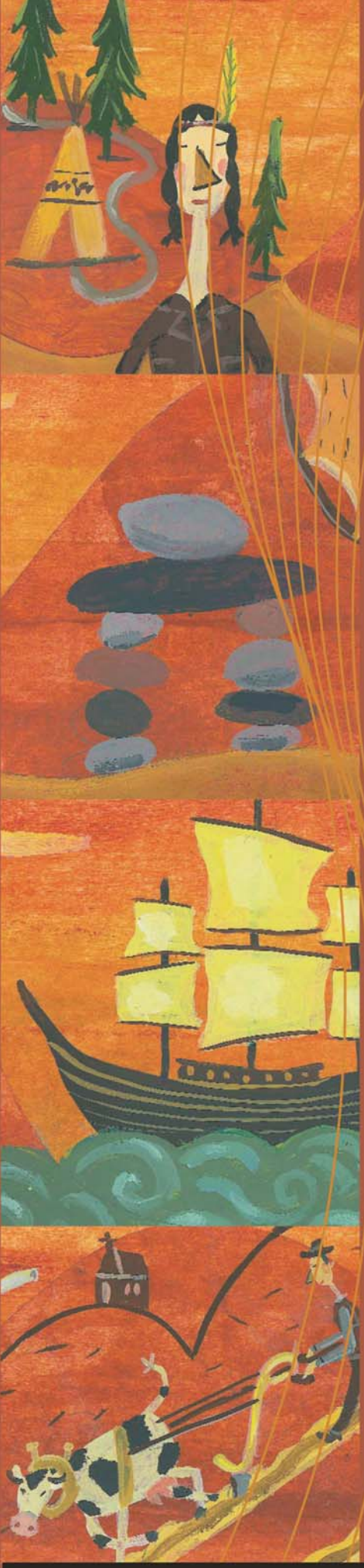

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Nailing Down Bits: Digital Art and Intellectual Property

By Richard Rinehart

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Introduction

This paper on digital art and intellectual property has been commissioned and published by Canadian Heritage Information Network CHIN), a special operating agency of the Department of Canadian Heritage. This paper is part of a larger series of papers on intellectual property and cultural heritage that have been commissioned by CHIN [1]. This paper is not intended to duplicate the information found in those papers, but will focus on intellectual property issues that are specific to or arise in relation to digital art and will form an additional layer to the broad range of legal, theoretical, and practical knowledge found in other papers in the series.

Copyright is not the only form of intellectual property that might be relevant to digital art. Technology often falls under the umbrella of patent law and cultural organizations often deal with trademark law. It will be important for the cultural heritage community to monitor developments in these fields as well as other legal fields that may relate to digital art such as privacy law and specific laws covering art. However, in the arena of intellectual property, artistic production and artistic works usually fall in the realm of copyright law and most of the case studies and interviews cited in this paper emphasize copyright. So, in order to focus and provide some depth to the discussion, this paper will focus on copyright law in Canada [2] and the United States [3] in relation to digital art.

Digital art, defined purely for the purposes of this paper, is any art that is produced and experienced using digital media. Except for establishing background, this paper will not emphasize issues around digital reproductions of traditional media art such as when museums provide online access to digital images of paintings in their collection. This paper will focus on "born-digital" works of fine art. Nonetheless, it is not the purpose of this paper to narrowly define digital art, nor would that be helpful to this discussion because many of the copyright issues and cases that apply to digital art also apply to related experimental art forms such as video, performance, conceptual and installation art. In fact, one primary feature of digital media art is that it often incorporates elements of all the forms mentioned above. So, this paper will not attempt to draw clear boundaries around digital art, but instead will focus on intellectual property issues that seem to cluster around it.

This paper is not written from a legal perspective, but from a cultural heritage community perspective. This perspective is informed by legal professionals and publications and by direct experience with intellectual property issues that arise out of the daily practice of cultural professionals. One could say that this paper is an attempt to create a snapshot of the cultural heritage community's response to intellectual property law and practice

regarding (digital) art. This paper is meant to ground that response not in terms of broad theories or abstract philosophies, but in terms of daily practice and real-world case studies. For that reason, the sources used for this paper are not mainly books, but instead more topical, conversational, and immediate sources such as digital art community websites [4], blogs [5], email discussion lists [6] and extensive interviews with cultural heritage professionals in Canada and the United States ranging from artists to curators to educators (a list of those interviewed appears at the end of this paper). The intended audience for this paper is primarily the cultural heritage community who may benefit from the discussion and analysis of the issues and proposed paths of action. The legal community may also benefit from the case studies and articulation of how one area of law is playing out in the larger society whether it reaches the courts or not.

Lastly, the purpose of this paper is to provide an introduction to and current overview of the intersection of intellectual property and digital art. This paper attempts to provide useful information to those cultural professionals who deal with such issues on an increasingly frequent basis. A secondary yet compelling reason for this paper is to broaden this conversation to the larger cultural heritage community because intellectual property may well be the battleground for the next “culture wars” of the information age and thus it is of concern to all.

Setting the Stage

Though this paper will focus on digital art, it is useful to briefly consider the larger picture of how cultural organizations have been impacted by the rise of digital media with regards to intellectual property issues. One area that illustrates this impact well is that of digital reproductions of traditional museum objects and archival manuscripts, a subject of many papers, symposium sessions, and indeed entire conferences in the cultural sector. Following are examples of how digital imaging issues affect cultural organizations in ways that reveal precedents and implications for digital art.

The Centre for Research and Documentation at the Daniel Langlois Foundation in Montreal includes extensive archives of contemporary and media artists. Alain Depocas, Director of the Centre, said in his interview that one of the most pressing intellectual property questions facing his work is whether he can digitally reproduce archival material to aid access for researchers or perhaps to aid preservation. He must even determine whether he is allowed to show researchers the original physical manuscript sometimes. Part of the reason for such concern is that archival material is by definition the unself-conscious by-product of the activities of a person or organization and is thus has not necessarily been filtered or vetted by all stakeholders. These manuscripts may include private details of people's lives or industrial secrets. To compound the problem, the archive may include material about people other than the primary subject of the archive. For instance, in the Centre's Woody Vasulka collection there are personal letters from Vasulka, but also letters from others to the artist. Though this may be the "Vasulka Archive", the lives of others are intertwined in the archive. Depocas has to sort out whose privacy is at stake and whose permissions would be needed in order to digitally reproduce the archive, much less publish such reproductions online or in print. This dilemma speaks to a similar problem that arises around collecting digital art works that are often made by multiple collaborators, only some of whom may be the artists who end up dealing directly with a collecting organization.

Jill Sterrett, Head of Collections at the San Francisco Museum of Modern Art, outlined a project to digitally reproduce posters in the museum's design collection. These posters include commercial promotions for music concerts that took place in San Francisco in the 1960's and 70's. Because of the nature of the posters, SFMOMA must determine not only the multiple rights already inherent in commercial graphics productions, but also the subjects of the posters including promoters and musicians. This will take the museum into the realm of the music industry and that industry's own practices regarding advertising, publication, and reproduction. This journey is one that will be followed by others collecting

digital art that is often a hybrid of media (images, music, moving image) and thus a complex hybrid of laws and practices relating to several different professional fields.

The Franklin Furnace Archive in New York provides online access to images and records of performance artists who have performed at Franklin Furnace. It is the practice of Archivist Michael Katchen to ask permission from each artist individually to mount such images and records online. Keeping close relationships to the artists, Katchen has also received requests from artists to change the online image and/or text (even though staff at Franklin Furnace and not the artist wrote the record as a factual account of the event). The reason for at least one of these requests was because the performance in question on the Franklin Furnace website included challenging material about gender and pornography. At this later stage in their career, the artist no longer wanted to be associated with that earlier work. Though the concept of "moral rights" does not exist in United States law as such, this example demonstrates consideration for the artist's wishes after the fact, whether that consideration is mandated by law or simply required by an ethical relationship with the artist. This specific request to alter the work or record of the work long after the act of documentation or collection has special implications for digital media art in that such alterations are not only easier, but are often required by the ongoing acts of preservation and future exhibition. These activities will require an ongoing conversation with the digital artist whether or not it is required by law and may signal a new way of operating especially in those countries without the precedent of moral rights.

On the topic of morals and ethics (leaving behind moral rights as a specific legal concept for now), it may be useful to tease apart the different concerns surrounding intellectual property for cultural organizations. As mentioned earlier, cultural organizations have recently become highly interested in digital intellectual property. The motivation behind this interest is often implied in professional papers and conferences to be either practical (avoiding legal trouble) or economic because cultural organizations themselves sometimes earn income from licensing images of works in their collection. But these motivations do not account for the level of interest and, frankly, the heat surrounding such professional conversations. On the economic front, income derived from image licensing by the vast majority of museums in North America is scant; usually a small fraction of the museum's operating budget. Avoiding legal trouble is always of course advisable but since not much is at stake economically, this goal is easily reached by simply making the conservative and risk-averse choice every time. The motivation, the source of the fire that often goes unacknowledged is not legal or economic at all; it lies in the moral and social values of cultural organizations. One set of social values is evident in the current debate about open culture and unencumbered access to information. Other, perhaps countervailing, values that are less often openly addressed position cultural organizations as the protectors or moral guardians of culture and by extension of cultural artifacts and their representations. These values make museum professionals frown at the idea of licensing their images for use in commercial advertising for cigarettes for instance. The organizations that hold these values are aware that much of the art they steward was created in critique of mainstream or mass culture and that to co-opt those images in the service of said culture is more vulgar than ironic. For whatever specific reasons, many cultural organizations operate as moral stewards of the works in their collection and

representations of those works. This value implies a need for control of such images; the kind of control it is hard to imagine in the digital frontier. While this paper will not dwell overmuch here, cultural values are part of the larger social conversation and must be part of a cultural response to intellectual property law. It is useful to make explicit non-legal elements that would otherwise obfuscate a clear discussion of intellectual property in cultural heritage.

