Appendices to A System of Formal Notation for Scoring Works of Digital and Variable Media Art
Richard Rinehart

Appendix 1

Crosswalks

1) Crosswalk of MANS descriptive metadata to other descriptive metadata standards, Dublin Core (http://www.dublincore.org) and Categories for Descriptions of Works of Art (http://www.getty.edu/research/conducting_research/standards/cdwa/)

Note: This crosswalk includes only descriptive metadata elements, not all the elements that comprise MANS (such as core concept elements)

<table>
<thead>
<tr>
<th>MANS</th>
<th>DC</th>
<th>CDWA</th>
</tr>
</thead>
<tbody>
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<td>creation-creator</td>
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<td>title</td>
<td>title</td>
</tr>
<tr>
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<td>type</td>
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<td>contributor</td>
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</tr>
<tr>
<td>host</td>
<td>publisher</td>
<td>ownership-owner</td>
</tr>
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<td>identification.number</td>
<td>curr loc-rep number</td>
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</tr>
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<tr>
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<tr>
<td>authorization</td>
<td>rights</td>
<td>copyright/restrict</td>
</tr>
</tbody>
</table>

2) Crosswalk of MANS core concept elements to other conceptual models for structured digital or media art objects, MPEG-21 Digital Item Declaration Language and Capturing Unstable Media Conceptual Model.

Note: This crosswalk includes only high-level conceptual elements, and does not include, for instance, descriptive metadata elements

<table>
<thead>
<tr>
<th>MANS</th>
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<th>CMCM</th>
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<td>project</td>
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<td>&lt;item&gt;</td>
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<td>&lt;item&gt;&lt;item&gt;</td>
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<td>&lt;descriptor&gt;</td>
<td>document</td>
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<td>&lt;choice&gt;</td>
<td>interaction</td>
</tr>
<tr>
<td>condition</td>
<td>&lt;condition&gt;</td>
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<td>annotation</td>
<td>&lt;annotation&gt;</td>
<td></td>
</tr>
<tr>
<td>resource</td>
<td>&lt;resource&gt;</td>
<td>component.x</td>
</tr>
</tbody>
</table>
Appendix 2

Types

Recommended type classifications or genres for media art. Beginning of a more detailed taxonomy for media art. Developed by the Variable Media Network (http://www.variablemedia.net). These type terms are implemented in MANS within either the Type descriptive metadata element or as a Choice within a Part that defines the type of that Part. Implemented in the Type element, these terms would not be exclusive and any number of them could be combined to describe the whole Work. However, when indicating the type of a Part via a Choice, they should be used exclusively as they describe a specific sub-component Part of the Work.

Contained

Even "self-contained" art forms like paintings and sculptures can provoke prickly questions when some aspect of their construction alters or requires an intervention. Such works or components are "contained" within their materials or a protective framework that encloses or supports the artistic material to be viewed. Contained works or components require no infrastructure or apparatus beyond the human senses to be perceptible. These forms are the least variable among the types listed here, but can include some variance over time or under different conditions nonetheless. To account for these alterations in otherwise stable media, choices related to these forms might include what lighting is allowed for a work on paper, whether a protective coating is appropriate, whether surface qualities such as brushwork or gloss are essential to the work, or whether an artist-made frame can be replaced.

Installed

To say that a work or component must be "installed" implies that its physical installation is more complex than simply hanging it on a nail. Works or components that include physical objects would be described with "contained" or "installed", in possible combination with other descriptors. Examples of works with this behavior are works that scale to fill a given space or make use of unusual placement such as the exterior of a building or a public plaza. For such works, choices may track issues of site-specific placement as well as scale, public access, and lighting.

