



for
the future

Defining the way forward

Being a technology company delivering digital pen and ink experiences, Wacom seeks to unlock the potential yet to be realized, drawing on its technological prowess.

BE INNOVATIVE

How Digital Ink Changes The Experience of Drawing & Writing

In Search Of Technology That Harbors Feelings Of Companionship

With their impressive knowledge of digital ink, the Ink Division plays the role of enhancing the value of the experience of *drawing / writing* alongside the partners who make up their community. Wacom has continued to evolve from a hardware company to one specializing in delivering experiential journeys. Currently, they are in pursuit of the technology that can harbor companionship with people.



Bringing innovations to life

The Ink Division has a unique identity even within Wacom. While developing the technology involved in the applications of digital ink, the team also handles an extensive scope of other tasks, including the development and licensing of cloud services and applications that offer innovative experiences. Also part of the role of their division is to define the application of digital pens and digital ink and to strive for improvement.

The head of this nearly 100-member team is Heidi Wang, a woman raised in Germany with roots in Taiwan. Wang says of the Ink Division: "We are a new team that launched in 2018 as part of Mid-Term Business Plan: Wacom Chapter 2. Alongside the Branded and the Technology Solutions Business teams, we are pushing to revolutionize customer experience and the business model.

Our role is to advance the hardware-focused business to the next step while supporting an evolution towards services that deliver unique experience. In terms of structure, that puts us in an overlapping position with both the Branded and the Technology Solution Business. Coordination between teams becomes essential and natural, which is why we are keeping close daily communication with the CEO as well as the leaders of each team."

Up until now, the Ink Division has been developing the technology needed by each of the other teams, but in recent years, they have been focusing more and more on a different target. Over time, the realization of their dream to present experimental technology that can create new experiences comes ever closer. One prime example is KISEKI ART (⇒P48 _ About KISEKI ART), which allows Wacom to visualize the multidimensional data generated



during the creative process, such as grip habits, how we apply pressure, or shifts in the emotional expression of the creator/artist. "Technology evolves based on feedback. Even without a concrete application, it is worthwhile to continue taking on challenges for the sake of future possibilities."

The secrets hidden within our drawing / writing

Digital ink is "technically speaking both a software and a kind of glue." It is the link between digital pens and applications. WILL™ (Wacom Ink Layer Language), a software put forward and promoted for proliferation by Wacom, will achieve the same realistic sensation of *drawing / writing* as physical ink but on the screens of the digital devices. "I wanted everyone to be able to use it, which is why I used the term, 'Language,'" explains Wang, who coined the name for the technology.

Digital ink, which captures the thoughts, emotional shifts, and even the stories behind its users' *drawing / writing*, is itself the content. Although there isn't much information yet that can be gleaned directly from concrete experiences, digital ink hides a limitless potential.

"I think my strong emotional attachment to *drawing / writing* comes from my roots in a culture that uses Chinese characters.

"As opposed to the alphabet which is phonetic, Chinese characters are ideographic, and a vast amount of information is poured into each letter. However, the author's emotions and situation in the moment influence the letters they write or the lines they draw and infuse them with information invisible to the eye, so what digital ink does—whether it's the alphabet or Chinese characters or even a drawing—is to heighten the level of

information that can be encoded in." When one recognizes great value, one inevitably turns their attention toward its protection. Developed with the Ink Division at the helm, Wacom Yuify (⇒ P49 _ About Wacom Yuify) is a system which grants proof of creation for works made with digital ink and provides support to safeguard those rights. By using a Self-sovereign ID (SSI), the revolutionary system allows users to retain permanent proof of creation. When, where, how, and who created it—all this information is embedded into a piece the instant it is drawn. The creativity and individuality of each and every author is engraved into their works, and the data of each piece along with the proof it is paired with holds one-of-a-kind value. If Wacom Yuify gains traction, creators/artists will without a doubt be able to put their minds at ease as they lose themselves in the digital creative process. One could argue such an experiment is rather typical of Wacom, who always puts human's expressions by *drawing / writing* first.

Key to discovering a new you

According to Wang, what the Ink Division considers to be its prime target is the ability to share emotions and personal discoveries. Wacom is looking to release the collected information to users for themselves, which will lead to new insights. Their thought process is that this previously unknown information will awaken something in the subconscious of users and encourage all new discoveries. It may be similar to the idea of asking, "It's possible that something like this is happening in your mind. When you see it, how do you feel?"

"Our emotions are personal to us. It would be arrogant to assume our own interpretations. We hope that by opening the door to responses and exchanges, it will lead us to new discoveries, and by effect lead the technology forward."

