**CHRISTIE®**

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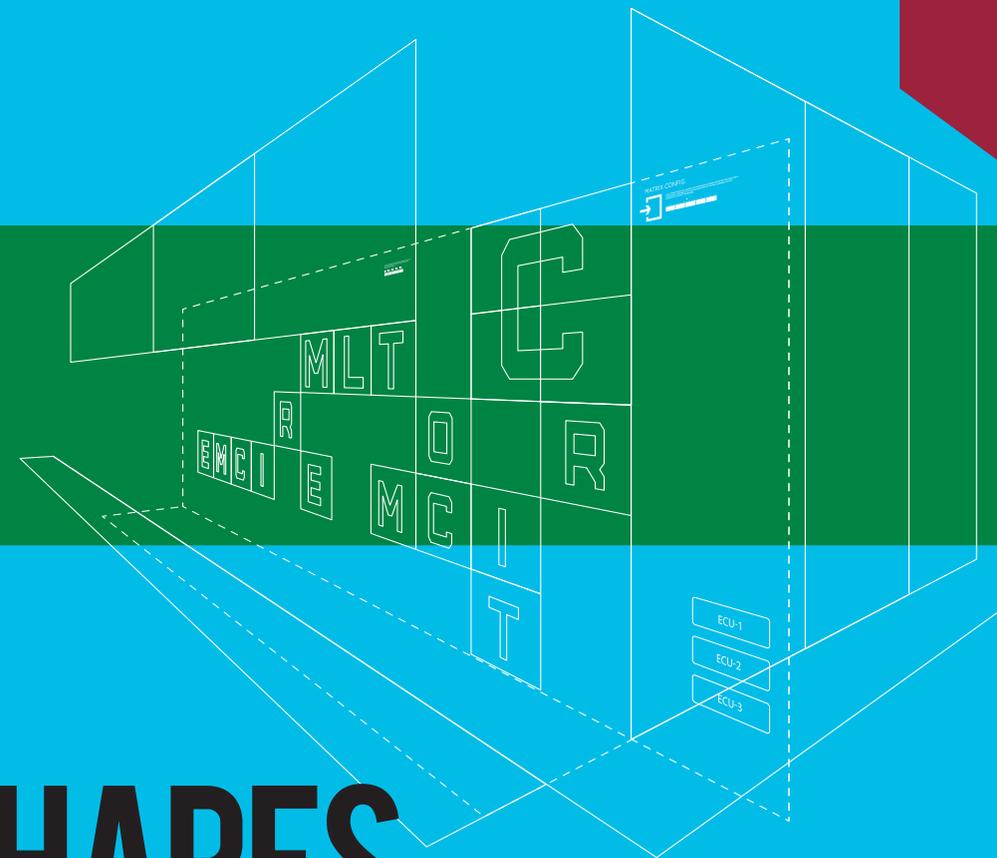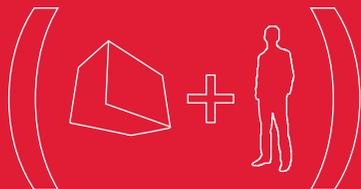
# THEBOOKOFSHAPES

INTERNATIONAL DESIGN INSPIRATIONS FEATURING CHRISTIE® MICROTILES®

# THE BOOK OF SHAPES

INTERNATIONAL DESIGN INSPIRATIONS FEATURING CHRISTIE® MICROTILES®

# ACKNOWLEDGMENTS

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# FOREWORD

The world is a riot of different shapes, but we've been viewing it, forever, in the context of rectangles - on everything from TV displays and computer monitors to movie screens and picture frames.

The media and the visuals intended to inform, entertain and excite us all have been heavily defined by the aspect ratios of analog and digital screens. We've been forced, somewhat, to think and create "inside" the box.

We were on a 2005 business trip in Japan, relaxing over a drink, when we came up with the germ of an idea for a digital canvas that wasn't constrained by four corners. Several years later, the idea that turned into MicroTiles has proliferated around the globe.

In some cases, Christie® MicroTiles® walls really are just a richer, brighter and far more pleasing way to do what's become known as video walls. But we've also been seeing some remarkably creative work from architects, retail designers and audio-visual experts who have re-imagined the use of digital displays in public and private spaces.

We're seeing displays in almost chaotic shapes. Others that are highly evocative of the environment and subject, and work where digital imagery is not only the focal point for a space, the displays are entirely part of the structure. MicroTiles are being used as visual building blocks, and the idea of pixels as a building material - making display elements an integral part of a space, as opposed to something outside of the design that's force-fit in.

They're also solving a problem of distance. Often, the largest displays are meant to be viewed from a distance, the gaps between pixels disappearing. With the MicroTiles, viewing distance no longer matters.

Our world should be a digital canvas we can use, without constraints, to illustrate ideas and messages, and excite and energize the people looking on. *The Book of Shapes*, we think, is a stunning reminder of great ideas brought to life, and hopefully an inspiration to anyone wanting to maximize the potential for digital and do something that has a true, lasting impact.

Enjoy.

**Bob Rushby** and **Mike Perkins**
Co-inventors, Christie MicroTiles
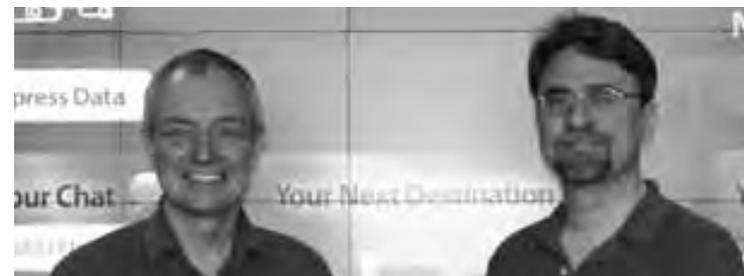
# INTRODUCTION

Give bright minds the tools to be truly creative, to break free from conformity, and the results can be amazing.

We've seen it endlessly with shapes. Materials and processes have allowed buildings to soar impossibly high. Utilitarian objects have become sculpted and beautiful when form was allowed to meet function. So many things that were once big - from telephones to batteries - have grown impossibly thin through micro-engineering and brilliant industrial design.

*I found I could say things with color and shapes that I couldn't say any other way - things I had no words for.*
Artist Georgia O'Keefe

New tools spark fresh ideas about shape. They excite creative minds. They become the agents of change.

We're now seeing that change in the way digital media is finding its way into building environments - from small retail stores to massive public spaces like museums and airports.

Designers have for many years been figuratively stuck in a box … or more accurately the rectangle of TVs and display monitors. The physical and technical properties of conventional displays have invariably compromised design ideas. Digital has been an add-on that tended to distract from the design vision.

## MICROTILES AS CHANGE AGENTS

The introduction of Christie MicroTiles - digital building blocks that can be stacked and clustered in endless ways - has changed all that.

Architects and designers are no longer constrained by where to fit in the rectangles. Abruptly, they've been equipped with technology and tools that put few limits on how motion media can fully be integrated with a designed space.

Done well, digital media in built spaces of any dimension can change the dynamics and make powerful statements. It can set moods. It can be evocative. And it can drive whatever objectives surround the project and design.

## CELEBRATING INNOVATION

*The Book of Shapes* is intended to introduce and celebrate the incredible ideas developed and delivered by architects, interior designers, broadcasters, audio-visual experts, integrators, consultants and creative teams around the globe. As soon as MicroTiles started shipping in late 2009, professionals started scheming in how they could be used in new projects.

The book is highly visual - filled with images showing how the modular displays have been stacked and clustered in dozens of novel ways. Sorted by category, each project comes with a narrative about the origins and goals, and how it was done. It also outlines the key players, and, in easily understood terms, the technical details.

There are amazing projects to read about, like the London Stock Exchange's atrium, the MicroTiles mountain range at the new History Colorado Center and the World of Coca-Cola's interactive wall in Atlanta. Then there are explorations of the possible and probable - where MicroTiles have "disappeared" into walls, been built into furniture, and have radically transformed ideas about retail merchandising and how people shop.

We're also seeing MicroTiles introduce exciting and more practical changes for broadcasters on sets around the world - from game shows in Russia to news programming in Bangladesh.

## JUST THE START

Anything radically new takes time to be adopted and truly understood. Each new MicroTiles project brings ideas - some big, some subtle - that add to the body of knowledge and provide inspiration.

Projects still in the design stages will push the boundaries on how we look at digital media even further. When MicroTiles were first brought on the market, they were introduced with the notion of the built environment being a digital canvas.

We've already seen some stunning work with those canvases, but so many more artists are readying their brushes, excited to create.

Hopefully, this book provides some inspiration for readers.



## MICROTILES+HUMANS = UNLIMITED CREATIVITY
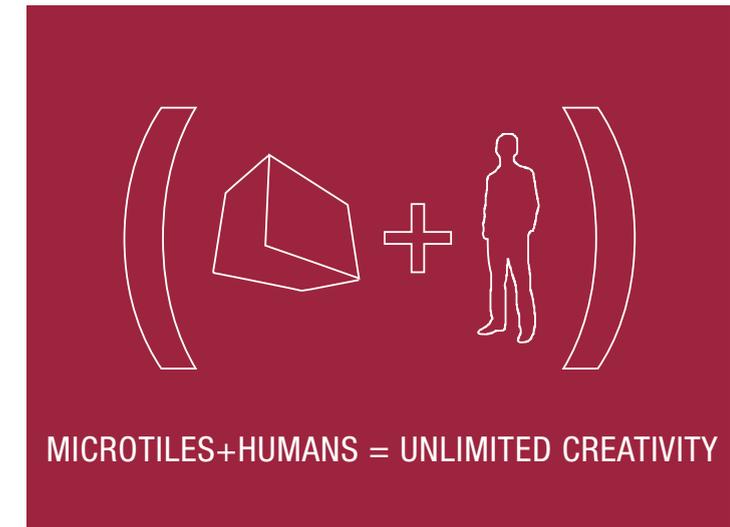
*This icon used on the cover and throughout The Book of Shapes symbolizes how MicroTiles technology, in combination with human creativity, can become powerful digital canvases for audiences around the world.*

# Shapes Around the World

*The Book of Shapes* is about digital creativity from around the globe. It's about decision makers who wanted something different to distinguish their brand, their environment. It's about industry professionals who are committed to innovation and the exploration of new trends in visual communications.

This book presents a selection of the many projects that have been developed worldwide using the Christie MicroTiles technology. They come from different segments of the economy, such as broadcast, retail, higher education, and entertainment.

As an introduction to these case studies, this world map identifies the location of each project.

**CHRISTIE®**
MICROTILES™

## Museums & Entertainment

Nascar Hall of Fame – North Carolina, USA
World of Coca-Cola – Atlanta, USA
TRON: Legacy – Moscow, Russia
Miami Dolphins – Miami, USA
American Museum of Natural History – NYC, USA
Cinemas Guzzo – Montreal, Canada
Church History Museum – Salt Lake City, USA
History Colorado Center – Denver, USA
TELUS Spark – Calgary, Canada

## Events & Shows

Shanghai World Expo 2010, Russia Pavilion – Shanghai, China
2011 Elle Style Awards – Shanghai, China
G8/G20 World Summit – Toronto, Canada
Shanghai World Expo 2010, China Pavilion – Shanghai, China
Audi, Goodwood Festival of Speed – Sussex, UK
Capital Markets Summit – Cape Town, South Africa
International Advertising Association – Moscow, Russia
Scala 2010 Digital Signage Expo – Las Vegas, USA
Australia Day 2011 – London, UK
2010 Milan Design Week – Milan, Italy
Versace Fashion Week 2010 – NYC, USA
International Design Show 2012 – Toronto, Canada
Bruce Weber Launch Party – NYC, USA
2011 TEDx Conference – Waterloo, Canada
Aztec Event Services – London, UK
HTC Product Launch – Dubai, UAE
Armani Hotel – Dubai, UAE
Novartis Oncology – Stockholm, Sweden

## Broadcast Television

Comedy Central: The Colbert Report – NYC, USA
Korean Election 2010 – Seoul, South Korea
100 Years Interview TV Set, NHK – Tokyo, Japan
Cuatro TV – Madrid, Spain
Maasranga TV – Dhaka, Bangladesh
Athena: Goddess of War TV Drama Series – Seoul, South Korea
Bulgaria On Air, MSAT Cable – Sofia, Bulgaria
The 10 Million Show – Moscow, Russia
Attack of The Show – Los Angeles, USA
El Circulo – Madrid, Spain
Global TV Morning Show – Toronto, Canada
NextRadio TV Group, BFM Business – Paris, France
2011 FIVB World Cup Volleyball – Tokyo, Japan
Ikegami Akira's New Year's Eve News Special – Tokyo, Japan

## Retail Environments

New Look – Dublin, Ireland
Kinetetsu Department Store – Abeno, Japan
The Virtual Shelf – NYC, USA
Fresh – NYC, USA

## Higher Education

University of Pennsylvania – Philadelphia, USA
University of Salford – Manchester, UK
Wilfrid Laurier University – Waterloo, Ontario
Perimeter Institute for Theoretical Physics – Waterloo, Ontario
Northern Kentucky University – Kentucky, USA
North Carolina State University – North Carolina, USA
Clarkson University – New York, USA
University of Iowa – Iowa, USA
University of Wisconsin-Madison – Wisconsin, USA
Emory University – Atlanta, USA
Lansing Community College – Michigan, USA
University Of Waterloo – Waterloo, Canada

## Corporate Spaces

London Stock Exchange – London, UK
Deutsche Bank – Hong Kong
Ushio Inc. Headquarters – Tokyo, Japan
Deloitte iZone – London, UK
Telstra Experience Centre – Melbourne, Australia
Unilever – Singapore
China Mobile, Shanxi – Shanghai, China
Incheon International Airport / Yeosu World Expo 2012 – Seoul, South Korea
PZ Cussons – Manchester, UK
The Nielsen Company – Connecticut, USA
SAS – North Carolina, USA

INTERNATIONAL DESIGN INSPIRATIONS FEATURING CHRISTIE MICROTILES

# MUSEUMS
# & ENTERTAINMENT

# NASCAR HALL OF FAME

NORTH CAROLINA, USA

## SHAPE STORY

The NASCAR Hall of Fame's Fan Billboard uses 252 MicroTiles in an 18-tile wide by 14-tile high array (24' x 14') suspended over Glory Road, a section of sloping track in the main hall that shows the progression of NASCAR from its dirt track years to the modern paved speedways of today.

Auto racing fans are amazed by the exhibits and revolutionary AV technology at this 150,000 square-foot interactive, entertainment attraction in downtown Charlotte, NC. Opened on May 11, 2010, the hall gives NASCAR fans a place to learn about stock car racing's long and colorful history and its most celebrated figures. The NASCAR Hall of Fame is owned by the city of Charlotte and operated by the Charlotte Regional Visitors Authority under a license with NASCAR.

The hall's design borrows from the sweeping curves of race tracks. A metallic ribbon runs around the building façade, and carries that design element inside to the expansive four floors of exhibit and attraction space.

MicroTiles addressed the unique design challenges that the soaring heights, curves and glass curtain walls that dominate the venue gave the architects. Stacked and clustered like building blocks, they not only reduced the depth and weight of the Fan Billboard, but also helped lower the overall construction and long-term servicing costs.

The Fan Billboard runs archival footage from the early days of stock car racing, various video and image montages, and an interactive application called the NASCAR Hall of Fame Showdown, which is driven by personalized RFID-embedded entry cards given to every visitor on arrival.

### PROJECT TEAM

Electrosonic
JaffeHolden
Pei Cobb Freed & Partners

### CONFIGURATION

18

14

WELCOME

NASCAR HALL of FAME

FOOD LION

17

Photo courtesy of Second Story
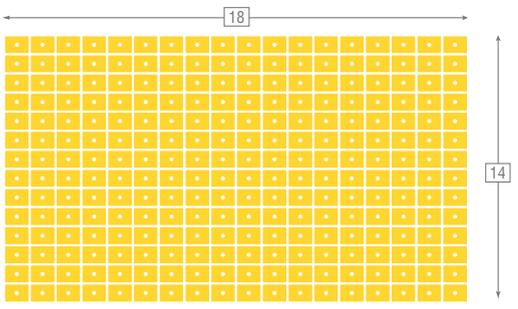
# WORLD OF COCA-COLA - LIVE POSITIVELY®  INTERACTIVE WALL
## ATLANTA, USA

The World of Coca-Cola in Atlanta, Georgia, has a fully immersive wall of 90 MicroTiles that relates to visitors of any age how the company is positively impacting the lives of people and their communities around the globe.

The 6 high by 15 wide Live Positively® Portrait Wall is a feature piece in the atrium of the tourist destination, located right outside the busy 4-D Theater attraction. Interactive depth-sensing cameras built into the display wall recognize and read forms, and respond to gestures, causing flurries of effervescent bubbles and fizzy shapes to appear against the backdrop of a world map.

