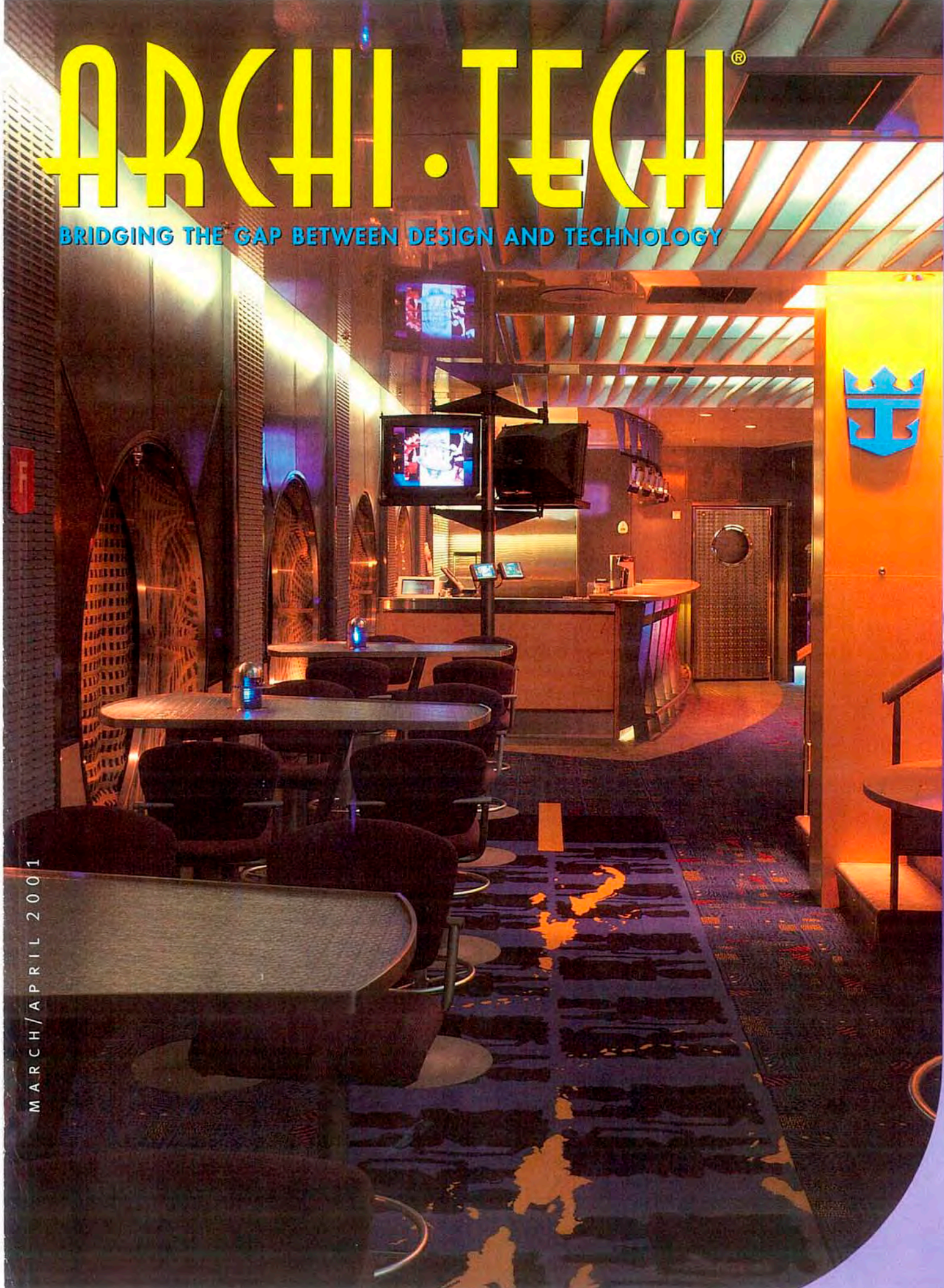


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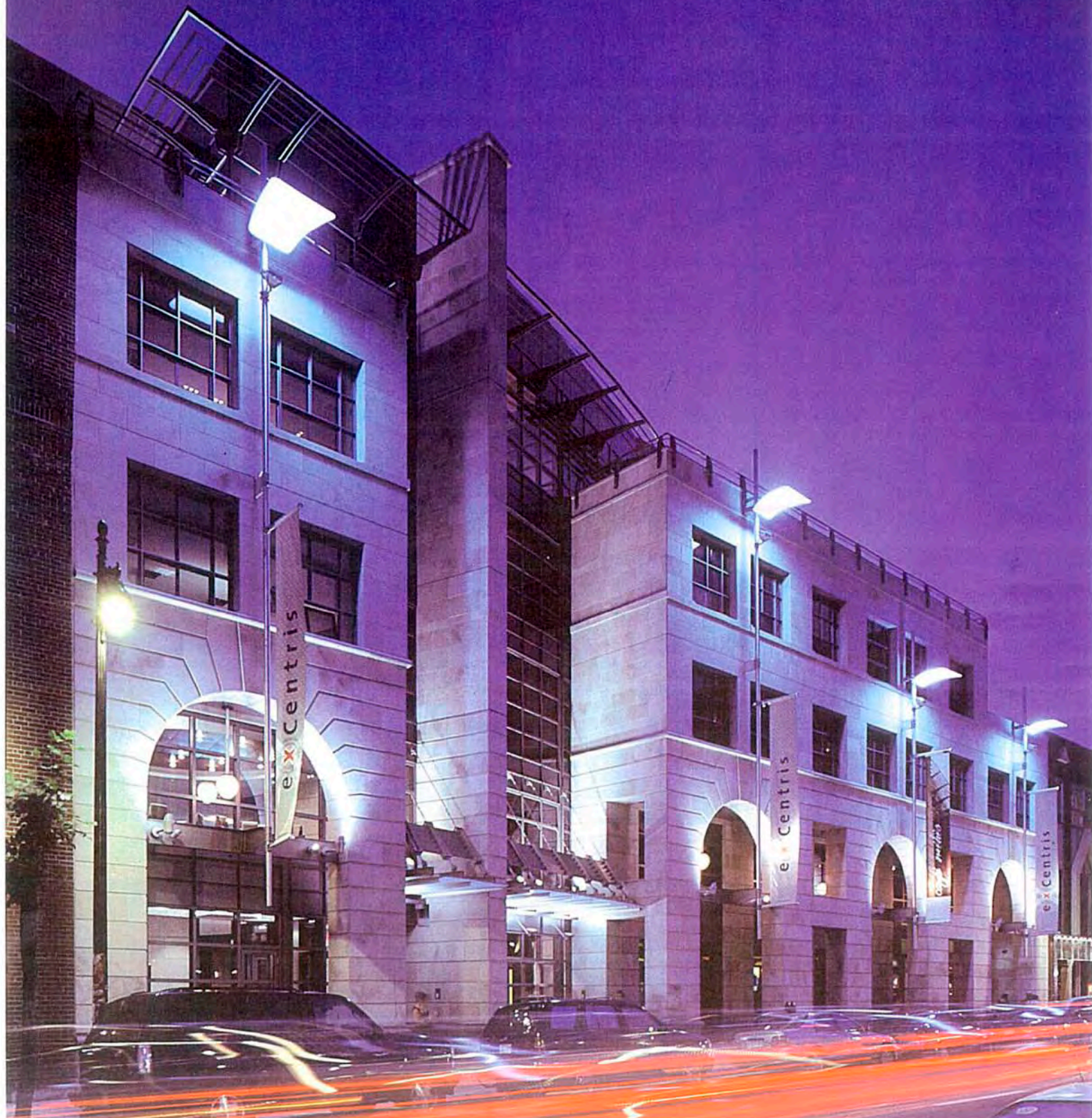
BRIDGING THE GAP BETWEEN DESIGN AND TECHNOLOGY



MARCH/APRIL 2001

Montreal's Ex-Centris

complexe cinématographique et nouveaux médias



By Rhys Phillips

Montreal is the second largest French-speaking city in the world and one of the North America's oldest settlements. It is also a remarkable urbane, cosmopolitan city which is fast emerging as a hub of the information-based New Economy. Recently, Prof. Hervé Fischer, who holds the Daniel Langlois chair in Digital Technology at Concordia University, predicted that the city's lead in digital cinema and its digitally literate workforce could elevate Montreal to be "the next Hollywood."

If so, much of the credit would belong to the man whose endowment pays Fischer's salary — Daniel Langlois — and his unique complex, Ex-Centris. Located on the lively restaurant and club boulevard of Saint-Laurent, known locally as "The Main," Ex-Centris is a state-of-the-art cinema complex whose technologies allow the use of both traditional film and new-media productions, including work which merges recorded work with live performance.

