

## ARTS ONLINE

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## Secrets of Digital Creativity Revealed in Miniatures

Most of us seem to want to experience an artistic creation as a finished product, not as a mound of raw materials. So an exhibition called "Gobs of Paint" or a concerto titled "Loads of Notes" would probably have some problems attracting an audience.

Which means that "Codedoc," an online exhibition of digital artworks that focuses on their underlying computer code, is a daring endeavor. It asks viewers without any programming knowledge to step back from the animated lines and interactive elements of computer art and instead consider the geeky techniques that digital artists use to create those works. This would be like studying the artist's brush and paints and not the painting.

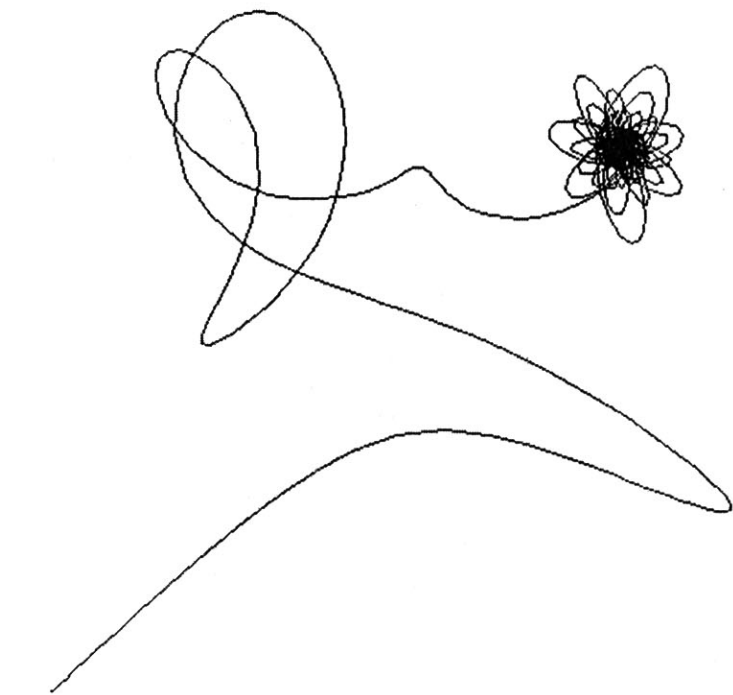
"Codedoc" was organized by Christiane Paul, the Whitney Museum of American Art's new-media curator. She commissioned small pieces from a dozen digital artists on the condition that they also publish the computer code behind their works. The online-only exhibition opens today in Artport, the Whitney's virtual gallery of Internet-based art projects, at artport.whitney.org.

Although the 12 works are little more than miniatures, the overall exhibition provides a revealing look at how digital art is actually created. In this medium, the raw material is computer code, and when shaped by the artist it determines the final product. "Codedoc" is shorthand for the code documents that are essential to the works' existence.

"To understand art, you need to understand artistic practice," Ms. Paul said. "We have looked at paintings for hundreds of years, and at some point, everybody notices that there is something in the stroke of the brush. Van Gogh looks very different from Seurat, and you see how that works on the canvas."

With digital art, the creative brush strokes, if you will, are embedded in the code. Yet its role in the creative process is rarely seen. "We experience digital art in reverse," Ms. Paul said. "We look at the visual front end, but what the artist wrote first is the code." The Whitney exhibition shows the artistic process, since the code precedes a work's rendering on the computer screen.

For those whose dealings with code are limited to five zippy numbers on an envelope, a brief tutorial. In the digital realm, code is the set of instructions that drive a computer's hardware and software. Most code exists as text, written in Java, C++, Perl or another of the foreign languages spoken by the software-development tribe. Whether code is written for a word-processing program or a digital artwork, its authors are usually the only ones who



see it. What counts is what it does, not how it looks.

But with "Codedoc," viewers are forced to look at each work's code document before they can see the art. The link that leads to each work has been placed at the bottom of its page of code, and visitors must scroll through a list of computer commands like "go to the frame" or, more typically, "double filVel = 1."

Ms. Paul is determined to refute

## Code contains the 'brush strokes' rendered on the computer screen.

the notion that digital artists simply buy a program, flip a switch and let a computer do its thing. By putting the code of 12 different artists side by side, she said, even nonexperts can discern that "it is all written from scratch and that it shows a lot of individuality."

True, up to a point. For instance, Scott Snibbe's code for "Tripolar" is a sliver of text, while John Klima's code for "Jack and Jill" resembles the script for a three-character drama. As it turns out, Mr. Snibbe's work is a minimalist take on chaos theory, while Mr. Klima's work adds a psychological dimension to the

children's poem.

Still, for those who do not speak the languages, reading the exhibition's code is like attending a concert where scores are distributed rather than program notes. Yo-Yo Ma is able to flip through the sheet music and hear the sound, but the average concertgoer is liable to remain baffled by all those funny symbols.

Mr. Snibbe, a San Francisco artist, agreed that people unfamiliar with programming would be stumped by the Whitney site's code documents. "Really, they're all going to look the same," he said. "If we had eight Russian poets, we might have similar problems. But to my eyes, all the code looks really different."

He continued, "People had really distinct styles." He said he enjoyed how Camille Utterback, a Brooklyn artist, embellished her code with poetic comments, and he described Mr. Klima's code as social psychology because "it's all about relationships." To help viewers grasp what is on the site, Mr. Snibbe and his colleagues have inserted explanatory remarks into their own documents and then annotated others' code.

Once one gets past the code, some of the exhibition's works are quite entertaining. Each artist was asked to create a work that would move and connect three points in space. Most responded with animated graphic contraptions. Some works are hypnotic. Others were less literal in how they interpreted the assignment. Sawad Brooks overlaid the home pages of Web sites for three international newspapers.

A sample from "Codedoc," an online exhibition of digital artworks. Viewers must step back from animated lines and interactive elements of computer art and consider creative techniques. Left, Scott Snibbe's "Tripolar." To see it, viewers must first read its computer code.

But the site's most remarkable works are six reinterpretations, or remixes, in which the artists process the others' code through their own programs. For instance, Brad Paley wrote a program that analyzes his own code, but he also turned the program on Mr. Snibbe's code. It is meant as spirited fun, but if code is a reflection of personal style, it also serves as portraiture.

Admittedly, computer code is not the most accessible of art subjects. Ms. Paul said, "This is a very unusual artistic practice in that the artist completely writes the project in verbal terms and that determines the visual outcome." She likened the writing of code to the conceptual-art projects of Sol LeWitt, who drafts precise instructions on how to create a wall painting, then leaves it to others to execute the work.

The New York artist John F. Simon Jr. takes this thinking a step further, arguing that programming is a form of creative writing. "What you choose to write about in code is very important," he said. "It's like what you choose to write about when you write a book. The plot can determine the beauty of the story. You have to make the same kinds of choices when you write code."

Ms. Utterback said: "Most people as kids wielded a paintbrush, so it's not mysterious to them how you create a painting. But people have no concept of what computer code looks like. Even if what's there still looks mysterious and crazy, it humanizes it."