

Shannon Mattern

Multimodal Mapping: Process, Collaboration, Epistemology

Please note that there are several links embedded in this document.
These external sites are considered integral to the report.

RESEARCH RESULTS

In the work I completed in my preliminary literature review¹, and in research I've conducted since then, I've discovered that a sizable portion of the Digital Humanities literature is dedicated to addressing when the Digital Humanities *began*, what the Digital Humanities (DH) *are*, and what *counts* as a DH project.² These identity-negotiation discussions are perhaps to be expected of a “diverse and still emerging” field³. Yet I find that the prevalence of these debates, and their focus on self-justification, limit the attention directed toward meaningful *applications*. In addition, the efforts to define the Digital Humanities as a *discipline* often mean that a great deal of (liquid and digital) ink is spilt in establishing the particular nature of DH's relationship to “the humanities” and “the digital.” Patrik Svensson, in his recent article on “the landscape of digital humanities” – the second in a three-part series in *Digital Humanities Quarterly* – writes:

there is [even] a question of whether “the digital” needs to be specified at all, and it is not uncommon to encounter the argument that technology and the digital are part or will be part of any academic area, and hence the denotation “digital” is not required.⁴

The continued insistence on (and seeming fetishization of) the digital, however, seems to privilege these media at the expense of other, non-digital, yet equally appropriate and effective, media forms. Rather than fetishizing the database, as some “humanities computing” (what some call “Digital Humanities 1.0”) scholars seemed to do, however, I'd prefer that we consider other modes of “processing” a research project – that we apply the valuable lessons that DH has to offer to a broader scope of scholarly *modes*. I'd prefer that we consider how particular questions or problems might lend themselves to investigation or representation through aural, visual, or interactive media; through maps, audio archives, documentaries, video games – even architecture, designed products, clothing. In some cases, we should remember, a *print document* – designed so that its material form reinforces its argument – might be the most appropriate means of giving form to an argument.

¹ See [here](#), [here](#), and [here](#).

² Sometimes it seems as if it would be easier to explain what *doesn't* count, given the expansive nature of some DH definitions. Todd Presner, for instance, defines DH as “humanistic practice anchored in creation, curation, collaboration, experimentation, and the multi-purposing or multi-channeling of humanistic knowledge.” (“[Digital Humanities 2.0: A Report on Knowledge](#),” May 13, 2010, Module m34246, Connexions.)

³ Digital Humanities Quarterly, “About DHQ”: <http://digitalhumanities.org/dhq/about/about.html>

⁴ Patrick Svensson, “[The Landscape of the Digital Humanities](#)” *Digital Humanities Quarterly* 4:1 (Summer 2010): ¶ 51.

I have found media scholar Tara McPherson's approach most similar to my own vision, and her voice most refreshing. McPherson, who is affiliated with USC's Institute for Multimedia Literacy, calls such a cross-platform oriented scholar "multimodal": the multimodal scholar "thinks carefully about the relationship of form to content, expression to idea." She examines "what happens when scholarship looks and feels differently, requiring new modes of engagement from the reader/user."⁵ She wonders: "How do you 'experience' or 'feel' an argument in a more immersive and sensory-rich space?" "Can scholarship show as well as tell?" "Will representing data differently change the ways we understand, collect, or interpret it?"

I prefer to use McPherson's terminology – multimodal scholarship (although I think that there's still something inelegant in this construction) – so, for the rest of this document I'll be referring to "MS" instead of "DH." However, I do think that there are a great many intellectual and ethical parallels between DH and MS, and in some cases we might even be able to use the terms interchangeably. So, although I'll be using the *term* (or, rather, *acronym*) MS in what follows, I'll be drawing from the literature on both MS and DH.

Rather than get caught up in the debates over labels and territory and disciplinary status, I have found it much more beneficial to focus, like McPherson, on those intellectual *practices* and *values* that are central to the new scholarly practices defining MS – values that seem consistent with the new pedagogies and university structures called for by a host of recognizable figures and entities, including Henry Jenkins, Cathy Davidson, David Theo Goldberg, and the MacArthur Foundation.⁶ Those values, which I highlighted in my preliminary literature review, include (1) opening up, laying bare, and critically reflecting on the process of scholarship; (2) collaboration; and (3) a deep concern with epistemological questions (e.g., how is knowledge "made," who gets to make it, what's done with it, etc.) I'll say a few words about each:

First, the practice of chronicling one's research *process*, Johanna Drucker says, benefits the researcher him- or herself in that it opens up "occasions for critical self-consciousness."⁷ The practice also benefits academia's publics – both the limited ones it has now, and the potentially wider and more numerous ones it could have in the future; explaining what we, as researchers/critical-practitioners/critical-educators/etc., do can "illuminate the shadowy process of critical thinking, encouraging readers not only to digest finished works, but also to learn from and evaluate the mechanisms of their creation."⁸ Second, collaboration allows participants to "leverage the increasingly distributed nature of expertise and knowledge and transform this reality into occasions for scholarly

⁵ Tara McPherson, "Introduction: Media Studies and the Digital Humanities," *Cinema Journal* 48, no. 2 (Winter 2009): 120-1.