Sweeping a hand across a region causes graphics and videos to build into view, celebrating people who've taken the initiative to improve lives in their areas with the support of The Coca-Cola Company. The 20-foot wide scale of the display wall, coupled with the gesture sensors, means multiple people can interact simultaneously with Live Positively content.

Located on the mezzanine level of the downtown attraction, the Wall is bathed by sunlight from atrium windows. Using the ultra-bright, saturated color qualities of the MicroTiles ensured Coca-Cola could preserve its brand integrity despite those lighting challenges.

Co-producers for the interactive wall experience included Donna Lawrence Productions for creative direction, digital stories and sound design, as well as Second Story, which was responsible for the interactive design and production.

### PROJECT TEAM

Donna Lawrence Productions
Electrosonic
Second Story

### CONFIGURATION



18
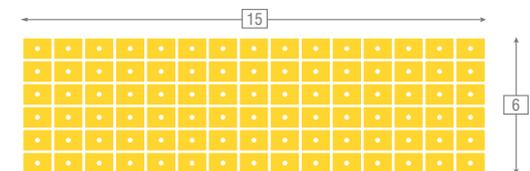
# TRON: LEGACY
## MOSCOW, RUSSIA

### SHAPE STORY

Wanting visual impact and buzz for opening night, the ad agency behind the late 2010 Moscow premiere of Disney's 3D blockbuster "TRON: Legacy" used a uniquely shaped cluster of 41 MicroTiles that ended up doubling as the digital backdrop for paparazzi photos and interviews with celebrities.

Charged with setting a visual mood that matched the highly stylized, futuristic film, the premiere night organizers built an irregular starburst cluster of MicroTiles into a temporary TRON-branded backdrop wall in the cinema lobby, running scenes and soundtrack audio. Three other sets of 1 wide by 6 high were built into temporary frameworks that made the TRON visuals appear part of the ornate theater's support pillars.

The combination of a large, virtually seamless digital canvas, flexibility in shape, light and easy configuration, wide-viewing angles and perfect color reproduction were all cited as reasons why MicroTiles worked, and why the display cubes were expected to have a role in many film premieres to follow.

### PROJECT TEAM

ETC Russia
Sunlight Outdoor

### CONFIGURATION

ACTIVATE MOMENT

TOP 15
DOLPHINS MOMENTS

#7 Playoff
excitement
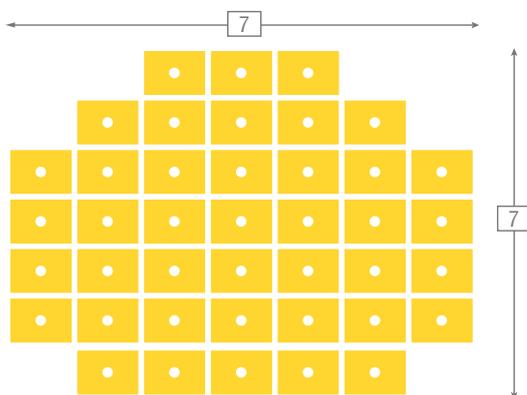
## MIAMI DOLPHINS - SUN LIFE STADIUM
MIAMI, USA
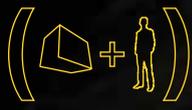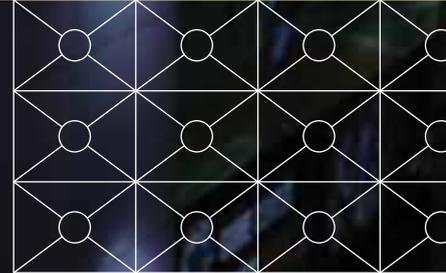
## SHAPE STORY

Miami Dolphins fans were the first in pro sports to see and use an experiential display wall that blended interactivity, mobile texting polls, live video feeds and sponsor branding on a cluster of 42 MicroTiles installed at the famed National Football League's home stadium.

Launched in November 2010 at Miami's Sun Life Stadium, the 13-foot wide, 5-foot high Dolphins Interactive "BuzzWall™" used a cluster of MicroTiles to drive four content zones with motion visuals, immersive technologies, live video feeds, and fan texting polls. Framed by print graphics that blended with the MicroTiles and amplified the visual impact, the wall was a new style of digital destination developed by Arsenal Media and the Miami Dolphins, destined to elevate the fan experience and introduce new sponsor marketing opportunities for the team.

Pro football's Miami Dolphins have a well-earned reputation for effectively integrating new technologies into its business as revenue sources and enhancements to the game-day experience.

Located on the premium club level at the Stadium, the Dolphins BuzzWall drew fans of all ages to fun features like user-selected highlights from the Dolphin's archives, live game feeds, video replays, instant fan texting polls, gesture-based interactivity, sound effects, social media photo galleries, and information about the team's stadium services, entertainment events and community programs.

The Wall is also an important tool for driving incremental marketing opportunities with the team's corporate sponsors, enabling brands to build affinities with fans through dynamic, fun, timely and contextually relevant content. Interactive digital gives the team engaging new ways to connect sponsors with fans, and also provides flexibility to adjust the sponsor marketing focus and content event by event.

## PROJECT TEAM

Arsenal Media Inc.
Float 4 Interactive
Christie Managed Services

## CONFIGURATION

# AMERICAN MUSEUM OF NATURAL HISTORY, ROSE CENTER FOR EARTH AND SPACE
## NEW YORK CITY, USA
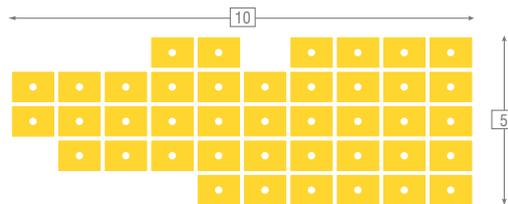
The Rose Center for Earth and Space, part of the famed American Museum of Natural History in New York City, uses a showpiece wall of 80 MicroTiles to powerfully illustrate the nature and evolution of celestial bodies.

The center, home to the Hayden Planetarium, shows in remarkable recorded and computer-generated imaging the processes that led to the creation of the planets, stars, galaxies and universe.

Ten years after the facility first opened in 2000, museum staff wanted to upgrade the AstroBulletin wall in the main Cullman Hall of the Universe from aging rear-projection units to displays most capable of replicating the detail, contrast and depth of color from space imaging.

A major feature of the Rose Center, the AstroBulletin displays the latest images, news, and breaking events from space exploration and astrophysics research in stunning detail. Touch screens at the base of the wall let visitors browse research and news and pose questions.

PROJECT TEAM

Custom Display Solutions
Video Visions
Visual Acuity

CONFIGURATION

# CINEMAS GUZZO
## MONTREAL, CANADA

### SHAPE STORY

The big, powerful visual experience of IMAX®
films starts at the cinema doorway as
Quebec's Cinemas Guzzo regional movie
theater chain uses MicroTiles to create
multimedia archways.

The chain operates a dozen multiplex cinemas in the
greater Montreal area, and in 2012, started using
MicroTiles to build archways at the entry doors to its
IMAX cinemas.

A pair of configurations are used for arrays that are fully
set into the lobby design - a 42-unit double arch with a
2 high row of MicroTiles across the top, and a 23-unit
arch that has a single horizontal row and better fits a
wider entryway.

Content welcomes moviegoers and reinforces the special
experience of IMAX. Custom programming also brands
Guzzo and IMAX, and uses a series of ambient and
movie-flavored visuals that light up the darkened lobby.

### PROJECT TEAM

Arsenal Media Inc.
Genesis Integration Inc.

### CONFIGURATION
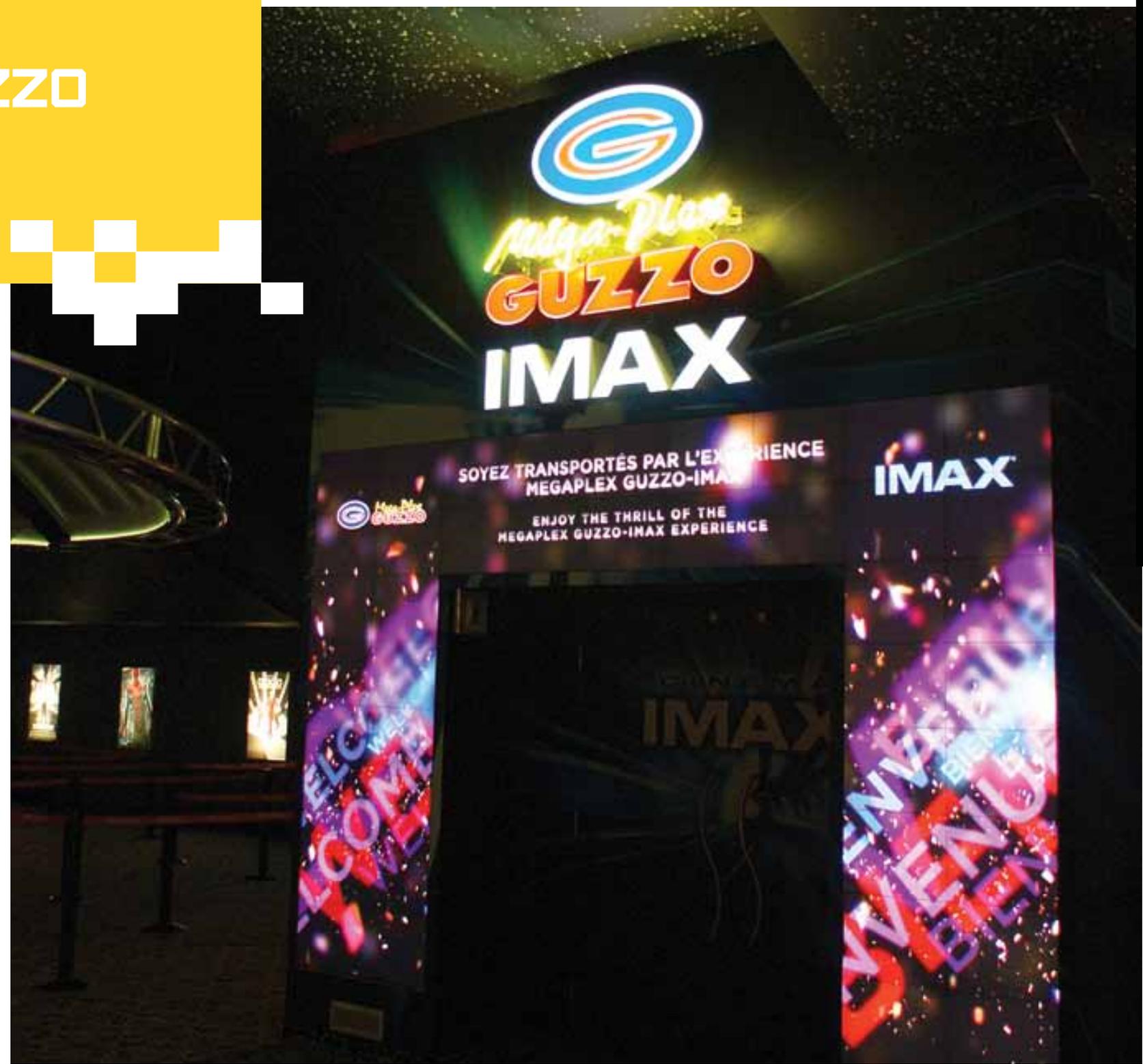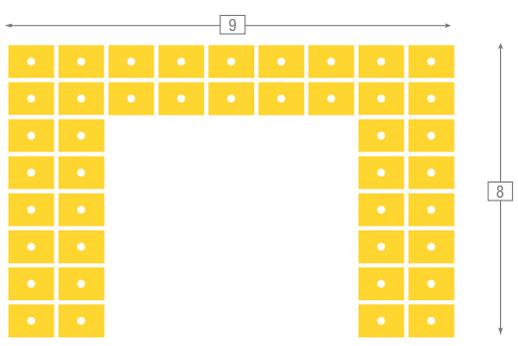
# CHURCH HISTORY MUSEUM
## SALT LAKE CITY, USA
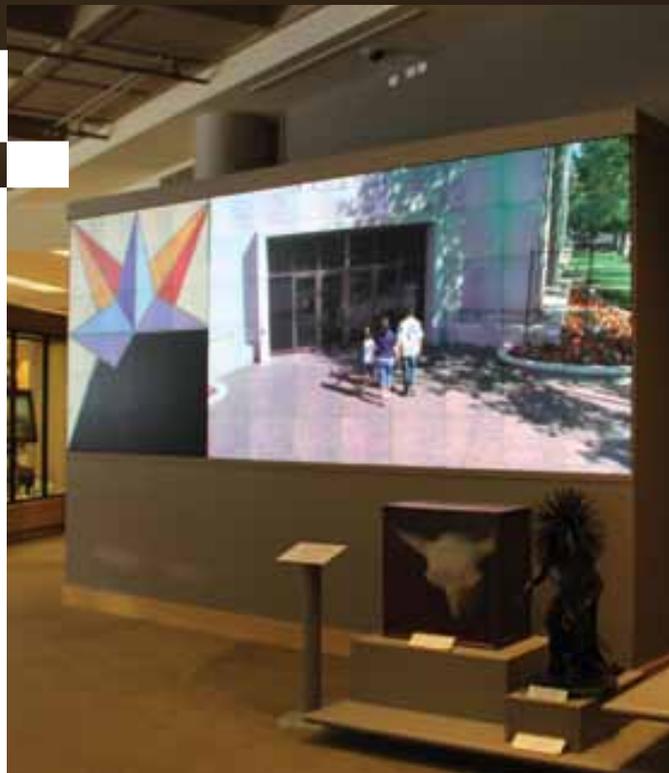
### SHAPE STORY

A wall of 72 MicroTiles is the powerful first visual greeting visitors to the Church History Museum in Salt Lake City, Utah, drawing them into the experience of learning about The Church of Jesus Christ of Latter-day Saints' history from its founding in the early 1800s to today.

Located in the downtown Salt Lake building's main lobby, the 6 high by 12 wide array installed in 2011 shows two displays at once - a steady video loop and rotating highlights of current and upcoming exhibits. "We have thematic vignettes that show content to get people hooked on the topic … to draw them in," explained Museum Director Kurt Graham.

### PROJECT TEAM

Electrosonic
RP Visuals

### CONFIGURATION

12

6
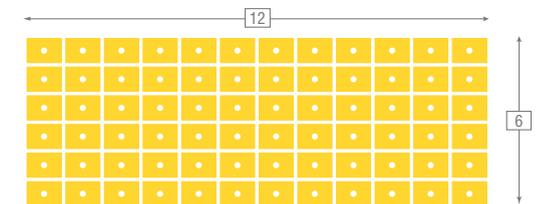
# HISTORY COLORADO CENTER
## DENVER, USA

## SHAPE STORY

A sawtooth wall of 132 MicroTiles, staggered in height, runs along the feature wall of the showpiece atrium hall in the newly opened History Colorado Center - the seamless video blocks evoking the Rocky Mountains, which are the natural backdrop for much of the western U.S. state.

The dynamic media wall celebrates Colorado history from 10,000 years ago to the present. Programming includes a collage of images based on the museum's programmatic themes, called Colorado: The People, The Place & The Promise.

The MicroTiles wall includes surround-sound audio to drive full multimedia presentations. Along with being a show-stopping feature for anyone visiting the new facility, the wall is part of the rental offer when events - from conferences to weddings - are booked for after hours.

The Anschutz Hamilton Hall sits beneath a four-story high glass atrium ceiling - meaning Denver's bright blue skies light up the space but wash out normal visuals. Along with the ability to build the extraordinary shape of the feature media wall, MicroTiles gives the center a display option bright and rich enough to overcome even the sunniest days.

### PROJECT TEAM

AVI-SPL
RLMG
RP Visuals
Tryba Architects

### CONFIGURATION

22
9

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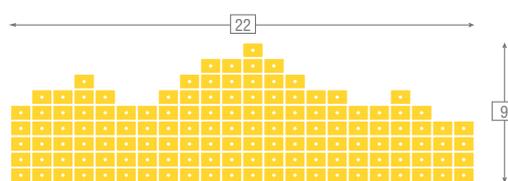
## SHAPE STORY

TELUS Spark, the New Science Centre in Calgary, Canada, uses an embedded wall of 48 MicroTiles to greet visitors and deliver powerful visual presentations despite an atrium location filled all day with sunlight.

The two-storey atrium in the building, opened in October 2011, has a 6 high by 8 wide array set in the wall between a feature gallery and Spark's gift shop, and is opposite a large picture window. The Centre's AV team determined MicroTiles was the only video display solution bright enough to overcome all that light.

The display serves as a rolling events calendar and wayfinding tool for visitors, listing events, times and locations. The wall is also used for presentations by staff and special guests, and is expected to be an impactful multimedia backdrop as the atrium is booked for special events.

A second wall, made of 22 MicroTiles, is planned as a highly visible tool to recognize major donors to what was the first new, purpose-built science center in Canada in a quarter-century.

### PROJECT TEAM

Adams Technologies Inc.