Performed

"Performed" works or aspects of works include not only dance, music, theater, and performance art, but also works for which the process is as important as the product. For such works, choices may ascertain instructions that actors, curators, or installers must follow to complete the work, in addition to more conventional performance considerations such as cast, set, and props. "Performed" indicates explicit actions that are allowed or required of the artist, agents of the artist, or the audience (thus including "interactive" works) to realize, manipulate, or engage with the work. Additional choices for such works or components might include who is authorized to perform specific actions, how such actions are recorded, or the duration and impact of such actions.
Reproduced

A recording medium is "reproduced" if any copy of the original master of the artwork results in a loss of quality. Such "lossy" media include analog photography, film, audio, and video.

Duplicated

To say that some aspect of a work can be duplicated implies that a copy could not be distinguished from the original by an independent observer. This behavior applies to artifacts that can be perfectly cloned, as in digital media, or to artifacts comprising readymade, industrially fabricated, or mass-produced components.

Encoded

To say that a work is encoded implies that part or all of it is written in computer code or some other artificial language that requires interpretation (e.g. musical or dance notation would be another form of encoding, but not theatrical scripts which are written in natural languages and could be considered along with other texts associated with the work).

Networked

"Networked" describes distributed simultaneity; a work or aspect of a work that makes the work potentially present in more than one physical location within a given time span. A digital networked work is designed to be viewed on an electronic communication system, whether a cell phone region or the Internet. Networked media include Web sites, e-mail, and streaming audio and video. A non-digital networked work might include coordinated performances that are triggered by natural phenomenon like an eclipse to occur at several different physical locations simultaneously, or mail art. Networked does not include works which simply travel from one exhibition venue to another, but works in which physical distribution is a key part of the work.
Appendix 3

Preservation Strategies

Following is a recommended list of strategies for preserving works or parts of works, along with descriptive terms and notes. These are described in MANS using a Descriptor accompanying a Resource that is the object of preservation. Developed by the Variable Media Network (http://www.variablemedia.net). Preservation approaches should be indicated at this level of description because it is applied at this level. For example, a work that included a QuickTime movie file and a physical prop like a table might opt to Migrate the digital movie, but Store the table. It would not be accurate to describe the whole work as being Migrated or Stored.

Storage
The most conservative collecting strategy—the default strategy for most museums—is to store a work physically, whether that means mothballing dedicated equipment or archiving digital files on disk. Storing one of Donald Flavin's fluorescent light installations simply means buying a supply of the out-of-production bulbs and putting them in a crate. The major disadvantage of storing obsolescent materials is that the artwork will expire once these ephemeral materials cease to function.

Emulation
To emulate a work is to devise a way of imitating the original look of the piece by completely different means. Emulating a Flavin fluorescent light installation would require custom-building fluorescent bulbs that produce the same light as and resemble the physical appearance of the original bulbs. Possible disadvantages of emulation include prohibitive expensive and inconsistency with the artist's intent. For example, Flavin deliberately chose to use ordinary off-the-shelf components rather than esoteric materials or techniques.

Migration
To migrate an artwork involves upgrading equipment and source material. The obsolete fluorescent bulbs of Flavin's light installation could be upgraded to fluorescent or halogen lights of comparable hue and brightness. The major disadvantage of migration is the original appearance of the artwork will probably change in its new medium. Even if state-of-the-art fixtures cast similar light to Flavin's originals, the actual fixtures are likely to look different.

Reinterpretation
The most radical preservation strategy is to reinterpret the work each time it is re-created. To reinterpret a Flavin light installation would mean to ask what contemporary medium would have the metaphorical value of fluorescent light in the 1960s. Reinterpretation is a dangerous technique when not warranted by the artist, but it may be the only way to re-create performance, installation, or networked art designed to vary with context.
Appendix 4

Media Art Notation System Implementation Examples.

