

Context and Archive: Presenting and Preserving Net-based Art

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As a form of artistic practice, Net art began to develop with the advent of the World Wide Web in the early 1990s and is now in its teenage years. From the very beginning, net art posed challenges with regard to its presentation and contextualization within the traditional, established art system. Given how rapidly the World Wide Web as a platform has changed over the past fifteen years, the issues of archiving, documenting, and preserving net art continue to become more pressing. Preserving the work of the net pioneers is now a major concern for the institutions and parts of the new media art world that started supporting and archiving net art in its early years. In the following this text will outline some of the basic challenges in the online presentation and contextualization of net art; institutional collection and archiving policies that have been developed for the art form; as well as preservation strategies and initiatives, including the case studies done at the Whitney Museum as part of the "Forging the Future" initiative. The challenges of presenting net art will be discussed here with regard to online exhibitions only; the exhibition of net art in the gallery space and the changes it has brought about for the curatorial role have been discussed in other publications and won't be a focus of this essay.¹

Net art gained momentum when a core group of European artists—among them Russian artists Olia Lialina and Alexei Shulgin, British artist and activist Heath Bunting, Slovenian Vuk Cosic and the Barcelona-based team JODI (Dirk Paesmans and Joan Hemskeerk)—drew attention to the genre and formed the "net.art" (net art with a dot) movement. The term was officially used for the first time when Vuk Cosic organized a small gathering, "net.art per se," in Trieste in 1996. The net.art group connected through the mailing list *nettime*—founded by media theorists and critics Geert Lovink and Pit Schultz—while discussions about the net art genre also took place on *Rhizome*, a New York-based mailing list for new media art founded by Mark Tribe.

An online art world—consisting of artists, critics, curators, theorists and other practitioners—immediately developed in tandem with Internet art and outside of the institutional art world. Among the early online galleries was Benjamin Weil's *ada'web*, a digital foundry that featured work by net artists as well as established artists, for instance Jenny Holtzer and Julia Scher, who expanded their practice with the new medium. In the early years, funding strategies for net art and online galleries were as experimental as the art itself. The Machida City Museum of Graphic Arts in Tokyo started sponsoring a competition for "Art on the Net" in 1995, but recognition for net art in the art world at large would remain scarce until the end of the century.

As an art form that exists within a (virtual) public space and has been created to be seen by anyone, anywhere, at any time (provided one has access to the Internet), net art does not necessarily need the physical space of an art institution to be presented or introduced to the public. Net art promises new ways of distributing and accessing art that can function independently of the institutional art world and its structures of validation and commodification. While some net artists have explicitly opposed "institutionalization" and resisted to being shown by a museum, many others felt that their work should be seen in the context of "art in general" and be represented in the gallery space and on museum websites. As other art forms before it, new media art has shifted the focus from object to process: as an inherently time-based, interactive, participatory and collaborative, customizable, and variable art form, new media art resists "objectification" and challenges traditional notions of the art object. The characteristics of net art lead to an increased openness of the production and presentation process, require increased awareness of process, and make the outcome of the work less predictable. Net art reconfigures the roles of the artist / author, curator, institution, and audience.

While some aspects of the institutional and curatorial role—such as the organization of exhibits and their art-historical framing—still apply to the process of presenting net art, transformations occur in the process of contextualization, in the filtering and classifying within the online environment. The Internet is a network where a different context is always only one click away, and everyone is engaged in a continuous process of (re)contextualizing. Linking to and

commenting on other websites creates information filters, portals, and new contexts.

As opposed to art in the gallery space, online commissions or an exhibition of online art are seen by a translocal community and continue to be archived indefinitely (until some party fails in sustaining it). The art exists within a network of related exhibitions and projects that can be accessed directly in the adjacent browser window, becoming part of the continuous evolution of the art form. Depending on their openness, the artworks featured online may continue to evolve over time, beyond the duration of a show. Ongoing discussions of an exhibition on mailing lists and in forums may include alternative versions of the exhibition, for example, through posts that feature links to additional artworks that would fit the exhibition context. Over time, the external links included in an artwork or online discussion may have become obsolete—a decay referred to as 'link rot'—leading to a loss of the original context. From its very beginning, an online project or exhibition is not bound by the framework of one institution but exists in a larger network where institutional control tends to be more distributed.

