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Collecting Digital Art and Its History

Japanese Computer Art and the Reality of Collecting It

WHAT I FOUND IN TOKYO

ROBERT MURPHY
OCT 2

READ IN APP

I've just returned from Tokyo with works by Yoshiyuki Abe, one of Japan's pioneering computer artists who died last year. It took me years to make this happen. The story of how I finally acquired these works—and what I learned about the broader landscape of Japanese computer art—tells you everything about why this field remains invisible to Western institutions.

The Invisible Pioneers

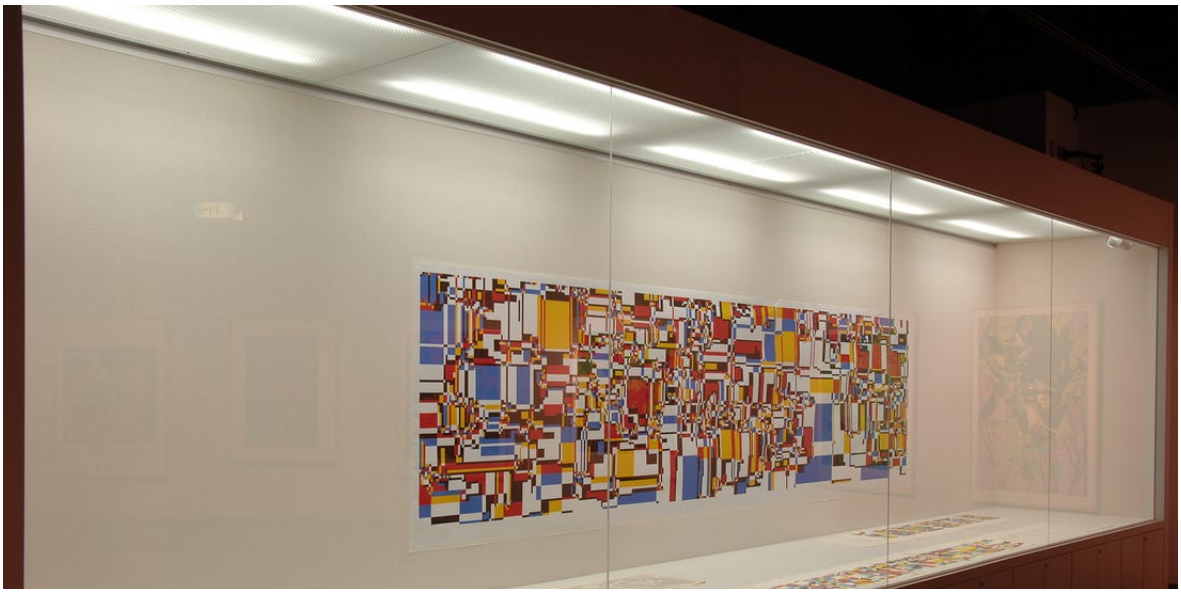
The Invisible Pioneers

Hiroshi Kawano is the holy grail for many computer art collectors—and he's completely uncollectible.

I've spent years trying. Multiple trips to Tokyo. Conversations with dealers, academics, former students, anyone who might know where Kawano works could surface. Nothing.

I was lucky enough to handle one Kawano work that came from the man who published him in the landmark **Art Ex Machina** portfolio. It's ironical to think that it was a difficult sale in 2019. So much has changed.

Kawano gifted most of his works to ZKM in Germany in 2010. The remaining pieces are in Tokyo University's collection, where he taught. There appears to be no private market, no family holdings available, no path to acquisition.



Work by Kawano

He's the artist Western institutions finally recognised—he showed in "Cybernetic Serendipity" in London in 1968, one of computer art's foundational exhibitions—and he's impossible to collect.

The CTG Problem

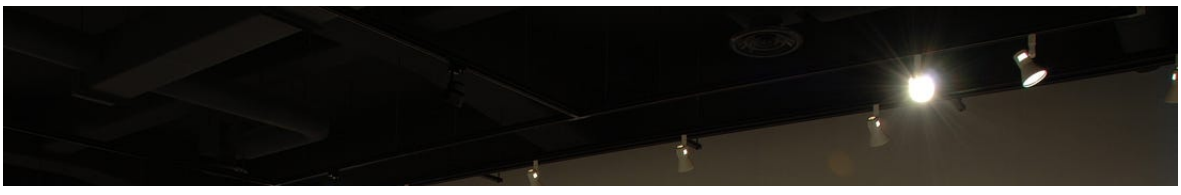
Computer Technique Group presents a different but equally frustrating situation.