Following are examples of the Media Art Notation System using MPEG-21 DIDL XML markup used to create a Score, or description of a work of media art. The media artwork described here is taken from the real world. It is the Chimera Obscura, by Richard Rinehart and Shawn Brixey, 2000, http://www.coyoteyip.com/project_archive/chimera. There are two separate MANS Scores below. Both examples describe the same work, and both include comments, but one demonstrates a very simple implementation of MANS, while the second demonstrates a much more detailed, granular description. The detailed example shows how to describe sub-component resources in detail and link to relevant files. In one section, the detailed score goes beyond linking to files and shows how to use Choice to model the behavior of a sub-component part completely within the Score, without invoking a separate file (using the score as a standardized modeling language to replace the functionality of software-dependent files). The detailed score here includes a description of the Work with two Versions, first the real version as it was installed in Berkeley and Seattle, and second a possible future version, including relevant choices, conditions, and variables outlined by the artists to consider when re-installing or re-creating the work.

MANS Example 1 - Simple Score

```xml
<DIDL xmlns:dc="http://purl.org/dc/elements/1.1/"
xmlns:xsi="http://www.w3.org/2000/10/XMLSchema-instance"
xmlns:profile="http://www.mpeg.org/mpeg21/Profile-Specs"
xsi:noNamespaceSchemaLocation="http://www.mpeg.org/mpeg21/schemas/didl.xsd">
<DECLARATIONS>
<DESCRIPTOR>
<STATEMENT TYPE="urn:mpeg:mpeg21:did/statement-types/text/xml">
<dc:title>Chimera Obscura Score</dc:title>
<dc:date>2004</dc:date>
<dc:creator>Richard Rinehart</dc:creator>
<dc:format>Media Art Notation System 1.0</dc:format>
<dc:language>English</dc:language>
<dc:rights>Public domain</dc:rights>
</STATEMENT>
</DESCRIPTOR>
</DECLARATIONS>
<CONTAINER>
<STATEMENT TYPE="urn:mpeg:mpeg21:did/statement-types/text/plain">
This document uses the Media Art Notation System, an implementation of MPEG-21 DIDL XML, to describe the work of art indicated in the Container below.
</STATEMENT>
</CONTAINER>
</DIDL>
```

Rinehart: A System of Formal Notation For Scoring Works of Digital and Media Art, Appendices
Chimera Obscura is a net-based tele-robotic work inspired by the historical anxieties, eugenic fantasies, and emerging realities evolving from the frontier of contemporary genetics research. The project is envisioned as an exploration into the nature of human discovery and the social behavior of collaboration/competition as exemplified by the Human Genome Project. Crossing the boundary between gallery installation and Internet art, the work is constructed around a tele-robotic agent that Internet visitors use to navigate and decode a highly complex maze designed from a human thumbprint located in the museum gallery. The online visitor becomes a hybrid cyborg sojourner through the maze -- the webcam acting as their eyes, the robot as their legs as they transmit their agency across the Internet and into the gallery, remotely controlling the robot that navigates the maze. The project employs a mutative game structure, allowing online visitors to leave a virtual trail of media memes (video, audio, text, etc.) behind for others to read, duplicate, or delete in the search for a unique sequence that will decode the maze. The ghost of the minotaur roams the maze in the form of random mathematical algorithms that yield mutative forces to the memes in the database, frustrating attempts at an easy, linear solution.
electro-mechanical robot (8x10ft)
physical maze
robot controller box
robot controller server computer
web-camera
web-camera server computer
viewing monitor
database and web server computer
database files
online interface files (Flash, HTML, scripts)
other website files (HTML, Flash, images, scripts)
user-contributed files (images, audio, video)