All of the above conditions pose a crucial question when it comes to the archiving (and preservation) of net art: if net art is intrinsically contextual—since it often makes context its content through a process of linking—do institutions need to preserve and archive its constantly fluctuating context? Recording and archiving the context of art (e.g. through catalogues, art-historical writings, collection of ancillary materials) has always been one of the tasks fulfilled by museums, art historians, research institutions et al. More than any other art form, net art entails shifts in context, since it is potentially mutable and can evolve through different versions due to contributions by the public and changes in its habitat, the Internet. (Traditional artworks can also go through different versions but these are mostly the result of a more controlled reinterpretation of the work by the artist or an art institution).

In its traditional, limited meaning, the archive is understood as a depository containing historical records and documents, which typically are static rather than mutable entities. Archives typically have "keys" and systems for cataloguing and classifying, and the development of a vocabulary for archiving net art has been a major part of preservation efforts. The archiving of the context of net art requires a new understanding of the archive as a "living" environment that can itself adapt to the changing requirements of the mutable "records" it contains. This type of archive would need to document the different versions of a work that develops through user contributions—for example, by keeping copies of the project in its different states; and it could potentially document aspects of the "environment" in which the work existed at different points in time, such as discussions of the piece on blogs, mailing lists etc. The contextualization and archiving of net art require new models and criteria for documenting and preserving the process and instability of works that are often created by multiple authors and constantly develop over time. While the amount of online tools for creating and distributing content has mushroomed over the past decade—and particularly within the context of Web 2.0 technologies—there are few tools for preserving the ephemera produced in the online environment. An example would be *The Pool*², a project developed at the University of Maine's Still Water Lab. *The Pool* was specifically designed as an architecture for asynchronous and distributed creativity and documents different stages of the creative process: the "Intent," a description of what the artwork might be, an "Approach" to how it could be implemented and a "Release" of the artwork online. The architecture also includes a scaling system that allows visitors to the site to rate any given project. *The Pool* supplies descriptions of projects' versions, reviews of the projects, as well as relationships to other works in the database. Tags to contributors make it possible to credit all the artists who have worked on a project at any given stage. The early works created by the net art pioneers are particularly vulnerable to decay and erasure—since they were often conceptual, driven by a sense of community, and a spirit of spontaneous interventions in network architecture—and require preservation strategies that at least to some extent document their context.

Institutional Archiving and Collection Policies

In the late 1990s, traditional institutions began to pay attention to net art as part of contemporary

artistic practice and slowly incorporated it into their programming. The following brief outline of models and policies for online archiving and collection focuses on the efforts undertaken by US art museums—the Walker Art Center's *Gallery 9*; SFMoMA's *e-space*; the Whitney Museum of American Art's *artport*; and the Solomon R. Guggenheim Museum—which still follow a fairly traditional model in that their online archives are overseen by a single curator / institution rather than open to a multiplicity of curatorial or institutional voices. These institutional archives find their counterpart in the ones organized by smaller organizations or independent teams not affiliated with an institution, which sometimes take more experimental formats.³ As opposed to smaller non-profit organizations such as *turbulence*, which continue to commission net art, most museums have stepped back from making a continuing commitment to the art form. One reason for this development may have been that museums too hastily started to incorporate net art into their programming—following a trend—without having an infrastructure (both technologically and conceptually) to accommodate it; once they recognized the inherent challenges of the art form, they became more hesitant to invest into it. Another reason would be that net art as a "pure" form or genre to a large extent has ceased to exist. Networked art has considerably hybridized over the years, and it is very common today to encounter a new media work that has a net component, exists on mobile devices, and has an installation component that can be shown in a gallery space.

In the context of net art, it is debatable what exactly the process of collecting entails. One can argue that the (virtual) object being collected is the source of the work, which would be hosted on the respective museum's server. Domain names are a form of virtual real estate and if works that were originally hosted by the artists themselves are transferred to and become accessible under a museum's domain, this certainly signifies a form of ownership. It would be more problematic to make a claim for ownership if a work of net art is only linked to but not hosted on the institution's server. While there are no established rules for collecting net art, the examples mentioned in the following show that institutions commonly host net art that officially enters their collection but tend to be more open when it comes to exclusivity (a work of net art might be in more than one collection or artists might retain a right to also host a copy of the work).