⁶ Henry Jenkins, "Confronting the Challenges of Participatory Culture: Media Education for the 21st Century" [white paper] (Cambridge, MA: MIT Press, 2006); Cathy N. Davidson & David Theo Goldberg, "The Future of Thinking: Learning Institutions in a Digital Age" (Cambridge, MA: MIT Press, 2010).

⁷ Johanna Drucker and Bethany Nowviskie, "[Speculative Computing: Aesthetic Provocations in Humanities Computing](#)," in *A Companion to Digital Humanities*, ed. Ray Siemens, John Unsworth, and Susan Schreibman, Hardcover., Blackwell Companions to Literature and Culture (Oxford: Blackwell, 2004).

⁸ Avi Santo and Christopher Lucas, "Engaging Academic and Nonacademic Communities through Online Scholarly Work," *Cinema Journal* 48, no. 2 (Winter 2009): 133-134.

innovation, disciplinary cross-fertilization, and the democratization of knowledge.”⁹ Collaborators on DH/MS projects increasingly come from *outside* the university: libraries, museums, archives, historical societies, arts organizations, advocacy groups, non-profits, schools, and local communities all have the potential to participate (as I’ll explain below, I’ve attempted to integrate several outside participants in my fall application). Third, as Stephanie Barish and Elizabeth Daley, also affiliated with USC’s IML, argue, “To be literate today, one must understand how strategically chosen and juxtaposed combinations of media enable the construction and dissemination of meaning in ways that bypass or enrich traditional text and the spoken word. Indeed, one must not only be able to read such media, but also to author it.”¹⁰ Such knowledge work calls into question the distinction between theory and practice. And, through its continual reflection on *process*, this work also has the potential to raise critical questions about what constitutes knowledge, “who gets to create [it],... how it gets legitimated and authorized, and how it is made accessible to a significantly broader (and potentially global) audience.”¹¹

My late-summer research has focused primarily on how these values can be integrated into the classroom. The [final section](#) of my preliminary literature review addressed the challenges and opportunities of introducing faculty to DH- or MS-inspired pedagogies, and incentivizing them to make the extra effort to incorporate these new modes of teaching into their courses (and to take some risk in doing so). Much of our online ATT discussion throughout the summer has focused on these issues, too. But my literature review [closed](#) by bringing these issues back to bear on the students: I focused on how the collaborative, process-focused, multi-disciplinary, “multiple literacies” approach is central to USC’s IML. While the program is immensely inspiring *on paper* – and it has no doubt achieved tremendous success during its few years of existence – we heard from Holly Willis recently about the challenges even it, with its generous funding and active fellowship programs, has faced. These types of issues require structural changes and widespread institutional commitment to change – efforts that, as we discussed, are beyond individual faculty members’ purview but within the realm of responsibility of the Provost’s office.

A more small-scale, but no less significant, issue that I then turned my attention to was the issue of assessment. I wrote at the end of my preliminary literature review: “As the rampant DH boosterism and invariably positive commentary on projects like HyperCities (despite its limitations) reveals, the Digital Humanities community has yet to build a tradition of critique.”¹² But how does one critique a research-based interactive map? Or a theoretically informed performance-installation? The standard processes and rubrics of grading, or of peer review, fail in these cases. So, I spent the final few weeks of my summer investigating models for assessing multimodal student projects. My [blog post](#) on this topic, I learned (much to my surprise), was tweeted among some central figures in the DH community. And given the specific multimodal form of my students’ projects – an

⁹ Jeffrey Schnapp, Todd Presner, et. al., “[The Digital Humanities Manifesto 2.0](#),” n.d.: 5.

¹⁰ Stephanie Barish and Elizabeth Daley, [Multimedia Scholarship for the 21st Century](#), Educause Forum for the Future of Higher Education (Educause, 2005): 39.

¹¹ Presner, “Digital Humanities 2.0: A Report on Knowledge.”

¹² See Jennifer Howard, “[Hot Type: No Reviews of Digital Scholarship = No Respect](#)” *Chronicle of Higher Education* (May 23, 2010).

interactive database-driven map – I've begun an effort to integrate [criticism sensitive to the medium-specificity of the map](#), with these multimodal evaluative rubrics. I will continue to work through these issues with my students as the fall progresses. And throughout the semester we will be blogging our design and deliberation and evaluation processes, for the benefit of those who might learn from our experience.

