



Second WAVE

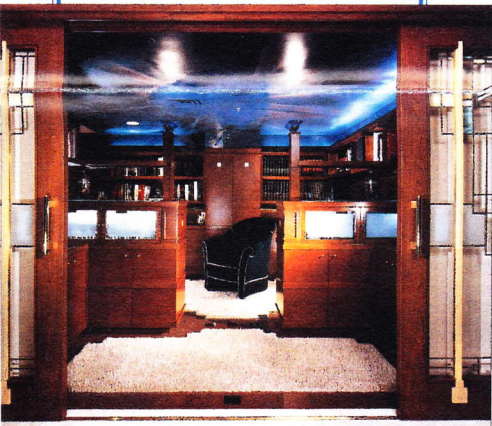
EIGHTH EDITION

THE NEW GENERATION OF COMPOSITE PANEL PRODUCTS

COMPOSITE PANEL SUBSTRATES ALLOW ARCHITECT TO DISPLAY EXOTIC WOODS AND A GREEN CONSCIENCE

How much wood could a wood-loving architect use without engineered wood as a substrate? A lot less than he chooses to is the answer.

Chicago architect Christopher H. Rudolph's residential designs are known for their abundance of wood throughout the home — not only on trim, but on walls, cabinets and other volumetric surfaces. Engineered wood substrates allow the architect to use the rich variety of woods he favors, including a mix of exotic species, in an environmentally responsible manner.



Hand-rubbed cherry veneers over engineered wood substrates create a warm, embracing environment without wasting precious timber.

Rudolph's preference for a profusion of woods is part of a carefully-hewn design philosophy. The work of Rudolph and Associates is notable for its contemporary interpretation of Frank Lloyd Wright's Prairie School style and for its attention to warm, finely-crafted detail.

"Wood is a key element in our firm's designs," Rudolph says. "We use it for color, pattern and durability, but also because wood brings an identifiable natural element into the home, making it an embracing refuge."

"Wood has a warm quality that other materials like stone, glass and metal don't have," he continues. "Wood provides the comfort factor and psychological fulfillment we all need from our sense of home."

Rudolph's residential designs feature a host of veneered woods over engineered wood substrates for practical and ecologically-attuned reasons as well as aesthetic ones.

continued on page 4

MDF and Particleboard Are Cool Players in Hot Toronto Nightclub Scene

No shrinking violet, engineered wood is making the club scene at a Toronto night spot so hot it reportedly turns away 1,600 partygoers every weekend. The popular Government/Warehouse nightclub is a multiplex of hip entertainment rooms, including one with composite panel cubes decked out in bold orange hues.

Each room in the 30,000-square-foot nightclub boasts its own theme. From the feisty neo-60's Orange Room to sleek, Art Deco-style Charlie's to the intimate Moroccan-look Tanja Room, the settings are cued to the musical preferences of the club's diverse patrons.

"We used particleboard and MDF in every room of Government/Warehouse," says architect Alessandro Munge, managing partner of Munge//Leung Design Associates, creators of the club's lively interior space. "We chose particleboard as a substrate for installations such as bars and banquettes, and we selected MDF both as a substrate and as a decorative element to enhance the mood of the space."

MDF stars in popular "Orange Room"

MDF is a key player in one of the club's most colorful, and popular, rooms. In fact, the Orange Room may well be the most recognizable nightclub space in North America since it's also a favorite setting for photo shoots and television and movie production sessions by day.

"The Orange Room," *Canadian Interiors* magazine reported recently, "could be described as Cubism Meets the Sixties, with its huge, open squares stacked like building blocks to form the screens that separate the room from the adjacent hallway, and as shelving behind the bar for bottles. The floating bar is constructed of orange-hued rectangles."