Typical museum sites originally tended to be more focused on the singularity of the institution rather than the context of the art world that surrounds it, but museums are now increasingly making efforts to turn their online assets into more comprehensive resources and study collections with educational initiatives, blogs, forums, YouTube channels etc. The predominantly centralized model proves to be largely insufficient for institutional websites devoted to online art, which by nature inhabits a discursive environment with multiple perspectives beyond the institution that need to be considered.

The Walker Art Center's online exhibition space *Gallery 9*⁴, developed from 1997 until 2003 under the direction of its founding director Steve Dietz⁵, acknowledged this need from its inception and was created as an online venue for both the exhibition and contextualization of Internet-based art. As Steve Dietz explains in his introduction to the site, the space features "artist commissions, interface experiments, exhibitions, community discussion, a study collection, hyperessays, filtered links, lectures and other guerilla raids into real space, and collaborations with other entities (both internal and external)." *Gallery 9* also became a permanent home for content that was developed externally, such as Benjamin Weil's *āda'web*, which was permanently archived at the Walker after losing its financial support. *Gallery 9* quickly became one of the most recognized online venues for net art worldwide and the leading initiative of its kind in the United States.

Gallery 9 provides access to featured net art projects (which are linked to); works commissioned by the Walker Art Center (hosted on the museum's server); as well as previously existing "archives," such as the *āda'web* gallery and G.H. Hovagimyan's online radio program *Art Dirt* (also hosted by the museum). The Walker acquired the right to display and archive all the works in perpetuity but only the commissioned works and previously existing archives (*āda'web*, *Art Dirt*) officially entered the Walker's collection. The museum did change its formal collection policy so that *Gallery 9* and the Digital Art Study Collections formally became part of its collection.

The San Francisco Museum of Modern Art's (SFMOMA) online gallery *e.space*⁶ was created in 2001 by the museum's Curator of Media Arts at the time, Benjamin Weil, to explore new art forms existing only on the web. The seven projects commissioned for *e.space* are hosted and permanently archived by the museum but were not acquired for the collection. SFMOMA's current media arts curator, Rudolf Frieling, accepted two works of net art into the collection as gifts in 2008, which initiated new research in preservation strategies at the museum.

Gallery 9 was a model for the Whitney Museum of American Art's (WMAA) *artport*, a portal to Internet art and online gallery space that I launched in 2001 and have curated since then. In the case of *artport*, contextualization took the form of a "resources" directory (links to new media organizations, net art galleries and exhibitions etc.) and a "gatepages" section that archives splash pages specifically created by artists for the artport site and providing an entry point to the respective artist's projects. Filtering and contextualization also were at the core of the first project commissioned for *artport*, *Idea Line* by Martin Wattenberg, which is itself an archive and visualization designed to show the variety of themes and technologies at the basis of net art, as well as the relation of each artwork to the larger tapestry of all these diverse approaches. Part of the *Idea Line* interface was the development of meta-tags to classify categories of net art. Whitney also co-commissioned a series of three net art projects with Tate Modern, which are accompanied by a contextual framework of video interviews with the artists and texts about the projects written by media theorists. None of the gatepages or larger projects commissioned for *artport* officially entered the Whitney Museum's collection, but the museum has a non-exclusive license to archive the works in perpetuity, meaning that artists retain the right to host their own copies of the work. A new commissioning contract was developed to accommodate the conditions and requirements of a net art commission. The decision to not make the commissions part of the collection was driven by the argument that artists should receive more money for an acquisition—as opposed to a commission—and the belief that, due to a lack of concrete preservation policies at the time, the existence of multiple copies of the work (in the artist's and institution's possession) was a crucial step in guaranteeing its survival—an approach referred to as "distribute or die."

The only net art work currently in the WMAA's collection is Douglas Davis' *The World's First Collaborative Sentence*, which was commissioned by the Lehman College Art Gallery, Bronx, New York in conjunction with its 1994 survey exhibition of the artist's work. The project was donated to the museum by Barbara Schwartz who, together with her husband Eugene M. Schwartz, had purchased the concept and a signed disk with recordings of the first days of the *Sentence*. The project allows visitors to the website to type in text and contribute to an endlessly continuing sentence that takes the form of a series of html pages. A few years ago the Whitney Museum started working with the Variable Media Network (VMN) to develop preservation strategies. As part of the VMN's Forging the Future initiative, the museum has conducted case studies for defining preservation approaches, which will be further discussed in the following.