MANS Example 2 - Detailed Score

<didl>
<!--This is the outermost element that represents the Score as a whole. These attributes declare external
namespaces that may be used within this document, such as Dublin Core. -->
xmllns:dc="http://purl.org/dc/elements/1.1/
xmlns:xsi="http://www.w3.org/2000/10/XMLSchema-instance
xmlns:profile="http://www.mpeg.org/mpeg21/Profile-Specs"
xsi:noNamespaceSchemaLocation="http://www.mpeg.org/mpeg21/schemas/didl.xsd">
<declarations>
<descriptor>
<!--This section describes the Score document itself. -->
<statement type="urn:mpeg:mpeg21:did:statement-types/text/xml">
<dc:title>Chimera Obscura Score</dc:title>
<dc:date>2004</dc:date>
<dc:creator>Richard Rinehart</dc:creator>
<dc:creator>Shawn Brixey</dc:creator>
<dc:contributor>Jesse Rankin</dc:contributor>
<dc:subject>Genetics</dc:subject>
</statement>
<statement type="urn:mpeg:mpeg21:did:statement-types/text/plain">
This document uses the Media Art Notation System, an implementation of MPEG-21 DIDL XML, to describe the work of art indicated in the Container below.
</statement>
</descriptor>
</declarations>
<container>
<!--This element represents the logical Work or project as a whole. Note that descriptive metadata elements are repeatable as there may be several creators, versions, subjects, applicable types, etc. -->
<descriptor>
<statement type="urn:mpeg:mpeg21:did:statement-types/text/xml">
<dc:title>Chimera Obscura</dc:title>
<dc:date>2000</dc:date>
<dc:creator>Richard Rinehart</dc:creator>
<dc:creator>Shawn Brixey</dc:creator>
<dc:contributor>Jesse Rankin</dc:contributor>
<dc:subject>Genetics</dc:subject>
</statement>
</descriptor>
</container>
</didl>
Chimera Obscura is a net-based tele-robotic work inspired by the historical anxieties, eugenic fantasies, and emerging realities evolving from the frontier of contemporary genetics research. The project is envisioned as an exploration into the nature of human discovery and the social behavior of collaboration/competition as exemplified by the Human Genome Project. Crossing the boundary between gallery installation and Internet art, the work is constructed around a tele-robotic agent that Internet visitors use to navigate and decode a highly complex maze designed from a human thumbprint located in the museum gallery. The online visitor becomes a hybrid cyborg sojourner through the maze -- the webcam acting as their eyes, the robot as their legs as they transmit their agency across the Internet and into the gallery, remotely controlling the robot that navigates the maze. The project employs a mutative game structure, allowing online visitors to leave a virtual trail of media memes (video, audio, text, etc.) behind for others to read, duplicate, or delete in the search for a unique sequence that will decode the maze. The ghost of the minotaur roams the maze in the form of random mathematical algorithms that yield mutative forces to the memes in the database, frustrating attempts at an easy, linear solution.
<RESOURCE REF="http://www.bampfa.berkeley.edu/conversations/movies/rickshawn-postr.mov" TYPE="video/quicktime"/>
<DESCRIPTOR>
</DESCRIPTOR>
</COMPONENT>
</DESCRIPTOR>
</ITEM>
<!--This section describes a logical or functional sub-component of the Work (the physical on-site installation of Chimera Obscura).-->
<DESCRIPTOR>
<STATEMENT TYPE="urn:mpeg:mpeg21:did/statement-types/text/plain">
Robot and physical site installation.
</STATEMENT>
</DESCRIPTOR>
<!--This section describes the Resources that comprise the this Part of the Work (the robot and physical installation on site). In this detailed description, sub-component Resources of the Work are broken out separately, but far more detail could still be added.-->
<COMPONENT>
<RESOURCE>
electro-mechanical x-y plotter robot that can navigate over surface of maze to any point. robot must have resolution of movement to allow at least 4000 points in relation to maze
</RESOURCE>
<DESCRIPTOR>
<STATEMENT TYPE="urn:mpeg:mpeg21:did/statement-types/text/plain">
Robot. Robot navigates over surface of maze to any point. Robot has resolution of movement to allow at least 4000 points in relation to maze
</STATEMENT>
</DESCRIPTOR>
</COMPONENT>
<COMPONENT>
<RESOURCE>
robot controller. This hardware switch box connects robot to power and computer input commands
</RESOURCE>
</COMPONENT>
<COMPONENT>
<RESOURCE>
Dell Dimension 2400 computer running Windows XP Home Edition
</RESOURCE>
<DESCRIPTOR>
<STATEMENT TYPE="urn:mpeg:mpeg21:did/statement-types/text/plain">
Robot controller and server. Computer runs robot controller software. Software modified to accept cgi commands over Internet and send commands to robot. Computer is networked to Internet.
</STATEMENT>
</DESCRIPTOR>
</COMPONENT>
<COMPONENT>
<RESOURCE>
15 24 inch square panels, glossy printed paper bonded to 1/4 inch masonite, arranged into 5 x 3 grid that assembles the thumbprint image
</RESOURCE>
</COMPONENT>
Maze. Maze should depict a human thumbprint. Thumbprint may be slightly modified to allow passage through furrows.