The importance of social values in a discussion of intellectual property was underscored by Zainub Verjee, formerly a Program Officer for Media Arts at the Canada Council for the Arts, when she said that what is at issue is not so much digital art as dealing with intellectual property in a digital culture. Verjee suggests that the cultural notion of "property making" is itself in question. Framing the issues in terms of relative global cultures, Verjee urges cultural professionals to watch and learn about views on property from cultures outside North America (referring to the emerging "global south") and cultures within (referring to traditional knowledge of native peoples).

Susan Miller, outgoing director of New Langton Arts, an experimental media artists space in San Francisco, agrees that it is critical to keep in mind that when discussing intellectual property, larger cultural values are always at play. Miller argues that cultural organizations should provide a forum for identifying and engaging the "owners and stakeholders" in society, giving equal voice to each and not necessarily limiting the discussion to a pre-existing legal framework. Miller noted that what should be only part of the discussion, intellectual property law, often has a way of rising up to stifle the entire conversation unilaterally. She warns that a danger in providing this social debate forum includes legal trouble from hosting artists who challenge intellectual property. Conversation closers also include funders and cultural organizations who censor artists that deal with such issues as animal rights, child abuse, pornography and racism - all topics that are relevant to the discussion of social ownership and social stakeholders. Miller contends that these dangers should not dissuade cultural organizations, especially cultural organizations on the "fringe" of the art world, from engendering this cultural debate because no one else will take the risk.

David Clark, Associate Professor at the Nova Scotia College of Art and Design, sees an answer to Verjee and Miller's call for cultural debate coming from another sector; education. Clark is most interested in the areas of intellectual property known as Fair Use (U.S.) [7] or Fair Dealing (Canada) [8]. It is these concepts that may allow the cultural debate to take place by creating a protected space even within the seeming legal minefield of intellectual property. Clark mentioned that Fair Dealing/Fair Use can be helpful in bringing the debate to students both by allowing him, as an educator, to bring copyrighted cultural materials to the class and by allowing students to engage in the issues directly by creating, re-mixing and critiquing cultural productions themselves. He added that Fair Use/Dealing is not a complete solution to the problems arising from intellectual property for cultural heritage. In fact, he mentions, most educators do not exercise their Fair Use/Dealing rights because they do not know of them and would rather err on the safe side. Problems have also come up for him when attempting to share, publish, or exhibit the

cultural critiques and productions created by his class in part by re-mixing the creations of others.

Jon Ippolito is Assistant Professor of New Media at the University of Maine and Associate Curator of Media Arts at the Guggenheim Museum. As a fellow educator, Jon sees the cultural values implicit in intellectual property play out in academia as well. Ippolito spoke about a commercial web service called turnitin.com [9]. Turnitin.com is a fee-based service for university professors where they can submit their student papers and have them checked against a huge database of other student papers and other sources to ensure against plagiarism. The database of student papers is not openly available to the user. Turnitin.com claims to encourage originality, but Ippolito is highly critical of the service and states that it hypocritically makes money co-opting students' words without giving them due credit, permission to opt out, or compensation. He argues that university funds would be better spent creating a huge database of openly shared student papers. An open system would encourage collaboration and would also encourage originality because everyone's papers would be public and openly available. Plagiarism might actually be useful, and when not, at least hard to hide. Ippolito rightfully sees this example as a microcosm of the larger question surrounding intellectual property, "Will limiting access or will opening access better promote originality?"

Moving outside (but never really leaving) the discussion of cultural values around intellectual property, we consider an additional discipline with implications for digital art and intellectual property; namely performing arts. Diane Zorich is an information management consultant based in the United States who has worked with cultural organizations in the United States and Canada. Zorich suggested in her interview that visual arts organizations wrestling with models for applying intellectual property to media art forms might look across the cultural heritage landscape to the performing arts. Specifically, Zorich noted, the performing arts have a richer model for detailing the separate rights inherent in one work. For instance, filmmakers and theater producers manage separate rights for copyright of the original script, performance rights, broadcast rights, and many more. Both the U.S. and Canada have different and very limited implementations of "exhibition" or "display" rights for art works, but these separate rights are nowhere near the sophisticated rights matrix used in performing or cinematic arts. Although it seems that a more complex model is antithetical to making intellectual property easier for cultural heritage professionals to deal with, in fact it may make sense to develop an intellectual property model for digital art that more accurately reflects the manifold nature of the medium.

An additional factor contributing to the increased interest specifically in digital intellectual property from the cultural sector is mainstream media attention to the issue at large. Cultural organizations that for decades may have not given much thought to securing rights and permissions to use images of art in their monthly print newsletters are now highly sensitive to using those same images on their websites. So, at least in the US, some of the prickly heat that arises for cultural heritage around digital copyright may be caused by media stoking the flames of infamous cases like Napster or by C-net television coverage of Disney arguing before the U.S. Congress to extend copyright. The image of Mickey Mouse pleading with Uncle Sam not to set him free seems one the media cannot turn

away from. In the digital realm not only is copying easier, but so is policing infringement. These contradicting activities combine in an escalating arms race that results in ever more panicked sounding “duck-and-cover” drills from the media. These alarms cannot help but ring in the ears of the cultural heritage community.

Clearly many intellectual property issues surrounding digital art are not entirely unique or new but are inflected with external considerations and influences. Many of the finer points raised in this section will show up again later in the paper as they are applied directly to digital art. Still, digital art can put an unusual magnetic spin on intellectual property issues and to see that we must focus a little closer now.

Variable Media

Perhaps the main causes of friction at the interface of digital art and intellectual property lie in the nature of the medium itself. Digital media is by definition computational media; that is media that may be not only the end result of computational processes, but may be composed of ongoing computational processes. More often than not, this computational nature introduces some level of fluidity and change into the digital art work in question. In addition, digital media are beholden to the separation of content from infrastructure that is required by the theory of a "universal machine" (a machine whose infrastructure may be reprogrammed to work with and produce almost infinite varieties of content; a computer).

Due to the fluid or variable nature of digital media, many digital art works are reconfigured each time they are exhibited. Even more to the point, many digital art works are reconfigured each time they are experienced and re-configured differently for each person experiencing them. They may be experienced differently when delivered across the Internet and presented on a vast range of home computers with custom combinations of network speeds, monitor sizes and settings, and media card capabilities. They may be instantly reconfigured because they are the result of user-input interacting with live computational processes that never produce the exact same results twice. Variability is an inherent property of digital media and one of the main capabilities artists are drawn to. Of course artworks in any medium change over time due to things like lighting or chemical decay, but digital media art changes more often, at a faster pace, purposefully, and in ways so immediately observable that they have direct implications for intellectual property.

One of the first legal concepts challenged by the variability of media is that of fixed form. No copyright law allows a creator to copyright an abstract idea, but rather requires a fixed form of expression for protection. Areas of commercial industry that regularly deal in liminal content like live broadcasts protect themselves by creating a recording of the broadcast, thus fixing the ephemeral content in a form worthy of copyright protection. Of course this concept has implications for artists who include live commercial media broadcasts in their gallery installations, but more pertinent and perhaps more complex implications arise around digital art. When digital art produces infinitely variable results every time, what is the fixed form of the work? For example, the UC Berkeley Art Museum and Pacific Film Archive has collected a digital art work, Landslide, by the artist Shirley Shor [10]. To produce Landslide, Shor wrote a custom software program that projects a variable never-ending visual map-like pattern of light on a sand-box installed in a gallery. The

projection is not stored or recorded. In this case, the program itself may be copyrighted, but the visual output that many consider to be the heart of the artwork may not be.

While portability of content and variability of form are givens with digital media, the courts remain conflicted on how to address these issues. US case law illustrates this point well. For instance, in the now famous copyright case involving art, artist Jeff Koons was sued by photographer Art Rogers who claimed that Koons infringed Rogers' copyright by creating a sculpture of a row of puppies in the lap of a couple based on a photograph by Rogers of the same image [11]. One of Koons' defenses was to argue that since the original was a photograph and his work a sculpture, it was not a direct copy but a new work. The court decided against Koons, declaring that taking content across different media was irrelevant; Koons infringed on Roger's original image. However, the case Tasini v. New York Times seemed to cast a different light on this matter [12]. The New York Times had obtained copyright permissions from freelance writers for stories they first printed in the paper and then mounted on the NYT website. The writers contended that the publisher had paid for only the right to print their articles in the paper and did not have the additional permissions necessary to mount the articles online. In this case, format did matter, and rights obtained in one medium did not automatically carry over to others. Even more complicated was the Bridgeman Art Library v. Corel Corp. case that seemed to split this particular hair down the middle [13]. Bridgeman Art Library had produced reproductions of paintings from the collections of several museums and then Corel Corp. produced a CD-ROM using many of the images without permission from Bridgeman. The paintings were not copyrighted; they were in the public domain. However, Bridgeman claimed that the photographs of the paintings were themselves copyrighted as separate works. The court decided that this was not the case; that any simple reproduction of another work does not constitute a separate work. Interestingly, the ruling only applied to two-dimensional works that had been "slavishly copied" without originality on the part of the photographer. However, photographs of three-dimensional sculptures may be considered separate works with their own copyright because translating the image from three dimensions to two required originality from the photographer with regards to angle, lighting, etc. For some reason, Koons was unable to take this argument in the opposite direction. So, does format matter or not? From these three cases alone, it is very difficult for the cultural heritage professional to triangulate clear guidelines for practice and furthermore they illustrate the courts' own confliction on the matter.

