In the last 5 years, there has been at times heated debate not only about how best to present digital and specifically networked art in an institutional context but also whether to do so at all. Not all of the discussion revolves around issues of physical interfaces to such works, but their onsite presentation is a critical concern for both museums and artists—and their audiences. This paper is informed by these discussions, mostly online in the archives of nettime, rhizome, thingist, and CRUMB, but focuses on the author's personal experiences in curating 10 exhibitions over the past five years that have included network-based art. The paper presents work at the Walker Art Center (Minnesota) focusing on new physical interfaces, particularly for the presentation of digital art. Some examples include a freestanding revolving door portal for the exhibition Art Entertainment Network; a telematic table resulting from an international design competition; and a "temporary autonomous sarai" developed collaboratively by the new media artists Rags Media Collective (New Delhi) and the architectural practice Atelier Bow-Wow (Tokyo). These and other projects are prototypes for new, interactive social spaces and functions being developed for the Walker's new building expansion, designed by the architects Herzog & de Meuron. (Includes 10 figures.) (Author)
Interfacing The Digital

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Abstract

"Interfacing the Digital" presents work at the Walker Art Center focusing on new physical interfaces, particularly for the presentation of digital art. Some examples include a freestanding revolving door portal for the exhibition Art Entertainment Network; a telematic table resulting from an international design competition; and a "temporary autonomous sarai" developed collaboratively by the new media artists Raqs Media Collective (New Delhi) and the architectural practice Atelier Bow-Wow (Tokyo). These and other projects are prototypes for new, interactive social spaces and functions being developed for the Walker's new building expansion, designed by the architects Herzog & de Meuron.

Background

In the last 5 years, especially following Documenta X (1997), the Whitney Biennial of 2000, and Net, Condition at ZKM (2000), there has been at times heated debate not only about how best to present digital and specifically networked art in an institutional context but also whether to do so at all. Not all of the discussion revolves around issues of physical interfaces to such works, but their onsite presentation is a critical concern for both museums and artists—and their audiences.

This paper is informed by these discussions, mostly online in the archives of nettime, rhizome, thingist, and CRUMB, but focuses on personal experiences in curating 10 exhibitions over the past 5 years that have included network-based art, including Beyond Interface: net art and Art on the Net at Museums and the Web in 1998.

Finally, while working with art that is "born digital" is a special case for most museums, I would argue that the many of the issues and lessons are transferable to the digital contextualization of any work in a museum's collection.

The Challenge of Context

One of the challenges of presenting digital art, is that the context and the work are generally displayed via the same means: the screen. How to differentiate between the metadata and the experience? One strategy is simply to open the project in a new window. This was the strategy of Beyond Interface.

The complaint from artists about such a strategy is that it creates a curatorial gateway that viewers must pass through before getting to the heart of the matter, the actual experience. If you think of the example of video games, for instance, there may be a narrative introduction to the game — but often there isn't and generally you can skip through it — and then you're in game play mode. If you need/want help you specifically open the FAQ or Help screens, but they are not the main way of starting the game. Even with a painting exhibition, while there is...
reams of research about the best length, tone, style, etc. for didactics, the working assumption is that most people look at a painting first and then read the label — the help file, so to speak — if they want more information.

Even when net art exhibitions present the artwork first, it is often because the only curatorial context is a list of links, which is an equally unbalanced approach.

With Art Entertainment Network, I tried to finesse this issue by making the interface part of the experience itself — it is a portal to art projects but to find out more information, you must go to the context (http://aen.walkerart.org).

And more recently, with Translocations, I integrated functions of various projects into the interface, so that from the contextual pages, you could directly "modify" the text (via an artist project called OPUS), send an email about it in any language anywhere (via an artist project called Translation Map), create your own soundtrack to browse to (via an artist project called Translocal Mixer) or pop up the video window of the Translocal Channel.

The Challenge of Ghettoization

Related to the issue of context is ghettoization. There is a conundrum. On the one hand, it can be valuable to provide a focus on a particular set of practices, whether they are photography or performance or digital art. It is easier in such focused contexts to meaningfully differentiate between, say, documentary, fashion, abstract, and conceptual photography, each of which has its own distinct but intermingling histories, methods, presentational contexts, etc. At the same time it doesn't make sense to completely divorce photography from the visual arts; to not include it in a thematic show, whether about modernist art in America or America in the modern age.

