

**Making the Black Hole Gray: Implementing the Web Archiving of Specialist
Art Resources**

Final Report to the Andrew W. Mellon Foundation
Covering the Two-Year Grant Period
October 16, 2013–October 31, 2015
(PUBLIC VERSION)

Submitted by the Principal Investigator
Deborah Kempe, Chief, Collections Management and Access
The Frick Art Reference Library, The Frick Collection

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Summary of the Project and Purpose of the Grant

On October 16, 2013, The Frick Collection, on behalf of the New York Art Resources Consortium (NYARC), received a \$340,000 grant for use over approximately two years to support the capture of and long-term access to digital art-historical research materials. We titled our successful proposal “Making the Black Hole Gray: Implementing the Web Archiving of Specialist Art Resources.” The grant allowed NYARC to implement the recommendations resulting from “Reframing Collections for a Digital Age: A Preparatory Study for Collecting and Preserving Web-based Art Research Materials,” a planning grant for a web archiving initiative funded by the Andrew W. Mellon Foundation in 2012–13. The final reports from consultants to the planning grant stressed the urgent need to address the potential digital “black hole” facing art-historical researchers— that an increasing number of art and art history materials exist only online (are “born digital”), with no print equivalent that can be acquired by the NYARC libraries. The Frick Collection serves as the administrator of the grant on behalf of the three NYARC partners: The Frick Art Reference Library, the Brooklyn Museum Libraries and Archives, and The Museum of Modern Art Library.

Final Report

At the conclusion of the two-year grant period, the NYARC group has largely achieved the goals and deliverables set out in the proposal. In spite of the daunting challenge of entering a new realm of collection building with few prescribed standards or practices, we have successfully implemented a substantial and sustainable program for collecting born-digital materials in many of the subject areas that our libraries have long collected in print format. We have made our born-digital collections discoverable in novel ways and have developed and documented best practices for collection building, metadata description, and workflows. Using affordable preservation services offered by Archive-It and DuraCloud, we are storing multiple copies of WARC (Web ARChive) files, while we continue to address longer-term plans to meet the special challenges of emulating and preserving web-based documents.

During the past two years, NYARC has become a valuable contributor to high-level international discussions about web archiving and its critical importance to the future of libraries and archives. Interest in web archives, both within and without the library community, has increased substantially over the life of the grant and our project staff contributed to numerous conferences and professional journals devoted to this topic. Indeed, from the beginning of the project, NYARC intended to make an impact beyond the three libraries. All of the documentation developed for the project is being made available through the [NYARC website](#) and [wiki](#), where others may freely use it for designing their own web archiving programs. The metadata practices we have adopted insure that our born-digital collections are discoverable in the larger data environments of WorldCat and Art Discovery Group Catalogue.

NYARC and its host institutions The Frick Collection, the Brooklyn Museum, and The Museum of Modern Art, have made a firm commitment to continuing the web archiving program after the end of the grant and to further developing its practices and policies in concert with the art research community. Thanks to the initial funding which has been critical to our strategic goals, NYARC has a sustainable program in place that can serve as a model for consortial collections of specialized born-digital resources. Although our goals were met, we also learned that the process of collecting, preserving, and making born-digital resources available is much more complex than that of building print collections. The lessons learned over the two years have further convinced us that a much larger effort will be required to adequately insure that relevant born-digital resources will be made available to scholars now and in the future. On that front, NYARC is actively seeking partners who wish to join our efforts to optimize networked models and develop tools that will make it easier to build collective repositories.

This report provides details of the final year of the grant, building on the interim report submitted in March 2015.

Staffing, Communication, and Outreach

Sumitra Duncan was Project Coordinator for the entire duration of the grant and was responsible for much of the program's successful development. She did an outstanding job as supervisor and mentor of the graduate student interns who worked on the project over the course of two years. Our experience has convinced us that graduate students hired on an hourly basis are the best match for the quality control work that is so crucial to viable web resource collections. The interns uniformly rated their learning experience as excellent, and in return, we have been very satisfied with the work they did. As proof of this successful arrangement, Pratt School of Information has agreed to continue to fund fellowships devoted to NYARC's web archive program. Retaining personnel to perform quality assessment will be instrumental to our program, even if much-needed automated tools are developed to check the integrity of website captures and replay.

