Paragraph 1 – About the Artist

Casey Reas is an American artist, educator, and programmer best known as one of the co-creators of Processing, a flexible software sketchbook and language for visual arts. Born in 1972, Reas studied at the MIT Media Lab under John Maeda, another influential figure in design and computation. Reas's work sits at the intersection of software and visual expression, where he explores how code can act as a medium for artistic creation. He is widely recognized for pioneering what is now commonly referred to as "software art" or "generative art"—forms of digital artwork that use algorithms to generate visual output. As an educator at UCLA's Department of Design Media Arts, he has significantly contributed to shaping the next generation of media artists. His work is conceptually rich, often referencing historical art movements such as conceptualism and minimalism, while using modern computational techniques to reinterpret those ideas. What makes Reas particularly significant in the field of new media is how he merges artistic intent with computational logic. His code-based approach challenges the traditional notions of authorship and material, raising philosophical questions about creativity and automation. Reas doesn't just use code to simulate or illustrate ideas—he uses it to **instantiate** them, allowing the software itself to behave like an active participant in the creative process. His influence is far-reaching, especially among young artists and designers who use Processing as a gateway into creative coding. In many ways, Reas has democratized creative technology, making it more accessible and integrated into both academia and DIY culture. His contributions extend beyond his personal work; the Processing community he helped build continues to inspire countless artists and programmers around the world.

Paragraph 2 – Analysis of *Software Structures*

One of Casey Reas's most influential works is *Software Structures* (2004), a project that pays homage to conceptual artist Sol LeWitt while reimagining how instructions can generate visual forms through code. In this work, Reas wrote software programs based on textual instructions, similar to how LeWitt used written guidelines to direct others in executing his wall drawings. Each "structure" is a unique system that produces evolving visuals, where no two outputs are exactly the same, yet they all follow the same underlying logic. What makes *Software Structures* fascinating is how it invites the viewer to reflect on the role of the artist in digital creation. Instead of producing a static image, Reas provides a system—a set of generative rules written in code—that continuously creates visual variations. This approach challenges the conventional art object, transforming art into an ongoing process rather than a final product. Visually, the works are often abstract, composed of geometric forms that shift, interact, and evolve in real-time. Behind the scenes, the visual outcome is dictated by algorithmic logic,

randomness, and interaction between elements defined in the code. Reas intentionally obscures the complexity of the code in favor of visual immediacy, allowing audiences to engage with the piece even without programming knowledge. Conceptually, *Software Structures* bridges the gap between conceptual art and generative aesthetics. It also questions authorship—who is the creator: Reas, the code, or the machine? This work exemplifies Reas's larger philosophy: that code can be both an expressive tool and a conceptual framework. *Software Structures* is not only an artwork but also a statement on the potential of software to be a medium of thought, not just utility. It remains a seminal piece in the world of algorithmic art and continues to influence digital artists who seek to fuse logic with beauty.

Link: Casey Reas: Software Structures | Whitney Museum of American Art

Paragraph 1 – About the Artist

Manfred Mohr is a German-born digital artist and one of the earliest pioneers of algorithmic and generative art. Born in 1938, he began his artistic career as a jazz musician and abstract painter before transitioning into computer-based art in the late 1960s. Deeply influenced by concrete art and the compositional structures of music, Mohr found in algorithms a new language for artistic expression. His encounter with the writings of philosopher Max Bense—who promoted a rational and information-theoretical approach to aesthetics—was pivotal in shaping his conceptual foundation. Mohr began using algorithms and computer programming to generate artworks, a radical departure from the expressive, emotional tendencies of traditional painting at the time. By doing so, he reframed art-making as a process rooted in logic, rule-based systems, and the abstraction of visual space. His works often explore permutations within geometric structures, such as the cube and the hypercube, aiming to reveal hidden aesthetic potential in mathematical relationships. Mohr's contributions are especially significant because he began this line of work at a time when access to computers was extremely limited, and digital art was not yet recognized within mainstream institutions. Over the decades, he has remained committed to algorithmic abstraction, using evolving technologies to deepen his exploration of visual systems. His consistent engagement with non-representational forms and computational processes has positioned him as a foundational figure in digital and generative art history. Mohr's influence continues to be felt not only through his prolific body of work but also through the theoretical questions he raises about authorship, control, and the role of randomness in artistic practice.

Paragraph 2 – Analysis of *P-511/D*

One of Manfred Mohr's most iconic and intellectually rigorous pieces is *P-511/D* (2002), part of a broader series exploring the four-dimensional hypercube, or tesseract. In this work, Mohr uses a custom algorithm to generate complex, abstract compositions derived from the projection of a six-dimensional cube (6-D hypercube) onto a two-dimensional plane. The project represents a remarkable confluence of advanced mathematics, computer science, and minimalist aesthetics. At first glance, the piece appears as a collection of intricate black-and-white line structures, but beneath this visual simplicity lies a profound conceptual framework. The visual elements are generated through systematic traversal and slicing of the 6-D cube's structure, creating dynamic, yet non-representational forms that evolve across the series. Each output is the result of a deterministic system governed by the artist's algorithm, reinforcing Mohr's belief in the creative potential of logical processes. What is compelling about *P-511/D* is how it transcends its computational origins to become a meditative exploration of structure, order, and visual rhythm. The strict adherence to mathematical logic contrasts with the expressive openness of traditional art, offering instead a machine-like objectivity that invites contemplation. However, the emotional impact is not lost; the interplay of lines, densities, and spatial relationships evokes a sense of elegance and wonder. The piece is also a testament to Mohr's long-standing practice of reducing aesthetic decisions to algorithms, thereby decentralizing the artist's ego in the creative process. By removing intuitive gesture, Mohr invites the viewer to engage with the underlying systems that generate beauty, offering a different kind of authorship—one shared between human intention and machine execution. *P-511/D* is both visually striking and conceptually rich, serving as a landmark in the history of generative art and a powerful example of how computation can serve as a vehicle for philosophical inquiry and aesthetic innovation.

Link: Manfred Mohr P-511/D from Half Planes at the Digital Art Museum