Camera. Camera is mounted on movable arm of robot at target point, so that the camera can be aligned with any point specified in the maze. Camera is mounted close enough to maze panels that it does not reveal more than 1/100 surface area of maze in field of vision. The camera should allow an + or x registration in center of image. It should enable video output to allow web video streaming out of image in real-time.

Web video streamer. Computer accepts real-time video input from camera mounted on robot. Sends out video stream over the Internet, using video streaming software, at fixed URL to allow video stream to be included in online interface.

Onsite viewing monitor. Allows visitors on site at physical installation to see video stream coming from camera (same video seen online). Optionally, allows onsite visitors to view online interface in real-time.
<RESOURCE>
Apple Macintosh G3 Computer, running Mac OS 9.2 and FileMaker Pro 5.0 Unlimited software
</RESOURCE>

<DESCRIPTOR>
<STATEMENT TYPE="urn:mpeg:mpeg21:did/statement-types/text/plain">
Database and Webserver. This networked computer served the Chimera Obscura website documentation, online interface to the Chimera Work, and back-end database. It was not stored or installed in the same place as the robot controller or web streaming server.
</STATEMENT>
</DESCRIPTOR>

<RESOURCE REF="http://chimera.berkeley.edu/memes.fp5" TYPE="application/filemaker" />

<DESCRIPTOR>
<STATEMENT TYPE="urn:mpeg:mpeg21:did/statement-types/text/plain">
This database stores and manipulates variables and data that run the Chimera online interface in real-time. This database creates and stores the association between files uploaded/contributed by viewers and the specific point of the maze that they were at when they contributed the file. This database tracks viewers' requests to control the robot, limiting one user per 8-minute session. This database contains an algorithm (the minotaur) that will randomly copy or delete viewer-contributed files, every one out of 5 times a viewer contributes.
</STATEMENT>
</DESCRIPTOR>

<RESOURCE REF="http://chimera.berkeley.edu/interface.html" TYPE="text/html" />
<RESOURCE REF="http://chimera.berkeley.edu/interface1.swf" TYPE="application/x-shockwave-flash" />
<RESOURCE REF="http://chimera.berkeley.edu/interface2.swf" TYPE="application/x-shockwave-flash" />
<RESOURCE REF="http://chimera.berkeley.edu/interface3.swf" TYPE="application/x-shockwave-flash" />

<DESCRIPTOR>
<STATEMENT TYPE="urn:mpeg:mpeg21:did/statement-types/text/plain">
Online Interface. These flash files present the Chimera online as well as accept user interaction and track certain variables in real-time. The HTML page displays the real-time video stream from the robot camera. The Flash files accept button commands from users as directional commands sent to the robot controller server. They track the point of the maze the viewer is at and display all user-contributed files associated with that spot. They allow users to contribute/upload new files to associate with that spot.
</STATEMENT>
</DESCRIPTOR>

<RESOURCE REF="http://chimera.berkeley.edu/usercontribution1.jpg" TYPE="image/jpeg" />
<RESOURCE REF="http://chimera.berkeley.edu/usercontribution2.gif" TYPE="image/gif" />
<RESOURCE REF="http://chimera.berkeley.edu/usercontribution3.mpg" TYPE="video/mpeg" />
Viewers are encouraged to upload digital files as a marker at any point in the maze. They must first navigate to the desired point in the maze, then upload files of types: jpg, gif, mpg, mov, or mp3. The files are stored on the database/web server and are displayed to others using the online interface files.