SUMMER ACCOMPLISHMENTS

- In mid-June I completed a draft of a **substantial literature review** on the digital humanities and multimodal scholarship, and their role in the classroom.¹³ I've continued to review additional resources on these topics and on assessment strategies for student work created within these relatively new traditions.
- Throughout the summer I **developed a fall course** that would allow me to test the underlying principles of multimodal scholarship. In "Urban Media Archaeology," students will engage in several practices that, as I discovered in my literature review, are central to the "ethos" of this mode of practice: (1) they will make use of relevant material in local archives and special collections; (2) they will digitize relevant materials for use in their research projects, thereby bringing to light some potentially underexposed material; (3) they will integrate these digitized materials with their own self-created primary research and their secondary research in the creation of a "spatial argument" that will lend itself to presentation on an open-source mapping platform, "Urban Research Tool"; (4) they will contribute to the testing and development of the tool; and (5) they will document and critically reflect on their research process and their experience in practicing "multimodal" scholarship. These course goals were developed in a mid-summer [blog post](#), then refined on my [course syllabus](#) (see also the [class website](#)).
- Throughout the summer I cultivated **relationships with librarians and archivists in several local institutions** – the New York Public Library, New York Historical Society, Fales Library at New York University – and conducted preliminary research in these collections in order to [identify material that might be of use in my student's projects](#). I also collected relevant teaching and student research materials from the [Archives Center](#) at the National Museum of American History and the [National Archives and Records Administration](#), in preparation for my fall multimodal project-based, research-intensive studio class, "Urban Media Archaeology"
- Throughout the summer I met regularly with Jessica Irish, Jane Pirone, and student technology developers to create the "conceptual back-end" and begin **development for our Urban Research Tool**. You can find some of our planning notes [in the appendix](#).
- On several occasions Jessica Irish and I met with Shoshanna Goldstein to discuss **funding possibilities** for the Urban Research Tool (URT). Christiane Paul, another collaborator on a larger potential mapping initiative, have been in consultation with former NSF and NEH grant winners, and will be meeting regularly with New School development staff. We also learned that we secured a generous grant from the Innovations in Education Fund, which we will use for technical development of URT, for research expenses for students in both of our classes, and for archival material reproduction fees for my students.

¹³ I posted this report, which I submitted as part of my Applied Think Tank Revised Proposal in June 2010, to my own website (see [here](#), [here](#), and [here](#)). It inspired a few comments from readers and initiated several email conversations with familiar and unfamiliar faculty colleagues, and with several graduate students from around the country.

FALL ACTION PLANS

- My students will participate in ongoing documentation, through their individual research blogs, of their research and map-making processes and their experience in [learning through “multimodal scholarship.”](#) (For a description of the students’ **“Process Blogs,”** see my “Urban Media Archaeology” syllabus).¹⁴
- We will be aggregating the students’ posts, and I’ll be adding my own critical reflection on the research process – and my own experience in this pedagogical experiment – on our **class blog**.
- I will be presenting my “Urban Media Archaeology” students’ work at the **“Reimagining the Archive: Remapping and Remixing Traditional Models in the Digital Era” conference** at UCLA in November. You can find my conference proposal [in the Appendix](#).
- We’ll be **welcome guests into our classroom** at various points in the semester – when students present their individual maps, and when they present their final collective map. During these presentations students will not only present their work, but also describe their processes of multimodal scholarship.”
- I have organized a **workshop, “Urban Informatics, Geographic Data, and the Media of Mapping,”** for the 2011 **Society for Cinema and Media Studies conference**. The workshop will allow five faculty members, from a range of institutions, to address our experiences in using multimodal mapping projects “as platforms for research, as pedagogical resources, and as political tools for civic engagement.” The proposal is current under review; I should know in mid-December if we’ve been invited to participate in the conference. You can find my workshop proposal [in the appendix](#).
- I plan to document our class’s experience with “multimodal learning” in a few **peer-reviewed publications**. I have already submitted a proposal to a special issue of a highly regarded peer-reviewed journal.
- My colleagues and I will continue to develop **grant proposals** for the Urban Research Tool and for a larger “media mapping” project.
- I’ll also continue to work on my book, which addresses many of the same issues we explore in Urban Media Archaeology.

¹⁴ For a discussion of MIT’s experience with “process blogs,” see Madeleine Clare Elish, [“Re-Imagining the Archive: Process and Documentation in Creative Work / A Case Study of MIT ACT’s Future Archive Project”](#) HyperStudio: Lab for Digital Humanities (n.d.).

