Chapter I
The Computer Medium in Digital Art’s Creative Process

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ABSTRACT

Art objects might be described as symbolic objects that aim at stimulating emotions. They reach us through our senses (visual, auditory, tactile, or other). They are displayed by means of physical material (stone, paper, wood, etc.) and combine some patterns to produce an aesthetic composition. They convey some message, normally to suggest some state of mind or to induce an emotion and the consequent feeling on the side of the viewer. Digital art differs from conventional art pieces by the use of computers and computer-based artifacts that manipulate digitally coded information, inheriting the almost unlimited possibilities in interaction, virtualization and manipulation of information the computer medium offers. In this chapter the authors propose to analyze and discuss the concepts and definitions behind digital art, emphasizing how the computer medium is itself the tool and the raw material in its creation, especially if we stress the fact that the conception and design of artistic information content is at the heart of any artistic work. Furthermore the authors present a framework for digital art creation that consists of a common design space where digital artists can smoothly progress from the concept until the final artifact while exploring the computer medium to its maximum potential.
INTRODUCTION

Arts and culture are social phenomena, consequen
tial of the social interaction, of the individual
and collective imaginary manifestations, that
together establish a common communicational
and informational space embracing artifacts said
to be cultural and artistic. These artifacts, where
some are possibly non-tangible, constitute, in
fact, the resulting product from the artistic and
cultural phenomenon. They are expressions of
our imagination.

In this respect, the common communicational
and informational space is created by the process
of collaboration among a group of people who
communicate and operate together by sharing
the same interests and goals. Information or
information content, meaning the intended mes-
sage of each artifact, is a central constituent of
the common communicational and informational
space. Accordingly, artistic artifacts, may these
be of digital or physical nature can be defined as
informational objects.

Art objects might be described as symbolic
objects that aim at stimulating emotions. They
reach us through our senses (visual, auditory,
tactile, or other). They are displayed by means
of physical material (stone, paper, wood, etc.) and
combine some patterns to produce an aesthetic
composition. Like any art object, digital art objects
are informational in nature; they are symbolic and
purposeful built. Their creator intends to convey
some message, normally to suggest some state of
mind or to induce an emotion and the consequent
feeling. They differ from conventional art pieces
by the use of computers and computer-based arti-
facts that manipulate digitally coded information,
what opens unlimited possibilities in interaction,
virtualization and manipulation of information.

The computer medium is defined here as the
set of digital technologies ranging from digital
information formats, infrastructures to process-
ing tools that together can be observed as a con-
tinuum art medium used by artists to produce
digital artifacts.

When we consider the creative process itself,
we can establish its beginnings when the creator
gets an hold of the first concept or idea resulting
from his/her subjective vision, gradually modeled
into a form of (un) tangible artifact. It constitutes
the message, this about something, the artist wants
to transmit to the world. When digital content is
used in this process, it can be both the means and
the end product. On one hand, the digital content
can be explored as the means to create non-digital
artifacts, as for instance, digitally altered paper-
based photography, and, on the other hand, be the
end-result intended as it is the case in animated
comics (Marcos, 2007).

In fact, digital art applies the computer me-
dium both as raw material (e.g. the digitally coded
information content) and as a tool of enhancing
creativity. Notice that raw material is related here
to unprocessed (or in minimally processed state)
material that can be acted by the human labor to
create some product. Similarly, digitally coded
information content can be manipulated by digi-
tal artists to create artistic objects. When in the
creative process, digital artists apply information
content along with technologies from multimedia,
virtual reality, computer vision, digital music
and sound, etc. as also the information and com-
munication infrastructure available such are the
internet, presentation devices, and storage arrays,
among others, to create interactive installations
and generate digital artifacts. Therefore, the com-
puter medium traverses effectively all the stages
of the creative process, from concept drawing
until the final artifact production and exhibition.

Today’s powerful editing and programming tools
make it possible to an artist to modify, correct,
change and integrate information content as valu-
able raw material in the creative process, that may
be presented in several digital formats such are
text, image, video, sound, 3D objects, animation,
or even haptic objects.

Moreover, artistic communities need to have
access to common technological infrastructures
that facilitate collaboration (collaborative editing,
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