At the Walker, my answer, as is my wont, is both/and, not either/or. Gallery 9 is a virtual gallery for network-based art. At the same time, with a project like Shock of the View, we specifically chose to compare a physical artwork with a digital artwork. In the example below, for instance, the guest curator chose to compare a John Frederick Kensett painting of Mount Washington with a ski resort webcam of the same view, arguing that Kensett was the board-of-tourism-promotional-guy...
of his day. In another case, I compared Ken Goldberg's *Memento Mori*, with the ephemeral *Sisyphus* of Luciano Fabro. (http://www.walkerart.org/salons/shockoftheview/.)

**Figure 2 : Screenshot Shock of the View**

Comparisons are odious, and in the end, the interesting point is not that digital artist x is as good as artist y, but to bring their contexts into collision and see what happens. Sometimes this is best done in a digital only show. In the same way that Douglas Fogle at the Walker might do a painting only show, such as *Painting at the Edge of the World*, which explores diverse ideas about painting at the moment, in the Walker's expansion there will be a "mediatheque" devoted to the presentation of new media art (http://www.walkerart.org/programs/vaexhibpainting.html). We will continue, however, to do crossover shows, such as *How Latitudes Become Forms*, the current Walker exhibition curated by Philippe Vergne, which incorporates performance, new media, and film directly into the gallery exhibition (http://latitudes.walkerart.org).

**The Challenge of Medium**

In this post-medium, post-studio world, the idea of a medium may seem slightly antiquated and naïve. It's all just art, right?

Personally, I believe there is a cinema and video practice tradition that cannot be fully subsumed in installation art. The same with photography. And, I would argue, digital art.

Perhaps more to the point, however, is that we tend to talk about most digital art through the prism of visual arts, perhaps with a nod to video art, but in many ways the more fruitful comparisons are with the performing arts. Digital art is time-based, often performative, often ephemeral, often done in/by groups, process-oriented, and so on. The burning issues of collectability and ownership and authenticity take on a whole different tone when viewed against the history of music, its notation system for replaying a core experience that is nevertheless different every time; and the by-now acceptance of live and recorded performances as different but not merely derivative.

With 386 DX, Alexei Shulgin — shown here in Athens in a show I co-curated with Jenny Marketou for Medi@terra 2000 - plays computer-generated covers of hits such as *Purple Rain*, an inspiration, I would argue, to a whole generation of

Figure 3: Alexei Shulgin performing as part of the Open Source Lounge at Medi@terra 2000, Athens

The point in terms of interfacing the digital is to pick our models appropriately. Many of the issues of displaying digital work may be better solved working from a tradition of theater (think of object theater in history museums, for instance) and performance than rigid adherence to the traditional gallery experience.

In the Walker's new expansion, we have built in this idea by putting the mediatheque galleries literally in the balcony level of the new performing arts studio. While there is no specific plan to always integrate the spaces, the assumption is that at some point artists will insist on their integration, building out the potential of the conjunction experimentally.
The Challenge of Expectations

One of the reasons why the computer and the network have become not only subjects but also means of making artwork is that they are so ubiquitous in our daily lives. That very ubiquity, while it may provide a certain familiarity, also creates a whole set of expectations, starting with "user friendliness."

Try telling Matthew Barney, he should be more user friendly. Or Jasper Johns that his references are too obscure.

In this picture of BangBang, a work by the Bureau of Inverse Technology, which was presented in a traveling show I curated Telematic Connections, the Bureau disturbs our expectations of interactivity. The viewer can do nothing to make the work "happen;" it is dependent on environmental triggers outside of the gallery space (http://telematic.walkerart.org/ and http://telematic.walkerart.org/telereal/bit_index.html). This was extremely frustrating for many visitors but too often the response was based on a false notion of "good interactivity," not, really, whether they liked or understood the work on its own terms.

Interactivity and user-friendliness are just a couple of the expectations with which we view digital art. On the museum side of the equation, there are a whole set of parallel issues to do with touch/don't touch, how much time you spend with a time-based work, and other learned gallery behaviors. All of these are concerns that both the artist and the presenter must take into consideration when interfacing the digital, but the answer is not always obvious — to make things "easier" to do, for instance.

The Challenge of Infrastructure
Figure 6: David Henshaw, a friend of the author who just "dropped by" to see the installation of Telematic Connections at the San Francisco Art Institute, who was drafted to splice cables.