The variable nature of digital media inflames ideas already familiar to the art world: authenticity, appropriation, versions, reproductions, and derivatives. Following are three of many possible examples of how digital art pushes to these ideas to the edge and raises immediate questions about intellectual property.

First, Lost Love by artist Chris Basset is a website where viewers are invited to contribute their own personal stories of lost love and read stories by others in a central database of stories [14]. No permission form or contract exists on the site currently. Lost Love is typical as a work of participatory Internet art and raises the question of whether various anonymous contributors from around the world retain copyright in their work. If each retains copyright to their own words, then will one need to obtain their permission

each time the work is exhibited? What happens when the work is collected? What is the extent of their contribution? Should they get credit (the Moral Right of association) as co-creators of the work? Works that play with notions of decentralized authorship naturally also play with intellectual property.

Second, the software art project Carnivore was created by the artist team Radical Software Group is an open software "tool-kit" [15]. Radical Software Group wrote a piece of software code that monitors traffic on computer networks and converts that data to output for use by secondary software interfaces. Other artists are encouraged to download the software and use it to create their own interfaces. These other works may look very different from each other, yet they are be based on the same software "engine". Modular and collaborative works are not uncommon in the digital arts, and they directly question traditional concepts held by the art world and legal community about originality and individuality. They intentionally confuse strictly defined notions about derivative works and about versions of works with the expected legal ramifications.

Last, Shredder is a digital work by artist Mark Napier. Shredder invites the visitor to type in the address of any website [16]. Shredder then copies that website, turning it inside-out in the process; changing the size and colour of fonts, text, and images, even revealing HTML code that normally hides safely behind the scenes of most websites. The result usually looks little like the original website; it is shredded. Shredder is a forum for variability. It is ever-changing not only because it takes on a different form for each web address, but it does so in real-time, reflecting changes in any one website over time as well. Digital artworks that appropriate content from other sources either asynchronously or in real-time are also not uncommon, and they raise questions about appropriation of content and derivative works.

As mentioned earlier in the paragraph about SFMOMA's poster project, digital art can incorporate many media forms into one work. Each form included in the work, from images to music to physical objects to games to code, may bring its own set of related copyright laws, agencies, and practices. Janet Cardiff's Eyes of Laura illustrates the compound nature of some digital art [17]. Bruce Grenville, Senior Curator at the Vancouver Art Gallery described Eyes of Laura as a work that exists on the Internet and includes elements of interactive storytelling and camera surveillance. The work incorporated a live video feed from the Art Gallery's surveillance camera and allowed viewers to move the camera. The work also included diary-like entries from a Gallery security guard. Although the gallery presenting this work is in Canada, many of the server software components were at first hosted by an Internet Server Provider in the U.S. Later, all components were moved to a Canadian host because of technical and intellectual property concerns. Since online visitors could change the view of the camera, did they have some rights in their "directorial choices"? If a person was caught on camera for this participatory art work, were their "performance rights" being violated even if privacy laws allow it? Since the video feed was not stored or recorded, did copyright apply here at all? To fully realize the implications of this one work, one could seemingly research the history of film and theater as well as copyright and privacy laws.

Nina Czegledy, Canadian independent curator stated that the visual arts organizations that are increasingly exhibiting and collecting complex media works are not as prepared as their performing arts cousins to deal with multiple compound rights. Czegledy went on to cast this relative blank slate as an opportunity. If there is little precedent in the visual arts for dealing with compound rights, then the visual arts community has a chance to establish an intellectual and legal model that makes sense for the artists, the works, and the organizations involved. But this chance may only be realized if the arts community accomplishes two acts it is not known for doing well. First, the arts community and especially larger organizations like museums, must become pro-active about political and legal affairs. Many museums often shy away from political advocacy because of a parent organization such as university, government, or foundation that would prefer to maintain neutrality on such divisive external matters. Museums rightfully understand that they can influence society at large, but usually through the much slower means of cultural change. While it is true that cultural debates about larger social values around property will serve a purpose, intellectual property law in the digital age will not afford the luxury of much time. Those external forces are at work shaping law now, and while some activities and some debates may be conducted within the confines and control of the art world, copyright is not one of them. Next, the art world must reconcile the inherent variable nature of digital media with its own time-honoured models for acquiring and preserving works of art. Museums especially act as the heroic bodyguards for works of art, staving off the effects of time and change in order to preserve the integrity and accuracy of historic evidence. Though this strategy has served well, with digital art, museums must regard change as part of the solution, not the problem (for detailed recommendations in this area, see the Variable Media [18] and Archiving the Avant Garde [19] projects). It will not be fortuitous if the oldest thing museums preserve from the past is their way of conducting business

Source Code

Amid the variability and portability, there is one aspect of digital media that separate them from traditional art media and even other electronic art media; source code. Source code is usually a text file written by a programmer in a standard programming language like C++. Using a separate piece of software called a compiler, this source code is compiled into a full fledged piece of software such as MS Word. Since source code is one of the few elements that is truly unique to digital media, it is worth discussing its specific implications for digital media art and intellectual property.

One implication is the fact that digital media includes intellectual property rights not just in the content of any specific art work, but also in the underlying infrastructure. For instance, when a collector buys a painting they must negotiate all the rights in that painting, but they do not need to separately negotiate the rights pertaining to the paint material itself, to the canvas and stretcher bars, etc. They do not need to obtain permission from Rembrandt Paints to conserve the work by re-touching areas of the paint with another brand in future years. This is not always the case with digital media art. With digital art, the artist may have produced their own code or may have used a commercial software program like Flash (compiled code) to produce their art. In either case, the collector may need to reverse-engineer and then reproduce the underlying code to preserve the work by porting it from its original platform to a newer one. To do this, they would need to have obtained the permission of the rights holder to the software, independent of the rights holder to the art work. Unlike most art materials, most software is licensed and not sold outright to the buyer. The buyer does not own the digital material outright; they own the right to use the material in specific and limited ways. Artists and collectors must consider these underlying infrastructure rights when negotiating the intellectual property of an art work.

Additionally, source code can play many roles in a work of art. Sometimes source code is used to produce a work of art in the form of a compiled program that can run on its own. In this case, the rights in the original source code versus the compiled program may be separate. Sometimes source code does not produce the art (a separate program or media instance), but instead the code itself is the art. This may be because the artist considers the code more important than anything it produces, or it maybe that the code is written in a language that needs no compiling to run (JavaScript for instance).

Source code for a digital artwork can come from many sources, each of which has separate intellectual property implications. First are instances where the artist writes the source code. In this case, the collector may negotiate directly with the artist for all rights. Sometimes the artist engages a collaborator or hires a programmer to write the code. In

this case, the collector may negotiate with the artist only when the artist has cleared all rights issues themselves and indemnified the collector against future claims by the collaborator or hired programmer.

Source code may bear an exclusive one-to-one relationship with a work of art where an entire piece of code has but one purpose; to produce the work of art in question. It may not always be so simple. For example, Shor, the creator of Landslide, hired a programmer to write much of her code for her. Her source code is used to produce Landslide, but parts of the same source code are also used to produce other artworks. For another example, Japanese Artist Akira Hasegawa created a digital artwork, Digital Kakejiku, where never-repeating abstract images are projected on buildings and large outdoor areas at night [20]. The code that is used to produce this fine art work has also been licensed to a commercial manufacturer of massage chairs who uses the code to sync the chair's vibrations with the audio visual signals coming from the sitter's home entertainment system [21]. The same code has is being used by designer Issey Miyake to produce one-of-a-kind textile patterns for fashion design.

Considering the complexities in thinking through the separate intellectual property rights for custom software developed by artists in relation to the work, Jon Ippolito and others have formed the Open Art Network [22]. One of the goals of the Open Art Network is to develop and promote a template license for code that is part of artworks. For artists, the license would be a legal tool for sharing their code. For collectors the license may not grant them exclusive rights, but would make explicit their rights and permissions pertaining to the code.

The Open Art Network, along with other copyright collectives discussed later, may be of great help to the cultural community. The Open Art Network covers instances where the source of the code is the artist. However, there are many artworks for which the source of the code is not the artist or their collaborators. Another source for code besides the artists may be a separate programmer who is sharing their code via a separate open-source license or other legal tool. In this example, the artist is the beneficiary of someone else's open-source license. This example would most likely allow the artist the needed flexibility to modify the code to produce their work and then share the modified code along with the work with the larger world, including collectors.