We were also extremely fortunate to retain two excellent consultants during this period. Lily Pregill has been a consistently superb consultant to NYARC. Her creative leadership and deep technical knowledge led NYARC to a groundbreaking implementation of the [Primo](#) discovery layer which incorporates results from our web archives, as detailed later in this report. [Rebecca Guenther](#), a recognized expert for metadata standards and applications, worked closely with staff to produce a Metadata Application Profile, consulted on workflow practices, and produced a final set of recommendations that will serve as a road map for future development of metadata policies and practices.

The Program Coordinator and Technical Consultants submitted all required reports to the Principal Investigator, and the Principal Investigator provided progress reports to the NYARC directors at our regularly scheduled conference calls and meetings. Basecamp was used for project management, with 104 documents relating to the project residing there at the conclusion of the grant.

Although not formally part of our grant, NYARC was selected by the Metropolitan New York Library Council to host [Karl-Rainer Blumenthal as a National Digital Stewardship Resident](#) (NDSR) for nine months. Under the supervision of Sumitra Duncan, he investigated issues of quality control and long-term preservation for web archives and wrote [QA Guidelines](#) and a report entitled [Preserving NYARC's Web Archives](#) that is shared on [NYARC's wiki](#).

NYARC staff involved with project implementation accepted many requests to speak and participate at events devoted to web archiving. This intensive outreach has served to increase awareness of our pioneering web archiving program, resulting in a growing community of interest about archiving art-related collections. An article by Sumitra Duncan, published in *Art Libraries Journal* in 2015, followed up on her presentation at the 2014 ARLIS/NA Annual Conference and brought the NYARC project to the wider attention of art libraries. Also of note was a presentation by NYARC project staff at the Columbia University Libraries conference on [Web Archiving Collaboration: New Tools and Models](#), in June 2015, which was recorded and publicly distributed. A complete list of activities follows this report.

Creating Public Collections of Specialized Web Content

The process of developing collections of specialized web content for use by scholars of art history has been evolutionary, iterative, and incremental. As elucidated in the Interim Report, we used the websites of MoMA, The Frick Collection, and the Brooklyn Museum as testbeds to gain experience using Archive-It and Hanzo as our primary tools for web archiving. While this testbed was underway, we developed our permissions process and sent 500 requests to website owners. Because many requests received no responses, second and third requests were sent, using a FileMaker database to track communication. In the end, we received 133 permissions and only nine denials. However, the majority of website owners did not respond, and we were not able to capture as many sites as we wanted, or as quickly as we wanted. We also learned how laborious, time-consuming, and critically important the quality assurance (QA) process is. At the end of the grant, we had a total of 211 publicly accessible seed URLs (and sixty more awaiting QA) distributed into ten collections in Archive-It:

- *Art Resources*: Miscellaneous art-rich websites relevant to the study of art and art history or which are particularly vulnerable to disappearing
- *Artists' Websites*: Websites of selected artists relevant to NYARC institutions
- *Auction Houses*: Auctioneers specializing in sales of art; includes catalogs and price results
- *Brooklyn Museum*
- *Catalogues Raisonnés*: Born-digital catalogues raisonnés (scholarly compilations of an artist's work)
- *Museum of Modern Art*
- *NYARC*
- *New York City Galleries*: Galleries and art dealers based in New York City
- *Restitution of Lost or Looted Art*: Sites dedicated to restitution efforts and provenance of artworks that may be lost, stolen or looted
- *The Frick Collection*

The sites may be openly viewed and searched at the NYARC Partners Collections page in Archive-It: <https://archive-it.org/organizations/484>. Our initial goal was to capture 2 terabytes (TB) of WARC files. We learned that there are two important measures of capacity in Archive-It subscriptions: one is data capacity and the other is numbers of documents (URLs). While we reached document capacity, we did not hit the expected data target, achieving a final tally of 1.2 TB. This was also a result of unexpected delays in obtaining permissions from website owners. Fortunately, we were able to roll over unused data and, as our collections continue to expand, we will be certain to reach a higher capacity soon.

Procedures for collection and seed management and for the quality assurance process were established and refined over the course of the project. Interns took Archive-It tutorials and were trained and supervised by the project coordinator. Interns worked at each NYARC site and held monthly meetings to discuss the project.

