approximately 24,000 images and merge them with descriptive metadata from the ROAD (Resource of Outdoor Advertising Description) database, in order to create an improved online resource for researching advertising history.

This narrative report provides a detailed summary of all project work, including what deliverables were met and how, and challenges encountered during the project. The expected outcomes used to measure the performance of this project are discussed within the following sections:

1. Scanning and Costs

- Scan approximately 24,000 images from the OAAA Archives and Slide Library and from the John Shaver Papers.
- Keep project costs below approximately \$5 per image.

2. Publication with Metadata

- Make the scanned images available through the ROAD database.

3. Assessment of Use

- Test the usability of the digitized materials through a user survey that will examine how researchers use the material.
- Track and report on the project website about the usage of collections prior to and after digitizing in terms of reference requests and usage of the originals.

4. Promotion of Collection and Project Documentation

- Publicize the digitized collections through press releases, announcements on appropriate listservs, and presenting on the project during at least one professional conference.
- Create a project website that publicizes the project and describes the processes and costs associated with preparing, scanning, and making these collections available online.
- Timely submission of complete reports, which include detailed cost analyses for each part of the project, as well as three copies of grant products such as digitizing guidelines, publicity materials, and the revised finding aid.

1. Scanning and Costs

27,515 total images were produced by this project, exceeding original projections of approximately 24,000 images. The rapid pace of digitization enabled the project team to expand the original scope of materials. Even with this expanded scope, total digitization costs for this project also came in below projections, for a total cost of \$97,488.30 to digitize images for the ROAD database (see Table 1 below). Total digitization costs divided by total images produced yields an average cost of \$3.54 per image, well below the project goal of approximately \$5 per image.

Table 1: Planned versus Actual Digitization Expenses

Budget Category	Planned Expenditures	Actual Expenditures	Notes
Digitization Assistant wages	\$33,333.50	\$23,337.50	0.5 FTE; 20 hour/wk
Digitization equipment	\$2,500.00	\$2,500.00	Zeutschel planetary scanner
Contract digitization services	\$11,640.00	\$19,141.71	Vendor digitization of slides
Shipping costs	\$250.00	\$257.09	Shipping slides to vendor to digitize
Cost share: staff salaries	\$49,706.00	\$38,973.07	
Fringe benefits	\$17,410.35	\$13,278.93	Cost share + appropriated funds
TOTAL DIGITIZATION COSTS	\$114,839.85	\$97,488.30	

Digitization Assistant

Speed and efficiency of digitization work kept costs at a minimum. Rita Johnston, the digitization specialist hired by the grant, proved to be both quick in digitization work (scanning and quality control) and accurate and careful in metadata review. Rita scanned photographs, worked with a vendor to digitized slides and negatives, and conducted quality control on all images, which included cropping, inversion of negatives, and color level adjustment.

As she digitized and performed quality control on the images, Rita reviewed the existing metadata records to ensure that the image in hand matched the existing description. This work also involved checking the file names of the digitized images against the file identifiers that exist in the metadata to be sure that images would match with the database records. Her metadata verification also involved quick corrections of typographical errors and routine normalization.

An additional factor contributing to lower costs for digitization was a decrease in the projected rate for Library Assistant-banded positions at our institution.

Digitization equipment

In addition to great project staff, our strategic purchase of a Zeutschel 14000 A2 overhead scanner (rather than the planned Epson 10000XL flatbed) enabled us to increase our digitization throughput. Where the Epson scanner was estimated to take around six minutes per scan, including time for material handling, quality control, and generating derivatives, the Zeutschel averaged approximately two minutes per scan for the same work.

Contract digitization services and shipping costs

Outsourced slide digitization proceeded at the expected pace. Even though we adjusted our original digitization plan, sending smaller batches more frequently in order to conduct quality control on each batch as it was returned, our timeline for completion of the approximately 12,000 slides was unaffected. The unplanned increase in costs for contract digitization did not affect our total costs, due to the faster digitization pace afforded by the Zeutschel and the efficient work of our Digitization Assistant.

2. Publication with Metadata

Metadata cleaning began during the digitization phase, and continued during preparation of the collection for publication. Unexpected infrastructure development and staff turnover altered original plans to publish the collection in batches. Instead, publication was postponed until work on a new digital collections discover and access application was completed. The ROAD 2.0 collection (http://library.duke.edu/digitalcollections/outdoor_advertising/) was published in its entirety only one month later than originally planned.

The project team established goals for metadata cleanup to enable a more effective discovery interface upon publication. Digitization Assistant Rita Johnston focused on creating new records in cases where multiple items were described in the same record. She has also refined records that had been given a “Miscellaneous” subject designation and corrected company names where values were inconsistently assigned.

Publication of the images with the ROAD database metadata required cleaning of the metadata to correct errors and to enable item-level searching of images, and mapping of the existing descriptive values to a more generic and discoverable schema based in Dublin Core. This modified Dublin Core schema, which we refer to as AdCore, includes additional descriptive values mapped to Dublin Core elements. A list of these new values can be found in *APPENDIX 1: AdCore Metadata Schema – Additional Elements*.

3. Assessment of Use

To assess the use of the ROAD 2.0 digital collection, we developed and conducted a web-based user survey. A copy of the survey can be found in *APPENDIX 2: ROAD 2.0*

Survey. To further assess the use of the site, we also gathered web statistics through Google Analytics.

The online survey was posted on the ROAD 2.0 website in September 2011. The most recent analysis of survey results, collected in June 2012 and discussed in greater detail below, supports earlier findings: users are satisfied with the site content and usability and a greater number self-identify as “casual users” than we would have expected. We were also surprised to learn that, of the respondents doing topical research, the majority were apparently not researching the advertising depicted in the photographs, and were instead using such criteria as geographical place names to drive their search.