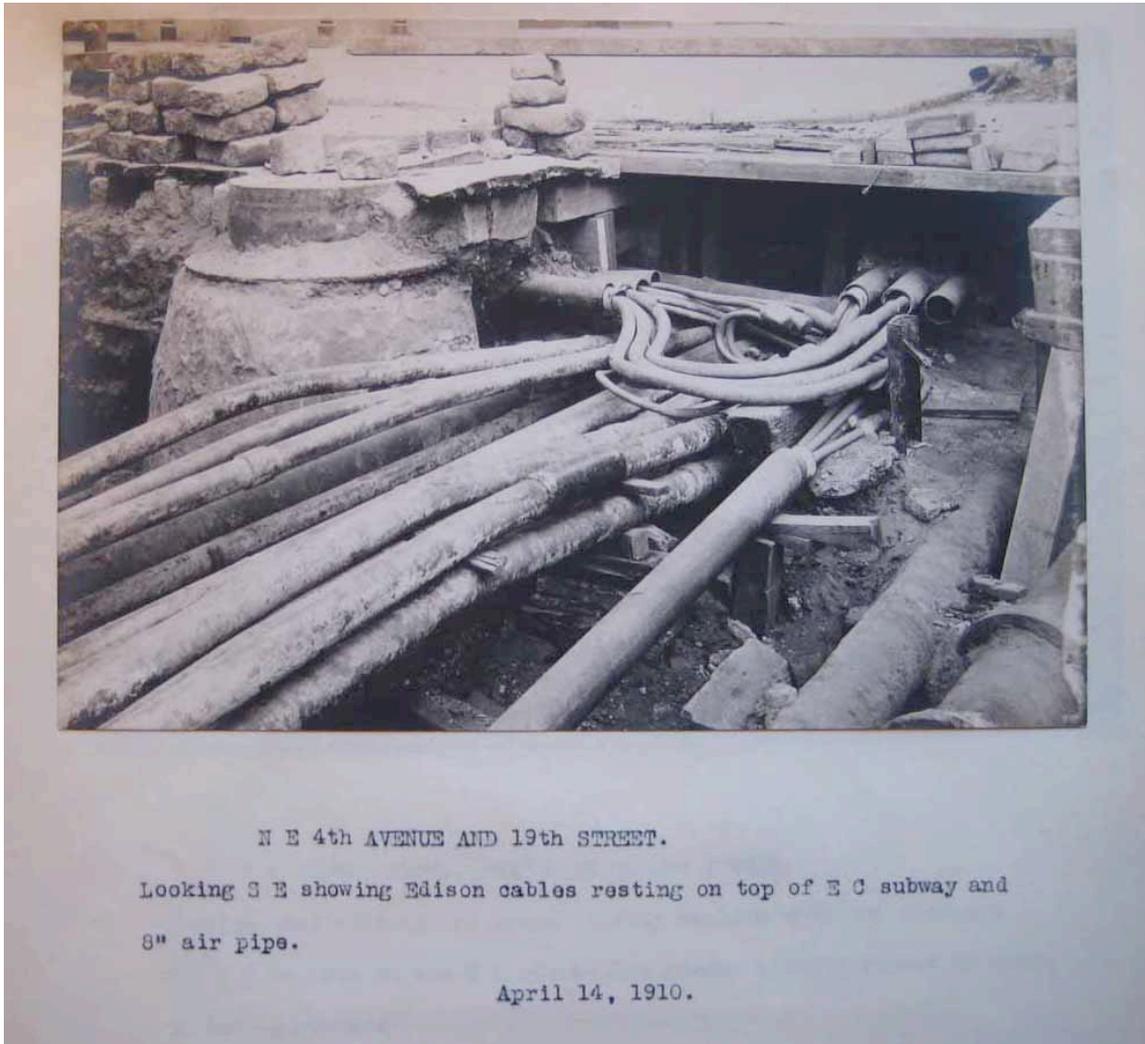
PROPOSAL FOR REIMAGINING THE ARCHIVE CONFERENCE

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Excavating: Digging Into Urban Media History Through the Archive

“Every time an incision is made in the pavement, the noisy surgeons expose ganglia that are tangled beyond belief.”
– E.B. White, *“This Is New York”*



National Archives and Records Administration, Records of the Post Office Department, Box No. 1, Folder: “Photographs (Not Used in Report)”.

Abstract

This fall semester I’ll be teaching a new graduate seminar-studio at The New School. The course, “Urban Media Archaeology,” will function in part as a pilot test for both a new interactive research *platform* and new research *partnerships* with a variety of local archives and

special collections. My presentation at “Reimagining the Archive” would demonstrate our “Urban Research Tool” as a work-in-progress and address the collaborative archival research process that is generating the platform’s content, which in turn drives modifications of the tool’s form and functionality.