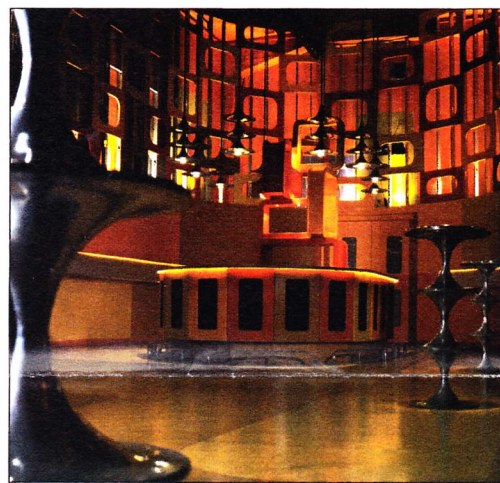
These visually dynamic, multi-purpose cubes and rectangles — the room's key design elements — are constructed of MDF and particleboard.

"The Orange Room is a good example of how the choice of MDF comes down to how you can manipulate the material creatively," Munge explains. "MDF creates a sculptural effect for the back bar, walls, DJ booth and even speaker covers." Particleboard is the substrate for the MDF-clad floating bar.

"With MDF, we can fashion the shapes we want without the expense of laminate, metal or glass," he continues. "And then we can paint these forms any color we wish because of the material's smooth surface and excellent paintability."

In a nightlife setting, details matter less than the overall effect of the environment, according to Munge.

"Vibrant colors are needed in a darker room," he explains. "For example, the look of unfinished MDF can be appreciated in an office, but it wouldn't really be visible in a nightclub atmosphere. In a high-energy setting like the Orange Room, the vivid color on



MDF was chosen for this color-filled club because of its smooth surface and excellent paintability.

the panels comes through, especially with the wild, darting lighting effects created by the room's recessed disco balls."

Durability was another key concern for the people-packed club.

"There's no sense in specifying exotic veneers when the wear and tear of smoke and foot traffic are routine," Munge explains. "Drywall, too, would be quickly damaged from heavy use, but with MDF, there's only scuffing, which can easily be washed down and repainted."

Flexible, economical solution

"I love the flexibility of MDF," he continues. "In the Club's Tanja Room, for example, we used MDF for a series of columns with cut-out forms that reflect a Moroccan feeling. Drywall would have been very difficult to cut into these intricate shapes, but MDF is a very easy material to manipulate and allowed us to create the shapes we envisioned very effectively and inexpensively."

"Every one of our projects — from residential kitchens to retail fashion stores to our own offices — has something made of particleboard and MDF."

Munge adds. "There are no limits to the material, except the limits set by the designer or architect's imagination."

If you'd like further information regarding this article, please contact Munge//Leung Design Associates by phone (416/588-1668) or e-mail (general@mungeleung.com) or visit their website: www.mungeleung.com.

Orange cubes and painted towers fashioned from engineered wood create a visually dynamic effect.



This is not your father's office. Today's dot-com, digital work arenas are shedding yesterday's genteel corporate aura for accouterments more reminiscent of a kindergarten classroom or sleep-over camp than a grown-up work space.

One company features a "playpen" — a brightly colored room set aside for brainstorming sessions. Other start-up ventures with nearly 'round-the-clock hours provide employees with "sleep tents" and satellite rest areas for brief, re-energizing naps. And many a modern office punctuates the work scene with mind-activating games like oversized Tic Tac Toe boards to get employees' creative juices flowing.

It's not all about recess, however. These unconventional methods are part of a tough-minded game plan: companies are designing their offices to attract the young, techno-accomplished work force they need to keep their edge in a competitive, cyber-connected marketplace. Office design is now recognized as an extension of a company's brand image and an effective recruitment tool.

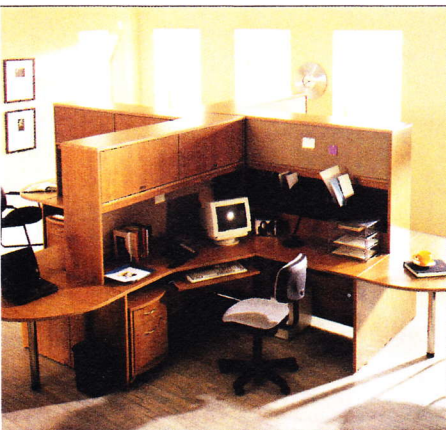
Organic forms and colorful laminate finishes create this engaging sculptural workstation, recently introduced by Haworth.