This Version describes a more abstracted work, including the choices, conditions, and variables defined by the artists that should be considered when re-creating the work for future installations.

Robot and physical site installation. In the Chimera, the robot may vary greatly in size, technology used, and appearance, but it is important that the robot always remain physical, not virtual.

The space should allow viewers to move around the robot in three dimensions.
<STATEMENT>

<DESCRIPTOR>
<STATEMENT TYPE="urn:mpeg:mpeg21:did/statement-types/text/plain">
Lighting should allow round the clock viewability of the maze both on site and via the web camera. Lighting should not cast shadows on the maze that confuses viewers about what is a shadow and what is a maze path.
</STATEMENT>
</DESCRIPTOR>

<CONDITION REQUIRE=museum, indoor, rural, urban, theater, room, multiple />
<SELECTION ID=lighting DEFAULT=specialized />
</CHOICE>

<ITEM>
<!--This section describes a logical or functional sub-component of the Work (the virtual, online interface of Chimera Obscura). -->

<DESCRIPTOR>
<STATEMENT TYPE="urn:mpeg:mpeg21:did/statement-types/text/plain">
Virtual aspects of Chimera and online interface. In the Chimera, the appearance of the interface and technology used to implement this Part of the Chimera Obscura may vary greatly as long as the function described for each Resource is maintained. Online interface may be viewable, but should not be performable by visitors while on-site.
</STATEMENT>
</DESCRIPTOR>
</ITEM>
</STATEMENT>
</DESCRIPTOR>

<CHOICE ID=type DEFAULT=performed, encoded, duplicated, networked>
  <SELECTION ID=installed />
  <SELECTION ID=performed />
  <SELECTION ID=encoded />
  <SELECTION ID=reproduced />
  <SELECTION ID=networked />
  <SELECTION ID=duplicated />
  <SELECTION ID=contained />
</CHOICE>

<CHOICE ID=network.type DEFAULT=Internet>
  <CONDITION REQUIRE=networked />
  <SELECTION ID=Internet />
  <SELECTION ID=Internet2 />
  <SELECTION ID=LAN />
  <SELECTION ID=internal />
  <SELECTION ID=other />
</CHOICE>

<!--This section describes who is authorized to make the Choice indicated by the Condition. Note there may be several authorized agents. -->

<CHOICE ID=authorization DEFAULT=artist, agent, host>
  <CONDITION REQUIRE=Internet,Internet2,LAN,other />
  <SELECTION ID=artist />
  <SELECTION ID=agent />
  <SELECTION ID=host />
  <SELECTION ID=presenter />
  <SELECTION ID=public />
</CHOICE>

<CHOICE ID=viewer.interacts DEFAULT=work.synchronous, others.asynchronous>
  <CONDITION REQUIRE=performed />
  <SELECTION ID=work.asynchronous />
  <SELECTION ID=work.synchronous />
  <SELECTION ID=others.asynchronous />
  <SELECTION ID=others.synchronous />
  <SELECTION ID=performer.asynchronous />
  <SELECTION ID=performer.synchronous />
</CHOICE>

<!--This section describes who is authorized to make the Choice indicated by the Condition. Note there may be several authorized agents. -->

<CHOICE ID=authorization DEFAULT=artist>
  <CONDITION REQUIRE=work,others,performer/>
  <SELECTION ID=artist />
  <SELECTION ID=agent />
  <SELECTION ID=host />
  <SELECTION ID=presenter />
  <SELECTION ID=public />
</CHOICE>

<ITEM>
<!--For purposes of demonstration, this section shows a much more granular use of Choice, in which one could model the behavior of one of the online interface Flash files completely within the Score, without reference to the Flash file. This Choice allows users to pick a direction for the robot to travel in. The Components are directions sent to the robot when a specific selection is made. -->

<DESCRIPTOR>
  <STATEMENT TYPE="urn:mpeg:mpeg21:did/statement-types/text/plain">
Online Interface. Robot Navigator.