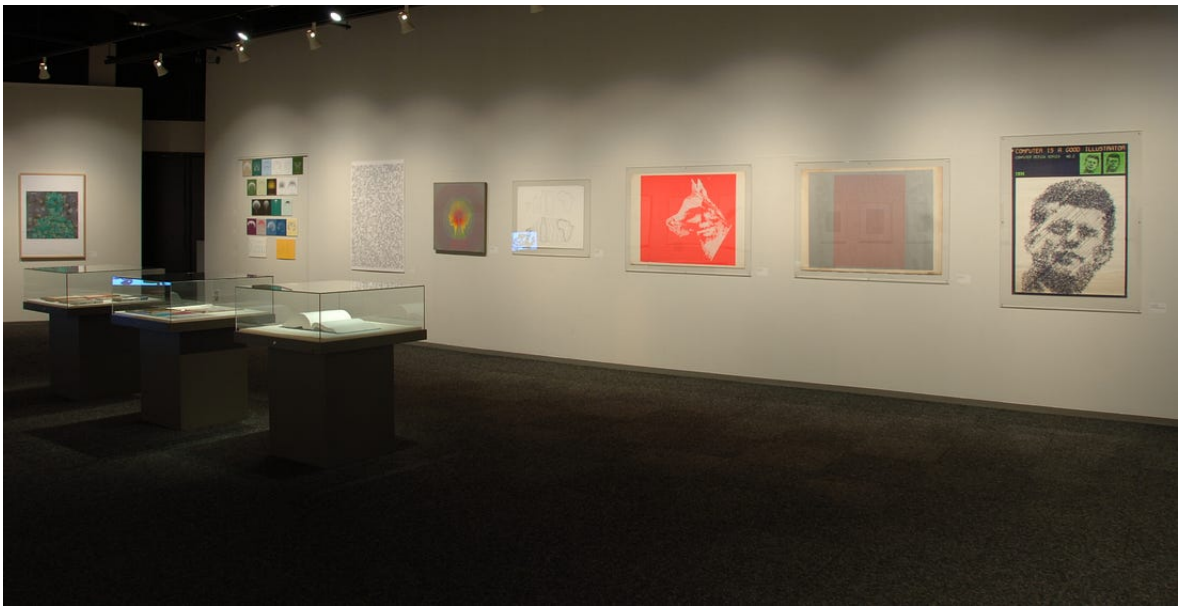
CTG—Masao Komura, Kunio Yamanaka, Koji Fujino, Makoto Ohtake, Haruki Tsuchiya, and Yasuhiro Yukimura—created some of the most sophisticated algorithmic work of the 1960s. APM No.1 (Automatic Painting Machine, 1968) was Japan's first interactive computer art installation.

Where is this work now?

The Museum of Contemporary Art in Tokyo—but only recently.

For years, I couldn't find clear information about what happened to CTG's output. Through my research in Tokyo, I learned that when the group dissolved in 1970, their works eventually made their way to MOT's collection. And now? Those works aren't circulating. There's no pathway for private collectors.





Work by CTG

What Happened in 1970

Over tea at Takase in Ikebukuro this summer, I met Hasaqui, who has been researching this history. What he explained helped me understand why all of this disappeared.

In 1970, CTG held a dissolution event at Iwanami Hall in Tokyo.

Haruki Tsuchiya gave a speech: “Goodbye Computer Art.”

They weren’t rejecting their work. They were rejecting what computer art was becoming.

The 1970 Osaka Expo had turned computational work into technological spectacle—corporate pavilions demonstrating Japan’s futuristic capabilities. Computer art got swept into this wave of techno-optimism, associated with entertainment rather than serious aesthetic practice.

CTG saw where things were heading and quit.

When the artists walked away in 1970, the infrastructure to preserve or

When the artists walked away in 1970, the infrastructure to preserve or market their work didn't exist. By the time anyone cared—decades later—the work had already vanished into institutional storage.

The Engineer Problem

Here's what made the Japanese situation different from the West: CTG had only one member from art school—Yasuhiro Yukimura from Tama Art University. The rest were engineers.

This mattered more than you'd think.