“Urban Media Archaeology” will address the material layering of historical media infrastructures in New York: telegraph and telephone wires, radio broadcast zones, postal routes, foreign-language newspapers, WiFi hotspots, etc. (see www.wordsinspace.net/wordpress/?p=836). Students will conduct secondary and primary research on their chosen topics, then build a “multimodal” argument using, for instance, videotaped interviews with urban planners and telephone workers, scanned archival documents, GIS data, or custom animations. All the while, students will consider how they might construct a *collective* class-wide argument – how they might use the cross-referencing and layering capabilities of the interactive platform to explore the synergies between their research and their classmates’.

I have consulted with local archives and special collections to identify primary resources that could be of use to my students; many of these institutions have agreed to grant us special permission to reproduce material from their collections on our map. Of particular interest to some of our library and archive partners, who recognize ours as a “Digital Humanities” (DH) project, is that, unlike many of the DH initiatives on which they’ve partnered in the past, ours does not involve mass digitization of collections without forecasting and tracking the use of materials in those collections. Our research will involve the judicious digitization of select materials, as well as their thorough citation, so that partner institutions can trace their materials’ use on the site. And rather than simply posting these archival materials in an online gallery – in what one archivist called a “hey, look what I found in the archives!” display – we will emphasize the careful integration of these archival materials into the development of a “multimodal” argument.

Among the many relevant local collections are the “New York Mail and Newspaper Transportation Company” Records at the New York Public Library; photograph and ephemera collections in the New-York Historical Society; and various collections regarding East Village history the Fales Library at New York University (see www.wordsinspace.net/wordpress/?p=858 for more). Students will also be encouraged to conduct their own primary research: to interview experts, to photo- and video-document their research sites, to conduct oral histories, to create field recordings. The site will thus not only draw on the material in existing archives, but constitute its own de facto archive of primary resources on New York’s media history.

My presentation will examine how our research platform draws on these archives’ collections, makes use of the material in those collections, and inspires the creation of new primary research material.

SCMS WORKSHOP PROPOSAL

Title and Summary

Title*
(150 characters including spaces)

Urban Informatics, Geographic Data, and the Media of Mapping

Summary*
(2500 characters including spaces and hard returns)

The past several years have seen increasing corporate and educational interest in and major funding for projects that make urban histories, knowledges, data, etc., accessible, visible/audible/tangible, and, ideally, intelligible to urban publics. This workshop, supported by the Cinema, Media and Urban Studies SIG, will examine several such projects, critically addressing their rhetorical and aesthetic strategies and examining their utility as platforms for research, as pedagogical resources, and as political tools for civic engagement. Acknowledging the widespread commitment among these projects to “making the invisible, visible” (and sometimes collapsing “the urban” into “the visible”), panelists will pay particular attention to the media and sensory modes of mapping.

Kredell will critically reflect on how he’s using tools borrowed from urban and cultural geography—maps, census data, GIS—in his research on the relationships between gentrification and the growth of “sophisticated” cinema venues, like the Landmark Theatres. Haleboua will examine projects that use RFID, GPS, and other coding protocols to track, annotate, and map information about urban objects—from park benches to trash. Fusing urban informatics with “the Internet of Things,” these maps have the potential to “encourage novel styles of learning the city [and] aid in creating more stable policy initiatives.”

Makagon will discuss his own and others’ sound-mapping projects, which provide alternatives to traditional sight-centric modes of mapping and serve to represent the complexity of urban sensory experience. Both Makagon and fellow presenter Shapins pay particular attention to the politics embodied in their projects’ “base maps”: Makagon makes use of wiki-style OpenStreetMaps, while Shapins is developing an open-source toolkit for the creation of “cross-platform, interactive narratives” about urban places. Shapins’ software allows users to remix photos, videos, text, audio, maps, etc., into “database documentaries” that are then tied to places on a map. Finally, Starosielski will demonstrate a digital mapping project she has created in collaboration with USC’s VECTORS journal. Her “counter-map” uses digital media’s networked capabilities to portray transoceanic cables not as static material infrastructure, as they are presented in traditional cartography, but as “vectors” revealing the “complexity, historicity, and locality” of global media networks.

Bibliography

Source 1
(250 characters including spaces & hard returns)

Curtin, Michael. "Media Capitals: Cultural Geographies of Global TV." In TELEVISION AFTER TV: ESSAYS ON A MEDIUM IN TRANSITION. Ed. Lynn Spigel and Jan Olsson, 270-302. Durham:

Duke University Press, 2004.