Analysis of web statistics revealed that ROAD 2.0 was among the more popular of our digital collections, ranking 9th out of 40 based on portal pageviews. The length of time visitors spent on the site, clicking through items and pages of search results, supports the survey finding that users found the content relevant. Search terms used also corroborated another survey finding: that users were frequently interested in the places where the billboards were located, not just the advertisements themselves. While some items in ROAD 2.0 were viewed over 100 times, pageview statistics revealed that 38% of the collection had never been viewed, indicating that more needs to be done to promote the ROAD 2.0 collection and to optimize the portal and pages for search engine discovery.

User Survey

In the fall of 2011, we developed and conducted a user study for assessing use and value of ROAD 2.0. A brief web survey was positioned prominently on the site, for visitors to voluntarily provide feedback. The initial results of that survey were shared in the project’s *Jul – Dec 2011 Interim Report*. Since then, the survey has received an additional eight responses, which are incorporated in the final analysis below. Between its launch on Sept 19, 2011 and June 20, 2012 (276 days), the survey received 48 complete responses (averaging roughly one response every five days).

Yvonne Belanger (Duke University Libraries’ director of assessment) worked with Liz Milewicz (PI), Lynn Eaton (Hartman Center), and Sean Aery (Digital Projects Developer) to create questions that could accurately gauge the usability of the ROAD 2.0 interface and the value of the content for research, and also probe other ways these materials are being used. Key goals for the online survey were to discover who was using the site, how they were using it, and satisfaction with the site and content. We also hoped to generate a high number of complete responses by keeping the survey short, and not burdening the user with completing a long survey. Questions from this web survey are appended to this report (see *APPENDIX 2: ROAD 2.0 Survey*).

Survey questions were incorporated into a Qualtrics survey by Sean Aery. Aery also embedded the survey into the online interface using prominent links in the main ROAD 2.0 portal, the member collection portals, search results within either the main portal or a member collection, and on item pages for any item from a ROAD 2.0 member collection.

Analysis of User Survey Responses

There were 66 total responses to the survey. Forty-eight responses (73%) were complete and so were used to develop analysis. The remaining 18 responses (27%) were partial responses (started but abandoned before the end of the survey) and thus were excluded from analysis. Of the total 48 analyzed responses, 26 (54%) included additional feedback. A detailed analysis of responses to survey questions is appended to this report, along with complete listings of the additional feedback users provided (see *APPENDICES 3-5*).

Overall, responses to the survey were very positive, with most users reporting high degrees of satisfaction (see *APPENDIX 4: Detailed Analysis of Responses to ROAD 2.0 Survey*). Of the users seeking particular images, 86% were satisfied (either “very” or “somewhat”). Likewise, 83% of users doing topical research reported satisfaction. While the site’s ease of use was generally rated favorably, it is worth noting that slightly more respondents felt it was “somewhat easy to use” (20, or 42%) than “very easy to use” (19, or 40%).

The types of users and uses identified were also insightful, as they indicated to us a higher percentage of casual users than we might have expected (see *APPENDIX 4: Detailed Analysis of Responses to ROAD 2.0 Survey*). It was also surprising to learn that of the respondents doing topical research, the majority was apparently not researching the signs, billboards, or advertising depicted in the photographs. Though there are too few responses to generalize, it is worth noting that geographical place names figured prominently among the research topics. (See *APPENDIX 3: ROAD 2.0 Users’ Research Topics* for all user-supplied responses to this question.)

Slow load times, difficulties navigating between several images at once, and insufficient description of outdoor advertisements’ locations were all cited as negative aspects of the site (see *APPENDIX 5: ROAD 2.0 Users’ Additional Feedback*). It is likely that the site’s unresponsiveness was a primary factor for the users who expressed difficulty or dissatisfaction using the site, given the prevalence of comments that cited slowness as a problem. Slow load times have been problematic for all of Duke’s collections during this assessment period, but development is underway to speed up the application by the end of summer 2012. Some of the navigation features requested by users (grid view and category-specific slideshow) were actually already possible in the application, so these may not be presented clearly enough in the interface.

Web Analytics

We used Google Analytics on all pages of the ROAD 2.0 website in order to measure user interactions with the site and the digitized items within. Statistics were collected for the period April 18, 2011 to June 27, 2012, covering the entire lifetime of the website to date. A project launch timeline (*APPENDIX 6: Timeline of Web Statistics*) contextualizes the dates during which web statistics were gathered. A more complete breakdown and discussion of these statistics, analyzed in summary form below, are appended to this report (see *APPENDICES 7-11*).

The ROAD 2.0 portal page

(http://library.duke.edu/digitalcollections/outdoor_advertising/) was viewed 7,401 times, with a peak of 724 views on July 20, 2011. These figures include traffic to <http://library.duke.edu/digitalcollections/outdoor-advertising/> as the site was available at either location during the first several months of the project. We are encouraged that the ROAD 2.0 portal was visited more frequently than most of our existing digital collection portals: compared with other digital collections at Duke University Libraries during this period, ROAD 2.0 was the ninth most popular digital collection (of 40 in our common discovery & access application), as measured by portal page views.

However, there is still a lot of room for improvement when it comes to helping potential users discover these materials. For instance, pageviews for four of Duke's advertising digital collections portals surpassed the ROAD 2.0 portal's 7,401 during this period: [Ad*Access](#) = 177,590 pageviews; [Emergence of Advertising in America](#) = 70,500 pageviews; [AdViews](#) = 33,145 pageviews; and [Medicine & Madison Avenue](#) = 10,930 pageviews.