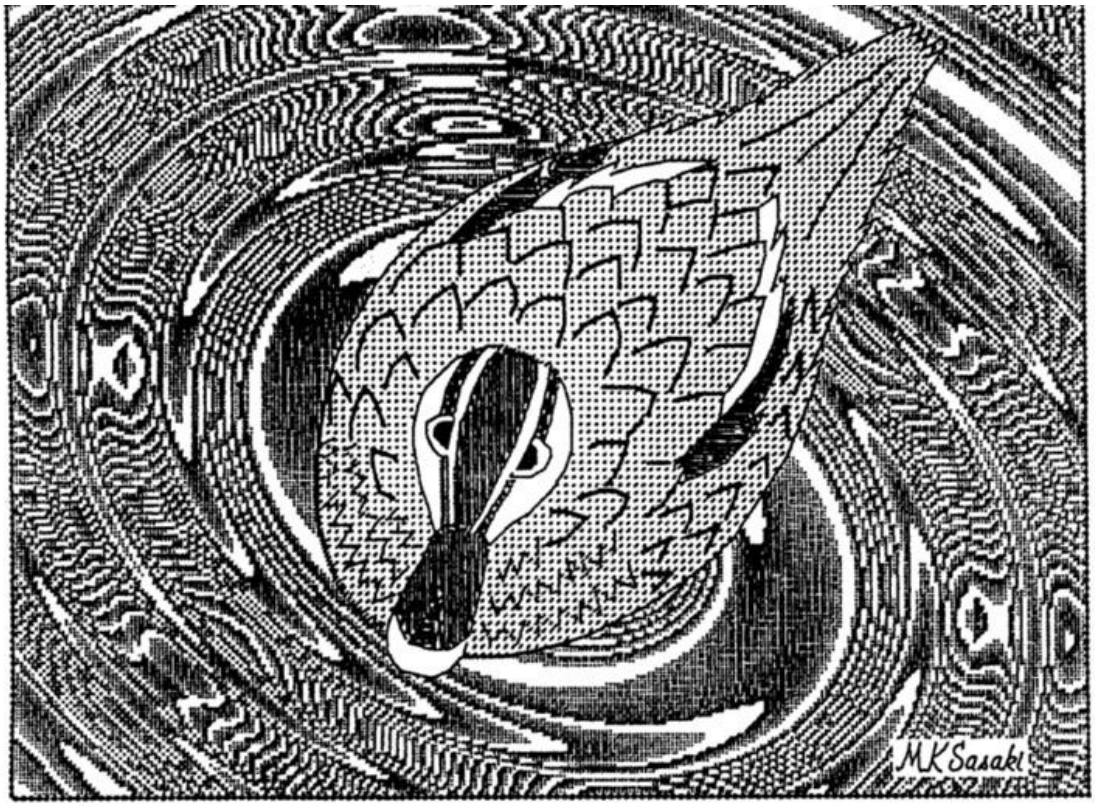
In Germany, Frieder Nake and Georg Nees had gallery shows in Frankfurt and Stuttgart, critical writing positioning them as artists. In Japan, the art world looked at CTG's technically sophisticated work and saw engineering demonstrations.

The split between "Duchamp-land" (the art world) and "Turing-land" (computational practice)—as Lev Manovich describes it—was especially harsh in Japan. Engineers making beautiful images weren't taken seriously by galleries or critics.

And it got worse if you were a woman engineer.

Mutsuko Sasaki worked at RIKEN, Japan's national science institute. She published computer art in *Computers and People* magazine. She created figurative works using complex algorithms—technically impressive, aesthetically sophisticated.

Largely overlooked. She was an engineer creating art, and the art world didn't know what to do with that.



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A plotter drawing by Mutsuko Sasaki, circa 1970

The Collector's Reality

Here's what I've learned:

Hiroshi Kawano: His works are at ZKM and Tokyo University. Seemingly uncollectible.

CTG (Komura, Yamanaka, Fujino, Ohtake, Tsuchiya): Their works are at Museum of Contemporary Art Tokyo. No private holdings have surfaced.

Mutsuko Sasaki: Her work was published but I haven't found where the physical pieces are, or if they even survived.

These are the artists who defined Japanese computer art's foundation.

After CTG

The artists who continued after 1970 faced similar challenges: no infrastructure, no market, minimal Western visibility.

Eiichi Izuhara and Chihaya Shimomura built on CTG's foundation through the 1970s. I've had some contact with Shimomura and hope eventually to acquire work, but it requires patience and relationship-building through intermediaries. Izuhara remains elusive.

Plotter drawings by Chihaya Shimomura, circa 1970

The Exception: Yoshiyuki Abe

Yoshiyuki Abe (1947-2024) died last year after a long illness. He was included in the Electric Op exhibition at Buffalo AKG alongside Bridget Riley, Vera Molnár, and other major figures—institutional validation of his significance.