### CONFIGURATION

8
6
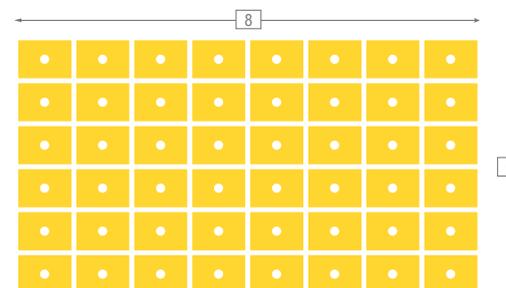
# TELUS SPARK
## CALGARY, CANADA

MicroTiles are unique building block displays that offer architects, space designers and motion media designers new freedom in how they can add digital media to permanent venues and temporary exhibits.

MicroTiles use both digital light processing (DLP®) projection and LED technology to produce visuals superior to any other display technology on the market.

The modular design also allows previously unseen flexibility in how digital display is used and incorporated in public and private spaces.

These units are little blocks – 12 inches (306 mm) high by 16 inches (408 mm) wide, and 10 inches (254 mm) deep - that can easily be stacked and tiled in any conceivable shape. They can fill a full wall, frame a window or fixture, run like a ribbon around a room, or look like a Scrabble game in progress.

## EASY TO MAINTAIN

MicroTiles run cool and need only a couple of inches behind them for airflow, and they are virtually maintenance free. The LED light sources that drive the display image are rated at 65,000 hours of usage before their brightness starts to degrade, which is equal or even better than LCDs. If servicing is required, it's all done easily from the front, and the most complicated component – the light engine - can be replaced in 15 minutes or less.

# WHAT YOU NEED TO KNOW ABOUT MICROTILES

## SELF-CALIBRATING

The tiles are designed to be aware of their neighbors and self-calibrate and adjust, meaning a wall of tiles will always be uniform in brightness, color and contrast. While other tiled displays need steady care and monitoring to maintain a uniform look, the MicroTiles have processors that steadily talk to each other and continually reach a consensus on how they should all look.

While there is massive sophistication behind the technical design, for the end user it's a very simple process. The output from a PC or media player runs into a small external control unit, and that unit drives the MicroTiles. These tiles stack and join like blocks with simple screws, and connect with standard line and power cords. When particularly large displays require multiple control units, these units talk to each other and synchronize automatically, in a matter of seconds and without any intervention from technical people.

## DLP'S DIFFERENCE

DLP reflects light off tiny, hinged mirrors and creates smooth, clear images with superior color fidelity. The small DLP projector inside each MicroTiles display unit produces higher brightness using less power than much larger projectors.

## LED LIGHT

The Light Emitting Diodes that drive the MicroTiles turn on and reach full brightness instantly, but use very little power, run silently and last many maintenance-free years because there are no moving parts. MicroTiles can reproduce 115% of the NTSC color gamut, generating pure, saturated and accurate colors.

## HIGHER RESOLUTION

MicroTiles have roughly 70 times more pixels than the most popular 4mm surface-mount display LEDs, producing crisp, clear, super high-definition visuals.

## SUSTAINABILITY

MicroTiles tick all the boxes when attention turns to "green" characteristics - so much so that they won an "Eco-Design" honor in 2011 from the French Institute of Design. Architects and AV engineers are turning to MicroTiles when new buildings pursue Leadership in Energy and Environmental Design (LEED) certification requirements.

The display unit's LED light engine consumes minimal power, even running around the clock. MicroTiles generate little heat, and have extremely long 65,000-hour (to half-brightness) operating lifespans. There are also no consumables in the unit to replace.

MicroTiles have solid metal housings and removable internal components that represent a total of 80% recyclable and 90% recoverable materials. They fully comply with RoHS (Restriction of Hazardous Substances) directives and include no phosphors, mercury, or toxic liquid coolants.

The building block design of MicroTiles also means display projects are only as permanent as they need to be, and full value and use can be made of the capital investment. MicroTiles shapes are easily built, de-constructed and re-assembled as often as needed - in the same venue or shipped somewhere new.

# THE HK EFFECT

Our brains can play some tricks on us when we're looking at things.

It is possible, for example, to look at two versions of the same image, having the same technical measure of brightness, and perceive one to be much brighter, just by the way the colors are being reproduced.

It's called the Helmholtz-Kohlrausch Effect (or more easily, the HK Effect) and has been talked about in scientific circles for a century. This effect is one of the more compelling characteristics of MicroTiles.

In lay terms, the HK Effect makes deeper, richer reds and yellows look brighter than they may actually be. The effect was first described by German physicists (hence the tongue-twister name) and has been a major part of research into human perception of brightness and color.

The wide color gamut produced by MicroTiles means viewers see a range of colors they've never seen before on digital displays. "That's one of the first comments we got when we demonstrated MicroTiles," says the technology's co-inventor Bob Rushby. "They literally said, 'WOW! Look at the colors!'"

"Humans respond much more strongly to pure, saturated colors," explains co-inventor Mike Perkins. "The subjective effect is that the purer colors you get from a MicroTiles display are punchier, more vivid, more exciting, more engaging, and just plain better to look at."

*"The subjective effect is that the purer colors you get from a MicroTiles display are punchier, more vivid, more exciting, more engaging, and just plain better to look at."*

*- Mike Perkins*

## MALLEABLE

MicroTiles are lightweight and shallow, ready to configure in any size, shape and orientation with barely visible 1 mm seams. They service from the front, removing the cost and hassle of rear access required with virtually all other display technologies. They lock together quickly and easily like building blocks, and then automatically detect each other, calibrating their configurations to match up.

## EASY CONTROL

MicroTiles work with specifically developed external control units, or ECUs, that make it easy to deliver content from almost any media player and then control, match and monitor each unit in an array. They can be stacked and shaped in whatever shape or scale is imagined, and are designed to work using free software tools.
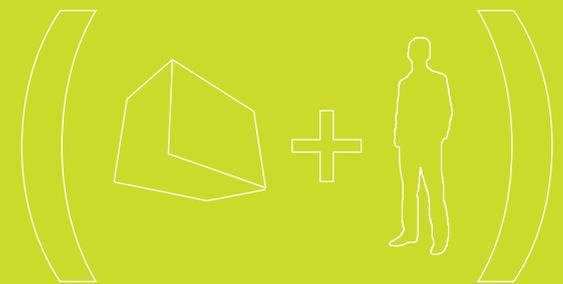
## TCO

With their 65,000-hour operating lifetime, MicroTiles also have a lower total cost of ownership than other display technologies because of that durability, as well as reliability, low-maintenance design, and a small carbon footprint.

INTERNATIONAL DESIGN INSPIRATIONS FEATURING CHRISTIE MICROTILES

# BROADCAST TELEVISION

## COMEDY CENTRAL: THE COLBERT REPORT

NEW YORK CITY, USA

## SHAPE STORY

When the producers of the satirical news and talk show The Colbert Report revamped the show's broadcast set in early 2010, they integrated several groups of MicroTiles - 41 in total - into the host's desk platform and backdrop columns to amplify the visual volume.

The redesigned Colbert set has four gently curving vertical columns each stacked with seven tiles positioned in the backdrop, while three horizontal displays - in 1x4 and 1x5 arrays - are fixed beneath the COMEDY CENTRAL® host's desk. The over-the-top patriotic visuals are all specifically developed and optimized for the MicroTiles to make the most of the technology's color saturation and granular detail.

Just weeks after Christie launched its groundbreaking displays to the Pro-AV marketplace, 41 units were shipped to the COMEDY CENTRAL show's New York City studio set, stacked, connected and turned on for the start of the January 2010 broadcast schedule.The design team needed display technology that could take on the characteristics and shape of the Colbert Report set, integrating with instead of forcing wholesale changes in the look. "The set had to be amplified visually without being too distracting, while still maintaining its unique signature on-air," offered Jim Fenhagen, Senior Vice President of Design at Jack Morton PDG, the New York-based brand communications agency charged with the revamp.

The set design team and show producers were also strongly attracted by some of the more technical characteristics of the MicroTiles. HD cameras love the rich, saturated colors produced by the displays. With LED light engines, the MicroTiles substantially reduce energy costs and have many years of operating life. Moreover, the ability to use shape in ways simply not possible with more conventional display technology was regarded as a huge benefit. The MicroTiles can be stacked and re-arranged as often as needed, creating entirely new set designs.
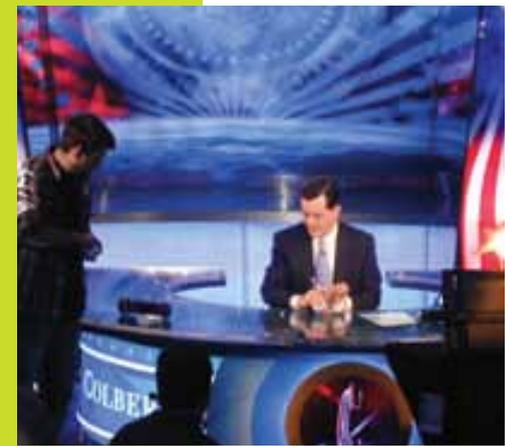
### PROJECT TEAM

Jack Morton PDG
Video Film Systems

### CONFIGURATION
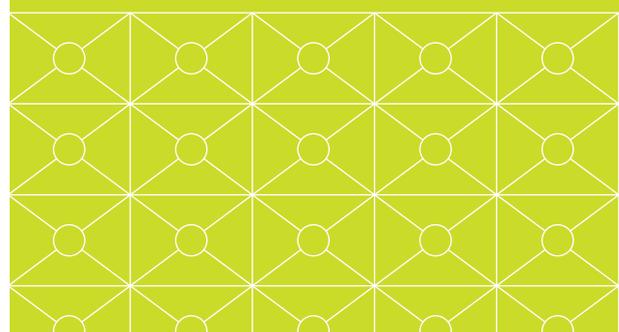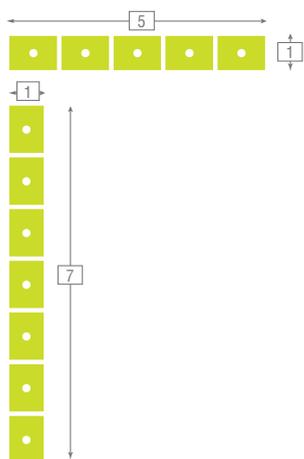
The Seoul Broadcasting System used a massive video wall built of 123 MicroTiles to drive the constantly shifting data - and graphic-heavy visuals that were central to its coverage of the mid-2010 national elections in South Korea.

The private broadcaster ran minute-by-minute election results that featured dynamic updates by number, chart and image on tallies that came in constantly from across the country on June 2, 2010.

The broadcaster wanted a seamless set backdrop that didn't restrict possibilities for shape or consume much of the very limited available space. At the same time, the video backdrop had to be broadcast camera-friendly and deliver razor-sharp graphics, while matching the aesthetics of the overall set design.

PROJECT TEAM

IMTEC

CONFIGURATION

12

12
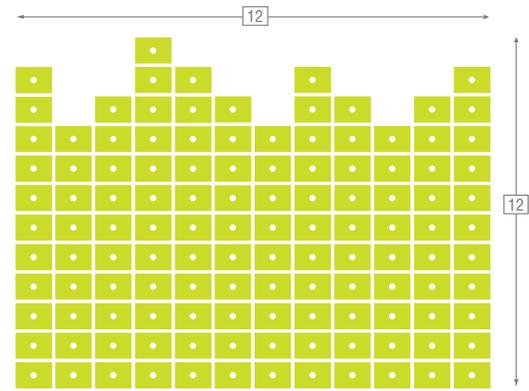
# KOREAN ELECTION 2010
SEOUL BROADCASTING SYSTEM,
SEOUL, SOUTH KOREA
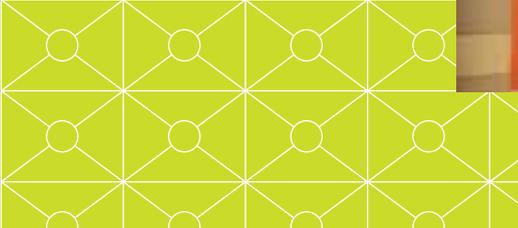
# 100 YEARS INTERVIEW TV SET, NIPPON HOSO KYOKAI
## TOKYO, JAPAN

### SHAPE STORY

Japan's famed national public broadcaster, Nippon Hoso Kyokai (NHK), uses a set of MicroTiles as compelling visual accents on the set of its 100 Year Interview series, which features one-on-one conversations with people the show's producers believe will still be relevant one century from now.

Run on NHK's premium HD satellite service, the show's set designers use 18–24 MicroTiles in irregular stacks behind the host and interview subject to show personal photos, illustrative visuals like maps, and natural scenery.

### PROJECT TEAM

International Creative
NHK Art

### CONFIGURATION

5

5

33
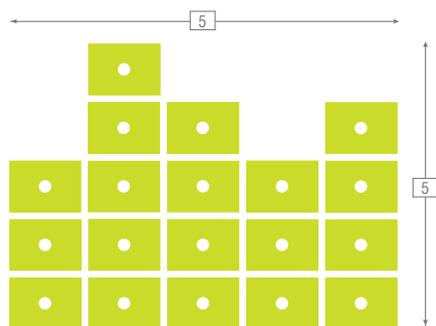
# CUATRO TV
## MADRID, SPAIN

Two of Spain's most popular TV shows energized their sets and programming, while also gaining more control on operating costs, by turning clusters of MicroTiles into compelling backdrops.

The producers of the wildly popular humor magazine, Tonterías las Justas, use a 6 high by 9 wide wall of MicroTiles as the primary backdrop in its Cuatro network studio. The Tonterías las Justas backdrop was turned on after the success seen using a similar wall on the set of a sister program on the network, the youth-focused talk show El Hormiguero.

The team at 7 y Acción, which runs the Cuatro network, wanted to display live content from cameras, recorded videos and other graphics for audiences, but needed screens to fit the size and space restrictions of small studios. The screens also had to come in at a low total cost of ownership, but not at the expense of visual quality.

MicroTiles, the producers said, gave them the richest, brightest colors, highest resolution and best overall performance. "In all my time in TV," said El Hormiguero host, Pablo Motos, "I have never seen such excellent performance on a studio set."

### PROJECT TEAM

Videoreport

### CONFIGURATION



34
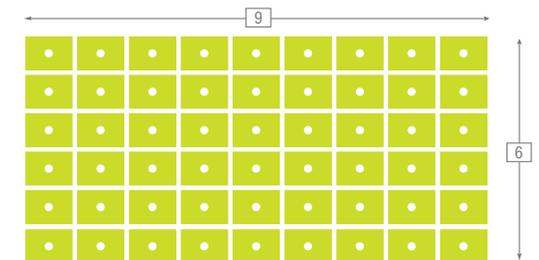
# MAASRANGA TV
DHAKA,
BANGLADESH

## SHAPE STORY

Two arrays of MicroTiles provide the back-
drop for many of the live shows airing on
Maasranga TV, the first Bangladeshi TV
channel to broadcast in HD.

Launched in 2011, the Dhaka-based network uses
a main 5 high by 10 wide wall of MicroTiles, flanked
by a second 5 by 5 wall, to run supporting visuals -
from live feeds to motion graphics - for programming
throughout broadcast days. This programming varies
from news and live interviews to sports and music.

### PROJECT TEAM

Falcon Technologies

### CONFIGURATION
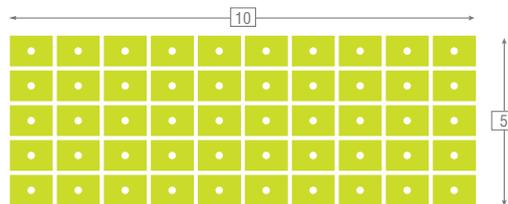
10

5
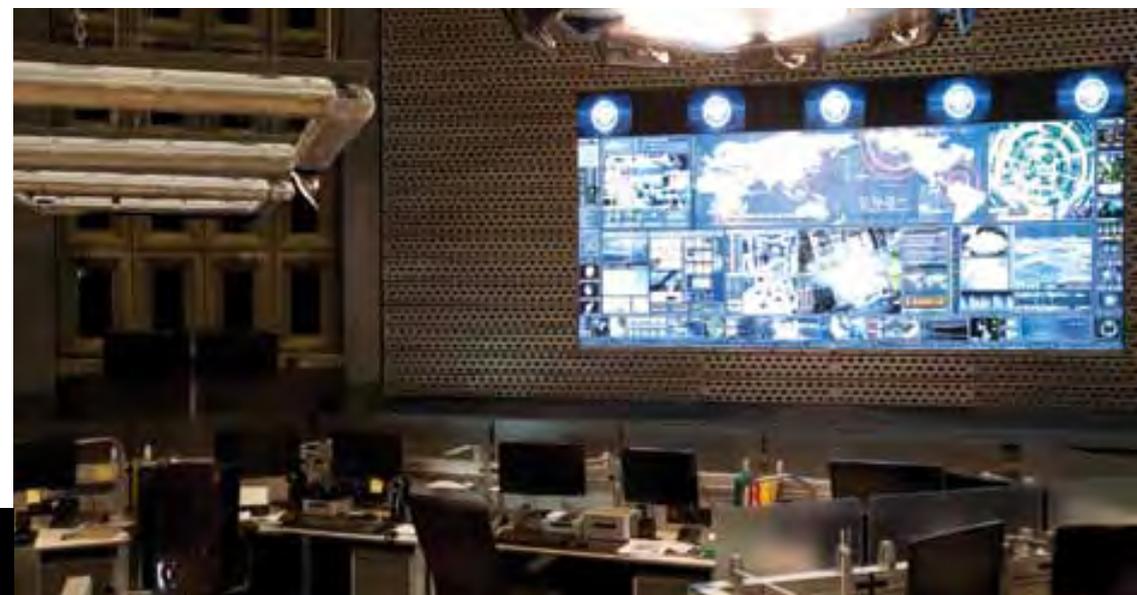
## SHAPE STORY

The main set for the South Korean action
drama Athena: Goddess of War is a counter-
terrorism control room that tracks, controls
and displays huge sets of diverse informa-
tion. The ideal fit for that space, visuals,
lighting and HD cameras was a wall of
50 MicroTiles.