Composite Panel Products Help Shape Bold New Look Of Today's Cutting-Edge Dot-Com Office Landscape

The hard-charging businesses of the current "dot-economy" are demanding high-style, technologic office set-ups that are not only efficient to install, but can be readily rearranged to meet their fast-changing needs. And furniture manufacturers are responding with a host of flexible, modular designs in a wide range of exciting styles and finishes.

Composite panel products such as particleboard, medium density fiberboard (MDF) and aggrifiber board are vital team players in these hip new office offerings, appearing as mobile desks, files and walls as well as multi-purpose units that are easily regrouped for conferencing or private work spaces.



The versatile Series 3000 collection from Sauder's Office Works line features modular self-partitioning workstations that can be easily reconfigured to accommodate the needs of a growing business.

Sauder Office Works' handsome, high-tech Series 3000 collection, for example, features uncluttered, contemporary lines and versatile styling that allows the pieces to be reconfigured to meet changing workplace demands. The collection's corner workstation, for instance, can stand alone or create multiple work centers without the use of expensive panels or wall dividers.

Laminate finishes easy to match

The sleek Series 3000 collection is offered in an attractive natural cherry laminate finish with a contemporary striped edge treatment. In fact,

laminate finishes are a boon to today's cyber-charged businesses. When a company's growth requires additional furnishings, solid wood finishes can be difficult to match, but laminate finishes guarantee consistency in color and tone, which gives the evolving office a seamless, polished ambience.

In the contemporary techno-centric business world, computers not only rate prime space, but the machines themselves are inspiring furniture designers. For example, Apple Computer's sleek, brightly colored iMac computer has encouraged bolder shapes and colors in office furnishings, industry insiders say. Haworth's "if" collection is a compelling example, with its combination of organic and geometric forms and colorful new surface options.

The "if" line's techno-savvy, human-scaled designs address key workplace issues with a wide range of storage pieces, work tops, tables and screens that can easily be modified to individual needs and quickly moved from space to space. And the collection's work surfaces are designed to rev up the modern office. Dynamic patterned laminates add refreshing visual interest and powder-coated accents in vivid shades of red, green and periwinkle punch up the work area with vibrant color.

Herman Miller's Resolve system is another colorful addition to the modern office landscape, with its orange and yellow office panels in an open, honeycomb shaped environment. The Resolve line also features wide angles and border screens with gaps that create an open feeling and foster collegiality without eliminating a sense of private space.

Wood looks add warm feeling

The look of wood remains a drawing card on the office scene because of its warmth, according to marketers at Gunlocke. The company has begun mixing cherry, maple and beech finishes for an appealing eclectic look and has designed two new collections geared to the tastes and needs of the Gen X/Y employee talent pool. The Shuttle collection is designed to create personalized work areas, and includes a group of modular boxes, accessories, trunks, carts, mobile tables and stools. Gunlocke's Advanced Customer Solutions (ACS) line answers the demand of today's youthful workforce for mobile, multi-purpose furniture by bringing together the image and status of classic case goods with a modern modular system.



Creative Interiors' CreativeWorks collection combines a warm, traditional cherry finish with contemporary nickel hardware and leg treatments for a savvy, go-anywhere office look.

Creative Interiors also caters to the e-commerce work scene with its exuberant new home office collection, CreativeWorks. The shapely desks, returns, storage and entertainment units provide the versatility and flexibility required by the contemporary worker. And the company's rich wood finish combined with stylish nickel hardware treatments fashion a look that's right at home in the hip, youth-oriented office landscape of the 21st century.

The corner office may never be the same, as today's spirited young workers leave their playful, cyber-charged mark on the once-staid business world.

If you'd like further information regarding this article, please contact:

- www.Gunlocke.com
- www.Haworth.com
- www.HermanMiller.com
- www.SauderOfficeWorks.com
- www.Thomasville.com (for Creative Interiors)

INDUSTRY UPDATE

Ample Supply, Strong Acceptance

Look around your home and chances are you're looking at a door or cabinet made with MDF. How about the desk in your office? The floor in your foyer? Chances are also good that they are made with industrial-grade particleboard, MDF or other engineered wood products.