Likewise, while most of the digitized items from ROAD 2.0 were viewed at least once, and there were several items that were viewed over 100 times, nearly 38% were never viewed by a single user during the year (see *APPENDIX 7: ROAD 2.0 Item Pageviews*). These numbers suggest that we need to do a better job promoting the collection to potential users in the future, as well as enhance our discovery & access application so that our pages (portals as well as items) are better optimized for discovery by search engines.

Our web analytics search data corroborates a conclusion drawn from our user survey responses: there has been slightly more interest in finding materials by geographic region than by particular products or companies, and the landscapes that surround the advertising in the photographs are as compelling to researchers as the ads themselves. (See *APPENDIX 10: ROAD 2.0 Frequent Search Terms*.)

Finally, our statistics on post-search site interactions support survey feedback that indicated users felt their searches were successful and were satisfied with the relevance of the materials they were discovering on the site. Users who performed searches usually viewed multiple pages of results, opened item pages, and stayed on the site for several minutes before leaving.

4. Promotion of Collection & Project Documentation

Launch of the ROAD 2.0 digital collection was promoted to advertising-industry publications and websites as well as to archival organization, and through the Duke University Libraries' and Hartman Center's online and print media outlets. Persistent information about the project and the ROAD 2.0 collection are available through the digital collections website,

<http://library.duke.edu/digitalcollections/outdooradvertising/about/>.

Promotion

The portal was released in April 2011, and heavily promoted through a press release and postings with a variety of trade journals, blogs, and listservs (see *APPENDIX 12: ROAD 2.0 Press Release*). News of the ROAD 2.0 digital collection appeared as a cover article in the Summer 2011 Hartman Center *Front & Center* newsletter. It was also posted on the Center's Facebook page, the Duke University Libraries home page as a news article, and the David M. Rubenstein Library's blog, *The Devil's Tale*.

The ROAD 2.0 digital collection was promoted to academic groups such as the Conference on Historical Analysis and Research in Marketing (CHARM), Business History Conference, American Academy of Advertising and through the H-Announce listserv. The press release was also distributed to the Society of American Archivists' (SAA) *Archival Outlook* magazine, the Society of North Carolina Archivists' (SNCA) newsletter, and the Business Archives Section of SAA.

Documentation

Documentation of project work is described below and in the appendices. Documentation for this project can also be accessed publicly through the project website: <http://library.duke.edu/digitalcollections/outdooradvertising/about/>.

Cost Assessment

This project sought to produce digital images for less than \$5.00 per scan. As shown in Table 1 above, actual digitization costs were lower than expected, and the rapid pace of digitization allowed us to scan more images than originally planned. The result was an average cost of \$3.54 per image, well below our goal of \$5 per image.

Table 2: Planned versus Actual Digitization Expenses

Budget Category	Planned Expenditures	Actual Expenditures	Notes
Digitization Assistant wages	\$33,333.50	\$23,337.50	0.5 FTE; 20 hour/wk
Digitization equipment	\$2,500.00	\$2,500.00	Zeutschel planetary scanner
Contract digitization services	\$11,640.00	\$19,141.71	Vendor digitization of slides
Shipping costs	\$250.00	\$257.09	Shipping slides to vendor to digitize
Cost share: staff salaries	\$49,706.00	\$38,973.07	
Fringe benefits	\$17,410.35	\$13,278.93	Cost share + appropriated funds
TOTAL DIGITIZATION COSTS	\$114,839.85	\$97,488.30	

Digitization Processes

APPENDIX 13: ROAD 2.0 Digitization Processes provides a summary of the workflow and standards used to digitize materials for this project.

AdCore Metadata Schema

Duke Core – Advertising, or AdCore, is a metadata schema that staff in the Hartman Center created for item-level description of advertising-related collections. Archivists in the Hartman Center have applied it to a number of projects over the years. The original ROAD grant project was an effort to apply the AdCore schema to a series of collections that, at the time, the library had no plans to digitize. For the ROAD 2.0 project, library staff digitized the contents of the collections and retroactively applied the item-level metadata.

AdCore as currently implemented is an extension of the Dublin Core schema. It uses certain elements as specified in Dublin Core, such as Format. It also adds a number of elements specific to the needs of advertising researchers. For example, AdCore specifies a Company property that is a refinement of the Dublin Core Creator element, and is used to indicate the corporate entity responsible for an advertisement. Other elements and their Dublin Core parents include: Product (Subject), Placement Company (Creator), Awards (Subject), Illustrator (Creator), Publication (Source), Season (Subject). (See *APPENDIX 1: AdCore Metadata Schema – Additional Elements* for a description of these additional AdCore properties derived from Dublin Core elements.)

APPENDIX 1: AdCore Metadata Schema – Additional Elements

"AdCore" or "Duke Core - Advertising" consists of the Dublin Core (DC) elements, with the following additional properties based on refinements of DC elements:

Name of property	Dublin Core element refined by this property	Brief description of property
Artist	Creator	The person responsible for the artwork in the ad.
Awards	Subject	Advertising trade awards received by the ad.
Company	Creator	The corporate entity responsible for the product being advertised.
Headline	Title	The text in bold in the ad.
Illustrator	Creator	The person responsible for drawings that appear in the ad.
People	Subject	Famous persons appearing in the ad.
Placement Company	Creator	The corporate entity responsible for placing an outdoor advertisement.
Product	Subject	The good or service promoted by the ad.
Publication	Source	The publication in which the ad appears.
Race	Subject	The race of persons appearing in the ad.
Season	Subject	The time of year with which the content of the ad is associated.
Sponsor	Creator	The corporate entity responsible for a non-advertising announcement.