Artwork related software from the commercial sector poses the most intellectual property issues for the cultural community. Many digital artists do not produce their own source code, but rather buy off-the-shelf computer software like Flash or Photoshop to produce their work. This code for this software is of course owned by the parent company, and the artist merely owns a right to use the compiled software in specific ways (no reverse-engineering, duplicating, or re-sale for instance). At the very least this means that when an artist gives a work of digital art to a collector, they cannot simply make a copy of the work and a copy of the commercial software to give the collector. The collector will have to obtain their own software. More importantly, anyone wanting to migrate a work of art from one platform to another (say from Windows to Mac) in order to preserve it or lend it for exhibition will not be able to modify or re-compile the underlying code in the software to do so.

While there is no answer for this situation that is as clearly described as the Open Art Network is for custom, open-source software, there are ideas and examples. For instance, Howard Besser, Director of the Film Preservation Program at New York University, along with others have been developing and promoting the idea of a public commons for old commercial software. Commercial software that is out of date is not of much commercial value to the vendor or others because upgrades and new versions have been developed. The idea behind the public commons is that the government could motivate vendors through tax breaks to donate original source code for old software into a public domain, openly-available resource without little or no copyright restriction. Artists and collectors would then have rights to share and modify this commercial software as needed for exhibition, exchange, or preservation of digital art works. This idea has not yet taken off in the largest sense yet, but the commercial software vendor Macromedia has directly given Brewster Kahle, creator of the Internet Archive [23], permission to reverse-engineer their software in order to aid Kahle's efforts to preserve web sites. In the film community, the notion of public commons is also being applied to independent documentary film in a project lead by the Annenberg School of Communication and American University.

It should be noted that there are other ways to share digital art openly that may not help with long-term preservation but may serve an immediate purpose. Some artists make it a point to share the most open version of the artwork that they can without obtaining copyright permission from others. To explain, it might be helpful to describe as example the various layers involved in producing an artwork with the program Flash. First there is the source code for Flash belonging, of course, to the vendor. That source code is compiled to create the program known as Flash that people will buy in the store. As mentioned earlier, these layers are tightly controlled by intellectual property rights, licenses and contracts. The software is then used by the artist to produce their work. For that, Flash produces a document, a computer file, in the .fla format. This .fla file can be edited and modified using the Flash software but cannot be viewed easily on the web. In the last step, the artist uses Flash to produce from the .fla file a derivative file in the .swf format. The last format may not be edited, but it can be viewed and used on the web, so this is the file that will be used to present the artwork to the world. Most of the time, artists mount only the .swf file online to allow others to experience their work, but some artists also share the .fla file for the work, thus allowing others not only to view, but also research, modify, re-mix, and otherwise re-use the artwork. The artist needs no additional rights to do this because they are sharing only a document in the Flash format, and not the Flash software itself. Anyone else wishing to use the .fla file would have to have their own copy of the Flash software. Again, this is not an ideal solution, and certainly will not be enough for long-term preservation, but it demonstrates a creative and quick solution that may help in such efforts as collaborative arts education.

It is clear that source code requires us to think in new ways about intellectual property in relation to digital art. It is in the interests of the cultural heritage community to become involved in efforts to resolve copyright issues pertaining to code and to bring to the table the special considerations outlined above when dealing with digital art works.

Copyright as Subject

In any discussion of the cultural heritage community's response to intellectual property, one should mention art that explicitly addresses copyright. Of course sometimes art works become unintentionally well-known for copyright issues that arise around them. These artworks can become exemplary of a specific intellectual property issue, or can even become cultural touchstones and rallying points for copyright activism. One work in the former category is the aforementioned sculpture by Jeff Koons, String of Puppies. A work in the latter category is Molotov, a painting by artist Joy Garnett. Joy Garnett's paintings incorporate mass media imagery in the form of painted versions of photo-journalistic images that she finds online and elsewhere. Her subject is not just the subject of the photo, but the photo itself as a cultural artifact. In one such painting, Molotov, she cropped and painted an image of a young man about to toss a soda bottle Molotov bomb. She exhibited this painting and was sued by the photojournalist who had produced the original photograph. This might have remained a routine instance of alleged copyright infringement but for what happened next. The art community rallied to Garnett and many artists began appropriating the same image for works of their own, sometimes changing the contents of the bottle or other details, in a cultural movement that became known as Joywar! [24]

Of course some works address copyright explicitly. Carrie McLaren curated an art exhibition called Illegal Art that gathered together such art [25]. McLaren said that this exhibition was intended to create a forum for public debate around issues of copyright, culture, and art. McLaren went on to say that usually such debates take the form of inaccessible legal discourse that excludes most of society, including most artists. Illegal art intended to put a human face on the debate. McLaren added that copyright law reflects a skewed perception that any artist, any creator, can be wholly original, when in fact every act of creation builds upon earlier acts across the chain of humanity.

There are also works that address intellectual property through their form and method of creation rather than as pictorial subject. For instance, some digital art works take the form of collaborative forums or software tool-kits such as Carnivore or Life-like by Lisa Jevbratt [26]. In these projects, the work of the original artist is essentially unfinished and open-ended. They invite other artists (or anyone for that matter) to use the tools provided to complete or extend the work, thus creating a work that is theoretically never

finished and includes an infinite number of collaborators. The distributed creatorship represented by these works calls attention to digital cultures of sharing and collaboration in sharp distinction to the traditional artistic stereotype of the heroic artist struggling alone. One can begin to see how questions about the concept of originality combined with inherently collaborative media might cause friction between contemporary digital art practice and copyright law apparently premised on the vision of the wholly original creator working in isolated competition.

Audiences, Participants, and Co-Authors

It has already been mentioned that digital art is often interactive, inviting collaboration and viewer participation. It is useful however to briefly discuss how this might differ from other art forms and the special considerations that may bring for intellectual property. In addition to source code, other primary elements of digital media that distinguish them from other art media are the degree and number of ways to create social and material relationships between artists, audiences, and artworks. All art can be said to be interactive in ways that range from spiritual to intellectual to material, but digital media art is commonly interactive in ways the leave permanent observable traces of the audience's interaction. These traces can be so prominent and so core to the work that they bring intellectual property implications. Interaction with digital art can be seen as a continuum that ranges from the passive observer of a work to the audience participant invited to contribute content to a full blown artistic collaborator whether self-selected or invited.

The reasons behind the prominence and degree of interactivity in digital art are covered in many publications and papers, but a few are worth mentioning again here. The technical complexities of digital media often require collaboration and digital tools, especially networks like the Internet, provided a means for increased collaboration. Parallel to the late twentieth century development of digital media, post-modern theory was developing in the literary arts and spreading into other fields. Post-modern theory emphasized, among other things, the idea that the author of a work is not the final arbiter of the meaning of the work; that the reader has a role in defining and completing the work. This deflating of the role of the creator and the rise of the audience were ideas that quickly spread into all forms of art, especially the media arts. Along the same time, technical innovations in digital media were providing to large numbers of people the tools to become creators of content instead of merely consumers. Desktop publishing produces self-published zines. iMovie produced home filmmakers. Camera phones turn callers into photographers. Blogs turn diarists into public writers. Content production and sharing tools were in the hands of those with little awareness of (and perhaps little use for) copyright. Social practices and values were emerging from both the artist and the audience and converging in digital media. Not too much later, these practices would later run up against copyright.

All of this and more served to create a digital culture of re-mix and sharing that is exemplified in digital art practice. Howard Besser feels that this gives rise to the most important practical copyright consideration for the digital arts, underlying and attribution

rights. Underlying rights are the rights of creators of content that is incorporated into a new work. Underlying rights come up with music that is re-mixed using other music. They come up when advertisements are used in collage works (which, in a way, describes both works by Kurt Schwitters and the Shredder mentioned above). They come up when 'found objects' or images are incorporated into a work (the way they were with Garnett's Molotov). Besser added that copyright law as currently instantiated acts as an inhibitor to this kind of creativity and that this inhibition finds its way into cultural practice not only through the fear of lawsuits, but also cultural institutions like museums that are increasingly asking artists to indemnify them against claims of underlying rights. Anne-Marie Zeppetelli, Collections Archivist at the Musée d'art contemporain de Montréal agreed that when artists do not clear underlying rights, it can become a problem for the collecting institution as these issues work their way up the line. For instance, Jill Sterrett added that in a joint project between SFMOMA and the Tate Gallery to loan media art between museums they specify that each museum is responsible for indemnifying other borrowing museums against such claims concerning underlying rights [27].

Publishing, Presenting, and Exhibiting Digital Art

The SFMOMA/Tate project to develop best practices for exhibiting and lending works of digital art arose because the technical, legal, and policy issues around lending digital art require revisiting standard museum practices. Of course it has long been common practice for cultural organizations to lend each other art works for exhibitions. Intellectual property has long been a consideration and institutions must negotiate how the loaned works will be credited and photographed or represented in exhibition advertisements and catalogs by the borrowing institution.

Cultural presenting organizations like museums or galleries are one way digital art is presented to the public, but digital artists have other venues as well. An Internet artist can mount work directly on a personal website for public view, and they may provide additional access to the work through self-initiated open online forums like Rhizome [28] or the Internet Archive. Some of these public forums, like Morpheus [29] or the CC Mixter [30] for sharing music, have developed structured legal models for sharing content, but many more have not. The fact that older arts institutions are concerned about indemnification is a signal that any copyright problems inherent in a work may follow the work wherever it goes.