The success of engineered wood — and composite panels in particular — is no accident. Specifiers cite consistent quality, reasonable cost, design flexibility and innovative finishes as the top reasons why panel products are so popular. In the US and Canada alone there are some 75 plants making the two most common types of composite panels — MDF and particleboard. Market demand pushed production up nearly 8 percent last year, and the 2001 outlook is for ample supply, moderate cost and still broader market acceptance.

Best of all, in our increasingly "green" world the use of engineered wood makes optimal use of natural resources by taking byproducts — typically chips, sawdust and planer shavings from the lumber and plywood manufacturing process, and more recently agricultural and post-consumer residuals — and turning them into high quality panels used in some of the most demanding and high end applications. Home and office furniture, along with kitchen and bath cabinets, are still the dominant users of composite panels, but the fastest growth markets are those in the architectural and construction arena. These include moulding, millwork, doors, laminate flooring and a variety of commercial applications.

For more information on composite panel demand, plant capacities and downstream markets, contact the Composite Panel Association at (301) 670-0604 or info@pbmdf.com.

PICTURE THIS:

Large-Scale Decorative Oval Frames Rely on MDF

It's a frame-up: Medium density fiberboard (MDF) has been caught once again solving an application problem for a manufacturer. This time, the versatile engineered wood product is helping an upscale frame manufacturer create its distinctive line of oval and round frames in large-scale sizes.

Hy-Jo Picture Frames, headquartered in El Cajon, California, designs and manufactures a full range of frame shapes, sizes and styles, and is currently one of the few manufacturers of oval and round frames. "We sell to a very broad customer base, from Mom and Pop craft stores to multi-million dollar mirror manufacturers," says Joe Hayko, president of Hy-Jo.

"We make over two dozen oval and round frame styles out of MDF, from four-inch by five-inch frames all the way to 24-inch by 36-inch frames, as well as custom sizes as large as 40 by 72 inches," Hayko continues. "MDF is attractive to us for several reasons: it's available in large sheets; it machines easily; it has consistency of texture; and it paints extremely well."

MDF is particularly suitable for the company's large-scaled frames.

"MDF panels are ample enough so we do not have to cut and piece the material together," says Hayko. "For example, we can easily cut up one large MDF panel to make a 36-inch by 48-inch oval frame. It's hard to find solid wood panels on the same scale."

Hy-Jo frames are available in a stunning range of designs, and MDF's consistent texture is a boon to creating uniform finishes for a variety of styles.

"Since MDF is a composite board with no grain, it lends itself equally well to all of the finishing techniques we apply to it, including paint, metal leaf and decorative ornamentation," says Kathy Jorgensen, marketing director for Hy-Jo.

"All of our frames are hand-finished, with no machine process involved, not even machine painting," Hayko explains. "Using specialized hand processes that we have perfected over 30 years, we first apply a sealer, then a primer, and then a number of different finishes, using steel wool between each step."



© Hy-Jo Mfg. Imports Corp.

"Making a picture frame is a very complicated procedure, more labor and finish intensive than making a door or door trim, for instance," he continues. "There are typically 10 to 20 steps in our manufacturing process, although we have one frame style that requires 68 steps."

Although Hy-Jo sells open frames exclusively — not matting or glass — the company is well-attuned to ever-changing consumer tastes.

"One overall market trend is towards larger and wider frames," notes Jorgensen. "Very wide frames, in particular, are extremely popular in round, oval, square and rectangular shapes alike. A favorite look right now is to have a wide frame with a small opening for a small image."

"Our best-selling oval frames have some decorative ornamentation on them," she adds.

And according to Jorgensen, people prefer wood and engineered wood over polyurethane in frames. "They feel that a wood-based product produces a better quality frame," she explains.

"MDF is a product that works for us," Hayko says. "There isn't really an alternative product for certain applications."

If you'd like further information regarding this article, please contact Hy-Jo Picture Frames at 619/449-7700, or at hy-jo@pacbell.net.