There is not really too much to say about infrastructure except that it is absolutely necessary, vital, critical. Yet, in every single installation I have done over the past 5 years, no matter where, the level of support has been less than for a comparable contemporary art exhibition at that institution. Not out of malice or design but largely because of the history of the space and the personnel. Nevertheless, it should be just as easy to plug-in a network connection as it is electricity, as just one small example. But it's not, and until it is, institutions will only be compounding their problems — and their audiences — when interfacing the digital.

The problem is totally solvable, but perhaps primarily in the design of new facilities. No facility should be built today that does not assume that significant network and computing resources will be required in potentially any area of the institution at one time or another.

The Challenge of Legal Bug

A "legal bug" is a concept that the artist group Knowbotic Research coined when their installation for Open Source Art Hack, Minds of Concern was shut down not because of infrastructure issues, exactly, but because of a contractual obligation — supposedly — on the part of the institution hosting the show. [iv]
Minds of Concern uses port scanning, a technique that is sometimes used by hackers to determine whether there are any weaknesses in a server. Knowbotic's use was simply the scanning, no hacking. After extensive consultation with legal experts around the United States, it was determined that this is essentially like looking in a window or open door from across the street. As long as you don't enter, there is no crime. For Knowbotic's use, they were alerting various non-profits when there was an insecurity in their system. It did not matter that this was a legally protected activity — or at least not illegal activity — the museum's "shrinkwrap" contract with its upstream Internet Service Provider included a blanket clause — apparently standard - that no port scanning was allowed, regardless of intent.

Knowbotic's point was that there is the possibility — and necessity — of a public domain in the digital realm, but that regardless of the public law around the issues, which in itself is problematic, the standard operating practice of shrinkwrap licenses and their equivalents was severely restricting the actual scope of the public domain. Legal bugs, so to speak, are undermining public space in the digital realm.

My point is that institutions, while often overwhelmed by the financial burden of litigation, understand and can protest cogently and strongly an artist's right to fair use, to parody, etc. But in the digital domain, it is often terra incognita, and so much easier to simply say "it's in the contract," and let the lights go dim. As the digital sphere becomes increasingly privatized, interfacing it becomes increasingly compromised.

The Challenge of Presentation

One can list dozens of other challenges to interfacing the digital, but I would like to end with three examples of the presentation of work in physical space. These are not intended, naturally, as universal solutions, but as case studies of attempts
to solve particular issues in specific situations.

**Let's Entertain and Art Entertainment Network**

As I said earlier, the interface that we created for the online exhibition *Art Entertainment Network*, was designed as a portal; a format "native" to the network. Once we had decided on this exhibition design, we commissioned Antenna Design in New York to create a physical interface, which could be used in the galleries as part of the parallel exhibition of visual arts, *Let's Entertain* (http://www.walkerart.org/val/letsentertain/le_content.html).

![Door-Portal for Art Entertainment Network as part of Let's Entertain, Walker Art Center](image)

Antenna designed a freestanding, revolving door, which acted as a kind of portal between the physical space of the exhibition and the virtual space of the online artworks. As you push the door around, it automatically calls up the home page of each project. A touchpad allows you to interact with the work.

This door could hold its own, so to speak, with the other installations in the exhibition. At the same time, it was appropriate to the concept of the online interface — as a portal. It also didn’t assume that the goal of the interface was to create a comfortable browsing situation for hours of enjoyment. Like much gallery
behavior it was designed for more casual browsing. A holder next to the didactic label contained printed bookmarks, which visitors could take and use to later log on to the site at their convenience and in their favorite viewing position.

**Architecture for Temporary Autonomous Sarai**

The Walker's most recent commission is a collaboration between Raqs Media Collective from Delhi and Atelier Bow-Wow, an architectural practice in Tokyo, *Architecture for Temporary Autonomous Sarai*, which is part of the *How Latitudes Become Forms* exhibition, currently on view.

From a visit to Raqs Media Collective's Sarai project — first online and then in Delhi — I was very impressed with their genealogy of the idea of the sarai as well as with the energy, levels of interaction, and quality of output. This is how Raqs described Sarai in a conversation with myself, Yukiko Shikata, and Gunalan Nadarajan that undergirded the parallel online exhibition, *Translocations*.