Collection Scope and Nomination Process

Unlike our respective print collections, the NYARC Archive-It Collection is jointly owned—a true “collective collection” created by the consortium. In order to accommodate this new collection, which is driven by subject selectors at three different institutions, tools to guide collecting scope and the nominations process were needed. Following a survey of the limited number of existing policies for collecting born digital resources, a NYARC policy for collecting websites relevant to our areas of specialization was developed with the input of the NYARC directors and acquisitions staff. The policy is posted on the NYARC wiki at <http://wiki.nyarc.org/web-archiving/3-nyarc-collection-scope-and-seed-url-nomination-process>. An [online nominations form](#) begins the path to discovery.

One criterion for the nominations process is whether the website content is in danger of disappearance. Examples of this are websites of galleries and museums that will close and websites with sensitive or controversial content. We have captured several such sites, including those of WALLSPACE Gallery, Casa Daros Rio, and the Looted Art & Cultural Property Initiative.

Facilitating Discovery and Access

NYARC's investment in web archiving has from the start been aligned with a commitment to providing wide and open access to all archived websites within the consortium's Archive-It collections. Thus, an important deliverable of our grant was the development of sustainable and transferable metadata practices for describing the websites captured with the Archive-It service. In year one of the grant project, NYARC catalogers became familiar with the purpose and principles of web archiving and became involved in creating access to born-digital resources through metadata creation. A flowchart for decision-making and metadata description was created. A project to enhance more than 300 existing and new MARC records for websites by adding URLs that lead catalog users to live and archived versions began, and was completed in the second year with assistance from project interns.

Faced with a steadily growing emergence of relevant born-digital resources, technical services staff from the three institutions came together in 2015 for productive meetings with consultant Rebecca Guenther to further address workflow processes and how they could be shaped to include organization, description, and cataloging of resources ranging from PDF documents to multi-faceted websites. Guenther's resulting documentation, "Metadata application Profile and a Data Dictionary for Description of Websites with Archived Versions," underwent reviews by staff of NYARC and selected partners of the OCLC Research Library Partners (Columbia University, Johns Hopkins University, and Stanford University), and was completed in June 2015. The profile details "a rich record based on MARC" and the specific core elements recommended for the description of both live and archived versions of a website. The metadata profile contains information pertaining to the main fields and data dictionary of elements for description of sites with archived versions, as well as notes on MARC encoding and record samples. The metadata profile serves the purpose of offering specific guidance to staff at the NYARC libraries, but it is also "cataloging rules agnostic," and thus, extensible to the greater research community engaged in web archiving as a collection development activity. Mappings are provided to elements, properties or classes in Dublin Core, MODS, BIBFRAME, VRA Core, and schema.org to facilitate transformations or application profiles for other metadata element sets. With the newly developed profile and workflow streams in place, NYARC's technical services staff worked together as a team to optimize the cataloging templates in OCLC Connexion, adding "constant data" specific to websites in order to streamline creation of MARC records for websites and PDFs. The records we create in WorldCat are discoverable in Google and are also made available to specialized researchers through Art Discovery Group Catalogue, NYARC Discovery, and Arcade, the collective online catalog of the three NYARC institutions.

Another significant component of our program was the procurement and implementation of a discovery layer solution. NYARC evaluated several discovery products available from commercial vendors and ultimately selected Ex Libris' Primo product, with the objective of promoting greater and more unified access to the consortium's Archive-It collections alongside NYARC's other rich holdings. Following negotiation and signing of a contract with Ex Libris, NYARC's implementation of the discovery layer began in January 2015, coordinated by consultant Lily Pregill. Ms. Pregill worked with NYARC's e-resources librarian, the NYARC Technical Contacts Group, the NYARC Discovery Working Group, and the ExLibris implementation team to expertly shape the technical components and user interface of the ["NYARC Discovery"](#) platform that was launched in October 2016. What sets our discovery platform apart from that of other institutions is the integration of Archive-It results into the Primo interface. To the best of our knowledge, NYARC's implementation is the first to integrate Archive-It collections using the OpenSearch API in a commercial discovery layer. The new platform integrates Archive-It collection search results with many other material types in NYARC's collections, inclusive of books, e-books, journal articles, auction catalogs, newspaper articles, images, dissertations, and photoarchives. When a search is done in Primo, results from NYARC's Archive-It collection are displayed dynamically in the Primo interface. The results appear just as they do in the native Archive-It interface; Primo does not rank the results independently. It is essentially a view of the Archive-It indexing in Primo, but we can control how many results display in that interface.

