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Exhibits show technological innovations in architecture

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Architecture has always responded quickly to technological change. For instance, the roughly simultaneous development of steel frame construction and the invention of the elevator made the skyscraper possible, which in turn changed the look and function of cities internationally.

Today, the digital revolution is affecting the built environment, transforming building facades into ever-morphing billboards and making formerly static parts of the environment interactive.

Guest curator Jasmin Aber has organized a small but fascinating exhibition for the Sheldon surveying architectural projects using digital technologies by 10 firms, nine European and one American.

The notion of architecture explored here is loose and inclusive: Most of the projects featured are not actually buildings per se, but works of public art, landscape design or signage. Still, there's no denying the impact they are having on the urban environment, a trend that is only certain to spread, potentially transforming our cities.

Until now, you've had to travel to Times Square in New York City, the Strip in Las Vegas or the Ginza in Tokyo to fully experience at architectural scale the empire of signs we now inhabit. The exhibition suggests that in the near future walls of pulsating information energizing the environment might be ubiquitous.

To many that might be a deplorable prospect. Every town a city that never sleeps, night's restful darkness invaded by dancing pixels, could be a formula for a nightmare of universal proportions.

Furthermore, it is irrefutable that most technological intervention in the environment — whether the neon lights of an earlier era or the digitally engineered light and imagery of the present — has been used for advertising. The empire of signs is funded by capitalism in order to sell products consumers

might not actually need.

The Berlin-based firm realities:united addresses that issue in their discussion of BIX, a permanent light and media installation that plays out on the facade of the Kunthaus Graz art museum.

In a videotape that accompanies the installation, Tim Edler, one of two brothers who lead the firm, acknowledges that most media facades are used for commercial purposes, but that fact gives Kunsthhaus Graz the opportunity and the responsibility, he says, to create a new visual language that would be used neither for advertising or as a billboard.

Kunsthhaus Graz, which opened in 2003 in the Austrian city of Graz, is an intoxicating example of how the new technology is affecting design. The building itself, by the British firm Spacelab.UK, is a biomorphic blob that looks like an inflated vinyl pillow with a constellation of weird nipple-like skylights punctuating the roof. Inserted in the building's skin is a matrix of 930 white circular fluorescent lights, each of which is computer controlled and performs like a pixel when activated. The project, the firm stresses, is not a separately mounted video wall, but a kinetic work that is seamlessly integrated into the skin of Kunsthhaus itself. BIX offers the best hope for the future of digitally enhanced architecture.

GreenPix's Zero Energy Media Wall demonstrates that there's nothing wrong with a digital billboard, and that they don't have to feature commercial advertising either. Commissioned by a Chinese company to create a flat-screen facade for an entertainment center in Beijing, the Brooklyn-based firm fulfilled its assignment, creating essentially the first digital art venue in Beijing.

But GreenPix also created an energy system that fuels itself. The curtain wall absorbs solar energy during the day through photovoltaic panels embedded in its surface, which it then releases in the evening for its video programs.

(An explanation about why few of the featured projects are in the United States is suggested by GreenPix's Simone Giostra. In a videotaped interview, Giostra says that in New York, he's always asked about any innovative project, "Have you done this before?" while in China, he's asked "Are you sure that this has never been done before?" One city fears risk, the other values innovation.)

INNOVATION USED IN 'GREEN' BUILDINGS

Although the realities:united BIX project deals with three-dimensional form, most applications of digital design will likely end up, like GreenPix's Zero Energy Media Wall, a form of facadism — innovative facadism, but facadism nonetheless. What goes on behind the wall might be as traditional as a Park Avenue high-rise.

Technological innovation in architecture is not limited to digital interactivity. Among other things, technology is being used to create environmentally friendly "green" buildings that limit waste in their construction and use.

Prefabrication is a dream of a utopian generation that has been given a second life. Among its appeals, prefabrication cuts construction costs.

Missouri-based Rocio Romero is one of the leaders in the field. Working out of Perryville, she has created a basic 1,190-square-foot "LV" unit that is affordable and stylish. An LV contains two bedrooms, two baths, a living/dining room and an open kitchen. With one starting at \$35,923, Romero has completed 64 projects in 28 states. (In a telephone interview, Donna Williamson, Romero's sales representative, said that with all costs considered, a buyer could erect an LV in Missouri for \$138,000 to \$150,000.)

The show at Gallery 210 features photos of completed homes and models of the LV unit — LV stands for Laguna Verde, the town in Chile where the prototype was erected — and its several variations. Among them are the 1,453-square-foot LVL (LV Long), the 625-square-foot LVM (the LV Mini) and the LVG (LV Garage).

What's most appealing about the LV is just how, uh, appealing it is. This is no-nonsense modernist design with nothing extraneous. It is about light and space, and you want to move in immediately.

Paul Goldberger, the dean of American architecture critics, praised the LV in *The New Yorker* for its "clarity, simplicity, and grace." In Romero's design, the Corbusian ideal of the home as a "machine for living" is realized but without sacrificing hominess, a fine balance many prominent architects have failed to achieve.

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