APPENDIX 2: ROAD 2.0 Survey

Thank you for helping us to evaluate our ROAD2.0 (Resource of Outdoor Advertising Descriptions) digital collections, including over 30,000 images from five archival collections. This survey should take only a couple minutes to complete.

I am a [choose one]:

- Student
- Faculty Member / Teacher
- Librarian / Archivist
- Advertising professional
- Businessperson in an industry other than advertising
- Casual user

How did you use this website today? [check all that apply]

- Casual browsing
- Searching for a specific image or images
- Researching a particular topic [please specify]:

How successful were your searches for the image(s) you were seeking?

- | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|
| Very Unsuccessful | Somewhat Unsuccessful | Somewhat Successful | Very Successful |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

With respect to your research topic, how satisfied are you with the resources and information available in this site

- | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|
| Very Dissatisfied | Somewhat Dissatisfied | Somewhat Satisfied | Very Satisfied |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How would you rate this website on its ease of use?

- | | | | |
|-----------------------|---------------------------|-----------------------|-----------------------|
| Very Difficult to Use | Somewhat Difficult to Use | Somewhat Easy to Use | Very Easy to Us |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How likely would you be to recommend this site to someone else?

- | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|
| Very Unlikely | Somewhat Unlikely | Somewhat Likely | Very Likely |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Please provide any additional feedback.

APPENDIX 3:

ROAD 2.0 Users' Research Topics

Following are all user-supplied research topics, in response to Survey Question #2, "How did you use this website today?" where "Researching a Particular Topic [Please Specify]" was checked.

-
1. Baltimore
 2. Analyze Ads
 3. outdoor advertising in New York City
 4. Arizona advertising history
 5. Vicks and Edgar Hatcher
 6. Trenton, New Jersey
 7. filling stations and related topics
 8. Trenton, NJ
 9. link from Women's History Sources blog
 10. signs with the red flying horse logo
 11. trenton,nj
 12. pre-casino Atlantic City NJ
-

APPENDIX 4: Detailed Analysis of Responses to ROAD 2.0 Survey

Type of Users (48 responses)

The greatest number of responses came from those who self-identified as a “Casual user” (40%, $n = 19$); they were followed by those who self-identified as “Librarian/Archivist” (23%, $n = 11$), “Student” (13%, $n = 6$), and “Businessperson in an industry other than advertising” (13%, $n = 6$). “Faculty Member/Teacher” and “Advertising professional” made up 10% ($n = 5$) and 2% ($n = 1$) of the respondents, respectively.

Type of Use (47 responses)

Users were asked to identify how they had just used the ROAD 2.0 site, checking all the options that applied. “Casual browsing” emerged as the predominant purpose for using the ROAD 2.0 collection ($n = 28$, or 60%). “Searching for a specific image or images” ($n = 14$, or 30%) and “Researching a particular topic” ($n = 12$, or 26%) followed.

Success of image searches (14 responses)

Seven of the fourteen respondents (50%) who indicated they were using the site to search for a specific image reported that their image search was “very successful.” Of those same fourteen respondents, 36% ($n = 5$) reported that their image search was “somewhat successful.” One respondent (7%) indicated that an image search was “somewhat unsuccessful” and one (7%) replied “very unsuccessful.”

Success of topical research (12 responses)

Of the twelve respondents who indicated they were using the site to research a particular topic, six (50%) were “very satisfied” with the resources and information available, and four (33%) were “somewhat satisfied.” Two of the respondents who indicated that they were using the site for topical research expressed dissatisfaction with their research experience, ranking their satisfaction level at “somewhat dissatisfied” ($n = 1$, or 8%) and “very dissatisfied” ($n = 1$, or 8%).

Research topics (12 responses)

The twelve respondents who were using the site to research a particular topic expressed a range of research interests. The majority ($n = 7$, or 58%) were researching a topic related to a specific geographic region (e.g., “Trenton, NJ” or “Arizona advertising history”). Less than half of the respondents ($n=5$, or 42%) specified a research topic directly related to advertising or marketing. The full list of topics is appended to this report (*Appendix 3*).

Ease of Use (48 responses)

Of the 48 responses to this question, 40% ($n = 19$) indicated the site was “very easy to use” and 42% ($n = 20$) indicated the site was “somewhat easy to use.” Nine respondents negatively evaluated the site’s usability, with 17% ($n = 8$) reporting that it was “somewhat difficult to use” and 2% ($n = 1$) reporting that it was “very difficult to use.”

Likelihood to Recommend (48 responses)

The majority of respondents ($n = 33$, or 69%) were “very likely” to recommend the ROAD 2.0 site to someone else, with 25% ($n = 12$) “somewhat likely” to recommend. Three of the 48 respondents to this question indicated they were unlikely to recommend the site to others, with one (2%) “somewhat unlikely” and two (4%) “very unlikely.”

APPENDIX 5: ROAD 2.0 Users' Additional Feedback

User responses to Survey Question #7, "Please provide any additional feedback."