WARC files in NYARC's Archive-It collection are viewed through the Internet Archive Wayback Machine. The grant made it possible for WARC files delivered by Hanzo to be integrated into Archive-It collections, thus creating a central repository for access. The integration was not flawless, as some of the files captured with Hanzo do not play back in the current state of the Wayback Machine. Discussions with OCLC and Archive-It on ways to improve the sharing of metadata between systems were held and will continue into the future.

Sustainability

We are pleased to report that we met the stated goal to set up a specialist web archiving program that will be sustainable at the end of two years. NYARC has established staffing, procedures, and funding that will allow us to continue our groundbreaking work in the area of art-related web resources. Simply put, we would not have been able to implement a successful program without the support of this grant. During the two-year period we formed important conclusions about the requirements of time and funding required for the support and preservation of web resources. Significantly, we learned that, in addition to honing skills and shifting duties of existing staff, new positions dedicated to web archiving would be critical to the program's continuation. The hiring of a full-time web coordinator was made a priority of the highest degree in the fiscal year 2016 budget plan, demonstrating the

institutional support of The Frick Collection for this new program. As a result, we were thrilled to bring Sumitra Duncan onto the full-time staff. Quality control is a new task that cannot easily be assumed by existing staff, but aligns well with the learning opportunity afforded by paid internships. Therefore, we have secured a multi-year agreement with Pratt School of Information to provide student fellowships for web archiving.

The grant allowed us to gauge the overall costs of web archiving; they are high but manageable, to a degree, by focusing collecting to a precise set of subjects (less universal than our print collections) and by leveraging our experience to negotiate a new two-year contract with Archive-It. Hanzo's commercial services are ultimately too expensive for ongoing subject-driven collections but going forward they will be used as needed to capture material for the MoMA and Frick archives. Funds have been designated for this in recognition of the importance of securing fully functional WARCs for our institutional archives.

To address preservation, we implemented a DuraCloud subscription. NDSR Resident Karl-Rainer Blumenthal conducted a thorough analysis of cost-effective backup solutions that confirmed our initial plan to use DuraCloud, although he recommended subscribing to the Preservation Plus option as opposed to the Basic Plan. In February 2014, [DuraCloud announced a new feature](#) that enables seamless back-up service for Archive-It collections. An annual subscription to DuraCloud Preservation Plus that includes 1TB Amazon S3 storage and 1TB Amazon Glacier storage was initiated in August 2015 and will be renewed by NYARC going forward, with adjustments to fit growing data needs.

Collaboration

Throughout the grant period, regular meetings were held with staff of Columbia University Libraries involved with web archiving to share information and reports on progress of our respective grants. Sumitra Duncan organized special interest groups on web archiving at the ARLIS/NA conferences and at METRO. Discussions we initiated with OCLC Research Libraries Partners blossomed into a [Web Archiving Survey](#) that resulted in 76 responses, from 60 institutions, in 6 countries, and the subsequent establishment of a Web Archives Working Group with NYARC representation.

The web archiving team participated in research projects conducted by Rhizome (Webrecorder.io), Old Dominion University, Archive-It, and Forschungszentrum L3S Research Center. NYARC was included in a Web Archiving Environmental Scan, prepared for Harvard Library by Gail Truman, a consultant for our previous grant. The report is scheduled to be released early in 2016. NYARC was awarded complimentary membership in the Digital Libraries Federation in conjunction with Sumitra Duncan's DLF Museum Cross-Pollinator Fellowship awarded by the Kress Foundation in 2015. Web archiving has created a need to combine expertise from librarians and archivists, with the welcome result of crossover and information exchange. Project staff were invited to join groups and conferences focusing on archival practice and in return we initiated discussions with the Society of American Archivists and our institutional archivists.

As mentioned earlier in the report, NYARC was selected to host Karl-Rainer Blumenthal as part of the first National Digital Stewardship Resident program in New York. Following this successful collaboration, Sumitra Duncan was appointed to the NDSR-NY Advisory Board. Deborah Kempe was appointed to an advisory team for Rhizome's development of the Webrecorder tool.

NYARC, Hanzo, and Archive-It collaborated to successfully integrate WARC files from Hanzo into NYARC's Archive-It collection—another “first” for NYARC on the technical front.

It is important to also acknowledge new types of collaboration that are taking place within the NYARC institutions. NYARC program staff met with Fiona Romeo and colleagues from the MoMA Digital Media department to discuss prioritized archiving of the MoMA websites and specific exhibition content. The departmental staff is pleased with the work that NYARC has done to archive the moma.org domain. Librarians and archivists of the NYARC partners came together to discuss digital preservation strategies and the implementation of archival management systems.