Zeppetelli said that the Musée d'art contemporain de Montréal usually exhibits without requiring intellectual property stipulations in artist exhibition or acquisition agreements. This is in part because of the public nature of the Musée and the fact that the law already spells out the artist's rights, rights that museum does not want to abridge. This means that each time they exhibit a work, even a work in their own collection, they must contact the artist or their representative. When these works become technically unworkable, the museum goes to the artist again for a solution. It is for both legal and technical reasons that the museum goes back to the artist when a problem occurs. For his work in the Musée d'art contemporain de Montréal collection, artist Gary Hill retains the master copies of all media. An agreement between the museum and artist specifies that the museum must ask the artist to exhibit or repair the work in their collection and the artist must ask the museum to exhibit the copy in his collection. This creates an intimate relationship between the museum and artist, and does much to protect the artist's continual say in how the work is treated. However, this relationship has also caused some

problems because the work is constantly changing. Each time the work is exhibited or repaired, the artist makes changes. This new, changed, work becomes the work in the museum's collection. That causes problems with documentation and potentially with historical accuracy as the work the museum collected and documented is no longer the work they own. But perhaps the most important side-effect of this type of agreement is that museum does not outright own the work in their collection. Rather they own a kind of license of use, viewing rights, that extend only as far as the life of the derivative medium they purchased and that may be as little as 15 years. 15 years can accommodate a lot of exhibition time, but it is a much shorter life than we usually attribute to works being preserved in the permanent collections of museums.

Collection and Preservation

It seems appropriate to follow a discussion about the near term use of digital art in exhibitions with a discussion about the long term use of such works and the intellectual property implied in the acts of collection and preservation. It has already been mentioned that digital art uses variable media that will necessarily require change in the life of the work. These works may need to be repaired, upgraded, or rebuilt entirely from instructions. Artists and institutions are already dealing with the ramifications through a nascent form of licensing rather than the traditional outright purchase. The reservations implicit in Gary Hill retaining master video formats of works in the museum collection are not unwarranted, nor are they limited to a few artists. For instance, when the Berkeley Art Museum/Pacific Film Archive acquired the aforementioned digital work Landslide, the artist Shirley Shor delivered a computer and a software program to run the artwork, but she withheld the source code behind the software program. The facts that Hill's work changes inside the museum collection or that artists are experimenting with agreements that look almost like software licenses are not in themselves negative developments; they demonstrate that the way media art is collected is changing. What should alarm the cultural community about such examples is that such change is usually met with quick ad-hoc technical and contractual solutions rather than community discussion and development of tested and principled long range practices. The side effects of these ad-hoc solutions are often in the long term interest of neither the artist nor the institution. Let us consider some of these side effects and then some suggested solutions.

With the source code for Landslide, for example, the museum could port the digital work from its native Windows platform to other computer platforms as needed for exhibition or preservation when (not if) the current Windows platform becomes obsolete. Without it, the museum will either have to take on the much more difficult task of getting the software program made for Windows to run on future platforms or they will have to go back to the artist for a longer-term copy of the work. Withholding the source code for digital art is in principle like withholding the master copies for video art. In practice however, it is easier to copy a derivative version video to a new platform, acceding a loss of quality, than it is to get computer software to run on an alien platform. Additionally, with digital work you do not have the problem that there is only one "master" copy. The digital "master copy" may be duplicated without loss of quality as often as the derivatives, meaning that both the artist and museum could hold "master" copies. Withholding the master/source for works of media art inhibits effective preservation and exhibition of the work and places in doubt the work's place in posterity.

Some agreements currently used by museums to acquire media art works resemble software licenses, but as often they resemble traditional acquisition agreements in ways that are detrimental to digital works. For instance, it is not uncommon for such an agreement to stipulate that the museum will acquire the only or one of very few copies of the work and that the artist shall make no more copies. Alain Depocas and others noted that these agreements also sometimes define the work being acquired in terms of the media or packaging rather than the content so that the museum acquires a "DVD" rather than a movie. Both tendencies mentioned here frame digital media works according to the exchange model of traditional media art. They use contracts to artificially limit the work to one exclusive copy as if it were a unique fixed object (such as a painting) or at best a "limited run" print.

The collecting practices among arts organizations are not happenstance; they rise out of earnest desire from the artist to exert influence over their work in their lifetime and from the artists' and museums' mutual desire to compensate the artist through a familiar economic model. However the side effects of those practices do not serve the long term interest of either artist or institution. Solutions are emerging out of community efforts to establish common best practices and standards in the cultural field for collecting digital and media works. Two such projects include the Variable Media Network and Archiving the Avant Garde. Selected recommendations from these projects are outlined below along with copyright implications.

Digital media is highly amenable to being copied, unlike traditional art media such as paintings and prints, and even unlike older analog media art such as photography and video that suffer loss of quality when copied. In fact, copying is a primary preservation strategy for digital artifacts. As "backing up" applies to personal data files, it also applies to works of digital art; the more copies exist, and the more the work of preserving them is distributed among different agents, the better that work's chance for survival in the long term. Therefore, the exclusivity of some acquisition agreements should be turned upside down. The arts community would do well to explore models where many copies of a digital work are collected and preserved, perhaps collaboratively. Of course this will require intellectual property considerations that allow works to be held commonly or exchanged between a larger but limited group of institutions instead of held closely by one or two.

The fact that the Gary Hill work constantly changes in the museum's collection is not the exception with media art; it is the new rule. It is clear that digital media works are not static objects that will remain stable for long periods of time. Rather, they will require frequent maintenance, upgrades, and sometimes even re-creation in contemporary technology using instructions from the artist. Change is an integral part of every media work. In this case, those collecting digital art will need to obtain permissions beyond the usual rights to exhibit, lend, and reproduce. Permissions must also explicitly define authorizations and parameters for altering the work over the long term.

There is no technical reason that "master" copies of digital art such as source code cannot be duplicated and given over to collectors. Doing this is in the best interest of preserving the work. So we must develop solutions that allow this to happen while

protecting the artist's controlling interest in the work. One way to do this is of course through contracts that clearly outline the limited permissions and rights of the collector regarding the code. For instance, a contract for Landslide would stipulate that the source code be used to produce new versions of Landslide only, and not be used to produce the other artworks the code is capable of producing (but which the museum did not purchase). Another way of accomplishing this goal is to create deferred rights. Ippolito and Depocas describe a kind of "digital escrow" where the source code is either legally promised to the collector at a future date in time, or where indeed a neutral third party is created to hold such code on deposit (and maintain it in the meantime). Ippolito explained that the Guggenheim Museum does not demand complete exclusivity to source code it acquires, but allows artists to retain and reuse their copy of the source code to produce new works. They also agree that if the museum fails in its duty to keep online works active (to exhibit them), that the artist is allowed to make other arrangements for hosting the work online.

Collectors of digital works are advised, when possible, to negotiate rights to reverse engineer software and to break software encryption when either is needed to salvage and preserve the work. It should be noted that the former is prohibited by most commercial software licenses and in the US, the latter is prohibited in the U.S. by the Digital Millennium Copyright Act [31] by default. This speaks again to the need for the cultural sector to proactively participate in legal and social debates around copyright law.

Given the flux of digital art, documentation is even more important than it is for traditional media art. Documentation is sometimes all that is readily accessible for viewing or research, and it is essential to maintain and upgrade the work. Collectors acquiring digital media art are advised to acquire as much ancillary documentation as possible from the artist along with the work itself. The collector must also clarify the copyright and privacy issues of the documentation as outlined in the above discussion of the Langlois archives. Documentation for digital art must follow a different format than for traditional media art because it must describe related credits and permissions pertaining to manifold works and various subcomponents of the work. This last recommendation requires new conceptual and descriptive models for digital art works. One such model has been proposed by the Archiving the Avant Garde project in the form of the Media Art Notation System [32].

Activities as important to the cultural community as collection and preservation call out for community best practices and standards. Such standards that are emerging need to be developed hand in hand with related intellectual property practices and economic models for digital art. These three discussions bear practical relationships and they may also inform each other conceptually.

Economic Models for Digital Art

Copyright has a direct relationship to economic interests, and different copyright models serve different economic models. To fully consider the relationship between copyright and digital art, we must consider what economic models are developing for digital art and their relationships to copyright. The sub-economy that is the art market is based on the traditional exchange model of tangible products, hard goods, for sale. There are of course nuances in this market pertaining to the speculative nature of prices and the specific ways that taste-makers influence it, but the basic economic model is both ancient and simple.

One obvious way in which digital art differs from traditional media art is that digital art usually does not take the form of a discrete singular physical object. This affects the important art market concept of exclusivity of ownership and the ability to immediately quantify what is being purchased. As described earlier, digital art bears a fluid relationship to tangibility and processes are often more important than product to defining the work. Similarly, new economic models for digital art - experiments really, as there is no agreed upon workable model yet – often emphasize process over product. For instance, in 1999 this author became the first artist to successfully sell a digital artwork on eBay. The art work was posted for $5 and after bidding, sold for $52 [33]. This experiment or performance was intended to raise the prospect of new economic models for digital art by employing the iconic tools of the then “new economy” and sell digital art more as “shareware” than as art work. Shareware is software that is developed by a programmer and multiple copies are sold for a very low price. The idea is not to make a living off the sales of the software, but to recoup a minimum of production costs while using the shareware to advertise the skills of the creator. The creator then makes their real living through contract jobs that may come as a result of the shareware, or they may be hired outright for their skills and creativity. The relevant concept here is that it is the skills and services of the creator that are important over their tangible products. By emphasizing art as process, the role of the artist is privileged. In the traditional art market based on products, it is often third parties, from galleries to artists’ estates, that recover the most value from the artists’ work through sale and resale as the work leaves the world of its creator. The attendant copyright for this shareware model would probably need to be an open and flexible model (except for strict attribution rights) as that artist wants the artwork to be easily shared and visible, used and re-used, in order to effectively advertise the artist.