Equally important, Ex-Centris permits post-production work directly onsite and, eventually, centralized distribution of digital films throughout the world by direct transmission. Langlois' cutting-edge complex is also a strong architectural statement, finely attuned to not one but two very different streetscapes. Not coincidentally, a large, government-supported *Cité du Multimédia* complex, a mix of old adapted industrial buildings and strikingly modern additions, is now under way in Montreal, next to the city's delightfully intact Old Town section.

Langlois began work on the design of Ex-Centris in 1997, following his success as the prime creator of the 3-D effects in movies such as *Star Wars (The Phantom Menace)*, *The Matrix*, *Titanic*, *Jurassic Park* and *Twister*. A graduate in design from the Université du Québec à Montréal, he had worked as a film director and animator for both private companies and Canada's National Film Board, as well as working on the first stereoscopic 3-D computer animation in IMAX format. From 1986 to 1998, his firm Softimage Inc. won international recognition for its advanced digital technologies, especially its 3-D computer animation techniques.

With the sale of Softimage to Microsoft's Bill Gates, Langlois focused his attention on what he saw as a the continent-wide and quite catastrophic decline in independent art houses catering to *auteur cinema*. Previously, Montreal's unique culture and linguistic profile had supported no less than twelve such theaters, but the juggernaut of multiplexes catering only to Hollywood's mainstream productions was taking a toll. The art houses that once





been crafted as a series of circles within a square, the center of which is marked by a 50-year-old oak tree.

In summer, underground cabling provides access to a full range of services for showing films outside. With the agreement of Softimage, windows in the old industrial building have been fitted for rear projection, retro images, so that its lower windows can also serve as screens.

Picking up the rich orange clay brick of the original Softimage building, Riopel creates a unified facade along Clark Street but introduces a 24-ft. modular form pattern that mimics that of the houses. The building is set back at its second and fourth story so that its scale appears domestic at street level. Details such as banding, first floor arches, and the use of stone lintels reach back in time, while aluminum paneling, crisp railings, and steel *bris soleils* keep the facade gently modern. The successful tightrope walk between old and new won Langlois and Riopel an "Orange" award from Sauvons Montréal, the city's influential heritage group.

curtain wall

Back on Saint-Laurent, a similar but more muscular harmony takes place. Langlois wanted an image of substance, something that harked back to the institutional presence once achieved by bank buildings. The solution utilized in Ex-Centris' main facade is the no longer uncommon gesture of using a modern curtain wall as a screen from which to extrude elements lifted from older building styles. But here it is done with convincing gusto. The curving glass curtain wall is set well back and rises above the strong steel-and-glass canopy over the entrance until it becomes the sole cladding for the set back fifth floor. A dramatic *bris soleil* provides a crowning detail that caps the building. Two four-story stone volumes marked by two-story arched arcades hold the street line. Both the stone and the arches reflect architectural attributes of Montreal's larger institutional structures.

"Simply put," says Riopel, "we wanted a new facade but one that would recall the great buildings of the city."

But if Ex-Centris is a compatible architectural presence for a great street, how does it live up to its objective of being a center for the new cinema? The first hint comes just inside the door at the two ticket windows. The visitor is confronted by a portal that is in fact a screen. A digital camera mounted on the wall and a microphone in the hanging light fixture sends the purchaser's image and voice to the ticket seller, whose image in turn is projected on the portal screen. The money and the actual tickets,

dotted Saint-Laurent's animated sidewalks, including one right next to Softimage's own offices, had closed.

"Today," Langlois has written, "a clear vision is needed to cultivate *auteur cinema*, promote new-media creations, and foster new digital technologies. Alternatives to the multiplex are essential to halt the move towards a single distribution network, one that shuns truly independent films. And these alternative venues must be of excellent quality if they're to compete with multiplexes and hegemony of American networks."

architectural design

Langlois had the experience and the money to build just such a facility. To realize his goal, he turned to Montreal architect André Riopel (André Riopel + Associés Architectes), who had done extensive interior work on Softimage's offices adjacent to the Ex-Centris site. With a degree in design, however, Langlois remained very much the head of a team that would include Scéno-Plus, Montreal-based specialists in theater design and equipment systems, in charge of the critically important audio/video program.

"There was no written program," says Riopel with a smile. "Instead, Daniel would make changes, add things, take things away as the building took shape. We created as we went along." The five-story, 150,000 sq.-ft. building has two distinct faces: an eastern facade that lines busy Saint-Laurent with its restaurants, bistros, bars, and shops, as well as a western elevation facing onto narrow Clark Street marked by its march of small, picturesque 19th century houses.