As Associate Curator of Media Arts, Jon Ippolito worked with the Guggenheim Museum from 2000-2001 to commission and acquire into the permanent collection two works of Internet art by Mark Napier and John F. Simon, Jr. In collaboration with the Guggenheim's legal counsel Maria Pallante, he created a new acquisition contract for net art works that explicitly required the museum to follow the variable media guidelines for preservation (developed by the Variable Media Network and discussed in the following section). The contracts also stated that a percentage of the commission would be set aside for future preservation. In the case of Mark Napier's project *net.flag*, which is a "public artwork" created by online contributions by visitors to the site, the contract contains a clause to the effect that he has the right to host the project himself if the Guggenheim Museum ever fails to do so for financial or technical reasons.

Preservation Strategies and Initiatives

The process of collecting and archiving net art should entail the responsibility of maintaining it, which may be one of the biggest challenges the art form poses. Net art is often referred to as ephemeral and unstable media, a label that is only partly accurate. Any time-based art piece, such as a performance, is essentially ephemeral and often continues to exist only in its documentation. Digital technologies allow for enhanced possibilities of recording and the process of a time-based digital artwork can potentially be recorded as an archive. One could argue that bits and bytes are in fact more stable than paint, film, or video-tapes. As long as one has the instructions to compile the code—for example as a print-out on paper—the work itself is never completely lost. What makes digital art unstable are the rapid changes and developments in hardware and software, from changes in operating systems to increasing screen resolution and upgrades of Web browsers. Hardware deteriorates and replacement parts are not infinitely available.

Net art requires new models and criteria for documenting and preserving process, context, and instability. These initiatives must develop a vocabulary for catalogue records; standards that allow to exchange the metadata gathered for catalogue records by institutions; and tools (such as database systems) for the cataloguing of unstable and process-oriented art. Both in Europe and the United States, numerous preservation initiatives are setting out standards for preserving media works. Among them is the Variable Media Network⁷, a consortium project that was founded by the Solomon R. Guggenheim Museum and the Daniel Langlois Foundation for Art, Science, and Technology, and has included the Berkeley Art Museum and Pacific Film Archive, Cleveland Performance Art Festival and Archive, the Walker Art Center, Franklin Furnace Archive, Rhizome.org, and the Whitney Museum of American Art. The Variable Media Network brought forth a series of working groups, such as Archiving the Avant-Garde⁸ and the Forging the Future initiative.⁹ European preservation initiatives include INCCA¹⁰, the International Network for the Preservation of Contemporary Art; Media Matters¹¹, created in 2003 by a consortium of curators, conservators, registrars and media technical managers from [New Art Trust](#), [MoMA](#), [SFMOMA](#) and [Tate](#); and the V2 organization's Unstable Media project.

As a framework for investigating and documenting strategies for preserving ephemeral works, the variable media approach strives to define medium-independent behaviors of artwork and to identify artist-approved strategies for preservation with the help of several tools, among them the Variable Media Questionnaire (VMQ). What distinguishes the variable media paradigm from other preservation concepts is the focus on the behaviors and creator of a work rather than its material. The initiative defined several medium-independent behaviors—installed | performed | reproduced | duplicable | interactive | encoded | contained | networked¹²—and four main approaches to preservation:

- storage (collecting software and hardware as it continues to be developed)
- emulation ("recreating" software, hardware and operating systems through emulators—programs that simulate the original environment and its conditions)
- migration (upgrading the work to the next version of hardware / software)
- reinterpretation ("restaging" a work in a contemporary context and environment)

There is no silver bullet approach to the preservation of net art or new media art in general and the preferable strategy for preservation would ideally be defined in collaboration with the artist. Any of the above methods can be ideal or problematic depending on the specifics of a work. For example, storing hardware may be impractical but can be the only solution if a work is based on a hardware modification; migration or recreation at worst can make a work look dated, since the artist might have chosen to create an entirely different project if the latest technology had been available to him / her the time of the project's creation.