Source 2

Farman, Jason. 'Mapping the Digital Empire: Google Earth and the Process of Postmodern Cartography.' *NEW MEDIA & SOCIETY*. Vol. 12, No. 5 (August 2010): 1-20.

Source 3

Manovich, Lev. "Database as Symbolic Form." *CONVERGENCE* Vol. 5, 1 (June 1999): 80-99.

Source 4

Parks, Lisa. "Satellites and Interactive Media: Cultural Geographies in Practice: Plotting the Personal: Global Positioning." *CULTURAL GEOGRAPHIES* 8 (2001): 209-222.

Source 5

Presner, Todd. "HyperCities: A Case Study for the Future of Scholarly Publishing," in *ONLINE HUMANITIES SCHOLARSHIP: THE SHAPE OF THINGS TO COME*. Ed., Jerome McGann et al.: http://rup.rice.edu/cnx_content/shape/m34318.html.

Source 6

Tuters, Marc and Kazys Varnelis. "Beyond Locative Media: Giving Shape to the Internet of Things." *Leonardo*. Vol. 39, No. 4 (2006): 357-363.

Chair Info

Chair*

Mattern, Shannon / The New School

**Chair Bio*
(500 characters including spaces & hard returns)**

Shannon Mattern is Assistant Professor and former Director of Graduate Studies in the Department of Media Studies and Film in New York. Her research and teaching focus on relationships among media, architecture, and urban studies, and she is author of *THE NEW DOWNTOWN LIBRARY* (Minnesota) and several articles on urban media. She is currently working with colleagues in Parsons The New School for Design on an open-source "supra-cartographic" mapping platform for scholarly research on urban media.

Participants

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Halegoua, Germaine / University of Wisconsin at Madison

(150 characters including spaces)

Topic: "Urban Informatics and the 'Internet of Things'"

(500 character including spaces & hard returns)

Participant bio: Germaine Halegoua is a PhD candidate in the Media & Cultural Studies program at the University of Wisconsin-Madison. She is currently completing her dissertation titled, "New Mediated Spaces and the Urban Environment". She is also co-editing an anthology which investigates the cultural geography of networked technologies and the tensions between the "global" and the "local" within the cultural and material practices of new media.

2

Kredell, Brendan / Northwestern University

(150 characters including spaces)

Topic: *Using GIS and Spatial Analysis in the Study of the Cultural Industries*

(500 character including spaces & hard returns)

Participant bio: Brendan Kredell is a PhD candidate in the Screen Cultures program at Northwestern University. He is writing a dissertation on the evolution of the relationship between the city and the cinema in post-industrial urban North America, research that has been supported by a Fulbright fellowship and a research grant from Canada's Department of Foreign Affairs and International Trade.

3

Makagon, Daniel / DePaul University

(150 characters including spaces)

Topic: *Mapping the City through Documentary Sound*

(500 character including spaces & hard returns)

Participant bio: Daniel Makagon is an associate professor in the College of Communication at DePaul University. He is the author of *WHERE THE BALL DROPS: DAYS AND NIGHTS IN TIMES SQUARE* (Minnesota) and co-author of *RECORDING CULTURE: AUDIO DOCUMENTARY AND THE ETHNOGRAPHIC EXPERIENCE* (Sage). His teaching and research interests are in urban communication, ethnography, cultural studies, documentary, and community. Makagon's audio documentaries have been broadcast on public radio and on the Internet.

4

Shapins, Jesse / Harvard University

(150 characters including spaces)

Topic: *Zeega: From Vertov to an Experiment in Open-Source Urban Database Documentary and Collaborative Mapping*

(500 character including spaces & hard returns)

Participant bio: Jesse Shapins is a media theorist, documentary artist and urban historian. His work has been published in *The New York Times*, *Places*, *Metropolis*, *Wired*, and been exhibited at MoMA, Deutsches Architektur Zentrum, and the Carpenter Center for Visual Arts, among other venues. He is an Instructor of Architecture at the Harvard GSD, where is completing a dissertation titled "Archaeologies of the Urban Database Documentary: Media Arts in Urban Research from the 1920s to the Contemporary."

5

Starosielski, Nicole / Miami University of Ohio

(150 characters including spaces)

Topic: *Surfacing: Toward a Counter-mapping of Submarine Systems*

(500 character including spaces & hard returns)

Participant bio: Nicole Starosielski is an Assistant Professor of Communication at Miami University of Ohio. She completed her doctoral dissertation in Film and Media Studies at UC-Santa Barbara and her undergraduate degree in Cinema-TV at the University of Southern California. She has presented at three SCMS conferences and has an essay forthcoming in the *INTERNATIONAL COMMUNICATION GAZEETE* on environmental animation. She is currently working on a book project on the cultural geography of undersea cables.