To start, the design team angled an enclosed *ruelle* or lane through the full block. The smaller, southern slice created by the lane's angle serves as the office-floor lobby. An elevator to floors above allows access to the northern office sections by bridges that cross back over the lane. At the front of the building, facing out onto the "Main," is the café Méliès, named for the early cinema developer, and Media & Beyond, a boutique carrying sophisticated digital production equipment.

The granite lane, inset with a stainless steel film strip designed by Langlois, serves as the lobby to the complex's three public theaters lined up on the right. On the left, its stone wall detailed "to recall what could have been there before," according to Riopel, gives way to a transparent screen of glass that opens onto a fine, sheltered exterior square. This urban oasis, embraced by the cleaned and deftly re-detailed walls of the Softimage building, has

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SCÉNO-PLUS

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AUDIOVISUAL INTEGRATION

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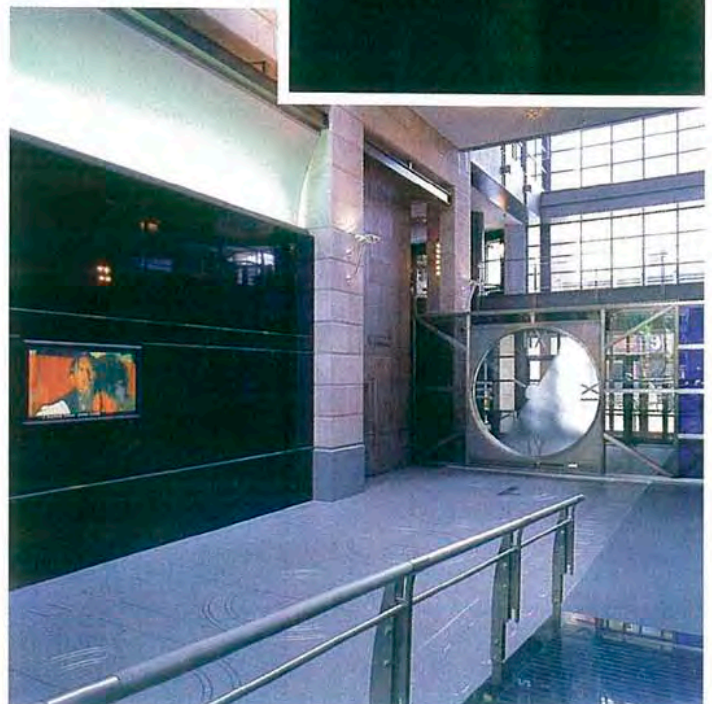
INTERIOR DESIGN

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PHOTOGRAPHY

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though, are exchanged by real hands. Just buying a ticket becomes a performance of real and the virtually real.

The true technical *tour de force* of Langlois' complex lies in the three cinemas: La Parallèle (93 seats), Fellini (188 seats), and Cassavetes (271 Seats). Mounted outside each theater is a large, 52-in. plasma screen running enticing clips of films on view. Inside, Scéno Plus audiovisual engineer Lawrence St. Onge and his colleagues, working closely with Langlois and Riopel, have created carefully calibrated cinema boxes designed to show either film or digital programs in an optimum setting. Two also have the built-in flexibility to accommodate both live and mixed productions.

All three theaters have foot-thick walls of concrete block for acoustic insulation. Under the floor, a concrete vault blocks sound from the complex's 150-car garage while also serving as a key component of the air circulation system. Air is pumped slowly through the vault into

small, perforated metal tubes which vent under the theater seating. This process provides a comfortable micro-climate for each seat and, by avoiding air vents in the ceiling or walls, very low noise levels.

audio performance

The sound system spans three standards: Dolby Digital 5.1, Digital Theater Sound (DTS) 5.1 and Sony Dynamic Digital Sound (SDDS) 7.1. The system also contains a LCS 13.1 multi-point, digital audio matrix used only in avant garde live productions, such as electric acoustic performances, and is currently waiting for the next generation of users to tap into its full potential. Fellini and Cassavetes are each equipped with more than two dozen speakers: five 1200-watt units behind the screen, four subwoofers, and eighteen to twenty 300-watt speakers spread around the room. All back screen speakers are mounted into the wall to avoid reverberation.



"In the end," St. Onge reports, "each of the theaters was analyzed, programmed, and tested as if it were a studio. Everything was aligned electronically to equalize the room to a perfect acoustical space, in phase correlation and time. We weren't aiming at THX standard approval, we wanted to exceed it."