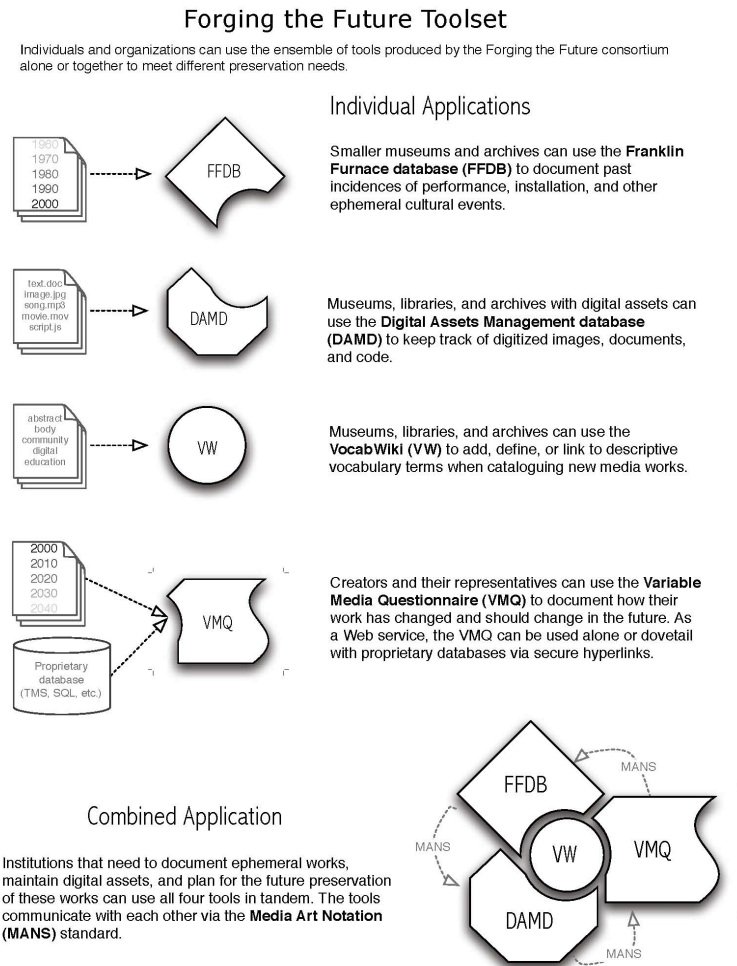
The challenges of documenting and preserving new media art most poignantly illustrate the concept of the ephemeral and immaterial as links between materialities—the connections between hardware and software components and processes initiated by humans and machines that form an immaterial system of their own. The success of preservation strategies will depend

largely on standardization, which requires a continuous dialogue between all the organizations and institutions involved in these initiatives.

Forging the Future

The initiative *Forging the Future: New Tools for Variable Media Preservation*—supported by a grant from the National Endowment for the Humanities and based upon the preservation standards and strategies developed in previous years by its members as part of the Variable Media Network (VMN) and Archiving the Avant-Garde working groups—is focused on building tools written to those standards and designed to help organizations choose among those strategies. *Forging the Future* proposes a consortium of museums and cultural heritage organizations dedicated to exploring, developing, and sharing new vocabularies and tools for cultural preservation.

The main tools developed in this project are the Franklin Furnace Database (FFDB) for cataloging the archives of arts organizations; the Digital Asset Management database (DAM), which manages digital objects or documentation files and related metadata; the VocabWiki, which defines descriptive vocabulary; and the Variable Media Questionnaire (VMQ), which contains interviews with artists and metadata necessary to migrate, re-create, and preserve variable media objects.