There are three key phrases that help drive these discoveries. They are: "Back to customer," "Creative chaos to smile," and "Commit and deliver." Putting ourselves to a customer's perspective is the starting point for

discerning a landing point amidst a chaotic debate and reconciling a sea of divergent ideas. Wacom is no stranger to the term "creative chaos." As Wang puts it, "Of course, creative chaos can be quite stressful and something irritating, and it takes time to get the ball rolling. But in the end, I believe that it inevitably takes things in a creative direction with new perspectives. That's why I go out of my way to use the term 'creative chaos.'"

Meanwhile, "Commit and deliver" refers to the team's attitude taken toward customers and partners. In order for innovation to happen, explorations with things that nobody has ever done before is crucial. On the other hand, it is also true that efforts are only recognized when they bear fruit and are proposed as a value to the world. "Even when a challenge is fun, it's meaningless if it doesn't provide any value. That's why I expect results even from the less experienced members of the team."

So how does Wacom appear to a team as heavily involved in a variety of projects as the Ink Division?

"Wacom is by no means special. We have a vision, communicate closely, use trial and error, and possess both imagination and courage. Nothing is inherently challenging. What's unique is the passion towards encouraging personal growth. I am no hero and no genius. I don't even want to be. What's important to me is inspiring growth. I have witnessed how team members create new value when they grow. That in itself has been the most inspiring experience for me."

A technology that can harbor human companionship

Among Wang's thoughts on technology is the warm sentiment of harboring companionship with people.

"I want to create a freer form of technology than we have today. More than just value-added, but something that can be with people. That's my dream. I want it to be with people—children, artists, writers, etc.—become the people they aspire to be and achieve whatever they dream of. Each new technology that comes around behaves as if it's commanding

us, and that feels jarring to me. Even when it comes to Artificial Intelligence (AI), people raise concerns about it competing with humans, but what I would like to explore is the philosophical aspects of how AI can become a companion. I believe that technology should be like a partner who stirs up feelings of fondness within us."

Says Wang, "To me, creativity is about discovering connections between two divergent things. It's that eureka moment." What kinds of innovations will "Living-organism Wacom" spark from here on out? The Ink Division's challenges and discoveries will continue.



Heidi WANG

Senior Vice President
Ink Division

Heidi is passionate about ink and innovation. For her, ink is the reflection and response of our soul and mind. As head of the Ink Division, she leads ink technology and services at Wacom. Her motto is "value is created by connections," hence her focus is on partnerships. Her purpose of technology is to create meaningful experiences.

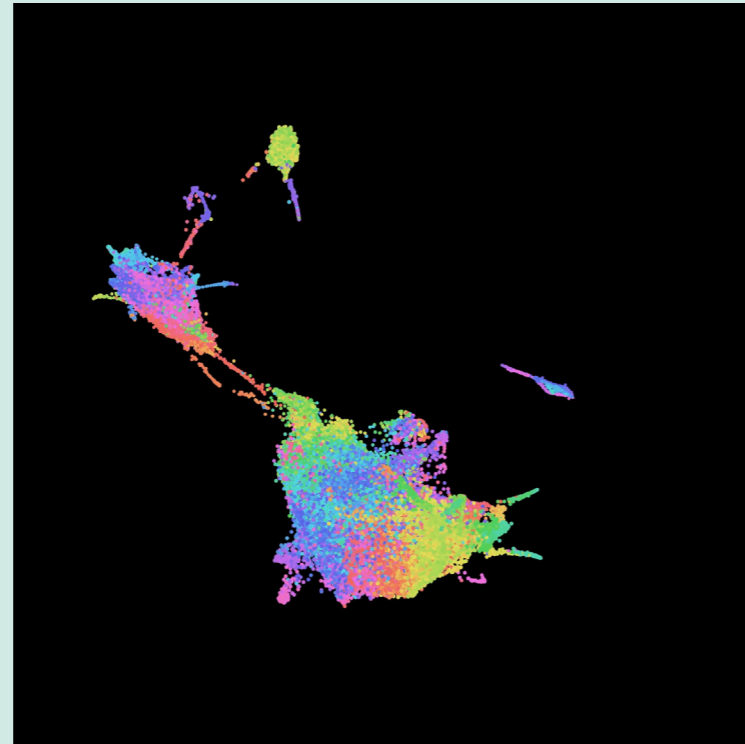
NEW VENTURES

case_1

KISEKI ART

Creating Value through an Artist's Creative Trail

Wacom's pen tablets provide creators with an important tool for giving shape to the ideas in their heads. One might say that Wacom and its creative users are allies sharing a common purpose. It is precisely this close relationship that has allowed the company to take on its next revolutionary project: KISEKI ART.



Jeff KO
Business Development Manager
Ink Division

The simplest way to describe Wacom is that it is an "instrument provider."