"... for us, the creation of a sarai was to create a 'home for nomads' and a resting place for practices of new media nomadism. Traditionally, sarais were also nodes in the communications system (horse-mail!) and spaces where theatrical entertainments, music, dervish dancing, and philosophical disputaives could all be staged. They were hospitable to a wide variety of journeys—physical, cultural, and intellectual. In medieval Central and South Asia, sarais were the typical spaces for a concrete translocality, with their own culture of custodial care, conviviality, and refuge. They also contributed to syncretic languages and ways of being. We would do well to emulate even in part aspects of this tradition in the new media culture of today... This might create oases of locatedness along the global trade routes of new media culture. (Transcript, Translocations, full transcripts at: http://latitudes.walkerart.org/translocations/)

A sarai was exactly what was needed for the *How Latitudes Become Forms* exhibition — a place for social intercourse, both onsite and translocally; a place for the investigation of both artists' work and the exhibition context.

Another artist group in the exhibition was the Tokyo-based architectural practice Atelier Bow-Wow, Yoshiharu Tsukamoto and Momoyo Kaijima, who are proponents of what they have named da-me or no-good architecture. Multi-layered structures with varied uses (underpass + cinema + bar + barbershop + store, for example), these buildings epitomize, for them, a new creative, adaptive aesthetic.

We decided to ask Raqs and Bow-Wow to collaborate on a "Temporary Autonomous Sarai" — something that was physically modest, intended to be temporary, and programmatically could function as a sarai for the exhibition.
I see the cross-disciplinary collaboration and the physical, social space for presenting net art and its context as an exciting experiment, which will inform future practice at the Walker.

**Telematic Table**

As I said, we believe that artist practice can and should inform institutional practice. One of the projects the Walker has commissioned for the opening of our new spaces is a "telematic table."

The core idea of this interface is to use the format of the table to create a social learning platform that is different than the typical nose-to-screen kiosk experience.

**Figure 9**: Installation view of Architecture for Temporary Autonomous Sarai by Raqs Media Collective and Atelier Bow-Wow, realized February 2003, Walker Art Center.

**Figure 10**: Design for Telematic Table by Marek Walczak, Michael McAllister, Jakub Segen, and Peter Kennard; commissioned by the...
Walker Art Center

In 2001, after receiving a grant from the NEA, we held an international design competition, inviting over 30 artists, designers, and architects to submit designs for a telematic table with only this for criteria:

"We are envisioning a human-scaled interface that is neither a standard desktop computer nor a public kiosk, but which viscerally engages the user; encourages social interaction among groups of people, can be networked and adapt to a variety of situations and museum spaces. Like an ordinary table, the telematic table is a space of gathering and exchange. It will give its users access to the Walker's multidisciplinary collections and resources, foster curiosity and inquiry into the museum's information assets, and create a setting for social interaction and dialogue among groups of visitors." (Walker Art Center, 2001)

Of the responses, we selected 5 for further paper prototyping and from those selected a proposal by a virtual group composed of Marek Walczak, artist/architect; Michael McAllister, furniture designer; Jakub Segen, Bell Labs researcher; Peter Kennard, programmer.

The core idea of the table is very simple. Using gesture recognition software developed by Segen, which allows for a multiple-touch interface, users drag digital assets from a "pond" to personal "puddles." Relationships with related works in other puddles are automatically highlighted, encouraging, hopefully, cross-tabletalk and interaction. In any case, just the shoulder-to-shoulder layout of the table, we expect to lead to at least social situations, if not direct conversations. Naturally, more information is available about each selected object; objects can be "collected" on a postcard printout; and URLs for even deeper investigation from home will be provided.

Conclusion

Even though the Turing Machine — the computer — is defined as a universal black box that can do anything — follow any instruction set — it is important not to confuse and conflate the flexibility of computation with the physical interface of computers as they are currently sold by most corporations. Interfacing the digital can and should be as varied as the situations in which it is called for; the audiences being sought; and the artwork being presented. This will take imagination and ingenuity, but it is time for museums to stage their own version of the infamous Apple ad that threw a "monkey wrench" into the Orwellian screen of IBM computing and be as creative interfacing the digital as they are with every other exhibition installation they present.

References

Walker Art Center, 2001, Proposal for Telematic Table

[i] See http://www.heise.de/tp/english/pop/event_1/4079/1.html for a review of the Documenta X website, which was also "appropriated" by Vuk Cosic and is viewable at http://www.ljudmila.org/-vuk/dx/. The website for the 2000 Whitney Biennial is viewable at http://www.whitney.org/exhibition/2kb/internet.html, and the net condition is at http://on1.zkm.de/netCondition.root/netcondition/start/language/default_e.

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