1. I like the different options for displaying results - allows the user to decide what type of searching they're doing - browsing versus focused searching.
2. Your site is like manna from heaven to a history buff.
3. Thank you for these wonderful resources.
4. Better location descriptors would be useful
5. Thank you for this wonderful resource!
6. Slow loading times. Perhaps the server is just inundated w/ request as this collection was posted about on a lot of social platforms today :)
7. I think the site is fine. As users, we must all spend some time learning how to navigate a web site. Your site is no different. It is a terrific resource.
8. I'd like to see more pictures of items from the collections, lots and lots more pictures without having to search for them.
9. INTERESTING SITE FOR TO HAVE IN MY FILES.
10. Thank you for digitizing and preserving the R.C. Maxwell collection for future generations to enjoy. I grew up in Trenton, NJ in the 60's - 80's and visited Atlantic City many times as a youngster. I am a history "fan" of familiar places and this collection gives me hours of fun uncovering these treasures. / / If you need, I can help you identify the location of some of the "unknown" images in the collection. Please feel free to contact me.
11. This is a great site. So much wonderful historical information available to the public.
12. This website is AWESOME! Love seeing all photos from Trenton NJ... I grew up there and lived there from 1976-1998. It is great seeing locations that I recognize taken in the 20's to the 50's. / Thank you!
13. I wish there was a better way of looking through the images . Having to always start at the beginning was difficult . I actually build scale models of service stations and would gladly share any information with you .
14. Difficulty in loading images is frustrating...
15. Excellent site. Easy to navigate and full of history. Loved the old photos of my hometown (Trenton, NJ)
16. it's great! thanks!
17. Was not working at all when you clicked on a category
18. THAT' S OKEY
19. I'm sure it will be awesome, but currently. the images will not load. plus, the slide show is not that helpful for a researching-the option of a grid would be much appreciated. / Thank you SO MUCH for making this available. I know how much work it takes and when it's fixed, it will be an exceptional resource. / All your digital archives are stupendous, especially the queer, civil rights and feminist collections. (The Sallie S. Center is to die for.)
20. Thanks for making these archival images available on the web. This is a good resource for researching signs, American roadsides, and advertising art.
21. I'd like to see the slide show feature enabled to cycle through the images within a category, i.e. Marlboro, Fords, Beer, etc. This is an excellent idea and collection. It was clunky to use, slow to respond, but I am

very enticed by the content and intent. Thanks for this effort and good luck with improving the database.

22. Great resource for advertising images. I have a student who is completing a research project about Coca-Cola, so this will be very helpful to her.
 23. Keep up the good work! Thank you for having these advertising archives. / I really enjoyed the television commercials from the 60's and 70's the best.
 24. I love your collections and recommend them to students ALL the time. I am a social sciences librarian at a small liberal arts college and my students and faculty are hungry for primary source materials like these. I have passed along this latest collection to the history library at my college because several of her classes and students frequently search for historic advertising collections as well. Thank you, thank you!
 25. I came to this website (I'm somewhat embarrassed to say) through a Facebook page entitled, "Atlantic City Memory Lane" where geezers and near-geezers (moi?) congregate to remember Atlantic City back in days when, as a movie character played by Burt Lancaster once said, "Atlantic City had floy-floy coming out its ears!" Actually, I'm writing an article about AC during its pre-casino era and I found images preserved at your website a way of getting into the mood of a gentility which the old town probably never deserved but which it affected anyway. Thanks, both to Duke and to the contributors at ACML that clued me to the availability of the images.
 26. I have the original book introducing the advertising found on the roadside signs you have listed entitled "American Marches Ahead ". The book is complete and is approximately 18x23 inches with a man beating a red drum with white letters proclaiming "American Marches Ahead!" I decided to research the book and found this website.
-

APPENDIX 6: Timeline of Web Statistics

The ROAD 2.0 site (http://library.duke.edu/digitalcollections/outdoor_advertising/) went live April 18, 2011 as a “soft launch” (available but not linked to or promoted) in order to gather staff feedback, which informed a final round of revisions before promoting the site more broadly. The site encompassed 22,186 items from four archival collections upon initial launch. By the end of July 2011, we had added our R.C. Maxwell Co. collection (digitized independently from the NHPRC grant) for discovery via the ROAD 2.0 outdoor advertising portal, bringing the total scope of the site to 31,595 items from five archival collections.

Date	Event
April 18, 2011	“Soft launch”: includes 22,186 items, from OAAA Archives (16,172 items), OAAA Slide Library (5,653 items), John Paver Papers (321 items), and John E. Brennan (40 items).
April 18, 2011	First item pageview
April 22, 2011	First portal pageview
July 1, 2011	Final interface revisions before official launch
July 15, 2011	“Official launch”: promotion began (e.g., library news post)
July 26, 2011	R.C. Maxwell Co. collection added (9,409 items), for a total of 31,595 items in ROAD 2.0.

APPENDIX 7: ROAD 2.0 Item Pageviews

Pageviews of ROAD 2.0 items were tracked between April 18, 2011 and June 27, 2012. Of the 31,595 items available on the ROAD 2.0 website, 19,649 (62.2%) were viewed by users at least once, while 11,946 (37.8%) were not viewed at all during the period. The average number of views per item was 2.37, with a median of 1, mode of 0, and standard deviation of 5.06. Seven items received over 100 views, and our most-visited item was viewed 328 times.