Alain Depocas witnesses similar models whereby the artwork serves not as the primary means of income for digital artists, but rather as a calling card that results in invitations to participate in media art festivals and residencies (where the artist receives their main income). In practice, the related copyright policies (if not laws) Depocas observes are indeed slightly more open than traditional art copyright. For instance the V2 lab in the Netherlands [34] requires that any technology digital artists develop during their V2 residency remains on-site for re-use by future residents who may incorporate it into their own work.

At the core of copyright law is the idea that intellectual property protections promote creativity and innovation in society because they ensure a return on original work thus motivating the creator. Long protection periods (life of the creator plus many decades) ensure generous return. But digital art models with their emphasis on process over product suggest that perhaps much shorter protection periods would better promote innovation because that would require continuous innovation; no one would be able to rest on the laurels of an animated rodent for 95 years. Shorter protection periods would also reinforce the idea that the creator is the main beneficiary of their work rather than the third parties that may acquire or inherit the protected work without creating or innovating themselves.

John Sobol, formerly an Educator and Co-Curator of Digifest, said that the current art market amortizes all value into tangible fixed objects, privileging transcription over performance. He adds that it would better serve artists and society to shift value from product to process. Sobol has seen various experiments with digital art economies, but reminds us that most of the art world, even much of the media art community, still define their value by the content they produce or own rather than the processes they enable. Sobol points out that the most successful organizations to profit from digital media and the Internet are those that are neutral with regards to content. These organizations (eBay, Google, Amazon, Cisco) produce no content themselves, but rather serve to enable processes and connect people to each other, to ideas, or to services and products. Sobol said that artist commissions, for instance, place value on process as much as product and commissions form a kind of enabling process. Sobol suggests that commissions that are normally paid for by one agent at great cost could potentially be de-centralized with costs spread among many agents. Artists could solicit many smaller donations online, rewarding donors with smaller artistic productions like creative buttons or postcards. Though each individual donation might be very little, it would add up to the equivalent of a museum commission. This model has been limited in the art world, but has gotten attention in the world of independent musicians and politics where, for example, U.S. presidential candidate Howard Dean raised a substantial amount of campaign money from numerous small Internet donations rather than a few large donations [35].

Neeru Paharia, Associate Director, of the Creative Commons [36] listed similar models from the creative community, relying mainly on the private sector. These economic models for funding creators include the following. First are online “tip jars’ for musicians. These are online music sites where the content is free, but users are asked to donate to the artist using the PayPal online payment system. This model might sound like the online equivalent of the subway musician with a hat on the ground, but what is interesting in this context is that

funding is directed to the artistic process and detached from a fixed price for a fixed product. Paharia mentions other music sites where sample content is free, but the full version requires purchase, and other sites where content is free for non-commercial use, but paid for commercial use. Jon Ippolito suggested the best economic model for digital artists might be simply retaining a day job. While this model has of course served artists of all types since ancient times, digital artists are among very few groups of artists that may obtain gainful employment doing something directly related to their artistic practice. There are few jobs for easel painters, but many for good programmers. Day jobs of course detract from the amount of time the professional artist may devote to their art and they even detract from the title of "professional artist" since many define the term as those who make their living from their art. On the positive side though, digital artists in particular can gain valuable experience in their chosen medium at work and create artwork at night that is informed or conversant with their industry. An income that does not rely on art sales also implies a certain amount of freedom from market concerns entering the artist's practice. Similarly it allows the artist to be more flexible with regards to the intellectual property rights they impose or release for their art. A digital art exhibition at New Langton Arts, "Day Jobs" explored the somewhat new relationship between artistic survival and work in the digital arts [37].

An example of an economic model for artists in general that is private but collective is the Artist Legacy Foundation [38]. Started by artists Squeak Carnwrath and Viola Frey, the Artist Legacy Foundation is a sort of confederated artist's estate. The Foundation accepts and stewards works donated by artists. During the artist's life and beyond, the Foundation promotes the artist's work and simultaneously profits from it through sales and reproduction licensing. Income derived from these works is re-invested in the arts community through grants to living artists. This economic model would appear to require copyright protection that is fairly close to current law.

Jem Budney, Curator at the Kamloops Art Gallery, spoke to public sector economic models and public influence on private models. Budney spoke about CARFAC, a Canadian national copyright collective society that sets standard fees for artist commissions and exhibitions [39]. Budney sees the value in such an agency, and uses their fee structures to compensate artists to the highest degree possible. Budney suggests that CARFAC affects public funding because arts organizations can clearly demonstrate the need for specific artist fees. Budney notes, however, that CARFAC is not a visual artists union and this also affects public funding. For instance, performing artists have several national unions that help negotiate and set consistent and larger fees with presenters. This means that performing arts presenters can demonstrate clearly defined needs for much larger areas of their budgets than visual arts organizations can. Budney believes that this contributes to smaller amounts of public funding for visual arts. David Clark, artist and Associate Professor at the Nova Scotia College of Art and Design, makes a living from his university salary in combination with public artist grants and commissions. Clark mentioned that a friend is experimenting with an interesting economic model for a digital book where the friend will provide content on the Internet for free, but will charge for broadcast rights. This resonates with a suggestion from Diane Zorich that artists begin to separate out the various rights in digital works and treat them individually by way of creating more sophisticated economic and intellectual property models. Clark concluded by suggesting that Canada provides

better public funding for artists than the United States, but has a much smaller private collector culture to support artists.

The digital arts community is experimenting with alternative economic models and related copyright practices, but this is not to say that some of the most traditional models have no application for digital art. Sales of artworks to collectors or museums may still play an important role, especially if such models are adapted and updated for digital media as described in the above section on collection and preservation.

Moral Rights

One area of intellectual property law that is not concerned with economic interests is that of Moral Rights [40]. Moral Rights is a legal concept that exists in copyright laws of Canada, other Commonwealth countries, and much of Europe. Rina Pantalony, Legal Counsel to CHIN, characterized copyright law in Canada as being concerned primarily with economic protection while addressing the natural or inherent rights of the creator through Moral Rights. She added that copyright law in the U.S. is concerned with economic protection, but also with a social imperative to foster innovation. Pantalony described three areas of Moral Rights: the right of credit or association, the right of integrity, and the right of anonymity or context. The first guarantees that the original creator is always credited for the work in any future presentation of the work. The second guarantees that the work shall remain in basically the same state unless the creator changes it. This guarantees that others may not change the work without permission, but it also guarantees that the artist may change the work at any point. Anne-Marie Zeppetteli said that this has indeed resulted in rare cases where the artist comes in to change a painting years after a museum has purchased it. The last right of anonymity and context guarantees that the creator can decide how the work is used or presented even if they no longer own the work. Zeppetteli again noted that in Canada, artists have taken their works out of exhibitions even when the museum or gallery owned the work. In these cases the artist did not want to be associated with the exhibition (anonymity) or objected to their work being viewed in that environment (context). Unlike other intellectual property rights, Moral Rights cannot be divested from the creator; they cannot be sold or given away. Even if the creator sells the original work along with all other copyrights, they retain their Moral Rights in the work. Zeppetteli noted, however, that she has seen contractual agreements between Canadian institutions and artists where the artist agrees not to enforce their moral rights, and in this way Moral Rights are waived.

The U.S. does not have the general legal concept of Moral Rights, but it does include some loose equivalents specifically for artists in the Visual Artists Rights Act of 1990 [41]. This act is separate from copyright law and gives artists the right of association or non-association with their work (they must be credited, unless they request not to be). The act also guarantees the work shall not be mutilated or changed without the artist's consent. It does not however, guarantee artists the right to make changes themselves if they no longer own the work. The Visual Artists Rights Act is severely limited however in that it seems to apply only to original works of art that use traditional media (moral rights, by contrast, apply to reproductions of the work as well). The act applies only to artworks and not all creations and it defines artworks as being paintings, prints, and sculpture and

specifically denies “motion picture or other audiovisual work .... data base, electronic information service, electronic publication …”. This exclusion was an attempt to rule out commercial works from an act meant to cover fine art only, but because the language focuses on media rather than its use as art, it also excludes digital media (and many other) forms of fine art from these protections.

Although Moral Rights are not the same as ethical considerations, this does seem a natural place to consider ethics in relation to copyright and digital art. Copyright law defines a minimum of rights, but the cultural community has long considered the social and ethical dimensions of agreements around art works. Some of the reasons for this are practical; museums and galleries want to, in fact need to, maintain good relations with individual artists and the artist community. In practice, dealings between arts organizations and artists often result in the artist receiving more rights, considerations, and privileges that the law requires. On the other hand, it would be worthwhile for the arts community to newly explore questions of trust and ethics in dealing with contemporary and digital artists. Why, for instance, are so many media artists reluctant to give master copies and source code to museums? Are the reasons purely economical, or are museums considered by many artists to be as much a part of the problem as the solution? Though much research remains to be done in the area of copyright and the arts, much more still remains to be done about the invisible forces of ethics and trust in the arts community.