Set up in 9 wide by 5 high grid, with another
5 MicroTiles dotted along the top, the display wall is
the focal point for pivotal scenes in the 20-episode
series - the most expensive South Korean production
to date. The show producers needed versatility in
configuration, quiet operation, and a display canvas
that could handle dozens of different visuals at once,
in whatever shape they needed to be.

### PROJECT TEAM

IMTEC

### CONFIGURATION

9

6

THE BOOK OF SHAPES **BROADCAST TELEVISION**

35
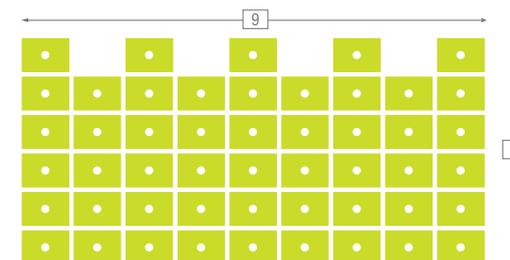
With a variety of shows, hosts and topics, five different stages and a mission to match presentation visuals to high quality content, the backers of a new TV station focused on the Bulgarian business market made some 250 MicroTiles the foundation for its broadcast studio.

Bulgaria On Air's newly renovated facility near Sofia's airport has a curved, seamless feature backdrop behind the main presenter desk that uses 112 MicroTiles, while there are four other display clusters of 30 MicroTiles built into the walls around the studio. Different walls come into view throughout broadcast days, all of them fed by a video switcher.

PROJECT TEAM

UVT SC Computer

CONFIGURATION

14

8
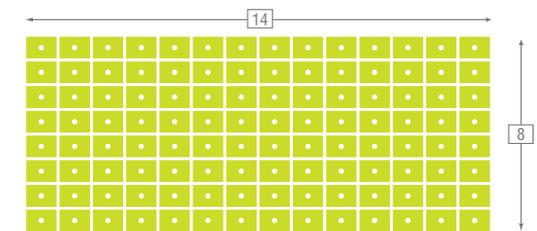
# BULGARIA ON AIR, MSAT CABLE
## SOFIA, BULGARIA

## ATTACK OF THE SHOW
### G4TV – LOS ANGELES, USA



## THE 10 MILLION SHOW
### MOSCOW, RUSSIA



### SHAPE STORY

When big-money questions are posed on the pressure-cooker set of the hit Russian TV series The 10 Million Show, all viewers' eyes are focused on the 60 MicroTiles used as the main backdrop.

Set in 6 high by 10 wide format, the corners softened by a frame to create an oval effect, the vivid colors of the video wall are striking against cool blue set decor and lighting. Turned on for the show debut in September 2010, the wall reveals the questions, and the choices for answers, as a pair of contestants try to hang on to the 10 million rubles they get at the start of each game.

### PROJECT TEAM

Big Screen Show

### CONFIGURATION
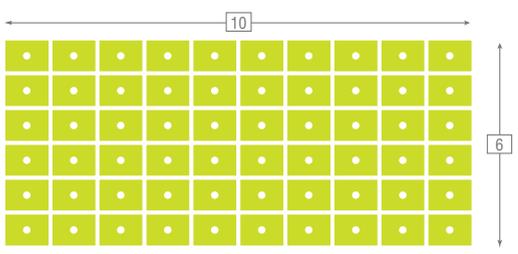


THE BOOK OF SHAPES **BROADCAST TELEVISION**

### SHAPE STORY

The live, unpredictable nerd-culture TV program Attack of the Show introduced a new co-host and broadcast set with an abstract wall of MicroTiles when it started its 2011 programming on G4TV.

The right side of the set has 40 displays, including vertical stacks of MicroTiles set at cascading heights and depths, with some set forward and others back to create more dimension. The displays are a backdrop for ambient graphics and subject matter video feeds, and wired to sync up with a large, conventional flat panel display in the center of the wall.

### PROJECT TEAM

Diversified Systems

### CONFIGURATION



37
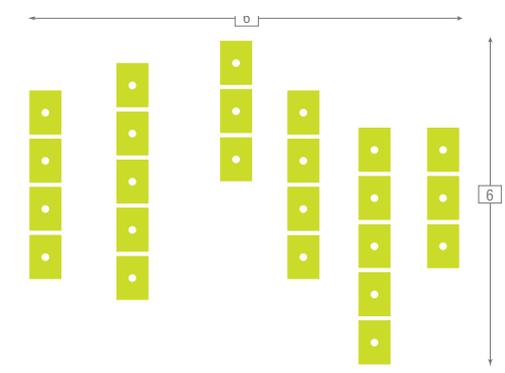
# EL CÍRCULO
## MADRID, SPAIN

When Telemadrid's popular morning chat show El Círculo extended programming to one hour and moved from a street cafe setting to a proper TV studio, the producers used a wall of 24 MicroTiles to replicate the sidewalk window that had long served as the show's backdrop.

A huge window at the El Círculo cafe in Madrid showed the city's hustle and bustle, and the show's producers didn't want to leave that behind on the new studio set. But they also needed technology that could replicate the idea of having a window on the city, while consuming minimal space in the studio's tight confines.

A 4 high by 6 wide wall of MicroTiles behind the TV presenters' desk has the brightness and color reproduction desired, and the 1 mm seams between the MicroTiles helped produce the continuous image window look. The wall shows live images of different scenes in Madrid, as well as graphics branding the program and supporting the conversation topic.

"It is as if we have the street behind us, like when we were broadcasting from El Círculo de Bellas Artes," says Telemadrid's Federico Gaitán.

PROJECT TEAM

Videoreport

CONFIGURATION

6

4

38
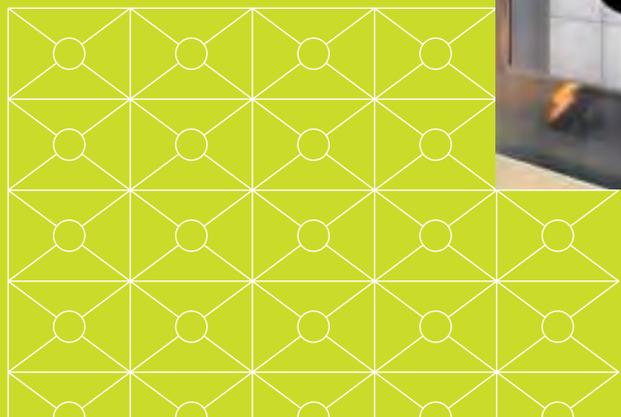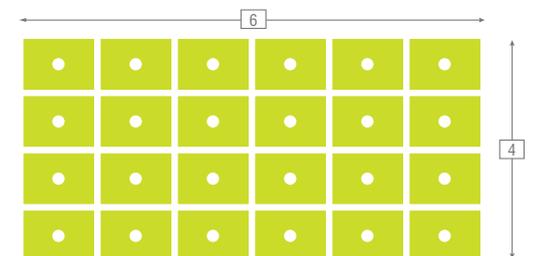
## SHAPE STORY

A seamless, stretched wall of 40 MicroTiles, surrounded by colorful backlit translucent panels, is the main backdrop for the relaxed news and conversation format of The Morning Show, operating from a street-side studio in downtown Toronto, Canada.

When Canadian national broadcaster Global Television launched its Toronto morning show in 2011, it wanted a different look for the set and plenty of flexibility for driving fresh visuals for three hours every weekday morning.

The 4 high by 10 wide Christie MicroTiles video wall drives an ultra-high 2500 x 1600 pixel resolution, and delivers the high quality color reproduction, contrast and brightness required by producers.

The glass-walled studio, visible to passers-by on the sidewalk, uses a series of 11 supporting LCD displays and a Christie Spyder X20 video processor to target visuals that range from background graphics and live street cameras to social media streams.

## PROJECT TEAM

Applied Electronics Ltd.

## CONFIGURATION
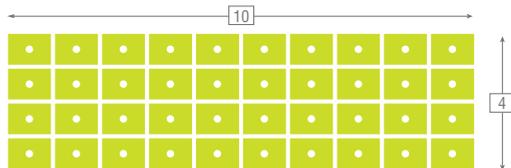
# GLOBAL TV MORNING SHOW
## TORONTO, CANADA
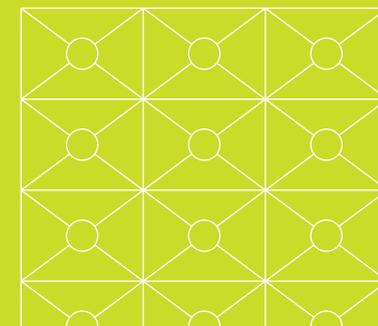
# NEXTRADIO TV GROUP
# BFM BUSINESS
## PARIS, FRANCE

## SHAPE STORY

When the executive-focused BFM Business planned the launch in France, producers were struggling to come up with a set backdrop solution that served a range of visual needs while still addressing technical changes that varied from limited space and cooling to wide camera angles. The answer was a wall of 88 MicroTiles immediately behind the presenters on the 24-hour network.

Operating a full, steadily changing live broadcast around the clock puts extraordinary demands on all aspects of a TV news network - including the display technology that helps illustrate and energize segments and shows with video and graphics. LCDs, plasma displays and projection cubes often used on sets were ruled out because of heat, noise and energy consumptions, and the time needed to keep those technologies synced and calibrated.

The producers opted, instead, for an 8 high by 11 wide wall of MicroTiles that minimized the footprint behind the set, gave them more than 7 years of 24/7 operating life, and delivered high quality visuals essential for the set. The rich, deeply saturated colors pop from the backdrop, images are sharp to the pixel, and the visuals look good even with the widest camera angle. BFM Business' CTO described the results as "exceptional."

### PROJECT TEAM

TAV Technique a Vue

### CONFIGURATION



# 2011 FIVB WORLD CUP VOLLEYBALL -
# FUJI TELEVISION NETWORKS
## TOKYO, JAPAN



### SHAPE STORY

A novel cluster of 7 MicroTiles showcased Fuji Television's coverage of the 2011 FIVB Volleyball World Cup for the thousands of people passing through the Japanese broadcaster's main office lobbies each day during the fall 2011 event.

Four MicroTiles nested together in a rectangle showed in-game coverage, previous games and promotions, while three satellite MicroTiles surrounding the center cluster ran separate content streams focused on the athletes and teams, highlights and sponsor messages. Some 5,000 Tokyo workers saw the MicroTiles each day during the run-up to the World Cup and through the event's finale.

### PROJECT TEAM

Fuji Television Networks
International Creative Co. Ltd.

### CONFIGURATION
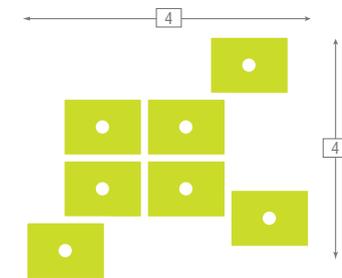
# IKEGAMI AKIRA'S NEW YEAR'S EVE NEWS SPECIAL

## TV ASAHI
## TOKYO, JAPAN

Japanese private broadcaster TV Asahi used a giant O shape of 14 MicroTiles to dramatically change up the set design for its six-hour long New Year's Eve news special on December 31, 2010.

The special year-end review program hosted by popular journalist Ikegami Akira used the MicroTiles to provide visual accents for the broadcast, changeable graphics, and a second 1 by 4 stack of MicroTiles flanking the main set desk.

PROJECT TEAM

TV Asahi Service
Christie Japan

CONFIGURATION

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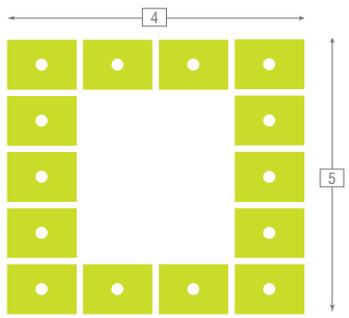
## GOING INTERACTIVE

When we see a screen - even something that just looks like a screen - we now expect interactivity.

It's now common to see people walk up to illuminated posters, poking and swiping the visuals, assuming what they're looking at is a digital screen and is therefore interactive.

Marketing discussions rarely start and finish without time being spent - often much of the time - on the idea of engagement. Consumer messaging is now a two-way conversation. Just pushing material at people is rarely enough these days to effect any meaningful impact.

Blended with big, rich and interesting visuals and shapes, interactivity offers enormous potential for brands, retailers, venue operators and exhibitors. It changes the conversation and that all-important experience.

## BEYOND FUNCTION

Interactive displays, for the longest time, were all about function. Press this and get that.

Touch screens looked things up. They speeded up lines or let people avoid them. But the only experiential characteristics that could be hung on things like kiosks was speed and convenience. They were about moving things along, reducing complaints and cutting costs.

With smartphones, tablets, and gesture-based gaming now commonplace, and growing more so by the day, consumers see interactivity very differently. A kiosk is just stuff. That sort of functionality is a given. The expectations today on anything that's marketing-driven is for actual experiences. It's not good enough to just inform. Brands also have to entertain, intrigue and excite consumers to get and keep them interested.

Those kinds of deliverables aren't easily achieved on a monitor hanging on a wall or resting on a stand. It won't happen easily on conventional video walls. It takes a bigger, far more interesting digital canvas. It takes something like MicroTiles.

# WHEN SHAPE MEETS INTERACTIVITY

## NATURAL IMPACT

When they're placed in easy reach of people, MicroTiles invite interaction.

This owes a lot to the ability to design MicroTiles into built spaces - picking up on the lines and the design aesthetic. They can feel like windows. They're inviting. They're not, like most displays, pieces of technology bolted or stuck in walls.

Conversely, the ability to stack and cluster in ways that cause surprises - like digital sculptures set as focal points - has a similar beacon effect. People are drawn to MicroTiles shapes. "This is different," they're thinking. "What do they do?"

The crisp resolution and deep, vivid colors create extraordinary, lifelike visuals and textures. In the short time on the market, we've seen creative designers do everything from create virtual streams that can be wiped off displays, to blood cells that can be digitally swept along a vein.

The wide canvas and interactive capabilities have allowed walls to have multiple users, and serve multiple purposes. One person can be playfully manipulating objects for the sheer experience, while another can be using the wall in far more functional ways, like tapping into staff directories or learning about a facility's donors.

## VIRTUAL GRAFFITI

Interactive walls have been developed for games and even virtual graffiti walls - like Christie's booth at the InfoComm 2011 trade show. At the 2012 Interior Design Show in Toronto, attendees interacted with a set of abstract MicroTiles structures to see themselves captured on camera.

Broadcasters are using touch sensors on huge digital set backdrops to change the dynamic for on-air talent. Instead of using isolated touchscreen monitors or visuals that take the hosts off-screen, entire backdrops are made interactive. News, sports, business and entertainment hosts can open, manipulate and create content across an entire digital canvas.

The flexible, modular design of MicroTiles are also a powerful new tool for retailers. As shown by Arsenal Media's Virtual Shelf concept, interactive digital can be more than just a store add-on. It can be built into the physical design of stores, nested with merchandise and capable of offering the depth and ease of online shopping, with the visual power and immediacy of being on the shop floor. Shoppers can browse, select, compare and order right in a store department, on a platform that blends in with the store design and attitude.

What's been done to date with interactive in these big digital canvases is exciting, and intriguing. The door's only been opened a crack so far. What's on the other side, for interactivity, should be amazing.

## VARIED OBJECTIVES

When it's done well - and there are now many great examples around the globe - the interactivity is natural and the impact powerful.

We've seen projects that are only about experience, causing buzz and driving awareness. Interactive might do nothing more than make people laugh, smile or think. These are real, genuine objectives.

But we're also seeing interactive that has more tangible objectives - informing, navigating, cautioning and driving business. High profile interactive right on a shop floor is one way, for example, that bricks and mortar retailers can battle mobile price-checking and online buying.

## NO LIMITS

MicroTiles have been embraced by marketers and designers who think about interactivity on multiple levels. Stacking and clustering displays removes the normal constraints on shape and scale, and where digital screens can be positioned.