NYARC staff responded enthusiastically to many opportunities for programs and publications about collaborative models for web archiving. Please see the list of activities at the end of this report for further details of our collaborations.

Plans and Goals for the Future

Post-grant, NYARC will adjust the permissions process to one of progressive notifications, in step with a policy adopted by Columbia University Libraries and others in the web archiving community. This is due to two factors: the lack of response from website owners and the publication of recent guidelines and recommendations from copyright experts that establish fair use practices to include collecting websites and making them broadly accessible. A series of tracked letters requesting permission to archive will be sent to owners of sites nominated by our selectors. When site owners do not respond, a final letter notifying them that NYARC will begin archiving the site will be sent, along with opt-out instructions. This system modification will allow NYARC to fully populate the Archive-It collections as we originally intended. There remain several hundred targeted websites whose owners never responded; as staff time allows, we will bring those sites into our collections. Because our post-grant roster of paid interns will shrink, the rate of QA will be slow and will impact our timetable for expanding our Archive-It collection. The staffing and cost requirements established during the grant conclusively demonstrate the need for a larger network to achieve the scale needed for archiving a significant portion of the websites which are important to art history. There is a need to lower the costs of web archiving, to create permanent positions for staff, and to facilitate aggregated collections. The deliverables of this grant have laid the groundwork for larger-scale collaboration; we are now ready to reach out to potential partners. While we seek to facilitate an expanded network of web archives, we will continue the collaborations established during the course of this grant, and await the research findings of our partners. We recognize great promise in the Webrecorder tool and will continue to test and develop its functionality in partnership with Rhizome. We will encourage Archive-It, OCLC, and other parties to further develop APIs that improve search results. An overarching need determined by the web archiving community is for new tools to improve quality assessment, avoid duplication of work, and automate provenance data of WARCs. We intend to actively participate in the efforts to meet this need. Outreach and educational efforts will continue anew. A logo that designates “Archived by NYARC” will be distributed to content producers for embedding into their websites. An example of this may be seen at <http://wayback.archive-it.org/4614/20160115164935/http://dawsondawson-watson.org/>

Given the rapid pace of change in the content, features, and functions of websites, we will regularly review and revise our collection development policy and workflow instruments to accommodate evolving practices.

As the final component of her consultancy, Rebecca Guenther provided us with a [report](#) that details some of the remaining challenges that will affect the future development of metadata policies for web archived resources, poses open questions that should be addressed, and concludes with six recommendations for next steps by NYARC. As she acknowledges, there are more questions than answers, and more recommendations for further investigation than specifications for what should be done. Nevertheless, her report will serve as an excellent road map for future collaboration. Web archiving is a nascent, albeit growing, component of research collections, and there remain many fundamental challenges to establishing viable programs that serve the needs of scholars. Broader community models will be necessary to truly harness the vast number of art-rich resources being produced on the web today and in the future. NYARC will continue to build upon its existing web archives, incrementally expanding collections and producing new access points to archived resources, while seeking to expand collaborative partnerships in web archiving.

“The web is disappearing page by page, character by character, image by image, before our very eyes, even as you read the words on this page. Only by coming together as a community can we ensure the preservation and access of our digital history to future generations.” Kalev Leetaru, Why it’s So Important To Understand What’s In Our Web Archives, www.forbes.com, November 11, 2015

List of Publications, Conferences, and Outreach Activities

Year One (October 2013–October 2014):

[Three Major Art New York Art Libraries Announce Plans for a Shared Program to Preserve Digital Art Resources](#), press release, October 2013

[Making the Black Hole Gray: Implementing the Web Archiving of Specialist Art Resources](#), presentation by Deborah Kempe at the Archive-It Partners Meeting, Salt Lake City, Utah, November 2013

[It is Time to Embrace the Present](#), guest post by Deborah Kempe to the Web Archiving Round Table, Society of American Archivists blog, December 2013

NYARC renewed membership in the National Digital Stewardship Alliance (NDSA) and assigned staff members to Working Groups, December 2013

[Preserving Web Based Auction Catalogs at The Frick Art Reference Library](#), by Gretchen Nadasky, D-Lib Magazine, March/April 2014, vol. 20, no. 3–4