Responses from the Legal Community

Though this paper focuses on responses to copyright from the cultural heritage community, it would be remiss to omit the other side of the conversation in the form of legal community projects that address or reach out to the creative communities. Creative Commons is probably the best known such project that concerns digital culture. Neeru Paharia, Assistant Director of Creative Commons, reiterated that the purpose of copyright is to promote creativity by granting creators a temporary monopoly on uses of their content. That period consists of the life of the creator plus 50 years in Canada, life plus 70 in the U.S. There are variants and exceptions on the terms (corporate creators get a different term for instance), but the basic purpose is the same. Paharia went on to say that copyright aims to aid the progress of society by releasing the work for use by the larger culture after this period ends. Paharia went on to explain that many digital artists feel their creativity inhibited by copyright law as it is currently practiced (a fact confirmed by nearly every interview and source for this paper). Many more artists do not know their full rights. Lastly, and most important to the formation of Creative Commons, is the fact that copyright is now automatic; it applies automatically the moment a work is created, requiring neither marking nor registration. This means that it is relatively clear how artists' works are protected but less clear how they can remove all or part of those protections when they want to share their work. Creative Commons is a project and a group that develops legal licenses that creators can use to share their works in various ways. Creative Commons separates out various rights and allows creators to choose which to retain and which to give away. For instance, one license may retain the right of credit for the artist, but release the right to make derivative works.

The Artist Rights Society (ARS) [42] and the Visual Arts and Galleries Association (VAGA) [43] are long-standing organizations that act to protect the intellectual property rights of their respective artist clients and members. Groups like ARS and VAGA rely on fairly strict interpretations of current copyright laws in order to protect their artists. In comparison, Creative Commons has focused mainly on music and is a much newer organization, but is nonetheless invoked by digital artists much more often than either of the aforementioned organizations. Creative Commons' open approach to copyright seems to engender media artists' loyalty to digital culture rather than to their own artist member organizations. For some however, the Creative Commons does not go far enough in opening up copyright for the fine artist. Libre Commons is one project that purports to better serve fine artists [44]. They point out that Creative Commons may not be completely compatible with other digital licensing schemes, specifically certain open-source software licenses. One way in which the cultural heritage community could take a direct role in

copyright is by coordinating among the various experiments and ensuring that innovations continue in the areas of economic and copyright models applicable to digital art.

One area of intellectual property that remains of great interest to artists is fair use (U.S.) or fair dealing (Canada). Fair use and fair dealing are not laws themselves, but rather defenses against infringement outlined in the law. Fair use considers the purpose, nature, extent, and effect of infringement. Fair dealing is similar. It considers whether or not the use falls into one of five categories, and if it does, considers factors similar to U.S. fair use but also considers whether or not there are available alternatives to infringement. There are many questions that arise in applying fair use and fair dealing to art, questions that have as much to do with artistic and cultural concepts as legal ones. In Canada, it is the criticism clause of fair dealing that is often invoked by artists (in the U.S. it is the similar satire or parody clause though critique is perhaps a better word as it removes inaccurate and purely comical connotations). Since all art can be considered a form of social criticism, parody, or satire, (critique) is this defense too broad? Or does the breadth of these clauses make them the perfect umbrella under which the arts can operate safely under lessened copyright restrictions? With regards to digital art, fair use and fair dealing remain legal areas to be tested. For instance, it is unclear how fair use or fair dealing applies to code and software. If an artist infringes by using copyrighted code to generate a new work and then claims fair use, how would the courts measure the "extent" to which the original was used? If the new work was asserted to be a criticism or satire of the original, who is qualified to determine that satiric capabilities of code instead of the usual pictorial or textual modes of satire?

While Creative Commons remains an important experiment at the intersection of digital art and copyright, it remains one of the few with such high visibility and participation. More such projects are needed. For instance, fair use and fair dealing are another example of a fairly discrete area of law that could be the focus of a joint project between the legal and cultural communities.

Summary of Findings

This section outlines first the general summary of research findings for this paper, followed by specific findings. This paper attempts to maintain a balance between differing perspectives on copyright, but it is also a goal of this paper to accurately represent the specific responses from the cultural community to copyright and digital art as derived from the published, unpublished, and direct interview sources. Based on these sources, it can be clearly stated that a significant portion of the cultural community agrees that copyright law as currently practiced in Canada and the U.S. is not friendly to artists and the cultural community. Rather these laws act to inhibit creativity, serve as an obstacle for reasonable and desirable cultural activities, and put artists and organizations at risk. This finding is pointed because most also felt that the original intention behind copyright was to foster creativity and protect creators. Bruce Grenville gave an example of how copyright can slow creativity instead of invigorate it. He argued that large media corporations mine public domain or "open-source" stories from the brothers Grimm and other folklore sources for instance. But once they put their imprint on a story that should continue to serve the public, they make it very difficult for other creators to, say, make an animated film of Beauty and the Beast. Content should flow from private to public domain and not the reverse. Michael Katchen noted that Benjamin Franklin and others wrote that early copyright was intended to protect the author's ability to earn a profit from their creativity during their lifetime, and that society should benefit after that. However, with numerous extensions to U.S. copyright in the past few decades (11 over the past 40 years in the U.S. [45]), it is now perceived by many artists and cultural professionals in the U.S. that third parties such as MPAA [46], RIAA [47], VAGA, ARS, BMI [48] or artist estates that often derive the most profit while delaying public benefit. Though copyright law is seen as restrictive enough, it was noted that the trend of technology/entertainment industries is increasingly to enforce licenses or contracts that are even more restrictive than the law allows. For instance when one purchases digital music under Apples iTunes store contract, one is allowed to make seven copies of the digital song for personal, private enjoyment. Apple created this contract despite the fact that under the 1992 Audio Home Recording Act [49], consumers are permitted to make unlimited private use of legally purchased music and other media content stored on CD.

Most interviewees agreed that copyright is a social conversation in which several viewpoints must be balanced. Most expressed frustration however that not all viewpoints are adequately represented at the highest levels of government and society. One cultural professional interviewed for this paper framed the conversation, at least in the U.S., as a triad including private parties advocating for more protections, parties like the American

Library Association advocating for the public interest and looser protections, with the national governments taking the role of the neutral mediator. This interviewee wondered if the government, as a public agency, should consider representing the public interests more actively. Jon Ippolito attended the American Assembly on Art, Technology, and Intellectual Property [50]. He noted that, despite the title of the high-level meeting to inform government policy, in attendance were only one artist, one programmer, and fifty eight legal experts. When Ippolito inquired about this imbalance, he was told that the meeting included groups like BMI and ASCAP [51] that would represent the needs and concerns of artists. A few noted that smaller cultural organizations like Franklin Furnace or New Langton Arts were created to operate outside the mainstream art world. This distance and their small size has allowed them to 'fly under the radar' of the property fixation of the art market and many intellectual property concerns. While this distance has allowed highly experimental practice and uncensored commentary, one has to wonder if it has also unwittingly contributed to a balkanization or dilution of the art community's advocacy on intellectual property.

Following are listed, in no particular order, further specific findings of the interviews and research for this paper.

- Most interviewees felt an urgency to learn more about intellectual property as these concerns have been arising in daily practice with increasing frequency over the last ten to twenty years. Most also felt that there are too few professional opportunities for learning in this area.

- It would seem that knowledge of and active engagement with intellectual property issues was much higher among those professionals who deal almost exclusively with digital art, and strongest among those dealing with Internet art specifically.

- There were mixed opinions about whether artists or the arts community could push the envelope of intellectual property law. Many felt that artists should take this risk, but some also felt that cultural organizations like museums would not.

- Canadian interviewees generally proposed intellectual property solutions that included an active governmental role. U.S. interviewees proposed either private or cultural community lead solutions. Some U.S. interviewees and sources argued that government could help most by staying out; regulating, legislating and restricting less.

- Canadian interviewees generally were aware of and understood Moral Rights. Moreover, many felt those rights placed an additional burden on cultural organizations, but that it was a necessary burden and that Moral Rights serve the greater good.

- Most were aware of traditional art world economic models, and that digital media art is currently now being exchanged and funded using these old models even when it seemed inappropriate. Most interviewees and sources were not aware of new economic models that were being tried or that were successful for media artists, especially digital media artists.

Recommendations for the Cultural Heritage Community

Although copyright law seems to define best what we cannot do, it is the purpose of this paper to suggest what we can do. Below is a list of recommended actions and practices for the cultural heritage community including artists, collectors, digital art communities, educators, funders, art centres, festivals, and museums. Most of these recommendations have been discussed in more detail in previous sections and are presented below in thematic rather than priority order.

- Although copyright law would seem to be a set of clear rules set in stone, in fact law is often about interpretation. This is especially true in the arena of digital copyright, which lacks a long history of case law or precedent. Lacking precedent, courts may judge a case based on established community practice. That means that in an unclear case, a defendant that was merely following the practice of their peers, in good faith, would be judged with more leniency. Since cultural community practice is still emerging, it would be of mutual benefit to establish liberal rather than restrictive common copyright practices. This means that every individual artist or museum that makes a liberal copyright decision helps shield themselves and others in the future. This is illustrated in a Canadian court decision. The Supreme Court of Canada, in its decision in Law Society of Upper Canada v CCH Publishing found that the establishment of a written fair dealing policy that was consistently applied was prima facie evidence of the practice of fair dealing and that the burden of proof was placed upon the plaintiff publishers to dissuade the courts otherwise.