The technical properties - like portability, brightness and long operating lives - make the most sense in planning interactive experiences. The big ideas that are never realized because of common technology limitations can actually happen using MicroTiles.

# INTERACTIVE IN THE FIELD

Bright creative minds around the globe have seized on the interactive, immersive possibilities for MicroTiles.

**Museums**

At the World of Coca-Cola in Atlanta, GA, the beverage giant uses a gesture-driven, fully immersive wall of 90 MicroTiles to show visitors how the company is positively impacting the lives of people and communities around the globe.

Sweeping away fizzy soda bubbles reveals projects and people supported by the company.

**Education**

The Wisconsin Institutes for Discovery, part of the University of Wisconsin in Madison, WI, uses a pair of interactive walls at its new facility.

On the Discovery Wall, several visitors can simultaneously learn about donors and their backgrounds, look into research highlights, search maps and find out more about key institute staff using multi-touch capabilities.

A second wall in the lobby, called the Portal Wall, has a wide sweep of 34 MicroTiles that responds to the movement of people looking at the displays or walking by, shifting content in playful ways that pull people into the experience.

**Sports and Entertainment**

Walls of MicroTiles, blended with high impact print graphics, have been used to create experiences for fans of performing arts groups and pro sports teams.

Pro football's Miami Dolphins use touch, gesture and mobile interactive for an experiential wall for fans at its home stadium. Called the BuzzWall, the installation amplifies the game-day experience while also driving the marketing needs of team sponsors.

**Broadcasting**

Set design concepts are now being marketed that use wide sweeps of camera-friendly MicroTiles as the interactive backdrops for broadcast sets.

On today's network news, sports and business reports, on-air personalities typically walk to specific display monitors to do any sort of interactive demonstration. Equipped with sensors along the edges, entire walls of MicroTiles - the full backdrops of sets - can be fully interactive displays.

**Retail**

MicroTiles have already found a home as attention-grabbing visuals in retail environments, but the building block design and budget-friendly operating characteristics of the displays make them well-suited for the sales floor.

At the massive 2012 National Retail Federation show in New York, Arsenal Media demonstrated a virtual shelf application that integrated MicroTiles into the decor and fixture walls of a retailer - nesting the displays with product and offering shoppers the ability to browse inventory not available at that store, compare items, and buy from choices on the spot through an e-commerce engine.

There's even a technology "kit" that makes what would seem other wise complicated - interactive experiences on big surfaces - actually quite simple.

The Christie Interactivity Kit easily and affordably turns MicroTiles into multi-touch interactive displays using sensors that attach along the perimeter. Based on Baanto™ ShadowSense™ technology, consumers can do all the flicking, pinching, rotating and scrolling they now use on tablets and smartphones, but on these much larger surfaces. The experience goes well beyond what most large touch displays can offer, and reflects what consumers actually expect to happen.

MicroTiles walls have also been tied in to the same types of gesture-tracking used in consumer gaming, with camera-based sensors tracking movement and affecting the content.

The capability is there for fine controls, but where camera sensors work well is for much broader gestures - like the grand sweep of an arm or people walking by, stirring up what seemed like otherwise static visuals. It's the surprise and whimsy that can have a real impact. The best experiences should just happen, with little or no learning curve.

We've seen elemental interaction - texting messages to see them then appear on a display wall, and QR codes that can serve up more information to mobile phones. We've seen MicroTiles used as the catalyst for augmented reality apps on phones and tablets.

The technology is steadily evolving. All we really know is that the future is interactive, and that the best experiences will come on the biggest, most brilliant digital canvases.

INTERNATIONAL DESIGN INSPIRATIONS FEATURING CHRISTIE MICROTILES

# CORPORATE SPACES
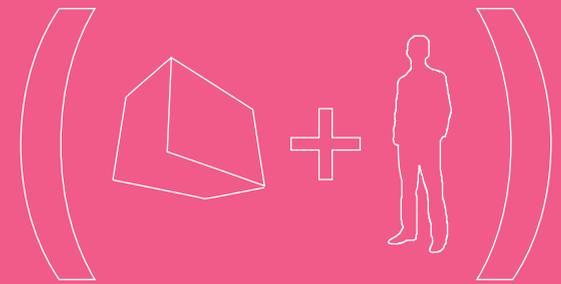
# LONDON STOCK EXCHANGE

LONDON, UK

## SHAPE STORY

The atrium walls of the London Stock Exchange (LSE) are a massive multimedia canvas of 508 MicroTiles that reflect the kinetic energy of the world's financial markets and provide a powerful visual backdrop for ceremonies welcoming new firms when they list on the LSE.

Visitors to Paternoster Square quickly see a mosaic of 46 MicroTiles on the ground level, as well as several columns of MicroTiles. Moving into the central atrium and looking up, they see a 132 MicroTiles array on the main bulkhead wall and arrays of 29 and 31 to each side. Another 48-unit array fills a balcony overlooking the atrium. Reporting live market news in data, headlines, graphics and video, the multimedia installation drives information and stunningly reinforces the vibrancy and status of one of the globe's key exchanges.

The London Stock Exchange wanted to upgrade its visual technology and make market opening ceremonies something truly special once again, using the latest, best technology to generate the kind of energy and excitement seen on the old pre-technology LSE trading floor. But whatever was applied had to somehow conform to the tight, irregular and sometimes challenging physical properties of the building.

What worked, ideally, were MicroTiles. Their building block design meant fitting around atrium windows and on bulkhead - however that needed to happen - was a non-issue. The lack of noticeable seams between the displays meant spanning visuals across large sections also presented no quality compromises. Bright, saturated displays overpowered the daylight from the atrium's glass roof. LED light engines meant power bills were going to stay manageable. As well, the largely maintenance-free character of MicroTiles resonated with an IT team that was adding 500 new devices with the project, most of them well out of easy reach.

The MicroTiles arrays were formally turned on in May 2011, and the primary video walls now stream a variety of content throughout trading days, including live news and data, and market updates from CNBC. System controls manage lighting, audio and live camera feeds, and orchestrate the automated opening and closing ceremony of the market. Marketing and brand messaging populate the MicroTiles arrays in the entry areas.

### PROJECT TEAM

Amigo Digital
CMS Consulting
Focus 21 Visual Communications
IGCH Inc.

### CONFIGURATION

11

12

30

2

29

2
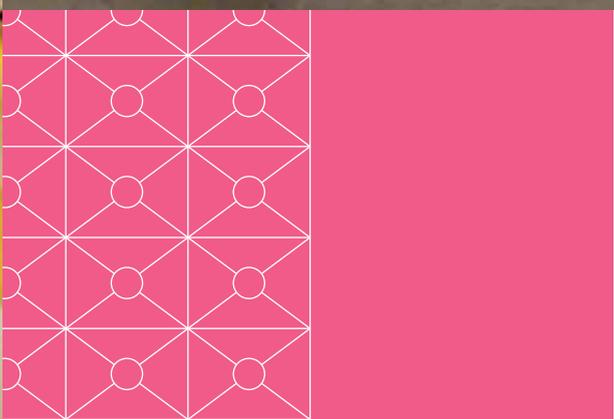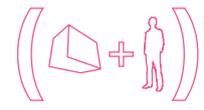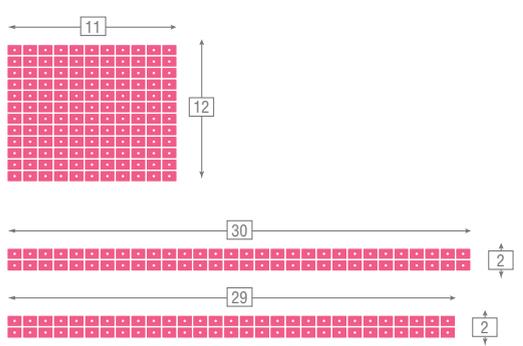
# DEUTSCHE BANK
## SKY MEDIA WALL, HONG KONG

Deutsche Bank incorporated a massive strip of 150 MicroTiles into the 48th floor lobby of its new Asia-Pacific head offices, located in one of the world's newest mega-skyscrapers. Embedded in a long wall, staff and visitors see a steadily shifting blend of real-time financial data, corporate messaging and original, atmospheric digital art.

Deutsche Bank believed any digital display technology used at its new Hong Kong offices had to both match the ultra-modern design of Hong Kong's new 118-storey International Commerce Center, and address the more practical technical challenges. Using MicroTiles allowed designers to use a super-wide format that best suited the lobby dimensions and harmonized with its style. The super-bright MicroTiles also removed worries about the washing effect of ambient light from walls of windows.

Five high by 30 wide, the media wall, turned on in 2010, has programming that blends Deutsche Bank corporate branding and rows of live financial market data with original digital visuals that vary from playfully atmospheric pieces to more serious statements about such issues as the company's environmental vision. Flush-mounted speakers provide audio for some media pieces, and an elaborate control room allows the wall to also be used for presentations and videoconferencing.
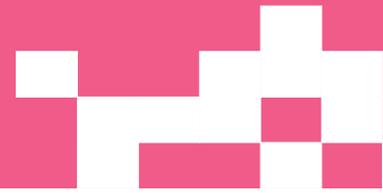
PROJECT TEAM

Verrex Corp.

CONFIGURATION
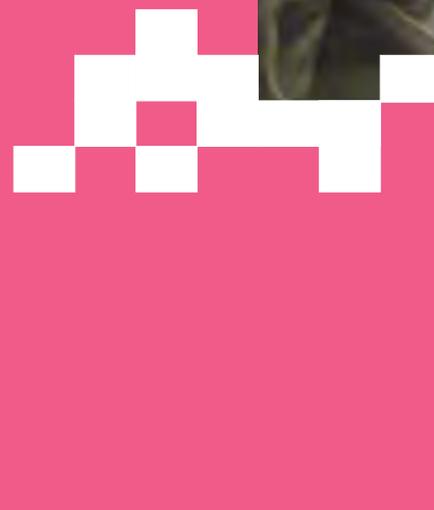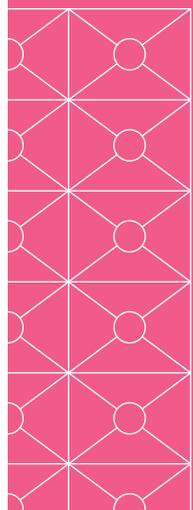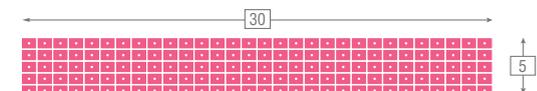
# DELOITTE IZONE
## LONDON, UK

# USHIO INC.
# HEADQUARTERS
## TOKYO, JAPAN

### SHAPE STORY

Visitors coming to the main reception desk of the Japanese lighting manufacturer Ushio are greeted by a skyscraper-shaped stack of 14 MicroTiles that plays general marketing content and welcome messages triggered by a laser sensor.

Located at Ushio's Tokyo headquarters, the MicroTiles are also used to promote the technology developed and marketed by its subsidiary, Christie Digital Systems, USA Inc.

### PROJECT TEAM

Christie Japan

### CONFIGURATION
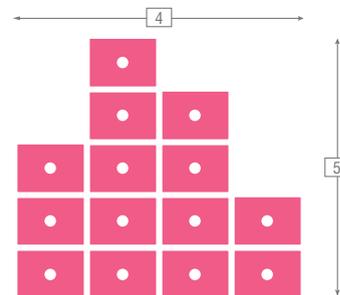


### SHAPE STORY

The iZone at a Deloitte UK facility uses unconventional arrays of MicroTiles as part of the mix of flexible AV technology designed in an accelerated problem-solving and collaborative environment for the global financial advisory firm's clients.

The 4,000 square foot space, opened in 2011 in London, has four primary working areas and allows the environment to be tailored to every client and event. Clusters of MicroTiles run a variety of content - from ambient nature visuals on a staggered horizontal set of 9 units to whimsical motion visuals of legs, running on a jagged stack of 6 MicroTiles.

### PROJECT TEAM

Amigo Digital
Cordless Consultants
Electrosonic

### CONFIGURATION



49
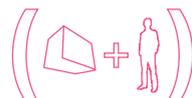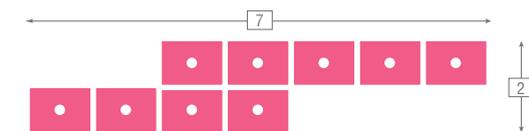
# TELSTRA
# EXPERIENCE CENTRE
## MELBOURNE, AUSTRALIA

## SHAPE STORY

Australian telecommunications and IT giant Telstra uses a massive, ultra-wide array of 260 MicroTiles to help showcase its solutions to customers at the Experience Centre it opened in Melbourne in mid-2011.
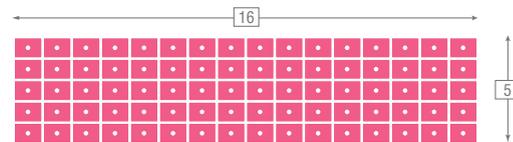
Built on hydraulic platforms that enable movement, three arrays - a single 5 high by 18 wide and a pair of 5 high by 16 wide - are heavily used by Telstra for in-house training in three labs.

When needed, lab walls can be removed and the three arrays turn into one vast, seamless canvas.

### PROJECT TEAM

Corporate Initiatives Australia
VR Solutions

### CONFIGURATION

16

5

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# UNILEVER
## SINGAPORE



## SHAPE STORY

Consumer goods giant Unilever built media directly into the physical design of the gateways to its new corporate head offices in Singapore, with a cluster of 30 MicroTiles nested into the stunning eco-themed backlit metal and glass decorative walls of the main elevator lobby.

The MicroTiles - 5 wide by 4 high - drive video and moving graphics, such as TV spots and messaging, pulled from a global media database, reinforcing product and brand as people arrive and wait to travel up to Unilever's offices. Once there, a strip of MicroTiles 6 wide by 1 high fixed in a wall immediately behind the main reception desk shows a steady variety of Unilever brand creative.

### PROJECT TEAM

Nete2
PAVE

### CONFIGURATION

6

1
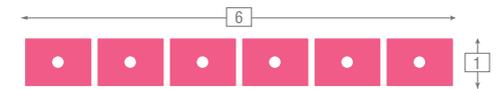
# CHINA MOBILE - SHANXI
## SHANGHAI, CHINA

Monitoring the activity and status of a vast network of phones, devices, towers, cameras and other equipment requires one very large, ultra-sharp visual dashboard, which is what led China Mobile's Shanxi Group to build a massive control wall using MicroTiles.

The wall at the China Mobile subsidiary's Shanghai office is 6 MicroTiles high by 30 wide, measuring 6 feet (1.84 meters) in height and 40 feet (12.24 meters) in length. Twenty controllers steadily synchronize and calibrate the visuals and data to give Shanxi's engineers the seamless, vibrant wall they needed for network monitoring.

### PROJECT TEAM

Beijing HongHe Electronic Engineering Ltd.

### CONFIGURATION

30

6
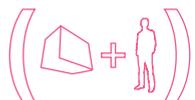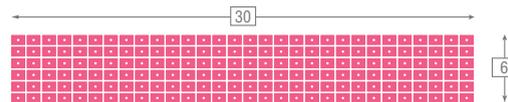
# INCHEON INTERNATIONAL AIRPORT / YEOSU WORLD EXPO 2012
## SEOUL, SOUTH KOREA



### SHAPE STORY

Creating visuals with stopping power in the bustle and huge scale of one of the world's busiest airports isn't easy, but a vast wall of 72 MicroTiles delivered the impact sought by the organizing committee of International Exposition Yeosu Korea 2012.

To promote the world's fair to the millions of passengers passing through Incheon International Airport, near Seoul, a 9 wide by 8 high wall of MicroTiles fills the rear of the terminal's millennium hall stage. The content on the wall showcases the event, Korean culture and the airport.

### PROJECT TEAM

IMTEC

### CONFIGURATION

9

8

**THE BOOK OF SHAPES CORPORATE SPACES**
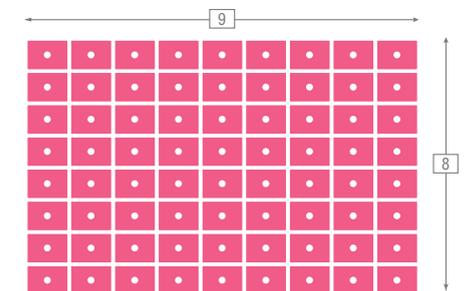
# PZ CUSSONS
## MANCHESTER, UK
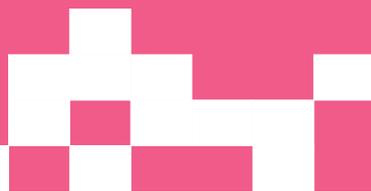


## SHAPE STORY

When PZ Cussons, the multinational consumer goods company, moved its headquarters to a business park in Manchester, England, executives wanted staff and customers to be "wowed" by a visual display in the building's sunny atrium lobby, running a rolling video show about the company, products and services.