</STATEMENT>
</DESCRIPTOR>

<ITEM>
  <COMPONENT>
    <RESOURCE REF="http://maze.berkeley.edu/?direction=north" TYPE="application/x-www-form-urlencoded" />
  </COMPONENT>
  <COMPONENT>
    <RESOURCE REF="http://maze.berkeley.edu/?direction=east" TYPE="application/x-www-form-urlencoded" />
  </COMPONENT>
  <COMPONENT>
    <RESOURCE REF="http://maze.berkeley.edu/?direction=south" TYPE="application/x-www-form-urlencoded" />
  </COMPONENT>
  <COMPONENT>
    <RESOURCE REF="http://maze.berkeley.edu/?direction=west" TYPE="application/x-www-form-urlencoded" />
  </COMPONENT>
</ITEM>

<ITEM>
  <COMPONENT>
    <RESOURCE REF="http://chimera.berkeley.edu/usercontribution1.jpg" TYPE="image/jpeg" />
    <RESOURCE REF="http://chimera.berkeley.edu/usercontribution2.gif" TYPE="image/gif" />
    <RESOURCE REF="http://chimera.berkeley.edu/usercontribution3.mpg" TYPE="video/mpeg" />
  </COMPONENT>
</ITEM>

<DESCRIPTOR TYPE="urn:mpeg:mpeg21:did/statement-types/text/plain">
  Viewers are also encouraged to upload digital files as a marker at any point in the maze. They must first navigate to the desired point in the maze, then upload files of types: .jpg, .gif, .mpg, .mov, or .mp3. The files are stored on the database/web server and are displayed to others using the online interface files.
</DESCRIPTOR>

</ITEM></ITEM></CONTAINER></DIDL>
Appendix 5

Example Choices and Selections

These Choices and selections have been and continue to be developed by the Variable Media Network. The following should not be considered a fixed and final list, but a preliminary list of Choices and Selections. They have been implemented in a FileMaker database called the "Variable Media Questionnaire" that is also under development and testing. They represent variables that govern configuration or installation of a Work or Part of a Work. Choices are relative to specific types of Works or Parts. For instance a Choice about minimum network speed would not make sense in the context of a Work that was a printed photograph. Choices are grouped together below with their relevant Type. A typical group of Choices relevant to a Part of a Work in MANS would include first, the Type of Work or Part, then a Choice about configuration of that particular Part, then an indication of who is authorized to make that Choice. Within each Type, each Choice in all-caps is followed by its list of Selections in lower-case.

Contained

GLAZING
none
other
reflective
non-reflective

COATING
none
other
matte
glossy

SUPPORT / STRUCTURE / MOUNTING
none
generic
particular

FRAME
none
other
artists frame
custom-made
generic / standard

ACCEPTABLE CHANGES IN SURFACE
weathering
color fading
color / tonal shifts
patinization
oxidization

Installed

SPACE
fine art or museum gallery
large-scale movie theater
small-scale viewing room
other indoor space
outdoor urban space
outdoor rural space
multiple locations

BOUNDARY
defined by physical components
defined by predetermined viewing space
occupies an entire room
can be interpenetrated by other works

ACCESS
one viewer at a time
number of viewers determined by artist
number of viewers determined by space
no limit
viewers cannot enter the space

LIGHTING
normal museum lighting
as dark as code allows
natural light
specialized lighting

SOUND
allow spillover from other works
isolate acoustically from other works
specified volume

SECURITY
no security required
requires stanchion
requires alarm
requires guard
requires base
requires glazing

