



Left and detail: Dan Goods, Nik Hafermaas, and Aaron Koblin, *eCLOUD*, 2010. Electrically switchable laminated Plexiglas, custom software, and data supplied by NOAA, 16 x 108 x 12 ft.

the Gorbet+Banerjee team that created several artworks and established the support systems. Team members Matt Gorbet and Susan L.K. Gorbet—artists whose work incorporates high-tech elements and interactivity—collaborated with Banny Banerjee, a mechanical engineer, designer, and artist. Their plan provides physical infrastructure, a technological foundation of data feeds and monitoring software, and personnel to oversee and document the work. Other artists responded to a request for qualifications to create the airport's inaugural pieces, inspired by the romance of travel, the discomforts of flying, and the technology industry that defines Silicon Valley.

In the concourse, Dan Goods, Nik Hafermaas, and Aaron Koblin's peaceful and meditative *eCLOUD* represents travel with an intriguingly poetic metaphor. According to Goods, "We were all enamored by the movement and behavior of clouds. We thought it would be wonderful to create a 'cloud' that would 'travel' between cities...to see what the weather was like." The team brought different perspectives from their day jobs—Goods is a visual strategist for NASA's jet propulsion laboratory, Hafermaas is the dean of education at Art Center College of Design, and Koblin works for Google's Data Arts Team. They soon hit on the material that gives *eCLOUD* its simple clarity: liquid-crystal Plexiglas whose natural white opacity vanishes into transparency with an electric charge.

More than 2,000 hanging squares of this material act as "pixels" for the software, which translates current weather data into a program that turns each square white or clear. The resulting airy profusion diffuses light from the overhead skylight and simulates weather conditions ranging from heavy clouds to peaceful breezes. The display accesses data from 100 cities worldwide, with 19 in rotation at any given

time, for 20-second intervals each. The software ensures that the "most interesting weather" is showcased and that "no two cities in a row have the same weather." A nearby display kiosk identifies the current city (detailing its weather conditions) and illustrates how the weather is translated into *eCLOUD*'s visual rendering. Goods says, "Our desire was to create a piece that was soothing and aesthetically beautiful, as airports can be tiring and visually chaotic places. If people have the time and are drawn in, they discover what drives the patterns."

The almost cheery quality of Björn Schülke's futuristic *Space Observer* on the mezzanine level of Terminal B belies a serious consideration of surveillance. Towering above passersby, the three-legged, sci-fi creature is equipped with several accessories: motion sensors and video cameras, spinning propellers, and two monitors that play captured imagery back to the viewers who double as its subjects. Schülke notes how "in the last couple of years, surveillance has emerged as a key idea in the conversation of what is public and private in our society. What type of monitoring is necessary? What is excessive? Does the data collected really help us?" His work is intended "to open a space where these questions about technology can be asked."

Space Observer took about two years to create, and Schülke collaborated with a boat builder to fabricate its large body. He says, "I have always loved machines and been fascinated by their moving parts. Seeing Jean Tinguely's kinetic absurdist machines...had a strong impact on me." The 8.5-meter-high *Space Observer* reflects this interest and adds an ominous undertone, particularly in an airport where everyone is already hyper-aware of scrutiny. Schülke hopes that people will be conscious of the observer's reactions: "It can recognize you and detect your movement, setting off a trigger of kinetic responses—kind of like a conversation or dance."

In addition to planning, Gorbet+Banerjee created several "pilot artworks to show-

ART + TECHNOLOGY

San José, CA

The San José Public Art Program has taken an innovative approach to commissioning artwork for the city's new Norman Y. Mineta International Airport. Envisioning a program of flexible, technology-related artworks—some permanent and some on view for two years—the agency first selected an "Art Activation Team" to take the lead in defining spaces for art and establishing a technological infrastructure. "We considered the project a collaboration with the future," says Matt Gorbet, a member of



Above and detail: Banny Banerjee, Matt Gorbet, Susan L.K. Gorbet, and Margaret Orth, *Chronos and Kairos*, 2010. Aluminum, custom mechanics, woven nylon, Teflon-coated stainless steel, SmartMotors, computer, and custom software, 19.5 x 9.4 x 30.4 ft. Below: Björn Schülke, *Space Observer*, 2010. GFK composite, steel, aluminum, electronics, motors, LCD screens, and cameras, 8.5 x 10 meters diameter.

case and test aspects of the infrastructure,” Matt Gorbet says. Artist Margaret Orth collaborated on *Chronos and Kairos*, which involves five curving rows of identical, kinetic objects hanging from the ceiling above Gate 19. Each oblong shape can split into halves that fold and unfold in simple curling motions. Like the pixels in *eCLOUD*, the “nodes” in *Chronos and Kairos* are programmed to work in unison. Their two main cycles explore different ways to perceive time: in one, they count like an abacus, and in the other, they ripple and “breathe” together, sometimes in response to motion sensors monitoring people below. Orth says that her previous programmable artworks were motivated by an interest in “the infinite variety of possible states,” but she now believes that “the artist’s job [is] to use software to explore the possibilities of a work’s behavior and select what it does well...Viewers watch ‘still’ art, like painting and sculpture, for a long time, finding new things in it, [and they] can find the new in a piece of programmable art in the same way.”

Another Gorbet+Banerjee project, *Courtesy of Nature*, reflects “on the agricultural past of San José” through embedded screens of light that represent vegetation patterns, while *Convey*, their addition to a baggage-claim carousel, represents travelers’

highly keyed emotions as emoticons. Other artists commissioned through the program include Christian Moeller, SuttonBeresCuller, Camille Utterback, Angela Buenning Filo, Gregory Kucera, Ben Hooker + Shona Kitchen, Bill Fontana, Carlos Pérez/ArtOrigin, and ZERO1. Many works received additional support from corporations with a local presence—Microsoft provided funding for *Space Observer*, the Adobe Foundation for

eCLOUD, and Animatics for *Chronos and Kairos*. The variety of viewpoints in Art + Technology enriches the airport; as Schülke observes, “Airports usually involve a lot of waiting, but I see this as an opportunity to provoke...viewers to consider their attitudes toward machines.” New commissions, says Goods, renew irritable travelers’ “wonder about the enchanting world we live in.”

—Elizabeth Lynch



Juries are convened each month to select works for Commissions. Information on recently completed commissions, along with quality 35mm slides/transparencies or high-resolution digital images (300 dpi at 4 x 5 in. minimum) and an SASE for return of slides, should be sent to: Commissions, Sculpture, 1633 Connecticut Avenue NW, 4th Floor, Washington, DC 20009.