

# “Seeing Is Believing”

Over the past several years, a quiet revolution has taken place in visual display marketing. A decade ago, most displays were static, backlit signboards for advertising, informational communication, or point-of-purchase marketing. More recently, advances in interactive technology have driven the rise of more versatile display communication tools – ones that can grab the attention of today’s consumer in far more persuasive ways than traditional print or broadcast media.

This concept of “narrowcasting,” through which businesses can directly program their own multimedia content for informational or marketing purposes, is rapidly gaining favor. For example, according to a 2007 study by Online Testing Exchange, consumers ranked digital signage as more attention-getting than any other advertising tool – and more entertaining than any medium except TV. Even more compelling was a report by Forrester Research, which noted that retailers using in-store digital signage experienced sales increases of 15 to 60 percent.

Because of these compelling trends, investments in new signage technologies have soared. According to InfoTrends, revenue for the North American digital signage industry in 2008 grew nearly 25 percent to \$1.7 billion. Even with a sluggish global economy and decreased media spending in other sectors, industry experts project that sales in this digital display market will grow to between \$4 and \$5 billion by 2011.

While much of the surge in digital signage to date has been in screen sizes of 52 inches or less, a key growth opportunity is in the large screen market (defined as 100 diagonal inches or more). These digital displays can be particularly effective in venues with room to accommodate visual “wow” potential, such as malls, big box retail stores, churches, airports, gaming facilities, museums, sports arenas, university campuses, and hotels and convention centers. In this large display category, where LCD, plasma and LED technologies have significant drawbacks, the CAPTURE™ digital display screen from AccelerOptics LLC uses front projection to deliver dazzling visuals at an affordable total cost.

## **AccelerOptics CAPTURE™ Front Projection Display Changes the Game for Large Screen Digital Signage**

“There’s a strong market perception that all projection technologies create washed-out images, and that the only way to view them is in a dim or dark environment,” says Chris Chinnock, president of Insight Media, a market research, publishing and consulting firm focused on the emerging parts of the display industry. “While that’s a legitimate concern, AccelerOptics will go a long way toward overcoming it once people see a demonstration of the CAPTURE display screen.”

## **CAPTURE: Sharpening the Image of Front Projection**

While front projection is widely regarded as a superior imaging technology for large screen applications, the major downside has been its viewing limitations in bright lighting conditions. Traditional fixed flat screens, while inexpensive and easy to install, cannot reproduce sharp, high-contrast front projection images when placed in spaces with large windows or other secondary light sources. Regular high-gain screens, which typically consist of reflective foil surfaces having light filtering layers, can reduce – but not eliminate – the visual problems created by high ambient light. .

The AccelerOptics technology, on the other hand, is a precision optical surface derived from a military research program. That surface material, applied to a curved screen backing, takes the image energy from a front projection source and tightly reflects it within a defined viewing area yielding uniform luminance throughout. The result is a crisp, consistent image that can be designed to accommodate horizontal viewing angles of up to 150 degrees, and vertical angles of up to 25 degrees. The screen produces no center “hot spots,” and projected images remain brilliant and high contrast even under bright light conditions.

The CAPTURE screen technology, which earned a 2008 DIGI Award for innovation in screen design, will most likely accelerate a front projection market that is already showing strong growth. In the second and third quarters of 2008, worldwide sales of front projection systems rose more than 30 percent over 2007, according to Pacific Media Associates. Much of the increase was in commercial-grade units for digital signage and public venue applications, where projection offers a strong value proposition over other types of displays.

“Projection makes sense when large-form, high resolution images or video is needed, the expense of plasma, LCD or LED is not warranted, or ambient light, viewing angle or distance present a challenge,” says Lyle Bunn, a widely respected digital signage consultant based in Toronto, Ontario. “Recent developments in screen technology, such as the CAPTURE display, enable projection to function as legitimate and spectacular large-area digital signage with eye-popping results.”

## **CAPTURE: The Best Overall Large Screen Solution**

While plasma and LCD flat panel displays work well in smaller applications, AccelerOptics President Paul Eckels says the limitations of those systems multiply exponentially when sized up to screens of 100 inches or more.

“Our CAPTURE technology is not just a game-changer on the viability of front projection, but on the overall affordability of large displays,” he says. “Before we went to market with our large digital display panels, it was clear that only *Fortune 500* firms could afford the existing large size high resolution products. And, even at that price point, those systems had other drawbacks with weight, energy use and ongoing maintenance costs that our technology does not.”

On a variety of measuring sticks, the CAPTURE technology delivers both solid value and exceptional visual results. Consider the following:

**Cost.** The combined cost of a CAPTURE 100 inch diagonal screen and a commercial-grade, multi-lamp projector is three to six times less than single 100-inch plasma or LCD units priced from \$35,000 to \$70,000. While a tiled plasma or LCD array can be constructed for about \$25,000, the seamed bezels and panel-to-panel color differences detract from the overall quality of presentation.

On larger screen sizes, the cost differential rises even more sharply. For example, the pricing for a CAPTURE 200-inch diagonal screen and projector combination is about 15 times lower than a comparably-sized high resolution LED system.

“When seen up close, LED images are very pixilated,” says Bill Yackey, editor of *Digital Signage Today*. “A lot of the newer projectors can now use high-definition resolution, so (large screen) images will be much more impressive on a projection system than on LED.”

**Weight and installation cost.** In addition to unprecedented visual effects, CAPTURE digital display screens are remarkably lightweight. A 100-inch diagonal panel weighs in at just 90 pounds, compared with 400 to 500 pounds for comparably sized plasma or LCD systems.

A 200-inch CAPTURE display, measuring 14.5 feet wide by 8 feet high, is 450 pounds installed. That’s less than one-third the weight of an LED unit. Because of the weight advantage, most CAPTURE screens can be installed with minimal mounting surface reinforcement. Additionally, since the screen receives images from a separate projector source, the installation requires no wiring or cabling.

**Power use and image brightness.** When modern front projection technology is paired with the high reflectivity of the AccelerOptics digital display, the results are simply brilliant. For example, images projected to the CAPTURE 100-inch screen appear twice as bright as those delivered by plasma or LCD displays – without the glare those products experience in strong ambient light conditions. At the same time, the average commercial-grade projector uses half the energy of these flat-panel systems.

“Another great thing about our screen technology is that it’s powerful enough to allow most customers to use less expensive projectors,” says Eckels. “In fact, in many existing projection situations, the user may well be able to cut their lumen output by half while delivering much better results.”

## **CAPTURE: Seeing is Believing**

Over the past year, AccelerOptics has installed several of its innovative digital screens at airports, malls, and large houses of worship. During the 2009 Digital Signage Expo, the company unveiled its new CAPTURE 200-inch display at the main entrance of the Grand Lobby in the Las Vegas Convention Center. For those who hold fast to the idea that projection cannot match plasma, LCD or LED technologies for bold, vivid imagery in all light conditions, Eckels says seeing is believing.

“The major argument against projection has always been that it doesn’t look good in high ambient light,” he says. “But the proof of our technology is in the visual experience. Once you’ve seen it, you’ll never think about projection the same way again.”

For more details on the CAPTURE display technology, visit AccelerOptics at **Booth 2038** during the Digital Signage Expo, or contact Jenny Brust, business development manager, at 417-237-0905.

**CAPTURE™**  
*Optical Brilliance. Captured.*