v1.5

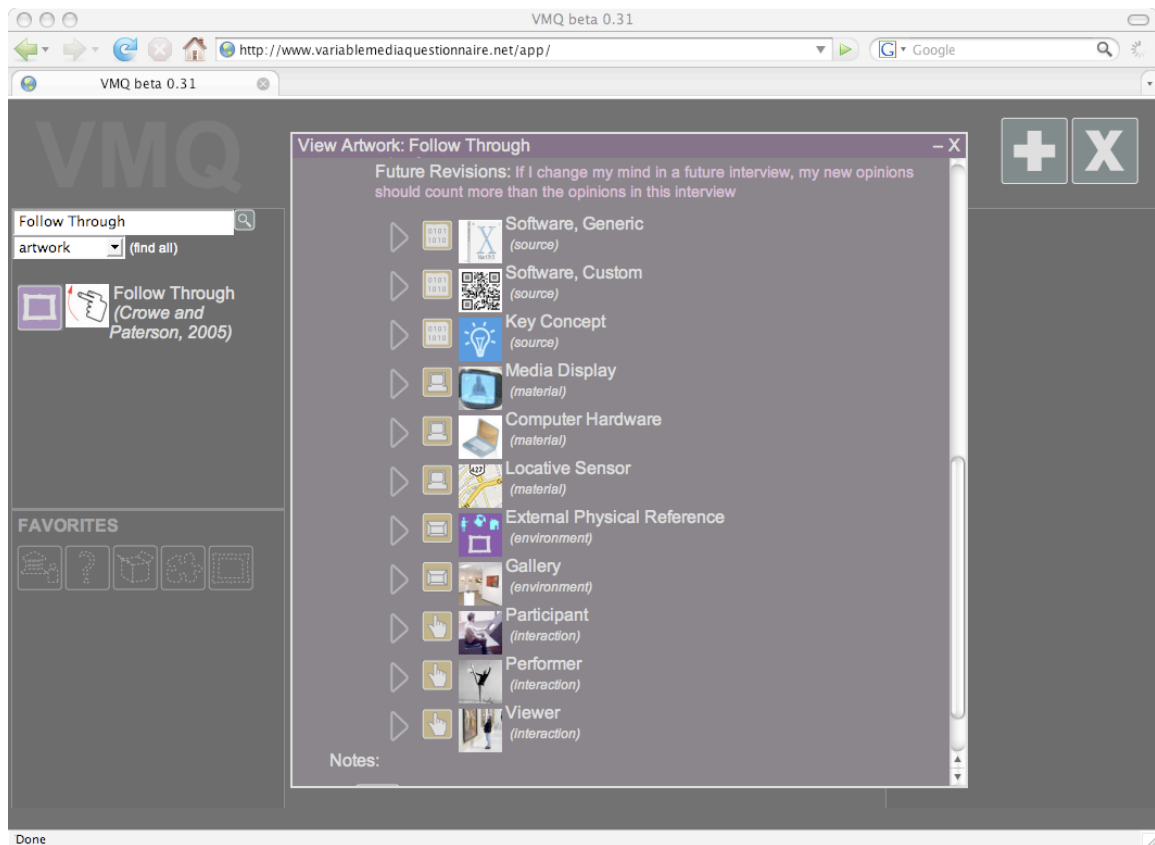
Whitney Museum of American Art Case Studies.

As part of the Forging the Future initiative, the Whitney Museum is testing the latest version of the

VMQ by conducting interviews with the following artists: Cory Arcangel (*Super Mario Clouds*, 2002-03), Jennifer Crowe and Scott Paterson (*Follow Through*, 2005), as well as Douglas Davis (*The World's First Collaborative Sentence*, 2004). At the time of this writing, the first two interviews have been conducted. While Arcangel's and Davis' projects are officially in the WMAA's collection, *Follow Through*, a performative mobile media project, was commissioned by the museum and both project documentation and the underlying software are archived online.

The Whitney's case studies are testing the VMQ with regard to its categories of behaviors and their applicability in view of necessary modifications of works over time. The questionnaire is not a sociological survey, but an instrument for determining creators' intent as to how their work should be (if at all) re-created in the future. Compared to previous versions, the third generation of the VMQ¹³ uses a component-based structure for artworks: interviewers can pick from a list of components, choose the ones applicable to the artwork, and associate them with it (each component in turn comes with a set of questions). The main components are:

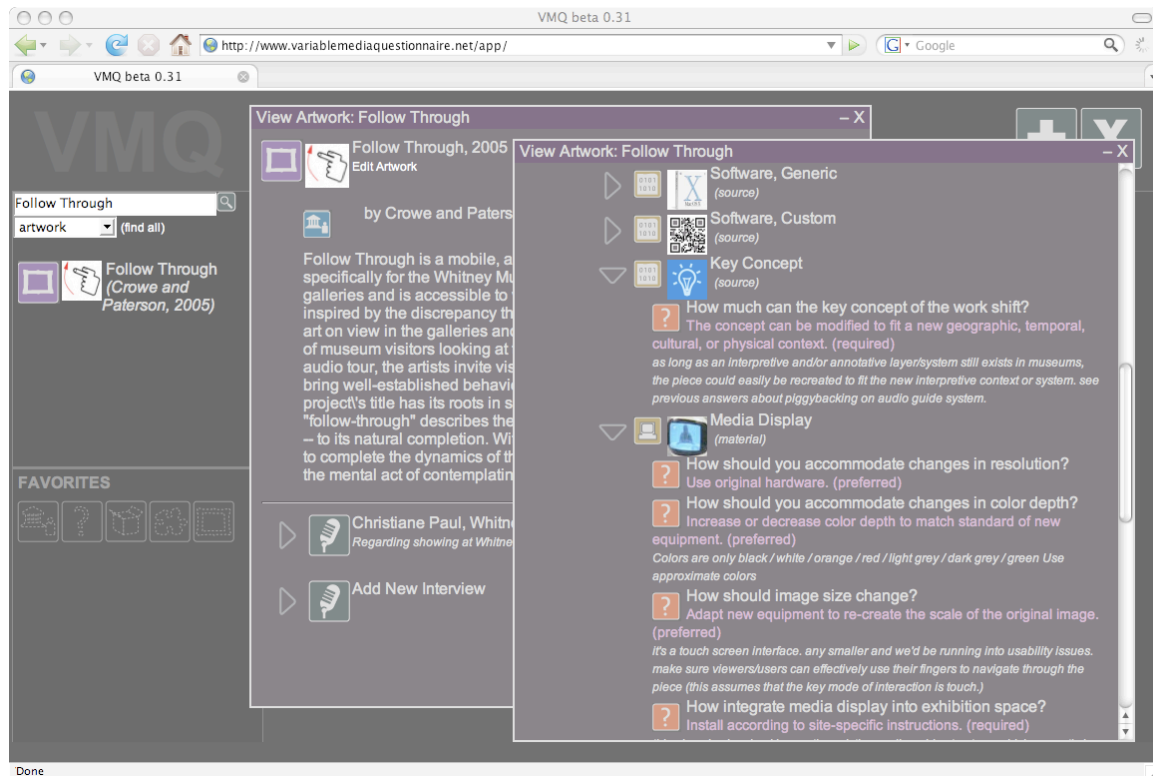
- material (such as Media Display, Computer Hardware, Live Material, Interchangeable Inert Natural or Manufactured Material, Locative Sensors, Robot, Mechanism, Reproducible Inert Manufactured Material)
- source (Interchangeable or Reproduceable Video Source, Generic Software, Custom Software, Reproduceable Video Source, Key Concept)
- environment (External Physical or Virtual Reference, Gallery)
- interaction (Participant, Performer, Viewer)



Screen shot of the VMQ showing the components of *Follow Through*.

*Follow Through*¹⁴ represents an interesting case since it originally was a mobile, audio-visual artwork that was created specifically for the Museum's Fifth Floor Permanent Collection galleries and was accessible to visitors on portable media players. The project is inspired by the

discrepancy the artists found between the art on view in the galleries and the rather passive and languid body language of museum visitors looking at that art. Museum visitors would use the portable media players to access the existing audio tour for the fifth floor galleries but, in addition to the audio for a specific work, would receive visual instructions to engage in a set of exercises designed to bring well-established behavioral codes of museum attendance into relief. In the case of *Follow Through*, preservation strategies have to be developed both for the performative work itself and its Web documentation on the artport site.¹⁵



Screen shot of the VMQ showing questions relating to components of *Follow Through*.