They settled on a 4 high by 8 wide rectangle of 40 MicroTiles embedded directly in an atrium wall, knowing the technology's brightness and color saturation would cut through whatever daylight streamed through the atrium glass. They also wanted a uniform, virtually seamless digital canvas not possible with other displays.

### PROJECT TEAM

Pure AV

### CONFIGURATION
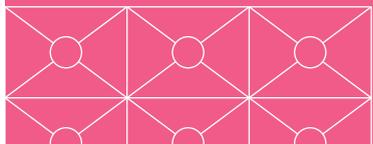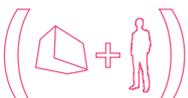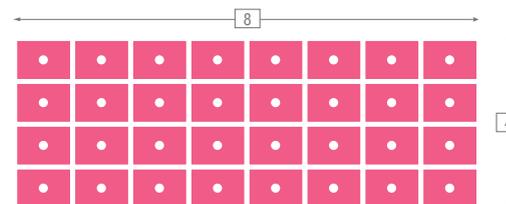
## SHAPE STORY

Market research giant The Nielsen Company wanted an interactive wall in the lobby of its new executive offices in Connecticut that reinforced the firm as a contemporary, creative technology leader, but also fully fit the design aesthetics of the space. A sleek 5 by 5 wall of MicroTiles now greets and immediately engages visitors as they arrive.

Located immediately outside the elevators, an interactive wall with custom content uses an infrared sensor system and laser camera to let Nielsen visitors intuitively learn about the company and brand, view selected graphics, and play with interactive content.

The 25-MicroTiles wall, specifically designed with the display units in mind and installed in 2010, is the start of a digital experience in the offices, with a hallway lined with a row of large plasma displays and another LCD display in the waiting area. The project included a full, integrated launch and operating content strategy for the offices, with a goal of re-imagining how digital displays fit in corporate spaces.

### PROJECT TEAM

Arsenal Media Inc.
Float 4 Interactive
Verrex Corp.

### CONFIGURATION
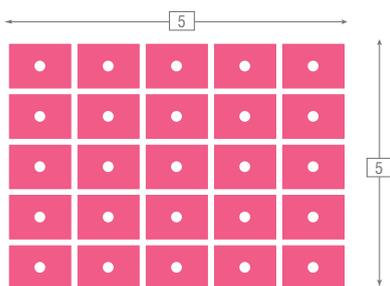


# THE NIELSEN COMPANY
CONNECTICUT, USA
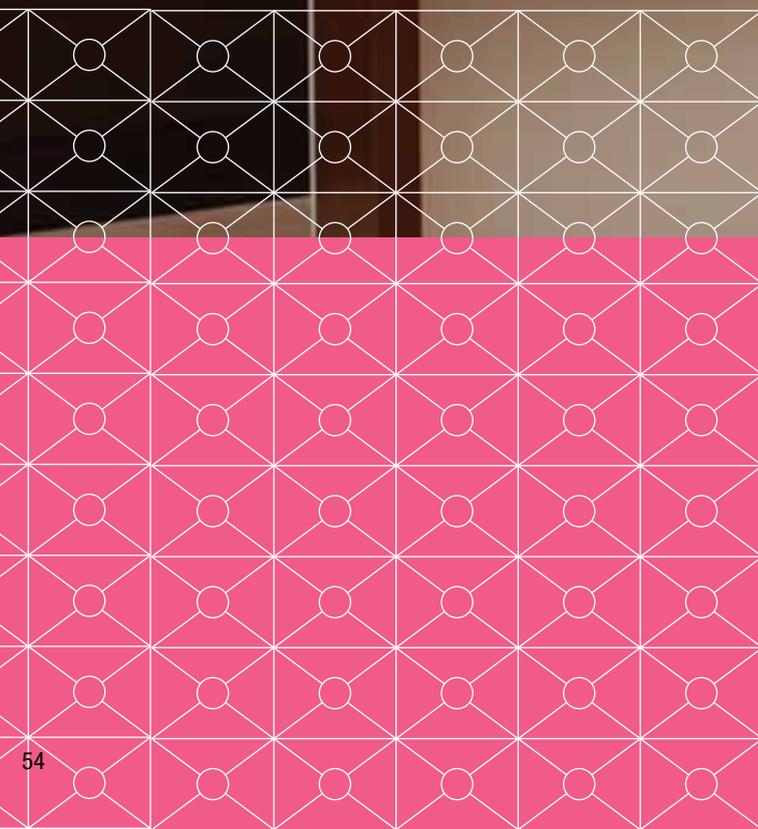
# SAS
NORTH CAROLINA, USA
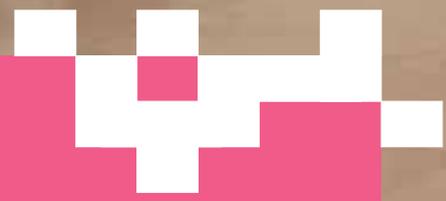
## SHAPE STORY

Business analytics software giant SAS wanted technol-
ogy to be both the showpiece and the secret behind
its award-winning new executive briefing center in Cary,
North Carolina. Setting the tone is a visually dominant
wall of 112 MicroTiles in the main lobby, along with
dozens more MicroTiles that compose four other clusters
around the building.

SAS sought a solution that would provide a wide, unin-
terrupted canvas as a backdrop for registration areas.
At the same time, it needed to overpower the ambient
daylight from windows and skylights, and still maintain
low energy consumption properties that aligned with
corporate green efforts. SAS settled on a 4 high by
28 wide array, dubbed the "Welcome Wall."

A graphics team at SAS produces visuals tuned to
events, from spectacular theme graphics to segmented
visuals that create a registration line-up for a busy
conference. Wall visuals change simply by producing
and scheduling in new content.

Other configurations in the building include a 4-by-2
wall in the lobby showcasing SAS' platinum LEED efforts
and a 3 high by 12 wide wall in the sixth-floor executive
suite, which is used to run presentations,
conferencing, cable feeds and corporate messaging.

### PROJECT TEAM

AVI-SPL
Thorburn Associates
SAS Project Design and Construction
Project Management Teams

### CONFIGURATION

28

4
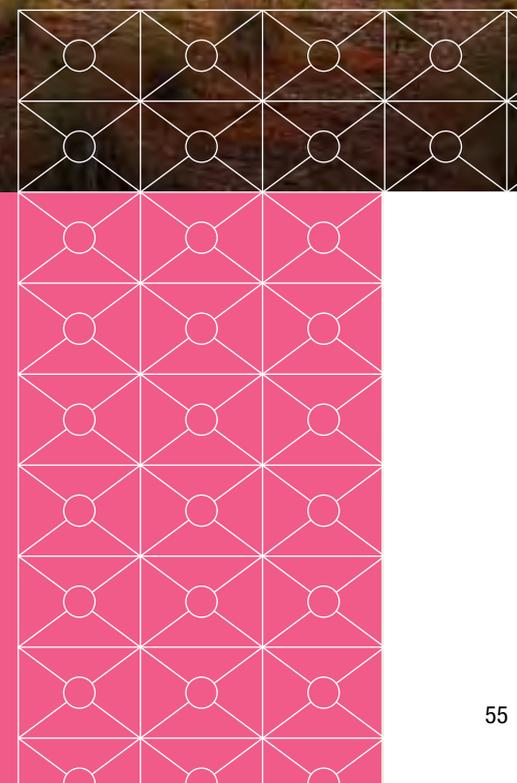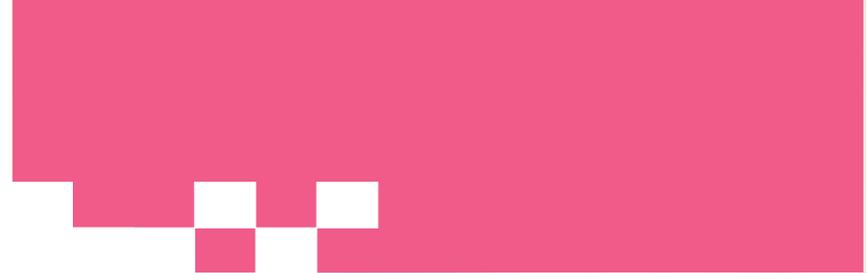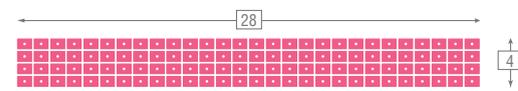
Digital display has finally broken out of its box.

Digital in built spaces has always been defined by four corners, but the stackable, flexible nature of MicroTiles has removed that design constraint. Now the creative thinking can start around shape.

No longer shackled by the standard aspect ratios of conventional displays, the people charged with introducing digital visuals into a space have the freedom to work with the lines, dimension and character of the venue. Instead of fitting displays in, displays can fully become part of the designed environment. The venue really can be the canvas.

This is a big shift. Before MicroTiles, attempts to build digital into designs always came with compromises. With conventional display monitors, it's obvious where the interior design stops and the technology starts. With projection, ambient light steadily fights systems that are really designed for darkened rooms. With LED, there is lots of brightness, but big concessions in picture quality.

MicroTiles, meanwhile, end the compromises.

## CREATIVE SPARKS

Even before MicroTiles formally came on the market, when it was shown in private to architects, space designers and audio-visual pros, creative sparks started flying. Here was something different; something that could not only change up the look of a space, but also work with it.

Visual display projects that wouldn't normally get past the idea stage because of the physical properties of the space - things like windows and doors that broke up walls, diagonal surfaces, shallow transoms and sunlit-washed atriums - have instead been built, using MicroTiles.

These digital building blocks make possible unique, even crazy shapes. Arrays of MicroTiles can fit the physical lines of spaces, whatever the challenge. Around the globe, companies and public facilities are using incredibly wide, slim sweeps of MicroTiles to span entire lobbies. At the 2010 World's

# THE CONTENT SHIFT

Fair in Shanghai, China used MicroTiles as a virtual riverbed, while Russia built them into a periodic table.

They've formed letters and numbers, been fitted into furniture and nested in walls, and MicroTiles have been stacked in odd, interesting shapes that were evocative, or just visually intriguing.

They can be the big statement in a venue, dominating the visual. Or they can be accents, complementing what's there. Or they can frame the real focal points - as in retail, where clusters of MicroTiles have left voids where product, like fine jewelry, is displayed. MicroTiles change the digital display proposition from showing visuals above, below or near product, to showing product surrounded by and with the visuals.

## CONTEXT AND CONTENT

Done right, shape can transform the dynamics of a space and the relationship with viewers. But the power of shape is not only its form, but how it's applied. The content has to be right in the context of that space and the people who pass through it.

The opportunity here goes well beyond concepts like information delivery, messaging and marketing. This is about a digital canvas that can still serve those more elemental needs, but in ways that are much more creative and visually exciting. Stories can be told, and moods set.

At the Wisconsin Institutes for Discovery, for example, a pair of sweeping MicroTiles arrays embedded in walls take the idea of a visitor information portal to entirely new levels - using playful, interactive visuals that draw and engage people. A mosaic of the eyes of resident researchers greets visitors. Gestures can shift blood cells along a virtual vein.

At the World of Coca-Cola in Atlanta, a gesture-driven array in a sun-lit atrium encourages visitors to playfully wipe away fizzy virtual soda bubbles, revealing more serious messages about the beverage brand's community improvement work around the globe.

Strong thinking and delivery transcends the simple idea of "Wow Factor" and gives the visual experiences meaning and more lasting impact.

## COLLABORATION IS KEY

Brilliant visual display projects come together when all the stakeholders collaborate.

Making the most of the investment and effort requires a team and process. It's true with any ambitious display project, but even more so when MicroTiles are used because there is so much more opportunity to do something that's truly great.

The best projects are those that begin with a vision that is more advanced than the novelty of shape. The vision instead incorporates all the thinking about the message and experience this shape or group of shapes is delivering, and the objectives being served.

The best projects also have content plans that consider the rationale behind the various content elements, the dynamics and physical properties of the space, and the states of mind of the audience.

The thinking is sophisticated. It's the perhaps subtle difference between developing visuals that look cool, to producing visuals that are cool for a set of well-defined reasons and messaging objectives.

Working with shape frees motion graphic designers to expand their ideas well beyond how visuals arrive and flow across a rectangle. The stacks, stair steps, notches, sweeps and almost organic bursts of display arrays allow multimedia people to build sequences and surprises into content in fun, inventive and powerful ways.

## DETAILS MATTER

Working with MicroTiles is no more difficult than using conventional, less sophisticated types of displays and display wall technology. There are calibration and maintenance characteristics of MicroTiles that actually make them easier to use in most respects.

# 3 TIPS FOR DESIGNING CONTENT FOR SHAPE

### Respect shape

MicroTiles technology opens up new creative doors, allowing you to explore new ideas and try different approaches to creating high-impact visuals. MicroTiles give interior space designers the flexibility to fit visuals to the environment and the situation and create elements of surprise and whimsy. Design elements for motion visuals should acknowledge and respect the shapes that tiles can be stacked and arranged in, and work within those lines when it makes sense. Make the most of the opportunity to create something special, starting from the preliminary conceptual analysis and continuing with each design element in the content piece.

### Design with a grid

Physical displays have a structure about them, and content designed for MicroTiles also needs a structure. In the same way that web-site and interactive designers carefully think through the placement of elements and the way eyes travel around a screen, MicroTiles displays need to be considered from a visual perspective so that organization is made relatively easy by the grids created when MicroTiles are stacked and arranged. Use this grid plan to determine where visual elements are positioned and how they arrive, move around and leave the display's viewable area. Working with a grid allows designers to manage how visual elements "sit" on a screen. A grid also shows how the micro-seams between tiles can disappear, or be accentuated by elements and font placement if care is not taken.
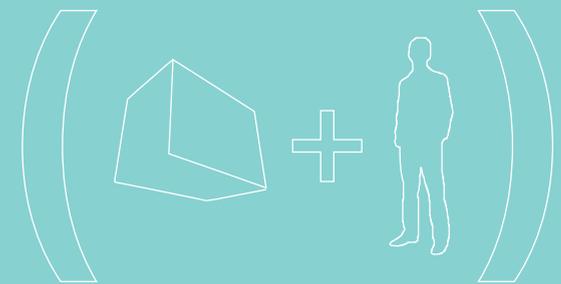
### What to remember

While the MicroTiles can generate tremendous design opportunities, they are fundamentally digital displays. Their impact will rely heavily on the quality of the content, and the thinking behind each piece.

- Match up and validate the business and communications objectives with the digital canvas options presented by the physical configuration of the location.

- Ensure the source material you are working with is of the highest possible quality and resolution.

- Be methodical and smart about your technical set-up, ensuring the software and hardware used to produce and play back content meet all your requirements. Don't cut corners.

- Remember the visual structure of the digital canvas, think about how elements are positioned, and how they arrive, build on and leave that canvas.

- Earn the time you "get" with viewers. Audiences can be transient and attention spans short, so ensure your content has stopping power and delivers quality and relevance to the targeted audience.

But the technical details of these displays and walls really matter. The ultra-high resolution of the units, far deeper, more vivid colors and high brightness need attention starting at the design stage and all through content production.

Content produced for other display media will technically work on MicroTiles, but it's unlikely the results will make the most of the possibilities. The content should be developed and tuned to the exact display resolution to make the most of the ultra-fine detail that's available.

The linkage between every element of the project is important. It's not necessarily any more complicated than using other displays, but the characteristics and capabilities of the playback devices are important to know and test. The software driving the media also needs testing and assessment.

To put it another way - there's a recipe involved, and the best meals arrive at a table when the cooks test and tweak that recipe's ingredients to get it just right. The investment in time will be worth it.

## PUSHING ENVELOPES

MicroTiles are still relatively new on the market. It's clear that as more projects develop and get plugged in we'll see even more exciting ideas about how shape is used to integrate digital displays into all sorts of new and built spaces.

Touch and interactive technologies are rapidly evolving, and that will play a big role in how people see and use big format displays. Smartphones and tablets will be tied in to draw information and engage with the displays.

We'll also see much more thinking and capability in how MicroTiles designed into spaces work not only with planned, scheduled and choreographed content, but also with information systems that control things like lighting and access.

Much will change and evolve. But the foundational idea will remain: Shape will excite a space and content will excite the minds of the people passing through it.

INTERNATIONAL DESIGN INSPIRATIONS FEATURING CHRISTIE MICROTILES

# EVENTS & SHOWS

# SHANGHAI WORLD EXPO 2010 - RUSSIA PAVILION
## CHINA

The designers behind a special exhibit at Russia's World Expo 2010 Pavilion used the classical periodic table of chemical elements, made from a cluster of 44 MicroTiles, as the visual inspiration for a multimedia wall celebrating a new science and technology center rising on the outskirts of Moscow.

Mounted on a pavilion wall as part of the exhibit for Skolkovo, the Russian Silicon Valley, a random array of MicroTiles set at different wall depths created a stunning three-dimensional effect in a darkened section of the exhibit space.