The visual impact of the theaters was given as high a priority as the ability to operate in a wide range of standards. All three theaters are capable of projecting from almost any existing video source, including: BETACAM SP, HDTV, NTSC, PAL, VHS, SVHS, DATA, SXVA, and DVD. Standard film is managed in each theater by two 35mm variable-speed projectors capable of handling all formats, including archival film from the earliest films as well as 16mm optical-magnetic projection. Cassavetes can easily be adapted to 3-D projection.

To avoid distortion, each theater uses a flat screen that is tilted to avoid parallax error or the "keystone" effect. The perforated screens were designed by Lesna of Montreal, which also supplied automated and fully variable masking for all formats.

The three theaters are unique in having their control rooms fully patched together. Thus, there exists a fully integrated audiovisual network, operated by multi-point digital control via touchscreens. Programming of functions such as automatic lighting or audio changes or matrix routing of films, is handled by a Crestron and Dataton control system, with Macintosh G4 computers in each room.

Equally significant is the private post-production room on the fifth floor. The HDTV-capable facility is equipped with state-of-the-art digital equipment including Euphonix System 5, two Protools 24 Mix Plus, JBL 5.1 surround system, and Audio Matrix LCS. The studio is tied back into the theaters below permitting simultaneous viewing/mixing sessions in Cassavetes, a distinct advantage to an editor. (The studio is currently in full use as Langlois works on his full-length, high-definition digital "period piece" movie, *The Baroness and the Pig*.)

alternate spaces

In designing the theaters, Scéno Plus brought extensive experience with transformable theaters, including innovative work in Montreal, Las Vegas, and Orlando for the world-famous Cirque du Soleil. As a result, Ex-Centris' two larger theaters are capable of remarkable transformations. At the touch of a button, the rake of the floor disappears as a piston below descends. Then, the 6-in.-thick acoustic wall panels are winched down to become a raised, flat floor, new emergency stairs appear, and the ventilation system reverses with the air now entering from the ceiling. As the wall speakers fold into the seats under the floor, ten Eastern Acoustics speakers are activated in the ceiling.

The metamorphosis complete, a versatile space emerges that is able to accommodate exhibits, experimental work, including 3-D immersion and projection.

Cassavetes is also capable of significant change, but into a more traditional stage format. Its THX-quality screen and speakers are integrated into a three-ton mobile frame that moves back on tracks (17 feet in two minutes) to create a performance stage. Optional mobile lighting grids provide stage technicians with access to theatrical spots in the ceiling. As the screen remains fully functional, the

converted space is particularly open to mixed live and film productions.

Already Ex-Centris is a major cultural player in Montreal, where it is home to the Montreal International Festival of New Cinema and New Media and *Rien à voir*, an electronic music festival. But to reach its full potential, Langlois wants the complex to be a key production and distribution point of independent films to similar venues around the world. It is fully equipped to transfer transmissions received from digital satellite to a satellite

broadcaster, through its existing fiber optic system.

At this year's Sundance Film Festival, thirty-five digital video films were shown. Even Langlois' old working colleague, George Lucas, is using digital for parts of his upcoming *Star Wars* installment. While Langlois — and Montreal — may be waiting for the cinema world to catch up, change is certainly well on the way. ●



ELECTRONICS

CIRCLE NO. 188

- | | |
|--------------------|----------------------|
| AKG | MICROPHONES |
| BARCO | PROJECTORS |
| BITTREE | CABLING |
| CANARE | CABLING |
| CROWN | AMPLIFIERS |
| DECADE | FM TUNERS |
| DIGITAL PROJECTION | PROJECTORS |
| EAW | LOUDSPEAKERS |
| EIKI | PROJECTORS |
| ELECTROMETAL | CABINETS |
| GENELEC | LOUDSPEAKERS |
| JBL | LOUDSPEAKERS |
| KLARK | EQUALIZERS |
| KODAK | LENSES |
| LEITCH | AMPLIFIERS |
| LEXICON | PROCESSORS |
| MACINTOSH | COMPUTERS |
| MACKIE | CONSOLES |
| MEYER | LOUDSPEAKERS, ETC. |
| OSRAM | LAMPS |
| PANJA | CONTROLS |
| RANE | AMPLIFIERS |
| SENHEISER | MICROPHONES |
| SHURE | MICROPHONES |
| SONY | COMPONENTS |
| SOUNDOLIER | SPEAKERS |
| STRAND | LIGHTING |
| STRONG | PROJECTION EQUIPMENT |
| TANNOY | LOUDSPEAKERS |