An interview with Douglas Davis' on his continuously evolving web project *The World's First Collaborative Sentence* (1994) still needs to be done. At first sight, *The Sentence* does not seem to pose major challenges when it comes to its preservation since it is a series of linked html pages (user input is made via a form field). At a closer look, however, the project raises interesting questions:

- Since the website was created in HTML in 1994, it looks rather unformatted, with uneven layout and fonts / font sizes varying throughout the document. Should cosmetic changes be made or should the pages retain their "dirt-style" aesthetics?
- At a certain point, large sections of *The Sentence* appear garbled, displaying illegible character sets. The project had been included in exhibitions in Asia, so that an increased amount of contributions was made in foreign-language characters. Should appropriate software be installed to make these sections legible? Should they be translated? Or should illegibility be preserved as a testament to the restrictions and boundaries that language creates on the supposedly global network? Should contextual information on the exhibitions in which the project was included be made available?
- *The Sentence* allows contributors to embed links to external sites or images. After 15 years, the project is suffering from a severe case of link rot. Should the dead links be left alone, pointing to the ephemeral nature of the Web as a habitat for art? Or should one search the Internet Archive¹⁶ to try to retrieve the pages or images to which *The Sentence* originally linked?

All of the above questions are deeply conceptual and ideally require to be answered by the artist himself since decisions on how to proceed will fundamentally change the work. As recorded in the VMQ, the case study of *The Sentence* might provide helpful models for preservation approaches to the works of the net pioneers. Feedback from the Whitney's and other case studies would cycle back into the refinement process for the database and vocabularies under development in partner institutions. In addition, the case studies will be used as a basis for a development of vocabulary for institutional agreements with artists to ensure the long-term preservation of works.

¹ Christiane Paul, "Challenges for a Ubiquitous Museum: Interfacing New Media - From the White Cube to the Black Box and Beyond" in Christiane Paul (ed.), *New Media in The White Cube and Beyond - Curatorial Models for Digital Art* (Berkeley, CA: Press, 2008)

Christiane Paul, "The Myth of Immateriality - Presenting & Preserving New Media" in Oliver Grau (ed.), *MediaArtHistories* (Cambridge, MA: The MIT Press, 2006)

"Flexible Contexts, Democratic Filtering, and Computer Aided Curating Models for Online Curatorial Practice" in Joasia Krysa *Curating, Immateriality, Systems: On Curating Digital Media*, Data Browser Series Vol. 3 (New York: Autonomedia Press, 2006)

Anne-Marie Schleiner, "Fluidities and Oppositions among Curators, Filter Feeders, and Future Artists", *Intelligent Agent* magazine Vol. 3 No. 1 (2003), http://www.intelligentagent.com/archive/Vol3_No1_curation_schleiner.html

² <http://pool.newmedia.umaine.edu/index.php>

³ The British website *low-fi net art locator*, run by a collaborative team, used an open curatorial model by regularly inviting guests to "curate" a selection of online projects within a theme of the guest's choice. A range of contextual perspectives can also be found at *turbulence*—a project of New Radio and Performing Arts and its co-directors Helen Thorington and Jo-Anne Green—which, in addition to commissioned projects, features curated exhibitions (often organized by artists) as well as "Artist Studios" that present artists' works and provide context for them through writings and interviews. The idea of "automated curation" and software-based filtering becomes more pronounced in the *runme* software art repository, an open, moderated database that emerged out of the *Readme* software art festival (first held in Moscow in 2002) and launched in January 2003. The site is an open database to which anyone can submit their project accompanied by commentary and contextual information.

⁴ <http://gallery9.walkerart.org/>

⁵ To the shock and surprise of the online community, the Walker Art Center abandoned its new media initiative and laid off Steve Dietz in 2003—presumably unaware of the fact that it was the most important program of its kind in the US (and probably worldwide).

⁶ <http://www.sfmoma.org/exhibitions/espace>

⁷ <http://variablemedia.net/>

⁸ <http://www.bampfa.berkeley.edu/about/avantgarde>

⁹ <http://www.forging-the-future.net/>

¹⁰ International Network for the Preservation of Contemporary Art, <http://www.incca.org>

¹¹ <http://www.tate.org.uk/research/tateresearch/majorprojects/mediamatters/>

¹² For detailed explanation see Jon Ippolito, "Death by Wall Label" in Christiane Paul (ed.), *New Media in the White Cube and Beyond - Curatorial Models for Digital Art* (Berkeley, CA: UC Press, 2008)

¹³ <http://www.variablemediaquestionnaire.net/>

¹⁴ The project's title has its roots in sports terminology where the term "follow-through" describes the act of carrying a motion—such as hitting a ball—to its natural completion.

¹⁵ <http://artport.whitney.org/commissions/followthrough/>

¹⁶ <http://www.archive.org/index.php>