Multi-colored MicroTiles showing different chemical elements surrounded a larger 2 by 2 block that gave Skolkovo its own Sk element. The Skolkovo exhibit was part of Russia's pavilion in September 2010, with the Shanghai event marking Russia's first appearance at a World Expo in three decades.

Featured visuals on science concepts cycled through different sets of MicroTiles in the array, with some of the chemical element blocks dropping off and coming back into view. All the elements would periodically drop off during the programming loop, creating a kaleidoscope of images.

The edgy science focus of the Skolkovo exhibit worked in sharp contrast with the fairy tale concept used as the primary theme for Russia's exhibit.

PROJECT TEAM

Beijing HongHe Electronic Engineering Ltd.

CONFIGURATION

# 2011 ELLE STYLE AWARDS
## SHANGHAI, CHINA
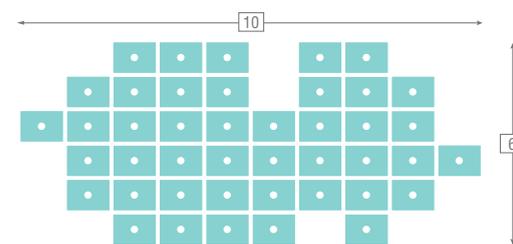
# G8/G20 WORLD SUMMIT
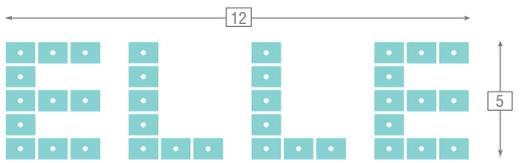## TORONTO, CANADA



### SHAPE STORY

There was no question who was behind the 2011 Elle Style Awards in Shanghai, as ELLE was spelled out in 5 foot (1.5 meter) high letters built from 36 stacked and connected MicroTiles.

Running synchronized motion graphics, the bright, crisp animated letters were used to visually dominate the VIP area available to celebrities, designers, sponsors and fashionistas at China's Oscars of Fashion.

### PROJECT TEAM

JC Decaux Group

### CONFIGURATION



### SHAPE STORY

Four unique stacks of MicroTiles were used to create city skyline shapes that help showcase contemporary, innovative Canada to some 3,000 international journalists who came to Toronto in mid-2010 to cover the G8/G20 World Summit.

Commissioned by the Canadian government, the Experience Canada Pavilion used a variety of visual display and interactive technologies to reinforce Canada's position as a prime destination for business, investment and tourism. Arranged in novel shapes, the MicroTiles clusters - 65 in all - ran HD video intended to influence the press on developing features about the country.

### PROJECT TEAM

Infinite Stage Design Inc.
Lord Cultural Resources
Christie Experiential Marketing

### CONFIGURATION



62
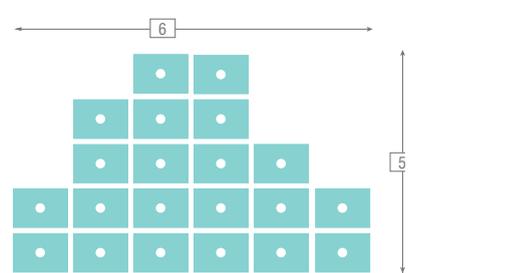
# SHANGHAI WORLD EXPO 2010 - CHINA PAVILION
## CHINA

### SHAPE STORY

Projectors on a huge, undulating canvas and 168 MicroTiles embedded in the virtual water of a moat helped create the remarkable centerpiece attraction of China's pavilion at the Shanghai World Expo in 2010.

Wanting to celebrate traditional culture using entirely modern technology, the same creative team behind the jaw-dropping opening ceremony scenes at the 2008 Beijing Olympics was hired to bring one of China's most famous panoramic paintings to life.

The circa 1100 AD scroll known as "Along the River" during the Qingming Festival is a little more than five meters wide in real life, but its lovingly animated re-creation was some 130 meters wide and more than six meters high, running the full width of the host country pavilion. Tranquil scenes showed life in a canal-side village in fine brush strokes and pale, elegant shades - all of it painted with light from 12 Christie projectors, the edges blended by software.

The designers considered using water for a moat that would separate the huge Expo crowds from the rippling water projection and surfaces, but instead opted to use a combination of rippling water and MicroTiles that lit up complementary visuals through these ripples in what was dubbed the River of Wisdom.

### PROJECT TEAM

Crystal CG International
Wincomm Technology Co. Ltd.
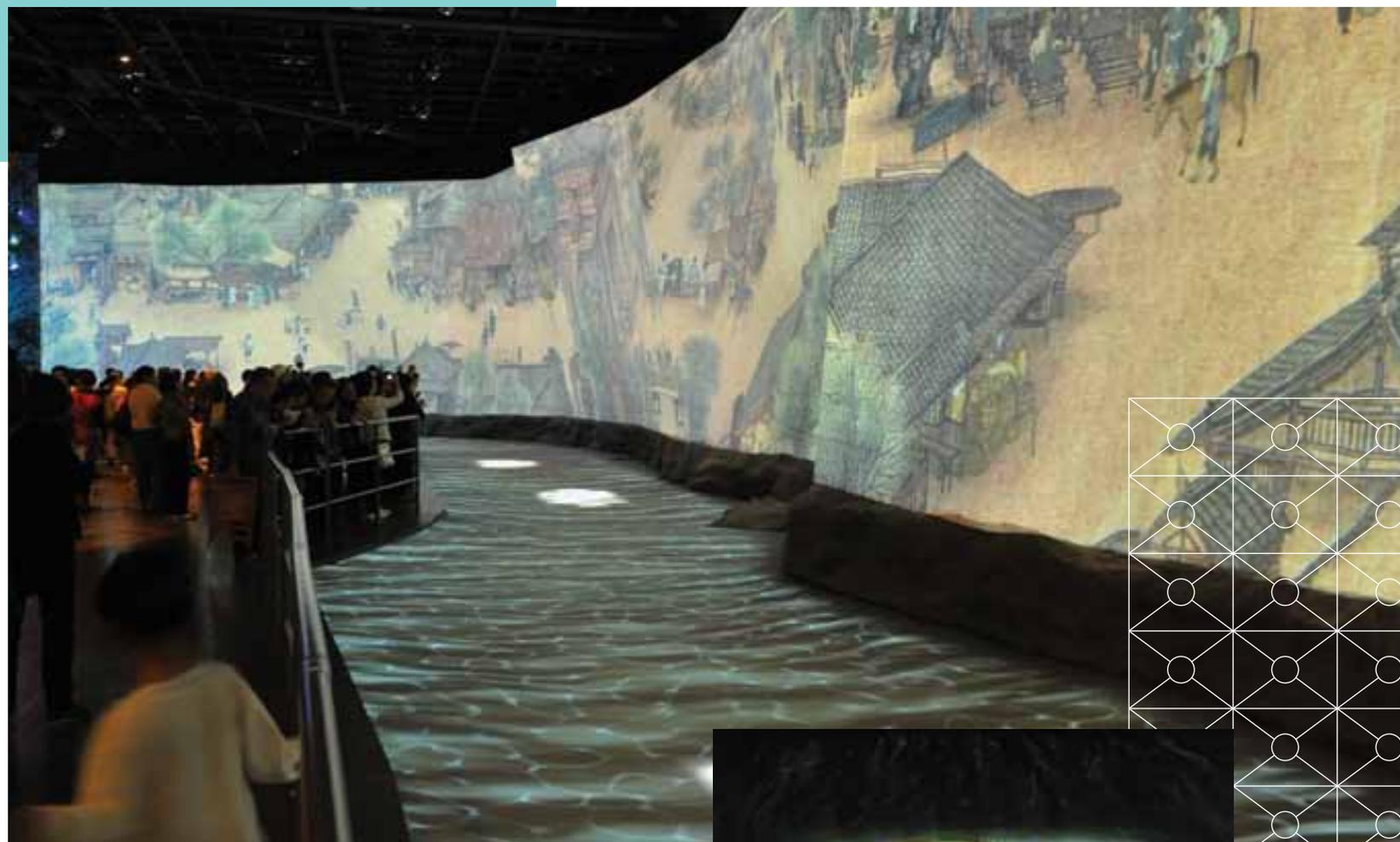
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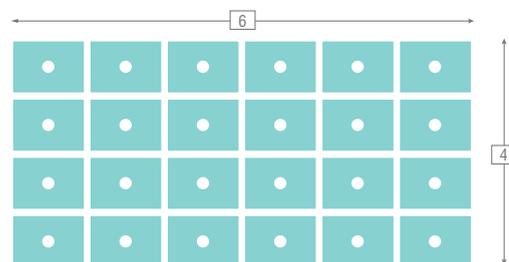
# AUDI – GOODWOOD FESTIVAL OF SPEED
## SUSSEX, UK

Audi showcased its car line-up and iconic brand with a jaw-dropping concave wall of 270 MicroTiles set up in a fan pavilion at the 2011 Goodwood Festival of Speed in Sussex, England, an event billed as the world's greatest celebration of car culture.

Audi's marketers needed a powerful way to excite fans and reinforce the brand at Goodwood, and a huge curved wall of MicroTiles delivered the desired "Wow Factor" for the German automaker. Audi-lovers visiting the pavilion were greeted by a 39-foot (12-meter) wide video wall showing Audi race and concept cars tearing up road circuits in pixel-perfect HD and deep, vivid colors.

Audi worked with integration and content teams to design and test what became the largest temporary installation of MicroTiles yet seen in Europe - creating the unique curved wall and stitching together six arrays of MicroTiles to build one massive visual. Coming off flawlessly, Audi said the project hit all the desired marks for driving the brand and energizing its event efforts.

### PROJECT TEAM

AV/Central Presentations Ltd.
Twofour Digital

### CONFIGURATION
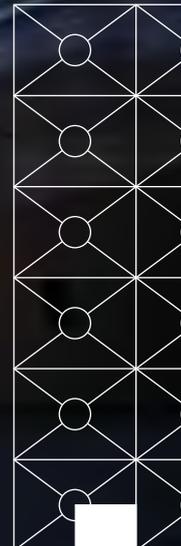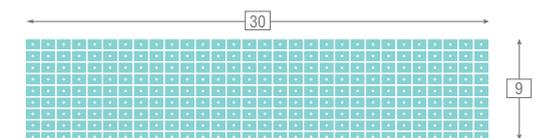
# CAPITAL MARKETS SUMMIT
## CAPE TOWN, SOUTH AFRICA

Some 500 executives from South Africa's institutional finance community took their breaks in front of an 88 MicroTiles display that served as a focal point for a two-day Capital Markets Summit held in Cape Town in early 2012.

The event's technical team placed an 8 high by 11 wide display, allowing for landscape mode content, in the foyer of the conference center. Custom content - presentations and sponsor marketing messages - was developed, and a screen zone allocated for financial data from CNBC Africa.

"We were able to deliver an exhibition and networking space with multiple client messages, huge brand presence, a unique presentation solution and a major talking point amongst the delegates," said Event Manager John Paul Waites.

### PROJECT TEAM

Gearhouse SA

### CONFIGURATION

# INTERNATIONAL ADVERTISING ASSOCIATION
## MOSCOW, RUSSIA
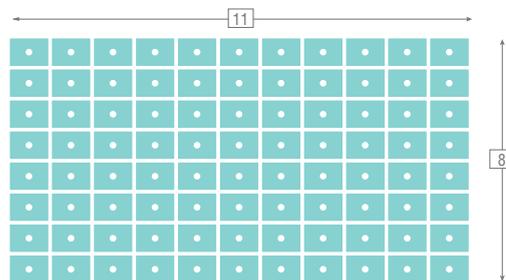
# SCALA 2010 DIGITAL SIGNAGE EXPO
## LAS VEGAS, USA

## SHAPE STORY

When members of the International Advertising Association (IAA) gathered in Moscow for their 2010 Congress, the organizers needed display technology that somehow cut through the daylight streaming in the windows of the grand lobby at the Kremlin. Three separate walls of MicroTiles, the first used in Russia, managed to overcome that light and properly showcase the event and the creative work of IAA members.

The central display used an expanse of 46 MicroTiles with an interesting jagged edge, and the structure filling out to a rectangle using solid color blind panels. The wall colorfully welcomed 1,500 attendees, while a pair of freestanding displays (3 x 4 and 3 x 5 MicroTiles) were used to feature socially responsible and award-winning creative.

### PROJECT TEAM

Big Screen Show

### CONFIGURATION

12

6
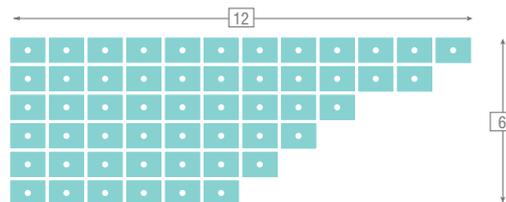
## SHAPE STORY

A set of 22 MicroTiles was placed in a visually intriguing diagonal staircase array across a booth backdrop by the digital signage company, Scala, as it marketed its media innovations at the 2010 Digital Signage Expo in Las Vegas.

With the MicroTiles units only partially embedded in the backdrop wall to give trade show visitors a better sense of dimension, the multimedia software firm showed how its playback software could cascade product marketing, and ambient video and motion graphics, on entirely unconventional digital surfaces and shapes.

### PROJECT TEAM

Scala
Christie Experiential Marketing

### CONFIGURATION

12

11
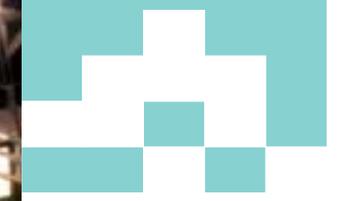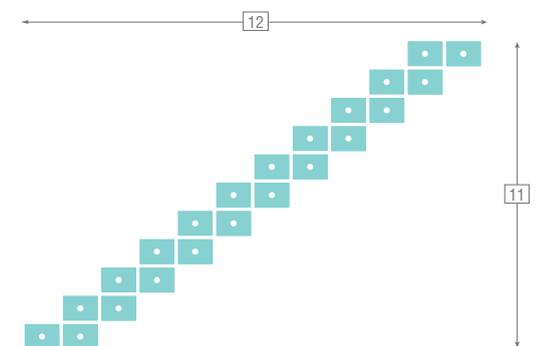
# AUSTRALIA DAY 2011
## AUSTRALIA HOUSE, LONDON, UK

### SHAPE STORY

The organizers of Australia Day 2011 in London needed spectacular visuals to match the venue's grand setting, but they also had to identify a flexible technology solution that could address the more practical challenges. The answer came in a stack of 60 MicroTiles.

The setting for the annual celebration – the Exhibition Room inside London's landmark Australia House - would be filled with chandeliers and national flags, leaving no place for hanging equipment and creating plenty of obstructed sightlines. The event's AV designers worked around that with a low-profile 5 high by 12 wide rectangle of MicroTiles at the head of the room, supplemented by six wall-mounted, 50-inch plasma screens around the space.

The 300 guests for the gala dinner were treated to show-case videos, PowerPoint presentations and live video fed by fixed and wireless cameras inside the venue. Pushed to make the AV presentation better with each passing year of the event, the technical designers found MicroTiles presented superior visuals and none of the color calibration, resolution or reliability issues faced in the past.

### PROJECT TEAM

Eclipse Presentations
Paragon Projection Ltd.

### CONFIGURATION

12

5
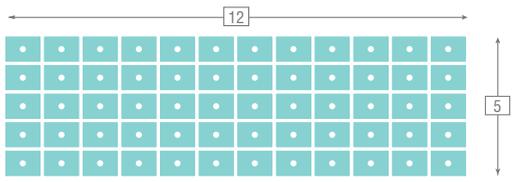
The chameleon-like capability of MicroTiles was the main visual attraction of Interni magazine's Think Tank exhibition at the 2010 Milan Design Week, showcasing a new fusion of technology and design with a 4 by 4 grand display set into a dominating vertical slab.

Held in the courtyard and upper cloister of the State University of Milan, the temporary wall slab had a mosaic product showcased on the other side - part of an effort to create a "living space" where designs and solutions for walls and furniture integrated with technology.

PROJECT TEAM

Engineering Solutions S.r.l.

CONFIGURATION

4

4
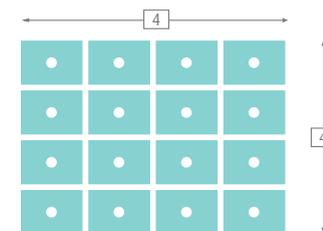
# 2010 MILAN DESIGN WEEK - INTERNI'S THINK TANK

## MILAN, ITALY

# VERSACE FASHION WEEK 2010
## NEW YORK CITY, USA

**SHAPE STORY**

Italian fashion house Versace filled the store-front windows of its New York Fifth Avenue location with a pair of 10 foot high, four foot wide MicroTiles video walls that showcased the latest designs and drew crowds during Fashion Week in September 2010.

Each vertical video wall array featured a stack 3 MicroTiles wide by 10 high, stopping sidewalk shoppers in their tracks and serving as a backdrop on Fashion's Night Out for a street-level show that combined runway footage and live models.