URBAN RESEARCH TOOL CITATION FIELDS

N.B. I think providing detailed citations will really set us apart from Hypercities; only a few of the media tagged on their site have citations, and those citations provide only rudimentary information. There's no indication of where these media were found, what collections they were drawn from, etc.

It would be helpful if, on the entry page to the citations, users are prompted to select their media type (e.g., photo from archive, journal article, self-written paper, self-created video) from a pull-down menu; the page will then display the appropriate fields for the specific media type

Names

- Author/issuing body's name(s) (individual author, government entity, etc.)
- Director name (for film)
- Editor name (may be multiple)
- Translator name
- Interviewer name
- Interviewee name
- Correspondent's name (for letters, email correspondence to author)

Formats

- Special Format (DVD, podcast, email, interpersonal communication, PhD dissertation, etc.)

Titles

- Article/Chapter/Item (e.g., Photo, Brochure, Clipping, Ephemera) Title
- Book Title
- Journal Title
- Newspaper Title
- Magazine Title
- Program/Event Title (for television/radio show, podcast, lecture, etc.)
- Station Title (radio, tv)
- Conference / Series title (for a talk/presentation w/in a larger event)
- Website Title

Location Info

- Pages (if a portion of a larger published work)
- Box and Folder Name/Number (for archival material)
- Database Name
- Collection Name (for archival material)
- Archive/Repository Name
- Archive Location
- Edition
- Volume / Issue Number
- Website for Online and Digital Archival Material
- Date of online access

Publication Info

- Place of Publication/Studio Location
- Publisher/Distributor/Recording Company
- Date of publication/broadcast/presentation/original release

URT FIELDS: info contributors will be prompted to input for each piece they add to URT; each of these field names should have a (?) link, which contributors can click for an explanation of what we mean by, for example, “material” or “area,” or when/how to use the “notes” field. Contributors should also be able to *choose more than one option* in each field.

- **Project:** When contributor posts new item, he or she should indicate which project/class it belongs to
- **Media System:**
 - **Media Form:** postal systems, newspapers, magazines, books, music, radio, film, broadcast television, cable television, satellite, multimedia, interactive media, gaming, mobile media (are these considered separate media sectors? I don't know what language people are using these days!)
 - **Function:** Production, distribution, sales, exhibition, or performance
- **Subproject** (not sure if this is the right word): indicate if item is part of a thematic component/layer of a larger project (e.g., if a group of three students in my Urban Media Archaeology class are working together on “telecommunications” history, a visitor to the site should be able to select the “telecom” layer within the “UMA” project and thereby pull up all three of their projects simultaneously)
- **Times/Dates:** should be able to choose specific date or range of dates, and to indicate if those dates are definite or fuzzy; if fuzzy, contributor should be able to explain in a “notes” field what reasoning and specific resources informed his/her estimation. Other researchers can then build on this info to perhaps arrive at a more certain temporalization.
- **Point/Route/Area:** should be able to indicate certainty of the plotting of a point or delineation of a route or an area (e.g., a contributor might know that a certain phenomenon took place in a particular neighborhood, but not specifically where; or s/he might now know exactly how far a certain network extended into a particular borough); if placement is uncertain, contributor should be able to indicate in a “notes” field what reasoning and specific resources informed his/her estimation.
- **Altitude** (not sure if this is the right word; this, too, is a dimension of representation that sets us apart from Hypercities and other mapping projects): indicate whether item is subterranean, at street level (or sea level?), above street level – and, if known, how many feet above/below ground
- **Ownership:** What corporation/organization/individual owns the “thing” (network, media object, etc.) being posted?
- **Parent Company:** this field would help to demonstrate, for instance, that although there are nine cable franchises in the five boroughs, those nine are owned by only two companies
- **Management/Operation:** If some one other than the owner manages or operates this medium, who?
- **Mode/Material of Network Transmission/Distribution:**
 - cable/wire: copper cable/wire, coaxial cable, fiber optic cable
 - physical transit: pipes, conveyor belt, train, automobile, plane, bike, horse, pigeon, human, etc.
 - wireless transmission: microwaves, radiowaves; satellite, antenna (I don't know enough about this stuff to provide a comprehensive list)
 - fixed or mobile?
 - origin, node, or subscriber location? (I need better language for this. I'm trying to identify where in the network a particular URT post might lie: at the

point of origin of communication (e.g., at the broadcast site, at the newspaper office), at a node in the network (at a distribution center or switching station), or at the place where the “medium” meets the user/subscriber.)