Being an instrument provider is about directly contributing to the process in which creators push their imaginations towards greater heights to produce something entirely new. So it only makes sense for Wacom itself to serve as a launch pad for new ideas and experiences that no one has ever thought of. This brings us to KISEKI ART, a project that was launched in 2021.

"We have developed the technology to visualize the entire creative process," says Wacom President and CEO Nobutaka Ide (Nobu). "This means the output of a digital pen is no longer just the physical line. It also includes information on the time, place, context, and other data related to that single line. If we can incorporate this additional information into experiences that benefit the user, it could be huge."

A major element of this system is WILL, Wacom's technology for displaying and saving digital ink data.

It allows us to record an artist's data on aspects such as pen pressure, angle, speed, strokes, and history of corrections—the entire creative trail ("KISEKI" means "trail" in Japanese).

"With KISEKI, every data related to creative work can be collected as RAW data," explains Jeff Ko, a business development manager at the Ink Division. "If we can develop a way for an AI to transform this data into a form of visual expression such as "Emon," we could provide a service that visualizes the background and story behind a creative work." Currently, Wacom is collaborating with Preferred Networks—whose AI development is widely renowned—and Celsys—a company that supports creators around the world with its illustration and animation production app—to explore the infinite possibilities of such a "trail."

Although KISEKI initially started as a way to give something back to creators, the user tests and other phases of the project have inspired new business ideas. "One of these is an education program for budding

animators," says Ko. "The Japanese anime industry is finding it difficult to ensure that the experience of veteran animators is properly shared with and handed down to younger animators. KISEKI could prove useful in developing a solution."

It has been two years since the project was launched. Ko's focus for now is brushing up the technology so it can be incorporated into marketable services and solutions. What will the eventual visualizations look like? One factor that is likely to determine the answer is Ko's own hopes for the project.

"Whatever form the output takes, as long as it's a service that would have made me jump for joy fifteen years ago when I first started drawing, I'll be happy," he says. "At the same time, one thing that I'm constantly thinking about is how to create a service that truly supports today's creators—the people who draw every day, some of whom are my friends."

KISEKI promises to be an exciting development in the coming years.

Even within the rapidly evolving field of technology, Web3 has managed to stand out. Web3 envisions an internet where individuals can interact directly with each other instead of via a centralized social networking service or other platform. For example, an artist wanting to provide someone with a license for their digital artwork generally needs to conduct the transaction via an asset store or other platform. With Web3, the artist can theoretically provide this license directly.

However, such peer-to-peer transactions pose potential problems in relation to authenticity and history. Who's to say that the party offering a license for an artwork didn't steal the work from the actual artist? To mitigate such problems, Wacom is developing a service that would allow users to use reliable artist ID data to manage a work's rights and licensing (can be applied to joint projects too). It is called Wacom Yuify.

"The project started as a way to help protect the unique attributes and rights of an artwork using (tamper-proof) blockchain technology, which is already used widely in Web3," says Ryoji Ishii, a Wacom Yuify project manager. "This service will allow users to license artworks directly to other users or to manage collaborative

projects so that there is a record of who contributed what part to the project."

The service will use Wacom technology to assign a unique ID to each artwork and embed the ID into the work's data in the form of "micromarks," a type of digital watermark. Wherever the work is presented, anyone will be able to read the micromark so they can access the record of creation, rights information, licensing conditions, and other information related to the work.

"Digital data is easy to copy, which I think is actually a good thing," says Ishii. "But with Wacom Yuify, we're trying to realize that while digital art can be replicated in the form of visually identical copies, its value lies not in its appearance but in the data, which is inextricably linked with the work's originality and background—the artist's own story."

Although Wacom Yuify has been positioned as a trial to offer creator's ecosystem, Ishii says the service has the potential to create new business opportunities for Wacom as well.

"Wacom Yuify could help us set foot in businesses where we haven't established a presence yet," he says. "Companies that share this vision and feel a sense of synergy with us may feel encouraged to work with us to

expand the scope of our business. That kind of expansion could enhance Wacom Yuify's position within the company and among our investors as key for moving into new areas and growing our business there."

Currently, a diverse taskforce from all across Wacom—engineers, designers, and marketers, as well as team members working in business development, customer service, finance, and legal—is working on Wacom Yuify for its first release sometime in 2023.

case_2

Wacom Yuify

A new ecosystem for protecting the rights of digital creators

Web3 is rapidly expanding the possibilities in the digital realm, making it more important than ever to develop a system for protecting the rights of digital creators. Wacom has been aggressively working on a service, Wacom Yuify, that could greatly contribute to such a system.



Ryoji ISHII
Project Manager
Wacom Yuify