NYARC's Annual Staff Meeting at MoMA featured presentations on the Web Archiving Program, March 2014

[Making the Black Hole Gray: Implementing NYARC Web Archiving Program of Specialist Art Resources](#), presentation by Deborah Kempe, ARLIS-NY Meeting at the Metropolitan Museum of Art, New York, April 2014

[M-LEAD II and Next Generation Museum Librarians](#), NYARC blog post by Emily Atwater May 29, 2014

Joint web archiving meetings with Columbia University Libraries staff, January, March, and September, 2014

NDSA Symposium “*Emerging Trends in Digital Stewardship*” at the National Library of Medicine, Bethesda, MD (Sumitra Duncan attended), April 2014

“What’s New in DACS?,” METRO workshop (attended by Sumitra Duncan), April 2014

Tour of the Frick Conservation and Digital Labs for Web Archiving Interns, April 2014

ARLIS/NA Annual Conference, Washington, DC (NYARC Directors, Project staff and interns attended and presented), May 2014

Pratt/IMLS M-LEAD II interns Walter Schlect and Janet Burka presented their work on web archiving auction sites to staff of the Frick, May 2014

[Digital Futures: New Directions in Art Librarianship](#), live webcast including a presentation by Deborah Kempe, May 2014

[Making the Black Hole Gray: Implementing NYARC Web Archiving Program of Specialist Art Resources](#), presentation by Deborah Kempe, at *Art Libraries Facing the Digital Age*, an international conference hosted by the Library of the Hungarian National Gallery, Budapest, Hungary, June 2014

Deborah Kempe, Lily Pregill, and Sumitra Duncan participated in calls with members of the ARLIS/NA Artists' Files Special Interest Group (SIG) regarding collaborative web archiving efforts and a pilot project presently being executed by SIG member

Identifying and Selecting Digital Content, webinar offered by Connecting to New York's Collections program, funded by the Institute for Museum and Library Services (IMLS), (Sumitra Duncan attended), July 2014.

METRO events about BIBFRAME and the evolution of bibliographic data, and about the Digital Public Library of America (DPLA) (Sumitra Duncan attended), July 2014

Library of Congress/NDSA Digital Preservation 2014 conference, Washington, DC (Lily Pregill and Sumitra Duncan attended; Sumitra Duncan also attended *CURATEcamp* during the conference), July 2014

More Podcast, Less Process, [Episode 7: humans.txt.mp3 -- The Web Archivists Are Present](#), 2014 audio interview with Lily Pregill and others

[Making the Black Hole Grey: Web Archiving at the New York Art Resource Consortium](#), a presentation by Stephen Bury and former intern Walter Schlect, *IFLA Art Libraries Section Satellite Meeting*, Paris, France, August 2014

NYARC-themed Catalogue Raisonné Scholars Association (CRSA) event at the Brooklyn Museum Library (presentations by Stephen Bury, Lily Pregill, and Sumitra Duncan), August 2014

"*It's All About Access*," presentation by Deborah Kempe at "[Untangling the Web: Diverse Experiences with Access From the Web Archiving Trenches](#)," panel at the Society of American Archivists Annual Conference, Washington DC, August 2014

"*Managing and Providing Access to Digital Content*," webinar offered by Connecting to New York's Collections program, funded by the Institute for Museum and Library Services (IMLS) (Sumitra Duncan attended), August 2014.

Archivemata Northeast Users group meeting at MoMA (Sumitra Duncan attended), September 2014.

["Ce projet un peu fou: Web Archiving Art Resources with NYARC,"](#) nyarc.org blog post by intern Walter Schlect, October 2, 2014

Sumitra Duncan and Karl-Rainer Blumenthal formed a NYC Regional Archive-It Users Group, September 2014.

Sumitra Duncan presented on the NYARC web archiving program implementation to the FARL library staff and Ian Wardropper, Director of the Frick Collection, October 2014.

METRO Web Archiving Panel Discussion (presentation by Sumitra Duncan), October 2014. Other speakers included Jason Kovari of Cornell University Libraries, Alex Thurman of Columbia University Libraries, Anthony Cocciolo of Pratt Institute School of Information and Library Science, and Anna Perricci of Columbia University Libraries as moderator.