- **Caption:** place to input any information that doesn't fit into any of the above fields. *I suppose we should limit the basic database entry to factual info, and save all editorializing and argumentation (i.e., explaining what each item means/represents w/in the context of contributors' larger projects) for a separate comment layer, yes?*

USER SCENARIOS

1. **Archival Researcher Posting a Map:** I've discovered a collection of maps showing the evolution of Manhattan's and Brooklyn's postal infrastructure – e.g., the addition of new post offices, the development of delivery routes, etc. I'm assuming that I don't simply post these maps to a single point on the map, but, rather, to an “area” encompassing Manhattan and Brooklyn. I imagine I have to first draw an “area” on the map corresponding to the area covered by each of the maps, then post the maps one at a time? Then, how would I link these maps so that a potential user can then recognize that they're a linked series; s/he could see a list of all the “postal maps,” then perhaps open them all simultaneously and increase/decrease their opacity to see how, for example, 1910's infrastructure morphs into 1920's. How can I also create a layer with my own “linear” argument? I'd like to offer some introductory comments, then control the order in which a user opens the maps, and point out, through a series of superimposed “comment boxes” (or through some other form of commentary), specific significant areas of change on the maps.
2. **Archival Researcher Creating a Network of Individual “Areas”:** I've created a list of wireless hotspots in the five boroughs. Because I'd like to indicate the *coverage* of each WiFi zone, I'm assuming I should plot each on URT as an “area,” rather than a site? I'm also not entirely sure about the exact range of a few of these zones, so I took an educated guess when plotting my area on the map, and I indicated in the database that I'm “uncertain” about the exact perimeter. Should the outline of an “uncertain” area appear differently from that of a “definite” area?
Although I'm sure some visitors would find use in reading about these hotspots one at a time, I'd also like to show them in relation to one another – to see how they're distributed throughout the city, what areas are over- and under-served, etc. How do I link these various sites into a hotspot map “layer”?
3. **Archival Researcher Posting a Photo of a Particular Site:** I'm posting a set of archival photos that show how pneumatic tubes were essential to inter-office communication in skyscrapers. In particular, I'd like to show how, if it weren't for the tubes integrated into the walls of the Western Union building, various departments of the business, spread across several floors, would have had no way to work efficiently with one another. I'd like to show a “section” (vertical) view of the building, with my photos tagged on the relevant floors. I'd also like to somehow draw a connection to the pneumatic tube network running beneath the building, alongside the subway. *(Because verticality is a defining characteristic of NY, I think we need to find a way to make the “Z” axis integral to our mapping. Rather than simply showing verticality through “street view” photos that pop up at particular sites on the cartographic map, I'd like to think about how we can give equal prominence to all three dimensions of the city.)*

4. **Field Researcher Posting an Original Video:** I've made a video of various Telco Hotels throughout the city. Because this video pertains to particular sites, yet also addresses the underground wires that connect them, I'd like to "link" this video both to specific buildings and to the "network" they constitute. I'm assuming I therefore create a "path" on URT, and, at the same time, tag particular "nodes" on that "path." How do I then link the video to all of these individual sites and to the corresponding path, without having to post the video multiple times – once for each site?
5. **Moderator Managing Class Postings:** I've created a "project" for my entire class. I want to make sure that everything that's posted as part of "Urban Media Archaeology" is *automatically* tagged as relevant to "media history" and "infrastructure." Do I simply have to advise all students to tag every single piece they post to URT – or can I somehow create an "uber-tag" that automatically assigned particular "overarching" tags to everything that's part of our class's project?
I also have a few groups of students who are working together on thematically related projects. How can I create "subgroups" for the Telecommunications, Publishing, and Mobile Media groups, so that they can have access to one another's projects – and, eventually, so they can work together to create intro and conclusion commentary and "connective" comments for their "subproject's" layers?

Project Ideas:

- Locations of cell phone towers and hot spots for dropped cell phone calls
- History of street pay phones, and identification of remaining functional phones
- History of telegraph, telephone, 911 alarm systems in NY; map of remaining fire alarm boxes on streets
- Telephone switching stations (140 West St., 33 Thomas St., 811 Tenth Ave., 375 Pearl St., 60 Hudson St.)
- History of mail delivery in NY; history of infrastructure of Farley Post Office and the network that radiates out from it
- Historical geography of pirate radio in NY in relation to that of the major radio broadcasters
- History of NY's telephone geography in relation to contemporary geography of "public screens"
- Locations of major broadcast antennae around the city
- History of NY radio stations and how their listening areas might be related to their geography (e.g., those broadcasting from City Island – near water – can be heard as far away as Bermuda)