- Diane Zorich said that laws are shaped by precedent and social pressure. She added that museums are naturally conservative organizations that may not exert such pressure, but artists are more free to do so. She concluded that the artist, as the paragon of "original creativity", might be more protected or sympathetic to the courts and public mind. Jon Ippolito also exhorted artists, as society's critical apparatus, to take up the challenge. Susan Miller thought that if the cultural target were big enough, as copyright is becoming, artists will aim true anyway.

- Cultural agents, such as artists, are encouraged to actively share and promote sharing original content as often as they protect it. Artists might consider innovative sharing schemes like a Creative Commons or Libre Commons license or consider releasing some of their content into the public domain as a kind of "shareware" calling card.

- Artists are encouraged to consider innovate means of legal protection as well as sharing. Michael Katchen suggested that individual artists might form limited liability corporations (LLC) that separate the assets of their artistic practice or "business" and would protect their personal assets from copyright suits. San Francisco attorney Sanh Tran confirmed that to be legit, LLC's require both adequate funding and insurance. Funding for an individual artistic practice need cover only the costs of production, and Rina Pantalony suggested that arts organizations already retain insurance from insurers that might be convinced to extend their services.

- Museums, academia, and cultural organizations are encouraged to equally share as well as protect cultural content. Museums are encouraged to respect artist wishes and to share their original museum content (cataloging, scholarly texts) openly in the public interest.

- Organizations that commission digital art are encouraged to include mechanisms for ensuring that their investment serves the public while protecting the artist. For instance, university galleries might commission art and require that the resulting digital work be open for re-use by local students (similar to the V2 lab example above).

- Neeru Paharia of the Creative Commons noted that public attention centeres on large concentrations of content, and suggests that the arts community offer one or more aggregate digital art resources licensed under innovative licensing schemas. For instance, the arts community could create a visual version of the Creative Commons CC Mixter music resource.

- Funders are encouraged to drive awareness of copyright without stifling artistic experimentation or choice. For instance, Zainub Verjee said that the Canadian Council for the Arts includes funding in their grants for artists to consult with a lawyer regarding copyright for the funded work

- Copyright balances the right of creators to gain income from their work with public interest in reusing the work. Funders could address both interests quickly by considering funding art works that would go immediately into the public domain. This might be similar to funders who require that funded activities remain free and accessible to the public, offsetting the up front compensation of the creator to ensure greater public use.

- Collectors, including individuals and museums, are discouraged from relying on older collection and copyright policies when collecting digital art. They are encouraged to consider the nature of the media and related recent cultural practices when updating said policies.

- Collectors are encouraged to ascertain relevant rights in underlying infrastructure, such as software, when collecting digital art.

- Collectors are encouraged to prepare to negotiate more complex rights for digital art, including different rights in different components of manifold works, and the rights of collaborators and participants.

- Collectors are encouraged to plan for the fact that digital media works in their collection will change over time. Collectors should define and gather appropriate permissions to make changes to preserve the work. This may entail a detailed artist interview at the time of acquisition or video documentation of an artist walk-through. This may entail obtaining rights to reverse-engineer or break encryptions present in the work for preservation purposes.

- Collectors who will be preserving the work for the long term are encouraged to obtain the version of the art work closest to the source. This means obtaining source code for software art when possible. When not possible, obtaining the digital files most able to produce new versions of the work (for example, .fla files instead of .swf files for Flash art). Collectors should avoid fixed or locked format versions of works such as movie DVDs. Collectors will need to reassure artists of their protected rights in the work by deploying the aforementioned deferred rights or limited use agreements.

- Museums and other digital art collectors are discouraged from demanding exclusive ownership. They are encouraged to allow multiple copies of the art work to be collected by different agents, thus distributing the load of preserving the work. Jon Ippolito exhorted museums to consider the long term interests of the works in their care before considering their own reputation built around their unique collections. In fact, museums might consider the purchase as funding to release the work into the public domain with strict requirements to credit the artist and collector. Society would benefit from immediate use of the work without depriving the museum of their copy of the work for exhibition and research. Artist and museum alike would benefit from the notoriety and public service.

- Since documentation is critical to preserving and using digital art, collectors are encouraged to acquire ancillary documentation (email between collaborators, early iterations of code) along with the work. Collectors should determine or negotiate the copyright and privacy status of such documentation early so that it can be accessible and useful.

- Collectors should prepare for more detailed cataloging and documentation of digital media art. They might employ a proposed metadata standard for digital art such as the Media Art Notation System proposed in the Archiving the Avant Garde project.

- The cultural heritage community is encouraged to continue and further professional development opportunities related to digital copyright. In the area relevant to this paper, cultural organizations are encourage to take the conversation beyond digital reproductions of physical objects to include born digital art. These discussions should include digital artists and representatives from related legal and industrial communities.

- The cultural heritage community is further encouraged to provide additional forums for larger public debates around issues of copyright and “property making”. This discussion may take the form of commissioned new works, exhibitions, educational programs, professional papers or popular papers. At the very least, the larger cultural community is

encouraged to provide feedback to ongoing projects like Creative Commons or the Open Art Network.

- Since fair use and fair dealing are copyright concepts that come up repeatedly in the arts, a single research project or paper dealing with this specific topic would greatly serve the community.

- Artists and especially arts organizations are encouraged to become involved in developing and testing innovative economic models for the digital arts. These models include art commissions, sales of digital art to museums (but according to newer practices outlined above), distributed online income models, etc. Cultural organizations are encouraged in particular to explore the notion of funding artistic process over products, and ensuring that the creator benefits directly.

- Museums and other cultural organizations are encouraged to make explicit what interests they protect not only in terms of law, but also in terms of policies and social values. Is the museum a protector not only of copyrights, but also of the image of the artist or artwork in society? If so, what uses of the art are acceptable and which not? Is there a real economic interest in licensing that the museum should protect for itself? Does the income from licensing balance any imperative to make the work as accessible and visible as possible? Rather than leave such vagaries implicit in the decisions of one or two staff upon each licensing request, the museum should make explicit their policy and values regarding intellectual uses of the art in their care. This would not only increase public accountability, but would also serve as a form of discourse and advocacy in the cultural sector.

- The cultural sector needs to demonstrate why decision-makers should listen to their opinions on intellectual property. It is safe to say that the art market is not a powerful enough industry to affect copyright law on the strength of size alone. However, artists and arts organizations are on the leading edge of “content creation” and are seen as models by other content creators be they commercial or not. Moreover, artists and the arts community speak directly to the core social imperative behind copyright, “to promote innovation and creativity”. Artists and arts organizations may not be economically powerful, but they are trusted institutions that could have a voice in the social debate around intellectual property.

Concluding Remarks

It is sincerely hoped that this paper will serve as productive addition to the ongoing conversation around art and intellectual property law. This paper represents a moment in time amidst quickly changing attitudes, practices, and legal interpretations. Certainly, the same issues covered here will need to be redressed in the future as new cases, projects, and ideas emerge.

John Sobol said that he once asked his college class of forty students who among them downloaded music from the Internet. All but four replied that they did. The reasons the remaining four abstained from downloading were mainly technical and logistical. When Sobol asked whether the legality or ethicality of downloading might have been a reason to abstain, the class broke into laughter. Sobol points out that this future generation of decision-makers has grown up with re-mix culture and has developed decidedly different values about the fluidity of content. While they will of course eventually become influenced by economic concerns, Sobol predicts that their underlying values will cause this generation to substantively change intellectual property law. However, that will not happen without inter-generational conflict. Sobol concludes that if cultural organizations stand by during this silent conflict, maintaining their status quo, they may not be toppled per se, but they may be simply ignored and starved into cultural irrelevance as society remakes itself.

Luckily, there is much the cultural community can speak to here, and much we can do.

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Interviewees

Alain Depocas
Directeur, Centre de recherche et de documentation
La fondation Daniel Langlois, Canada

Jill Sterret
Head of Collections
San Francisco Museum of Modern Art, USA

Michael Katchen
Archivist
Franklin Furnace Archive, USA

Zainub Verjee
Program Officer, Media Arts Section
Canada Council for the Arts, Canada

Susan Miller
Executive Director
New Langton Arts, USA

David Clark
Associate Professor
Nova Scotia College of Art and Design, Canada

Jon Ippolito
Assistant Professor, Digital Art
University of Maine
Assistant Curator, Media Art
Guggenheim Museum, USA

Diane Zorich
Information Management Consultant
for Cultural Organizations, USA

Bruce Grenville
Senior Curator
Vancouver Art Gallery, Canada

Nina Czegledy
Independent Curator, Canada

Howard Besser
Director
Film Preservation Program
New York University, USA

Carrie McLaren
Editor, Stayfree! Magazine
Curator, Illegal Art, USA

Anne-Marie Zeppetelli,
Collections Archivist
Musée d'art contemporain de Montréal, Canada

John Sobol
Co-curator, Digi-Ffest, Canada

Neeru Paharia
Associate Director
Creative Commons, USA

Jem Budney
Curator
Kamloops Art Gallery, Canada

Rina Pantalony
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Michael B. Bassi a Law Corp.
USA

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