Pageviews	#	Pct	Pageviews	#	Pct	Pageviews	#	Pct
0	11,946	37.81	28	12	0.04%	59	1	0.00%
1	6,770	21.43	29	5	0.02%	60	2	0.01%
2	4,067	12.87	30	9	0.03%	62	1	0.00%
3	2,520	7.98%	31	10	0.03%	63	1	0.00%
4	1,618	5.12%	32	6	0.02%	64	2	0.01%
5	1,132	3.58%	33	8	0.03%	65	1	0.00%
6	769	2.43%	34	5	0.02%	67	1	0.00%
7	586	1.85%	35	6	0.02%	69	1	0.00%
8	427	1.35%	36	5	0.02%	70	1	0.00%
9	319	1.01%	37	7	0.02%	71	1	0.00%
10	265	0.84%	38	8	0.03%	72	1	0.00%
11	206	0.65%	39	3	0.01%	76	2	0.01%
12	162	0.51%	40	1	0.00%	81	1	0.00%
13	120	0.38%	41	6	0.02%	84	1	0.00%
14	97	0.31%	42	4	0.01%	87	1	0.00%
15	75	0.24%	43	3	0.01%	93	1	0.00%
16	56	0.18%	44	2	0.01%	102	1	0.00%
17	51	0.16%	45	5	0.02%	104	1	0.00%
18	53	0.17%	46	2	0.01%	130	2	0.01%
19	35	0.11%	48	3	0.01%	137	1	0.00%
20	40	0.13%	49	3	0.01%	211	1	0.00%
21	35	0.11%	50	1	0.00%	328	1	0.00%
22	19	0.06%	51	1	0.00%	Grand Total	31,595	
23	17	0.05%	52	4	0.01%			
24	20	0.06%	53	1	0.00%			
25	24	0.08%	55	1	0.00%			
26	7	0.02%	57	1	0.00%			
27	10	0.03%	58	1	0.00%			

APPENDIX 8: Top 10 Most Popular Items in ROAD 2.0, by Pageviews

Following are the top 10 most popular items in the ROAD 2.0 digitized collection, as determined by pageviews (Apr 18, 2011 – Jun 27, 2012).

Rank	Item Number	Title [Product]	Pageviews
1	rcmaxwellco_XXX0893	Wrigley's Gum, El Producto Cigar, Piedmont Cigarettes, Coca-Cola Soft Drink (4 advertisements)	328
2	oaaaarchives_AAA0096	Bond Bread, Zenith Radio 1929 Model, Oakland Automobile, Billboard?, Willys-Knight Six automobile, Chipso Detergent, Hart Schaffner & Marx Clothes, Citizens National Bank (8 advertisements)	211
3	oaaaarchives_AAA6763	Extra Tasty...Extra Lean! [Wilson's Corn King Bacon]	137
4	rcmaxwellco_XXX2021	Cigarettes, Cigarettes (2 advertisements) [Prince Albert & Camel]	130
4	rcmaxwellco_XXX4724	Home of Trenton Old Stock Beer	130
6	oaaaarchives_AAA8469c	Come to Marlboro Country.	103
7	oaaaarchives_AAA0263	Gannon's Restaurant, Air Conditioned	93
8	rcmaxwellco_XXX1324	Lucky Strike its toasted	87
9	oaaaarchives_BBB6308	Enjoy Coca-Cola Classic The Universal Language of Friendship	84
10	oaaaarchives_AAA9291a	Save for Those Unexpected Extras At [banking services]	81

APPENDIX 9: Top 100 Most Popular Items in ROAD 2.0, by Pageviews

Following are the top 100 most popular items in the ROAD 2.0 digitized collection, as determined by pageviews (Apr 18, 2011 – Jun 27, 2012).

Rank	Item Number	Page-views	Rank	Item Number	Page-views
1	rcmaxwellco_XXX0893	328	30	rcmaxwellco_XXH2476	52
2	oaaaarchives_AAA0096	211	30	rcmaxwellco_XXX1603	52
3	oaaaarchives_AAA6763	137	30	rcmaxwellco_XXX1988	52
4	rcmaxwellco_XXX2021	130	35	oaaaarchives_AAA0375	51
4	rcmaxwellco_XXX4724	130	36	oaaaarchives_AAA9247	50
6	oaaaarchives_AAA8469c	103	37	oaaaarchives_BBB4600	49
7	oaaaarchives_AAA0263	93	37	rcmaxwellco_XXX0841	49
8	rcmaxwellco_XXX1324	87	37	rcmaxwellco_XXX3572	49
9	oaaaarchives_BBB6308	84	40	oaaaarchives_AAA0014	48
10	oaaaarchives_AAA9291a	81	40	oaaaarchives_AAA3028	48
11	oaaaarchives_BBB6089	76	40	paverjohn_PAV0058	48
12	oaaaarchives_BBB4585	71	43	oaaaaidelibrary_SLA2145	46
13	oaaaarchives_AAA8795	70	44	oaaaarchives_AAA2781	45
13	oaaaarchives_BBB4575	70	44	oaaaarchives_AAA8738	45
15	oaaaarchives_BBB6560	69	44	oaaaarchives_BBB6318	45
16	rcmaxwellco_XXH3655	67	44	rcmaxwellco_XXX1936	45
17	oaaaarchives_BBB5221	66	44	rcmaxwellco_XXX2181	45
18	rcmaxwellco_XXH3413	65	44	rcmaxwellco_XXX4692	45
19	oaaaarchives_BBB4573	64	50	rcmaxwellco_XXX1771	44
20	oaaaaidelibrary_SLA2687	63	50	rcmaxwellco_XXX2797	44
20	rcmaxwellco_XXH0242	63	52	oaaaarchives_BBB6307	43
22	oaaaaidelibrary_SLA1543	62	52	rcmaxwellco_XXH3361	43
23	oaaaarchives_AAA7674	60	52	rcmaxwellco_XXX2375	43
23	rcmaxwellco_XXH2166	60	55	oaaaarchives_BBB4588	42
25	oaaaarchives_BBB1913	59	55	rcmaxwellco_XXH2877	42
26	oaaaarchives_AAA7749	57	55	rcmaxwellco_XXX2784	42
26	oaaaaidelibrary_SLA0958	57	58	oaaaarchives_AAA5112	41
28	oaaaarchives_AAA1713	55	58	oaaaarchives_BBB6212	41
29	oaaaarchives_BBB3321	54	58	oaaaaidelibrary_SLA1665	41
30	oaaaarchives_BBB5741	52	58	rcmaxwellco_XXX4162	41
30	rcmaxwellco_XXH0891	52	62	oaaaarchives_AAA8607	40