Unlike Kawano or CTG, whose work disappeared into museum collections, Abe's work remained with him. After several years of persistence, I was able to acquire a comprehensive selection this summer.

Yoshiyuki Abe

The works span from the 1980s through the 2000s: Legend series (1992), LS series (1993), Geometrica (late 90s), Flow, Stochastica. Early pieces like

Math 906 (1986) through later sophisticated algorithmic compositions.

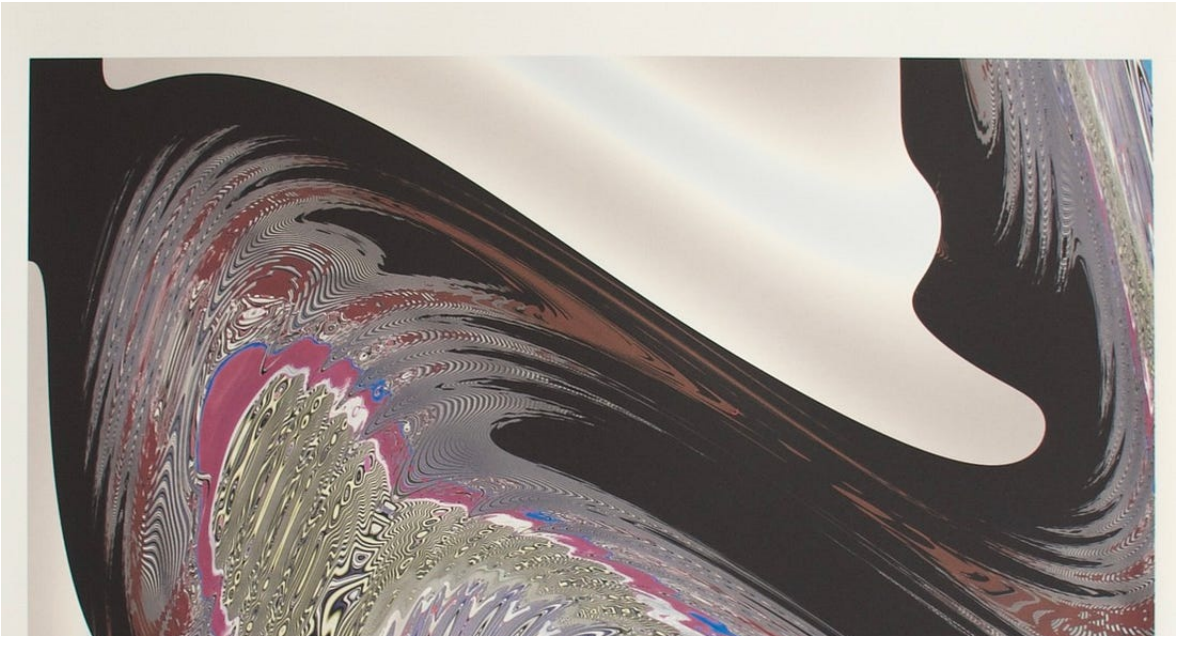
What Makes This Work Significant

This isn't Western computer art.

It doesn't look like the geometric rigidity of A. Michael Noll. It doesn't have the systematic quality of early Frieder Nake. It's not optically aggressive like some Op-influenced work.

There's something else happening: a use of algorithmic processes that connects to Japanese aesthetic principles. The balance between control and spontaneity. The concept of *ma*—negative space as meaningful element. The appearance of naturalness achieved through rigorous discipline.

Look at certain pieces and you can sense a dialogue with traditional Japanese art—the same careful attention to wave forms and natural patterns you see in Hokusai's Great Wave. But here, those organic shapes emerge from mathematical functions rather than brushstrokes. The computer becomes another tool for exploring ideas that have preoccupied Japanese artists for centuries



Yoshiyuki Abe

Abe wrote about this in his artist statement: “For artists who want to create mathematical art through algorithm-driven parameter control, the essential element for success is artistic serendipity. This is the interesting fact of art in the perfect mathematical space.”

That phrase—”artistic serendipity”—captures something about how Japanese practitioners approached computation differently than their Western counterparts. The algorithm wasn’t just a tool for generating form. It was a method for creating conditions where unexpected beauty could emerge.

What Abe Built (Literally)

In the 1980s, when computers capable of generating the images he wanted didn’t exist affordably, Abe built his own.

Not just wrote software—built the hardware. Designed circuit boards. Wired evaluation boards. Developed his own graphics software because what was commercially available wasn’t sufficient.