The Composite Panel Associationsm

The Composite Panel Association (CPA) brings together 35 North American producers of particleboard, medium density fiberboard and other compatible products, representing 92 percent of U.S./Canadian production capacity.

Serving as both industry beacon and advocate, the CPA represents the composite panel/engineered wood industry on technical, environmental, quality assurance and product acceptance issues.

Historically, the Association has been a vital resource for both producers and users of industry products. The CPA, as an ANSI accredited standards developer, writes and publishes industry product standards. It also participates in the standards development work of ASTM and others, sponsors product acceptance activities and works with federal agencies and model building code bodies. In addition, it conducts product-testing and third-party certification programs and helps manufacturers create in-plant quality-control programs.

Outreach and education are also prime goals of the CPA. The association conducts seminars to assist specifiers, manufacturers and other users of composite panels. It produces technical bulletins on installation and usage of particleboard and MDF, and develops publications, videos and other materials to inform key audiences about the attributes of industry products. Current publications include *Particleboard From Start To Finish*, *MDF From Start To Finish*, *ANSI MDF Standard*, *ANSI Particleboard Standard*, *2001 Buyers and Specifiers Guide* and a series of *Technical Bulletins*.

The CPA also supports the Composite Wood Council, which includes in its membership manufacturers, equipment suppliers and panel producers. The mission of the 198-member Council is to communicate the attributes of engineered wood products to a broader audience, including consumers.

WE'D LIKE TO HEAR FROM YOU

We encourage you to contact us with information or leads regarding applications, installations and newsworthy uses of composite panel products by architects, builders and manufacturers. We also invite your queries for further information on any of the companies, products or processes mentioned in our articles, and we'd like to know of others in your company who would like to receive this newsletter twice each year.

USA

Composite Panel Association
18922 Premiere Court
Gaithersburg, MD 20879
Phone 301/670-0604
Fax 301/840-1252

CANADA

Composite Panel Association
1260 Crescent Street
Suite 216
Montreal, Quebec H3G 2A9
Phone 514/878-2883
Fax 514/989-9318

www.pbmdf.com

ARCHITECT DISPLAYS EXOTIC WOODS, GREEN CONSCIENCE (continued from p.1)

"Engineered wood substrates allow us to use woods that we wouldn't be able to use otherwise," Rudolph explains. "It is very difficult to get solids in many woods, and in fact, certain exotic species like rosewood, teaks and ebony are only available in veneers." Veneers are also the only practical means to incorporate visually dynamic patterns like bird's eye and burls, the architect says.

"Engineered wood provides a stable environment for applying veneers," Rudolph says. "For example, if we want a quarter-saw section on a wall panel, we know the repeat flitches won't open up over time when they're applied to an engineered wood substrate.

"Certain designs — such as whole walls of veneers — wouldn't be possible without engineered wood substrates," Rudolph says. "Drywall is boring by itself, and people want more than wood trim in their homes — they want wood on walls, floors and ceilings as well. With the stable substrate of engineered

Rudolph forecasts an increasing use of wood to satisfy consumers' thirst for natural design elements.

wood, we have the vehicle to use wood veneers in an appealing range of applications." The use of engineered wood substrates answers Rudolph's concern about diminishing wood reserves. "The reality is that solids are scarce as well as cost-prohibitive," he says. "The notion that solid wood is better is part of the mind set of some people, but it's not true in many applications."

Rudolph makes a point to mix a variety of woods in his residential designs to reflect the variety of woods in the natural environment. "If you have all one flavor or all one kind of wood, then that wood soon becomes neutral and loses its appeal," he explains. "We need diversity in design, just as in life."

For one exceptionally large Chicago-area home, Rudolph estimates that he used tens of thousands of square feet of wood and engineered wood compared to more typical applications of hundreds of square feet of these products.

"It's a very wood-dense house," he explains, "with lots of finished wood walls, cabinets, ceilings and floors. The project was large enough that we had to use four different mill working companies, three different cabinet companies, a flooring company and several stair makers."

Rudolph uses engineered wood substrates primarily for volumetric elements such as cabinetry and wall panels. "Solids are inappropriate for these uses," he explains, "but MDF substrates play an important role in design components with mass."