Rank	Item Number	Page-views
62	oaaaarchives_BBB5938	40
64	oaaaarchives_AAA5650	39
64	oaaaarchives_BBB4860	39
64	oaaaarchives_BBB5615	39
64	rcmaxwellco_XXH0242	39
68	oaaaarchives_AAA4479	38
68	oaaaarchives_AAA8776	38
68	oaaaarchives_BBB6566	38
68	rcmaxwellco_XXX0373	38
68	rcmaxwellco_XXX4691	38
68	rcmaxwellco_XXX4699	38
74	oaaaslidelibrary_SLA0346	37
74	oaaaslidelibrary_SLA1605	37
74	oaaaslidelibrary_SLA3871	37
74	rcmaxwellco_XXH2314	37
74	rcmaxwellco_XXX4337	37
79	oaaaarchives_AAA8619	36
79	oaaaarchives_AAA8633	36
79	oaaaarchives_BBB0113	36
79	oaaaslidelibrary_SLA2198	36
79	oaaaslidelibrary_SLA2527	36
79	rcmaxwellco_XXX3162	36

Rank	Item Number	Page-views
85	brennanjohn_BRE0006	35
85	oaaaarchives_AAA3879	35
85	oaaaarchives_AAA5939	35
85	oaaaarchives_AAA8714	35
85	oaaaarchives_BBB5928	35
85	rcmaxwellco_XXH2119	35
85	rcmaxwellco_XXX4860	35
92	oaaaarchives_AAA4888	34
92	oaaaarchives_AAA9752	34
92	oaaaarchives_BBB0197	34
92	oaaaarchives_BBB1603	34
92	rcmaxwellco_XXX3530	34
97	oaaaarchives_AAA5813	33
97	oaaaarchives_AAA6135	33
97	oaaaarchives_AAA7566	33
97	oaaaarchives_BBB4404	33
97	oaaaarchives_BBB5989	33
97	rcmaxwellco_XXG0226	33
97	rcmaxwellco_XXX0378	33
97	rcmaxwellco_XXX2477	33

APPENDIX 10: Top 10 Most Frequent Search Terms

The table below shows the top 10 most frequent keywords used to search across the Road 2.0 digitized collection (Apr 18, 2011 – Jun 27, 2012).

There were 3,519 total keyword searches performed within the ROAD 2.0 site. This includes searches across all of the member collections (973, or 27.6%), which is the default scope for the ROAD 2.0 portal, as well as searches within specific member collections (2,546, or 72.4%). By default, the search box is scoped to search the item's member collection (not the entire body of ROAD 2.0 content) on the item pages, the member collection portals, and search result pages for searches within a collection.

Users viewed an average of 3.80 search results pages per search, and an average of 5.93 pages in general on the site after performing a search ("Search Depth"). They spent an average of 6 minutes and 2 seconds on the site after searching ("Time After Search"). Immediately after performing searches, 21.97% of users performed another search ("% Search Refinements") and 15.54% exited the website ("% Search Exits").

Rank	Search Term	# Searches
1	baltimore	44
2	nj	39
3	trenton	27
4	burma shave	26
4	city	26
4	York	26
7	tires	20
8	trenton nj	19
9	atlantic city	12
10	billboards	11
10	cola	11

APPENDIX II: Top 100 Most Frequent Search Terms

The table below shows the top 100 most frequent keywords used to search across the Road 2.0 digitized collection (Apr 18, 2011 – Jun 27, 2012).

There were 3,519 total keyword searches performed within the ROAD 2.0 site. This includes searches across all of the member collections (973, or 27.6%), which is the default scope for the ROAD 2.0 portal, as well as searches within specific member collections (2,546, or 72.4%). By default, the search box is scoped to search the item's member collection (not the entire body of ROAD 2.0 content) on the item pages, the member collection portals, and search result pages for searches within a collection.

Users viewed an average of 3.80 search results pages per search, and an average of 5.93 pages in general on the site after performing a search ("Search Depth"). They spent an average of 6 minutes and 2 seconds on the site after searching ("Time After Search"). Immediately after performing searches, 21.97% of users performed another search ("% Search Refinements") and 15.54% exited the website ("% Search Exits").

Rank	Search Term	# Searches
1	baltimore	44
2	nj	39
3	trenton	27
4	burma shave	26
4	city	26
4	York	26
7	tires	20
8	trenton nj	19
9	atlantic city	12
10	billboards	11
10	cola	11
12	beer	10
12	cigarettes	10
12	Jaguar	10
12	ribsams	10
12	vern clark	10
17	florida	9
17	maryland	9
17	pepsi	9

Rank	Search Term	# Searches
17	Virginia Slims	9
21	air cooled engine	8
21	bordentown	8
21	food	8
21	Slims	8
21	voorhees	8
26	'maxwell'\]	7
26	billboard	7
26	budweiser	7
26	gasoline	7
26	iron city	7
26	liberty	7
26	new york	7
26	Sleep-E-Hollow	7
34	AAa7025	6
34	arizona	6
34	burma	6
34	chevrolet	6
34	cigarette	6

Rank	Search Term	# Searches
34	neon	6
34	presentation	6
34	rolling rock	6
34	trenton, nj	6
34	untitled	6
34	war	6
34	whiskey	6
34	Winston	6
47	1920s	5
47	AAA6998	5
47	AAA6999	5
47	amoco	5
47	car	5
47	coca cola	5
47	Coca\-Cola	5
47	ford	5
47	hamilton	5
47	jersey	5
47	kinsey whiskey	5
47	music	5
47	restaurant	5
47	rock city	5
47	sex	5
47	tv	5
63	AAA7000	4
63	AAA7003	4
63	AAA7009	4
63	AAA7020	4
63	AAA7024	4
63	apple	4
63	benson	4
63	camel	4
63	chambers	4

