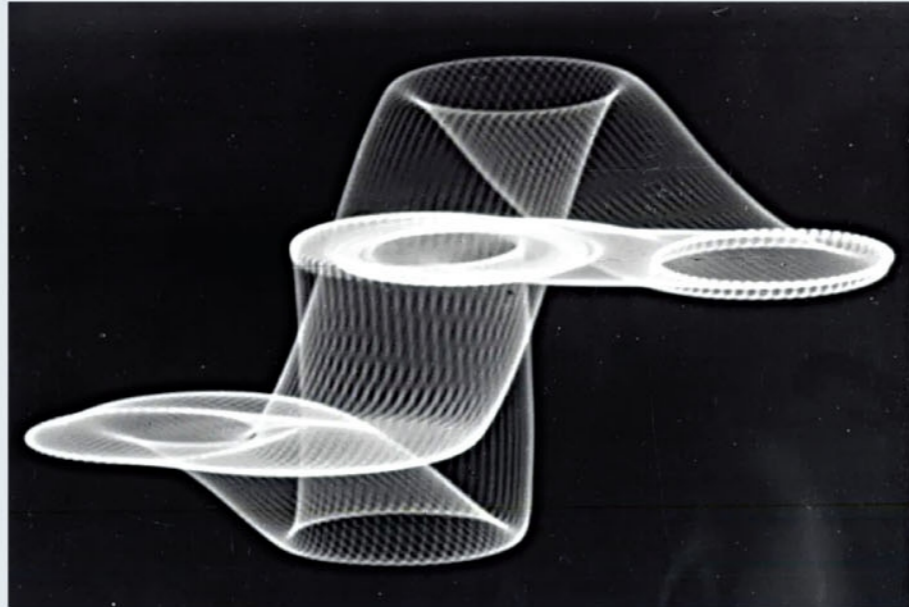


## Digital Art is taking root

Philipp Grieb

Mankind has invented many techniques to represent knowledge, experiences and ideas in a creative visual way. From cave paintings to photography, film and television, a variety of visual art practices emerged and came to coexist. Digital media joined them over the past decades. They are here to stay and will increasingly occupy broader space.

The rapid progress of digital technology was fueled by business and industry, whose products not only became better and smarter. They came to market in ever-shorter development cycles. Graphics-capable computer systems were first developed for engineers and scientists to visualize complex calculations and their results. As early as the 1960s, the aesthetics of



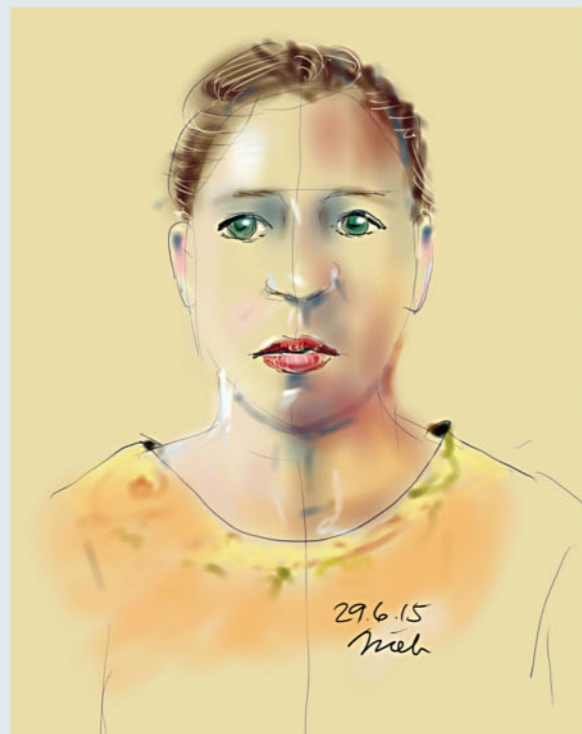
Early computer-generated art by Herbert W Franke 1962

visualizations of mathematical algorithms caught the interest of creative minds. It wasn't until the 1980s that there were graphics-capable solutions for designers, graphic artists and illustrators to draw, sketch and design directly on a computer.

Today, we use handy smartphones or tablet computers with convenient usability and a wealth of functions. The displays of these devices are touch-sensitive. Creative people install a graphics app, a program that allows them to paint and draw, almost as they would do on a sheet of paper. Great apps are even available for free. The software provides an unlimited number of colors, pens, brushes, ink

pens, erasers, and other tools that a professional graphic artist, illustrator, or designer would dream of having at his or her workplace. The graphics apps offer the option to work with transparent layers. That allows separating parts of the illustration for reuse, to manipulate, transform or duplicate. Beginners may start on smartphone and move to a tablet as their aspirations grow. However, the professional will switch to a larger and more expensive version of a tablet computer for intense daily work.