Rudolph has a high regard for the Prairie School style of Frank Lloyd Wright. "Wright's use of wood — not only as a building material, but for other tactile rewards — is part of the appeal of his residential designs. When people walk into a Prairie School house, they typically say, 'it feels like home.'"

Seeing wood throughout the home environment is comparable to smelling the aroma of baking bread, according to Rudolph. "Wood paneling can have the same comforting effect, fulfilling a deep psychological need," he says. "It satisfies one of our primal instincts."

Rudolph reports that there is a resurgence in demand for wood in residential designs.

"In the future we will see planes of wood on engineered wood substrates because there is an aesthetic thirst for the use of more wood in the home," the architect notes. "Contemporary homes are mostly drywall and paint because of costs. These houses are bigger, but have no detail. People long for visually exciting rooms, and a warmer, tactile sense of the outdoors."

"No matter what the work environment is like, when people get home they want reminders of the natural world," he says. "It's cyclical: people are seeking the values they experienced in their parents' and grandparents' homes, but not in their own homes."

"Today we are hungry for warmth, detail, and natural materials, and wood is a primary means of achieving that," Rudolph adds. "A house is not a home without wood."

For more information, contact Rudolph & Associates at 773.784.0804 or at rudolph@rudolph-architects.com.

Broadcast, Print Media Praise Engineered Wood

Composite panel products have joined the ranks of media darlings, strutting their stuff for television viewers across the country and continuing to draw raves in the print media nation-wide.

Engineered wood products recently starred in two national network home improvement shows.

For the popular PBS program, "This Old House," host Norm Abram toured Plum Creek Timber Company Ltd. to see how medium density fiberboard (MDF) is manufactured in Montana. The prime time show touted the merits of engineered wood and gave in-depth coverage of product advances.

Discovery Channel's "Michael Holigan's Your New House" showcased MDF doors, with host Steve Easley taking a first-hand look at how they're made at the Supa Doors facility in Texas. Program viewers learned that MDF's dimensional stability, consistency in machining and smooth surface allow door manufacturers tremendous design versatility.

MDF, particleboard and aggrifiber products are also making headlines in the print media. Recent articles ranged from definitions and benefits of composite panel products to splashy installations, reaching 35 million magazine readers and more than 25 million newspaper readers in 2000.

The January issue of influential *House Beautiful* magazine showcased a designer loft with MDF storage walls, and MDF doors and mouldings were featured in the October and November issues of the *Ladies' Home Journal*.

"This Wood Improves On Mother Nature" appeared in September *Houston House & Home* quoting architect Ed Langwith: "MDF is warp-resistant, has no knots, no splits, no waste and when painted gives a smooth surface of exceptional quality . . . And MDF is cost-effective, too."

In another article, *Canadian Homes & Cottages* wrote, "Particleboard, known for its uniform density, high strength and smooth surface, is used in applications such as table tops and dresser side panels, which require strength and durability . . . Because of its distinctive properties, MDF can be precisely machined and routed . . . Its smooth surface is also well suited to the application of wood veneers, laminates and other finishes."

The impressive roster of newspapers that featured some 500 stories on MDF, particleboard and aggrifiber products this past year includes the *Washington Post*, *Los Angeles Times*, *Philadelphia Inquirer*, *Detroit News and Free Press*, *Atlanta Journal-Constitution* and *Des Moines Register*.

Syndicated newspaper writers also sang the praises of composite panel products. According to Universal Press Syndicate writer Michael Walsh, "Much of today's furniture is made with MDF, an extremely hard, strong and durable manufactured material made into panels for the tops, sides, drawers and doors of case goods such as dressers, tables and bookcases . . . Painted, it is indistinguishable from solid wood."

And in defining MDF, syndicated columnist Rita St. Clair told her readers, "Wood fibers are fused with resin to form a highly versatile product that's available in various thicknesses. It can be painted or bonded to plastic laminates, and it's sturdy enough to be used in fabricating furniture and cabinetry. I happen to like the stuff because it is cost-effective and highly versatile."

Strong, durable, versatile, cost-effective — the word is out on composite panel products.



Printed on recycled paper.