Rank	Search Term	# Searches
63	coca-cola	4
63	colorado	4
63	diner	4
63	esso	4
63	foster	4
63	franz	4
63	Frederick	4
63	gulf	4
63	hedges	4
63	home	4
63	jantzen	4
63	kodak	4
63	little tavern	4
63	love	4
63	motel	4
63	nike	4
63	oil	4
63	pier	4
63	pike	4
63	pontiac	4
63	queens	4
63	SCENE	4
63	shore	4
63	station	4
63	texaco	4
63	time for beautiful milk	4
63	truck	4
63	woman	4
63	women	4
63	yardville	4

APPENDIX 12: ROAD 2.0 Press Release

Contact:

Jacqueline Reid

Director, Hartman Center for Sales, Advertising & Marketing History

j.reid@duke.edu

919-660-5836

HEADLINE: **Signs of the Times: Thousands of Online Images Trace Outdoor Advertising Then and Now**

See Rock City. Eat Mor Chikin. Exit Here.

Like them or not, billboards are part of the American landscape. They tell us where to fill up on gas, local peaches, and pecan logs. They encourage us to try new products. They display photos of wanted criminals and missing persons. They educate, entertain, and frustrate us, cluttering up the landscape and guiding us to fresh coffee and clean restrooms. Unavoidable as they are, they also provide a fascinating window on American popular culture.

Now more than 27,000 images of billboards and other outdoor advertisements have been digitized and made available online by Duke University Libraries. The new digital collection, [ROAD 2.0](#), brings together a vast collection of historical advertising images from the [John W. Hartman Center for Sales, Marketing & Advertising History](#), part of Duke's Special Collections Library. The images, most of them taken between the 1930s and 1980s, include not only billboards but also wall paintings, electric "spectaculars" (such as the neon signs New York's Times Square), bus shelters, taxi displays, and behind-the-scenes shots of outdoor ads under construction and sign painters at work.

In addition to their research value to scholars of advertising history, cultural studies, graphic design, and consumer trends, many of the outdoor advertisements are visually striking and often whimsical, making the newly digitized collection a pleasure to browse.

One billboard from the 1980s features the U.S. Forest Service mascot Smokey the Bear and appears to have been almost completely burned, revealing the metal support structure underneath. "Forest fires burn more than trees," the message reads. Other signs in the collection are less straightforward, like one from the early 1970s featuring two stereotypical hippies raising their fingers in a peace sign and the words, "Love... try some on your parents." The billboard is an advertisement for First National Bank of Arizona. What is the implication here? That opening a checking account is a demonstration of familial affection? It is difficult to say.

The images and documents in the online collection are both national and local in scope, covering campaigns for national brands as well as local mom and pop businesses. The collection also documents the interesting evolution of the outdoor advertising medium. What started as a specialized format

limited to highly skilled sign painters and small family-owned companies has become dominated by national conglomerates who communicate their messages through digital signboards and computer generated images. Paint has given way to pixels, and revenue from outdoor advertising is one of the highest growing segments of the advertising industry today.

In 2005, Duke University Libraries created the first [Resource of Outdoor Advertising Descriptions \(ROAD\)](#) database, an NEH grant-funded project to provide access to Duke's vast collection of outdoor advertising material. But the original ROAD database did not include images, only descriptive information. ROAD 2.0 takes up where the previous project left off, although its 27,000 images represent only about a quarter of the total collection.

The images for ROAD 2.0 were digitized with the assistance of a grant from the National Historical Publications and Records Commission (NHPRC). Most of them come from the papers of the Outdoor Advertising Association of America (OAAA), the primary professional organization for the modern outdoor advertising industry since 1891. (For complete descriptions of the Hartman Center's outdoor advertising collections, visit the [Center's website](#).)

The Hartman Center is one of the foremost resources for the documentation and study of advertising history in the world. As part of Duke's Special Collections Library, its mission is to promote understanding of the immense economic and cultural impact of advertising, sales, and marketing. Its collections include the archives of advertising agencies and trade organizations, as well as the papers of industry executives and private collectors.

###

APPENDIX 13: ROAD 2.0 Digitization Processes

Slides

1. Oversize and irregular slides will be done in house which will be removed from their boxes before the material is sent to the vendor.
2. When multiple slides are spliced together digitize the entire item and also each individual slide. Appending the root file name with an alpha character (a, b, c...) to represent each subsequent slide after the “full” version that includes all slides.
3. All PR boxes need to be numbered before they are sent to the vendor. SLB0001 and moving straight through to SLB9999. Structural metadata needs to be recorded (Box, Folder, Presentation, Slide Range). A few boxes are “miscellaneous presentations” which can be numbered consecutively without grouping them in any fashion.
 - a. Numbering schema re-starts with each new series (Chronological, Topical)
 - b. Numbering gaps identified and flagged for vendor during building of digitization guide
4. We will record Batch #, Box Label, Folder, Slide ID, Series, Type and Notes in the Digitization guide before we send the slides to the vendor.
5. Slides will be delivered to the vendor in 2000 slide batches starting July 27.

Additional Guidelines for Vendor

- Capture edges of images
- Deliver 16-bit images

Photographs

1. Scan duplicates
2. Remove negatives to separate archival box for scanning.
3. If the Finding Aid states that a photograph is in an over-size box but is actually present in the primary box, and is a photographic print... scan this print.
4. Some photographs are attached to a text document. Scan the entire document.