[Archive-It: Crawling the Web Together](#), blog post featuring the NYARC project by the Internet Archive, October 27, 2014

[All together now: NYARC and the National Agenda for Digital Stewardship](#), blog post by Karl-Rainer Blumenthal, October 27, 2014

Year 2 (November 2014–October 2015):

SAA@Pratt Panel Presentation (presentation by Sumitra Duncan and project interns), November 17, 2014

Archive-It Partners Meeting in Montgomery, AL (Lily Pregill and Sumitra Duncan attended), November 18, 2014

“Bringing Light to the Black Hole: Creating Web-Based ‘Born Digital’ Collections in Art Libraries,” keynote presentation by Deborah Kempe at the Third Seminar on Information Services in Museums, São Paulo, Brazil, November 26, 2014 (publication forthcoming)

Frick Art Reference Library Digital Art History Lab established (Sumitra Duncan serves on Steering Committee), November 2014

Meeting with Sandra Brooke, Princeton University art librarian, to provide an in-depth “tour” of our web archiving program and related workflow, December 9, 2014

Museum of Modern Art DRMC Metadata Experts Meeting (Deborah Kempe, Sumitra Duncan, Karl Blumenthal, and Rebecca Guenther attended), December 4, 2014

Duncan, Sumitra. “Preserving born-digital catalogues raisonnés: Web archiving at the New York Art Resources Consortium (NYARC).” *Art Libraries Journal* 40.2 (2015): 50–55. Print.

“Web Archive Implementation at the New York Art Resources Consortium (NYARC),” presentation at METRO Annual Meeting (Sumitra Duncan, Debbie Kempe, Lily Pregill, and interns Caitlin Harrington and Seth Persons), January 15, 2015

Interns Caitlin Harrington and Seth Persons presented on their web archiving work at NYARC at the ArLiSNAP/VREPS Virtual Conference: Visualizing the Future: New Perspectives in Art Librarianship (Sumitra Duncan attended), January 17, 2015

Rhizome + NYARC exchange (NYARC group w/ Dragan Espenschied, Digital Conservator & Heather Corcoran, Executive Director), February 24, 2015

Archive-It New York Users Group Meeting held at MoMA (1st meeting, organized by Sumitra Duncan + Karl Blumenthal), March 4, 2015

Sumitra Duncan appointed to National Digital Stewardship Resident-NY Advisory Board, March 11, 2015

ARLIS/NA Annual Conference in Fort Worth, TX (attended by NYARC Directors, Sumitra Duncan, Lily Pregill, Karl-Rainer Blumenthal, intern Molly Seegers, and former intern Walter Schlect; panel presentation on web archiving organized/moderated by Sumitra Duncan; “Metadata for Web Archives,” co-presentation by Lily Pregill and Mark Bresnan), March 19–23, 2015

ARLIS/NY & METRO NDSR Panel Discussion at MoMA (organized by Sumitra Duncan), March 30, 2015

ArchiveDirect Informational Webinar (Sumitra Duncan attended), April 1, 2015

METRO Web Archiving SIG Meeting (1st meeting of this group, organized/co-chaired by Sumitra Duncan; presentation by Karl-Rainer Blumenthal), April 7, 2015

Introduction to Archivematica webinar (Sumitra Duncan attended,) April 9, 2015

Workshop on Digital Art History at the Institute of Fine Arts (Sumitra Duncan attended), April 9, 2015

NYARC Annual Meeting at MoMA (presentations by Sumitra Duncan and Lily Pregill), April 14, 2015

IIPC General Assembly at Stanford University (attended by Sumitra Duncan), April 27–28, 2015

Archive-It Mid-Atlantic Spring Meeting at Princeton Theological Seminary Library (presentation on NYARC Project Quality Assurance by Karl Blumenthal), May 6, 2015

Web Archiving Roundtable Webinar (Sumitra Duncan attended), May 21, 2015

ARLIS/NA Papers Recap at Bard Graduate Center (Karl Blumenthal presented on NYARC Project Quality Assurance; Sumitra Duncan attended), May 27, 2015

Virtual meeting with Christine Podmaniczky of the NC Wyeth Catalogue Raisonné (Debbie Kempe and Sumitra Duncan), June 1, 2015

Call with Erick Marklund of NC Wyeth Catalogue Raisonné (Sumitra Duncan), June 3, 2015

Web Archiving Collaboration: New Tools and Models, Invitational Conference at Columbia University Libraries, New York (presentations by Debbie Kempe, Sumitra Duncan, and Lily Pregill), June 4–5, 2015