BASE
none
standard pedestals
one platform for entire work
custom-made

DISTRIBUTION OF ELEMENTS
other
equidistant in vertical format
equidistant in horizontal format
equidistant in grid
juxtaposed
face to face
abutting / touching / contiguous
scale to fill room or wall
random distribution

DISPLAY EQUIPMENT FOR INERT ELEMENTS
other
pedestal
vitrine
plinth
display case
mannequin

ARCHITECTURAL PLACEMENT
other
fixed hanging height
fixed distance from wall
viewers walk around the piece
viewers walk on the piece
combination
directly on the floor
eye level

EQUIPMENT VISIBILITY
conceal all
conceal some
leave visible

Performed

PROPS
disposable
unique

SET
disposable
unique
COSTUMES
disposable
unique

PERFORMERS
other
professional actors
professional musicians
museum staff
volunteers
the artist
public

NUMBER OF PERFORMERS
specific number
set by variable each time
indeterminate

FORMAT OF INSTRUCTIONS
other
digital transcript
film, video, or animation
printed transcript
combination

INSTRUCTIONS APPLIES TO
other
combination
installation
exhibition format
deinstallation

DOCUMENTATION OF NEW PERFORMANCES
combination
video
film
textual
digital tracking

AUDIENCE LOCATION
other
detached from performance
physically integrated in performance

BOUNDARY
occupies an entire room
defined by physical components or performance
defined by predetermined viewing space
SYNCHRONIZATION OF PERFORMANCE
other
synchronous in one location
synchronous in multiple locations
asynchronous in one location
asynchronous in multiple locations

USER INPUT
other
combination
physical manipulation
sound input
text input
menu driven
video feed

VIEWER INTERACTS WITH
combination
the work
other viewers
performer

MAINTENANCE
replenish daily
replenish weekly
determined by other criteria

Reproduced

RELATIONSHIP TO MASTER
other
master
clone
first-generation copy

LOCATION OF MASTER
archived with work's owner
archived in another location
used for exhibition

STATUS OF MASTER
still viable
re-mastered

AUTHORIZED FABRICATORS AND VENDORS
none
specified by artist
gallery
ACCEPTABLE SUBMASTERS OR EXHIBITION COPY
for exhibition
for research
for archive
for public distribution

PERMISSION TO CREATE SUBMASTER
not required
required from artist or estate
required from owner of master
not given

FATE OF EXHIBITION COPY
require borrower to destroy
require borrower to return
distribute freely
other

PERMISSION TO COMPRESS/DIGITIZE
combination
not given
for low-resolution distribution
for high-resolution migration

Duplicated

INERT MATERIAL
combination
construct according to blueprint
purchase according to instructions
gathered according to instructions

PHYSICAL ATTRIBUTES OF INERT MATERIAL
specified by artist

AUTHORIZED FABRICATORS AND VENDORS
none
artist
gallery

MATERIALS DUPLICATED ACCORDING TO
product brand or maker
blue print
instruction

ELECTRONIC EQUIPMENT AND HARDWARE
none
custom-made
off-the-shelf

FATE OF EXHIBITION COPIES
other
require borrower to return
required borrower to destroy
require borrower to disperse

Encoded

SCREEN RESOLUTION
640x480
800x600
1040x768
greater than 1040 x 768
optimum resolution

COLOR PALETTE
8-bit or below / 256 websafe
16-bit / thousands
32-bit / millions

EXTERNAL DATA SOURCE
combination
audio files
video files
fonts

FONTS
indexed
Web safe
other
ASCII

SOURCE OPENNESS
other
open to every user
open to exhibition venue and its staff
closed

Networked

CAN BE EXHIBITED
over live Internet connection
as stand-alone copy
broadcast
combination
cached, with Internet connection active

EXTERNAL DATA SOURCES
text from external site
images from external site
dynamic database feed

MINIMUM BANDWIDTH
14.4kbps or lower
28.8kbps
56kbps
1mbps
other

NETWORK MODEL
client/server
server-based (thin-client)
peer-to-peer