After a practice phase, a skilled draftsman, painter or designer can continue to work digitally almost identically as on paper. Young people learn to use the new tools quickly. Older people may need more time to make the transition. Drawing skills that a young student lacks, however, can compensate for the longer phase of acquainting oneself with the new system.



Digital sketch on tablet by Philipp Grieb 2015

For professional designers or illustrators involved in larger projects within teams, a sound proficiency in the new digital design tools is an important requirement today. Collaboration, often over long distances, relies on digital communication and digital formats of designs and sketches. Industrial designers, architects, fashion designers, illustrators in the advertising, film or games industry are working with graphics software that requires craftsmanship and creativity. Art colleges are increasingly offering training programs and courses to meet these demands. Digital designers have found their way into art colleges as teachers, applying their skills artistically and creatively. They combine digital design experience and free art, collaborating with sculptors, illustrators, graphic designers, and passing on their skills in hands-on courses where digital practice is in demand. Meanwhile, mastery of 3D design systems is required in many disciplines. The third dimension opens up virtual modeling of spatial art objects and sculptures.

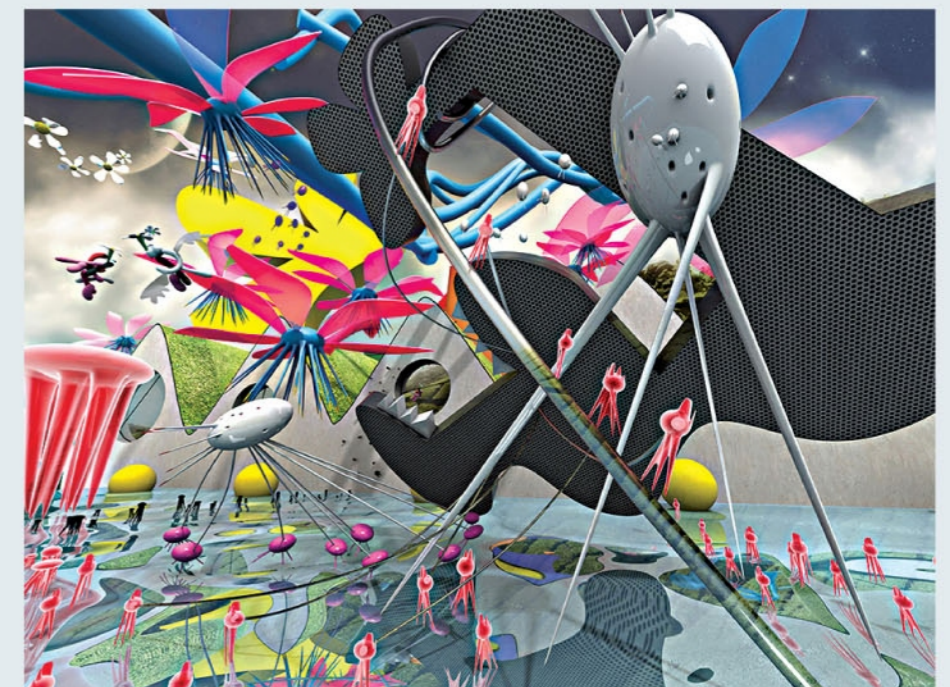
In the pandemic, schools and universities in Germany have switched to online education within a short period of time. Supported by government, teachers and parents, systems and software have been installed to facilitate remote teaching. Digital media in education suddenly received considerable attention and promotion. Increasingly, students own tablet computers, which are well suited for creative graphic works. Students and teachers are discovering the creative capabilities of their digital tools for art courses in secondary schools.



Digital concept art for 3D movie by David Revoy 2009

This year, a news story received high media attention: a digital artwork certified with a digital non-fungible token (NFT, a new crypto-technology) was sold by auction house Christie's for \$69 million. Established auction houses and galleries are already trading with digital crypto-currencies and NFTs. But there is harsh criticism of the

energy consumption in mining, especially of bitcoins, the contractual security when using NFTs is discussed by experts, and governments also have objections. It seems that the last word has not yet been spoken.



Surreal 3D design by Stepan Ryabchenko 2010