RESAW Research Infrastructure for the Study of Archived Web Materials) Conference on Web Archives as Scholarly Sources: Issues, Practices and Perspectives, Aarhus University, Denmark (presentation by Stephen Bury on “Collecting Specialist Web-Based Art Historical Resources by The New York Art Resources Consortium (NYARC),” June 8–10, 2015

Archivists Round Table of NYC Annual Meeting, at MoMA (presentation by Deborah Kempe, Sumitra Duncan, Karl Blumenthal, and project interns Seth Persons, Molly Seegers, and Celeste Brewer), June 15, 2015

7/13/15: METRO Web Archiving SIG + Archive-It New York Users Group Meeting (2nd meeting of these groups, organized/co-chaired by Sumitra Duncan), July 13, 2015

METRO webinar on Linked Open Data (Debbie Kempe and Sumitra Duncan attended), July 23, 2015

NYARC collaborates with [L3S Research Center Alexandria Project Testbed](#), Summer–Fall, 2015

METRO OpenRefine Workshop (Sumitra Duncan attended), August 12, 2015

DuraCloud virtual training (Sumitra Duncan and Debbie Kempe attended), August 18, 2015

Meeting with Jayne Warman, editor of Cezanne Catalogue Raisonné (Sumitra Duncan and Debbie Kempe), August 18, 2015

NYC Digital Art History Symposium, Columbia University (Sumitra Duncan attended), September 16, 2015

Conference calls with U.C. Berkeley Art History staff about janbreughel.net catalogue raisonné site (Sumitra Duncan, Debbie Kempe, Lily Pregill), August 24 and September 18, 2015

Digital Art History Workshop, MoMA (Sumitra Duncan attended), September 25, 2015

Digital Libraries Federation Forum in Vancouver, BC (Sumitra Duncan attended with award of DLF Museum Cross-Pollinator Fellowship, supported by the Kress Foundation), October 25–28, 2015

Monthly calls of National Digital Stewardship Alliance (NDSA) Working Groups (Sumitra Duncan and Deborah Kempe), 2014–ongoing

Web Archiving Meetings with Columbia University Libraries, CUL Meetings (four held between November 2014 and October 2015; upcoming meeting on January 28, 2016)

Post-grant (November–December 2015)/Upcoming:

Web Archiving Presentation to The Frick Collection Digital Media Committee (Deborah Kempe and Sumitra Duncan), November 4, 2015

Web Archives 2015 Conference at the University of Michigan, Ann Arbor (Sumitra Duncan attended), November 12–13, 2015

IMLS Focus 2015 Conference in New Orleans (Sumitra Duncan presented on the NDSR-NY program and participated in Pratt SILS project showcase session on successful internships), November 16–17, 2015

Call with Iain Baxter, author of Iain Baxter Catalogue Raisonné (Sumitra Duncan), November 23, 2015

"Preserving the Ephemeral: Web Archiving at the New York Art Resources Consortium (NYARC)," presentation to the Trustee Committee on Archives, Library, and Research at MoMA (Sumitra Duncan), December 15, 2015

OCLC-RLP Web Archiving Metadata Working Group to be established (Deborah Kempe and Lily Pregill will be members), January 2016 (forthcoming)

Metadata Managers Meeting, American Library Association Midwinter Conference, Boston (Lily Pregill attending), January 8, 2016 (forthcoming)

Web Archiving Environmental Scan for Harvard Library (NYARC program is profiled), 2016 (forthcoming)

[Web Archiving Special Interest Group meeting](#) at ARLIS/NA Annual Conference, Seattle (Sumitra Duncan will co-moderate), March 9, 2016 (forthcoming)

[“The Web Sits For Its Portrait: Web Archiving Process and Product,”](#) session at ARLIS/NA Annual Conference, Seattle (Mark Bresnan is moderator; consultant Rebecca Guenther will speak), March 10, 2016 (forthcoming)

[“Duty Now for the Future: Connecting Libraries, Library Schools, and New Librarians through Internships,”](#) session at ARLIS/NA Annual Conference, Seattle (Sumitra Duncan will speak), March 10, 2016 (forthcoming)

METRO Web Archiving SIG + Archive-It NYC Users Group Meeting (chaired by Sumitra Duncan), March 21, 2016 (forthcoming)

Art Libraries Journal special issue on digital and print art ephemera (article co-authored by Sumitra Duncan and Karl-Rainer Blumenthal), Vol. 41 no. 2, April 2016 (forthcoming)