He spent years creating the platform that would allow him to make the work he envisioned. By 1991, he’d completed his first ray tracing renderer. By the mid-90s, he was producing the Geometrica and Legend series that represent some of the most sophisticated algorithmic image-making of that period.

This level of technical commitment—building your own computer to make art—was more common in Japan than in the West, where artists either worked at institutions with computing resources (Bell Labs, universities) or waited for personal computers to become capable enough.

Why Western Museums Missed This

The Documentation Gap

The work was created in Japan, exhibited in Japan, written about in Japanese publications. It never entered the commercial gallery system, had little Western representation, generated no records Western curators could track.

Kawano and CTG were in “Cybernetic Serendipity” in London (1968)—one of computer art’s foundational exhibitions. Western curators saw Japanese work early on. But by the time institutions started building computer art programs decades later, the story was already crystallised: Bell Labs, European groups, a few other pioneers. Japanese work had faded from institutional memory.

What CTG Actually Achieved

CTG created APM No.1 (Automatic Painting Machine) in 1968—Japan’s first interactive computer art installation, exhibited at Tokyo Gallery. These weren’t just aesthetic experiments; they were technical innovations that anticipated later developments by years.

But because they were engineers, because the work was in Japan, because they dissolved in 1970 just as the Western computer art scene was consolidating—their achievements never entered the canonical narrative.

What This Means for Collectors

I’m writing this for two reasons:

First: To be honest about what’s actually possible to collect in Japanese computer art right now.

Kawano and CTG? Their work is in institutional collections. Second-generation artists like Shimomura and Izuhara? Difficult, requiring patience.

Abe? His work exists, and represents the only currently accessible window into this tradition.

Second: To explain why this matters beyond acquisition.

When we tell computer art's history as "Bell Labs and European groups," we're telling an incomplete story—the story of what became visible to Western institutions.

There was a parallel development in Japan: equally sophisticated, arguably more philosophically coherent, technically accomplished. That it remained invisible doesn't diminish its significance.

The Work Itself

The Abe pieces I've catalogued show an evolution across decades:

Early work (1986): Like Math 906 and Communication Day—explorations of three-dimensional form, ray tracing experiments, learning what the computer could do.

Early 90s (Legend, LS series): More sophisticated surface rendering, complex reflections and refractions, beginning to develop signature aesthetic.

Late 90s (Geometrica, Flow, Stochastica): Mature work where technical mastery allows pure aesthetic exploration. These pieces achieve that quality of controlled spontaneity Abe wrote about—algorithmic but alive.

2000s: Continued refinement, exploring stochastic processes, converting images to sound data for animations.

What strikes me across all periods: the work never looks mechanical. Even the earliest pieces have an organic quality. The algorithm serves the aesthetic rather than announcing itself.

Yoshiyuke Abe

What Comes Next

Shimomura remains a priority—I've made contact and hope eventually to acquire works.

I'll keep monitoring for any Izuhara pieces that surface.

I'll track whether institutional changes—estates being settled, corporate collections being reconsidered—make other Japanese computer art available.

And I'll keep writing about this, because the Western narrative about computer art's origins needs to expand.

The Honest Assessment

If you're building comprehensive computer art holdings, understand the reality:

Kawano and CTG's foundational work sits in institutional collections. You may eventually find Shimomura or second-generation artists, but patience is required. Abe's work offers the only currently accessible entry point to this tradition—and his inclusion in Electric Op signals that Western institutions are beginning to recognise Japanese contributions to computer art's history.

Learn These Names

Even if you can't collect them all, know who they were:

The Uncollectible Foundation:

- Hiroshi Kawano
- Computer Technique Group (Masao Komura, Kunio Yamanaka, Koji Fujino, Makoto Ohtake, Haruki Tsuchiya, Yasuhiro Yukimura)

The Difficult Second Generation:

- Chihaya Shimomura (I'm working on this)
- Eiichi Izuhara (no leads yet)

The Accessible Exception:

- Yoshiyuki Abe (1947-2024)

When art history books are rewritten to properly include Japanese computer art—and they will be—you'll already understand who these artists were and why they mattered.

—Robert Murphy
Paris

For those interested in the Abe works: info@rcmgalerie.com

P.S. If you have connections to Japanese corporate collections from the 1970s-80s, university archives with computer art holdings, or know collectors who acquired Japanese work during that period, please reach out. I'm building relationships in Tokyo and would appreciate leads that might help make more of this work accessible to Western collectors.

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