**PROJECT TEAM**

McCann Systems

**CONFIGURATION**

3

10
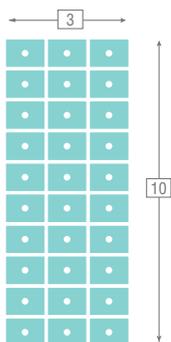
# IDS12 INTERNATIONAL DESIGN SHOW 2012
## TORONTO, CANADA

### SHAPE STORY

Walking into the 2012 Interior Design Show in Toronto meant walking into a novel immersive experience built around some 1,300 strips of suspended felt cloth and a pair of MicroTiles walls that let show-goers interact through hands-free gestures.

Called StripTease, the experiential welcome area featured projections on a curtain of felt strips and back-to-back 25 MicroTiles walls - set in matching, jagged skyscraper formats - showing colorful digital patterns. When show-goers waved or spread their arms, embedded sensors responded by dispersing the patterns, showing the faces of the people interacting.

"We particularly liked the fact that the shape of the images on the MicroTiles are not limited to simple rectangles, but can take on complex shapes to suit the designer's vision," recalled Roland Rom Colthoff, a partner with RAW Design, the firm behind the experience. "They allow for changeable images that can be manipulated individually or in any combination without having to fit discreetly into a screen or one frame."

With design being all about expression, form and function, using the MicroTiles at the country's largest interior design event made perfect sense. Organizers embraced the concept of how flexible displays can change both the look and character of a space.

### PROJECT TEAM

Acid Integrations
GestureTek™
Mad Hatter Technology Inc.
Mark Tholen
Raw Design

### CONFIGURATION

6

6

71
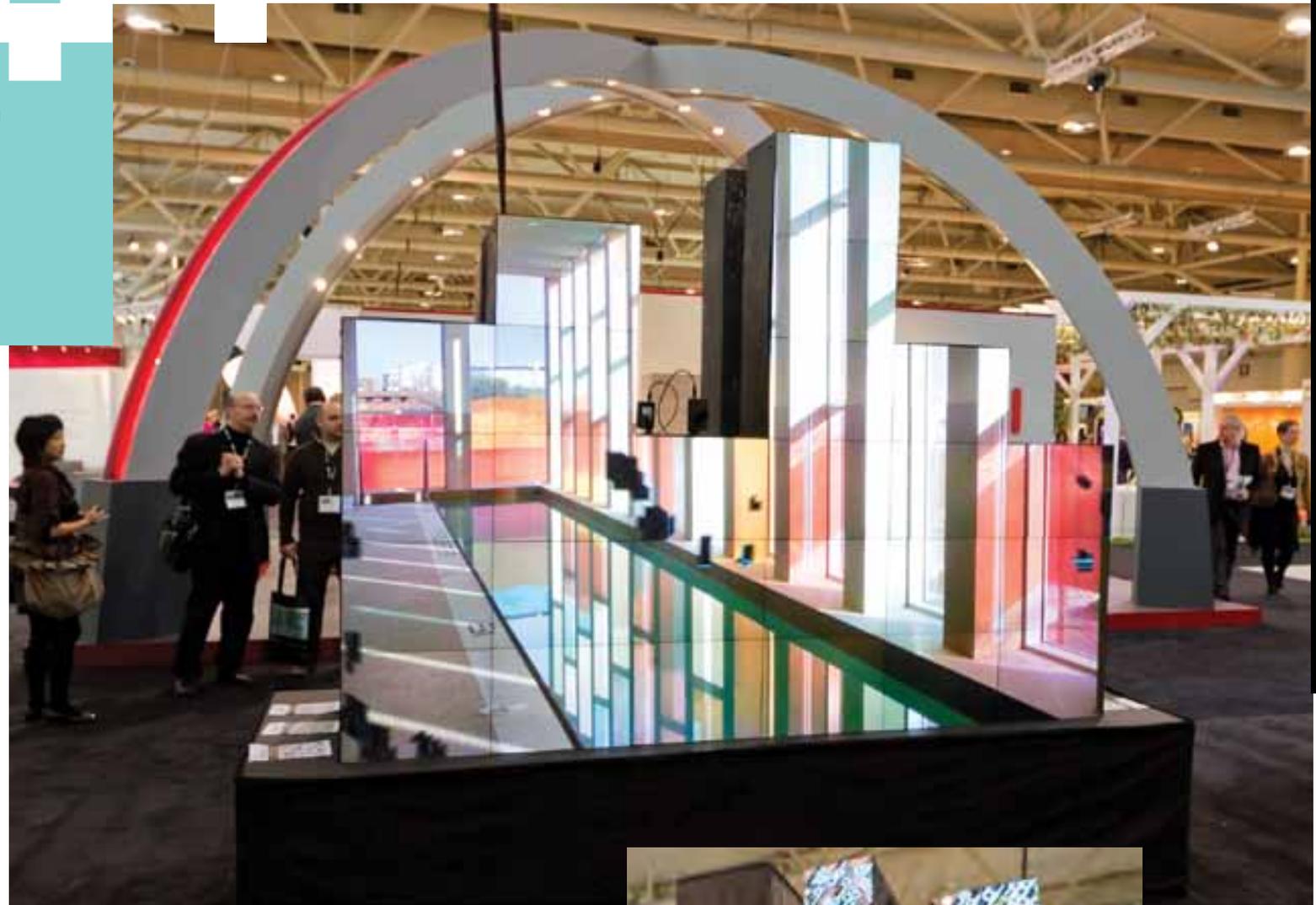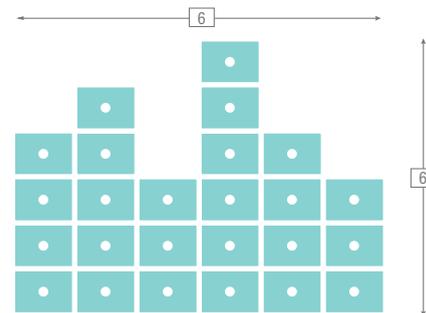
# BRUCE WEBER LAUNCH PARTY
## NEW YORK CITY, USA

Iconic fashion photographer and filmmaker Bruce Weber had a clear vision for the industrial steel and brick look he wanted for a New York launch party, and found a set of 25 MicroTiles gave him the digital backdrop he wanted, without making compromises.

The industrial theme of Weber's September 2011 launch party for a new film and related website required display technology that could blend in, ruling out the high-gloss glass of most digital displays. The non-reflective surface of the MicroTiles suited the environment, and the unique color matching, saturation, ultra-high resolution and brightness of the technology allowed the designers to maximize the impact of the film visuals and stay true to the vision.

"I didn't want the film to look pixelated in any way and the MicroTiles displayed the content exactly how I wanted it to look," said Weber after the event. "They fit elegantly into the architecture and were clearly superior to the other choices. MicroTiles provided exactly what we needed."

PROJECT TEAM

Materials & Methods
Christie Managed Services

CONFIGURATION

72
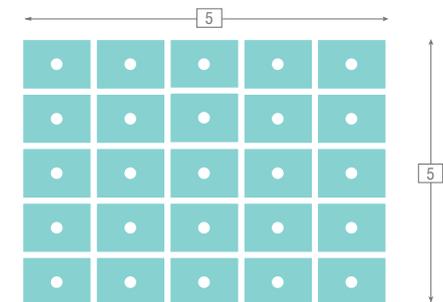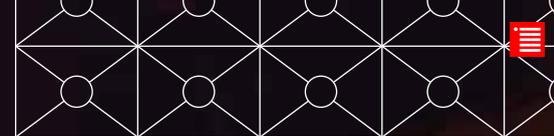
## SHAPE STORY

Organizers of a March 2011 TEDx conference in Waterloo, Canada, used an irregular cluster of MicroTiles to help convert a huge presentation stage into an intimate, visually intriguing setting for the event's speakers.

The TEDx centerpiece was a set of 11 MicroTiles that nested in the base and up through a custom bookshelf set up on the stage to help create a living room atmosphere. Props and other paraphernalia dotted the shelves, and the MicroTiles drove interesting visuals as ambient backgrounds and supporting speaker topics. "We wanted to find a way to shake up pre-conceived notions that displays are only rectangular," explained Jennifer Janik, Production Coordinator for TEDxWaterloo 2011.

A second 1 by 8 horizontal row of MicroTiles to the rear of the stage, set below a massive projection screen, displayed the name of each presenter during the sessions. In the lobby, a "Tower of Tweets" - 5 Tiles stacked on a pedestal - tied into Twitter to dynamically show what organizers called conversation bubbles that were focused on the TEDx Waterloo event.

## PROJECT TEAM

Media Lab
Mad Hatter Technology Inc.
Christie Experiential Marketing
Christie Research & Innovation

## CONFIGURATION



# 2011 TEDx CONFERENCE
## WATERLOO, CANADA
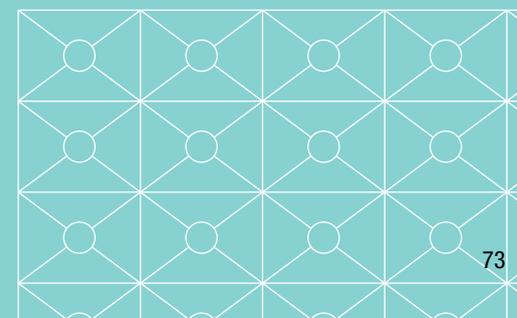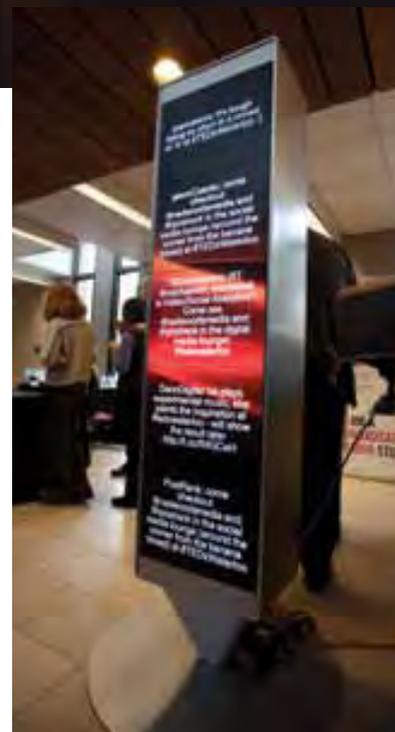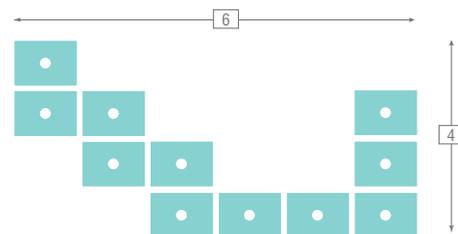
# UNITED KINGDOM SHOWS & EVENTS - AZTEC EVENT SERVICES
## LONDON, UK

UK-based Aztec Event Services calls its work "business theatre", and the company has used unique arrangements of MicroTiles combined with custom creative to put on a show at numerous events - the work including a massive digital head and giant multimedia letters on a fashion show catwalk.

For 100% Design 2011 in London, the UK's leading contemporary design event, organizers wanted an edgy showpiece that stopped attendees in their tracks and reflected the show theme of all design coming from within our brains. Aztec dreamed up a massive head cut out of a feature wall, with a 7 wide by 10 high wall of MicroTiles set inside. Content run on the displays coordinated with content projected on the surrounding wall space.

The visual spectacle of the five daily fashion show catwalks at 2011's International Jewellery London was amplified by incorporating a series of multimedia letters and shapes - made of 52 MicroTiles - into the trade hall's main runway boulevard. Placed at intervals, the arrays provided dynamic backdrops for the jewelry models as they prowled a main corridor in the Earl's Court trade hall.

For the World Travel Market 2011 show in London, the car rental company SIXT had Aztec create a curved wall of MicroTiles to generate the desired Wow Factor on the exhibit floor. Using a custom aperture, the exhibit wall contained 40 MicroTiles (4 high and 10 wide) and specially created content. It was the second year running that SIXT used MicroTiles, and the company expressed delight with the effect and results.

PROJECT TEAM

Aztec Event Services

CONFIGURATION

# HTC PRODUCT LAUNCH
## DUBAI, UAE
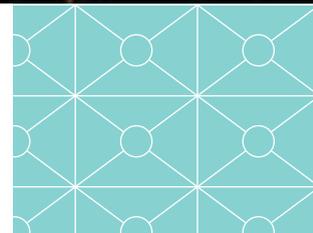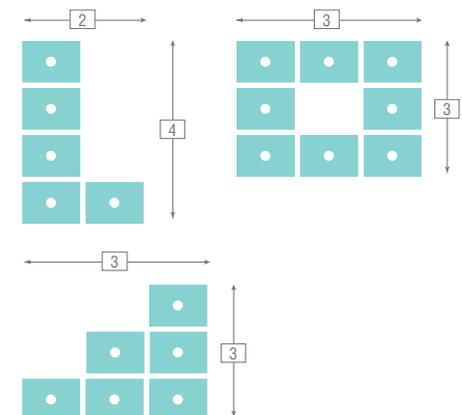


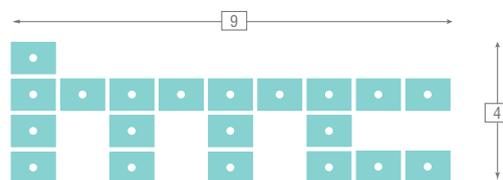# ARMANI HOTEL
## DUBAI, UAE

## SHAPE STORY

Taiwanese mobile giant HTC found a novel way to showcase all the apps and services available on a new set of devices being launched for the Dubai market: the company logo, made from MicroTiles.

For its mid-2011 phone and tablet launch, the event's technical design team built a giant HTC logo into a wall made of 24 embedded MicroTiles, and used a pixel-mapped video file, driven by a laptop, to move visuals for popular mobile services like Twitter, Facebook and YouTube around the logo.

## PROJECT TEAM

Eclipse Staging Services

## CONFIGURATION



## SHAPE STORY

With an open-air terrace overlooking a spectacular water fountain, and the world's tallest building looming overhead, everything about the Dubai launch of The Armani Hotel's outdoor pavilion had to be special - including the event's audio-visual display.

The 650 guests at the event saw a variety of lighting and digital technologies, with two of the focal points being 1 wide by 5 tall MicroTiles columns on the outdoor patio - taking on the classic Armani minimalist look and showing graphics for the revered Italian fashion house.

## PROJECT TEAM

Eclipse Staging Services

## CONFIGURATION

# NOVARTIS ONCOLOGY
## STOCKHOLM, SWEDEN

### SHAPE STORY

The pharmaceutical giant Novartis needed powerful visuals to draw attendees to its exhibit area at a global oncology summit in 2011, using three custom MicroTiles walls on the event floor to promote products and educate customers and partners.

More than 100 companies and organizations are competing for attention and time when some 16,000 attendees gather at the annual European Multidisciplinary Cancer Congress. The event includes a three-day exhibition, and for the 2011 show in Stockholm, Novartis had its exhibit contractor develop three 6 high by 5 wide free-standing walls of MicroTiles for the booth.

Two of the walls played HD video and computer graphics created to illustrate the characteristics of Novartis oncology drugs for medical practitioners, while a third included a laser-driven component that enabled booth visitors to manipulate content in an interactive test of their knowledge of drugs.
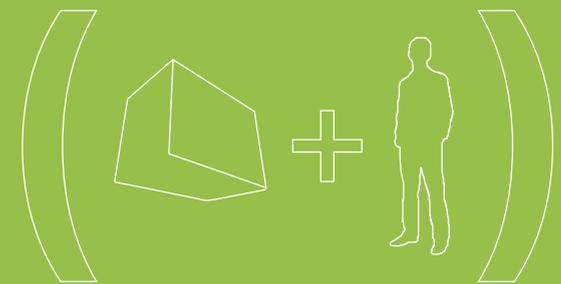
### PROJECT TEAM

Excogitare S.r.l.
Float 4 Interactive
Gruppo Interfiere S.r.l.

### CONFIGURATION
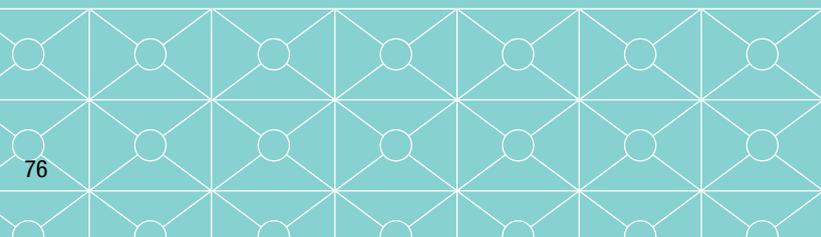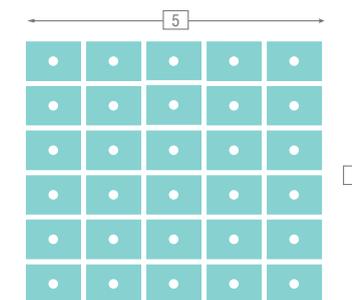
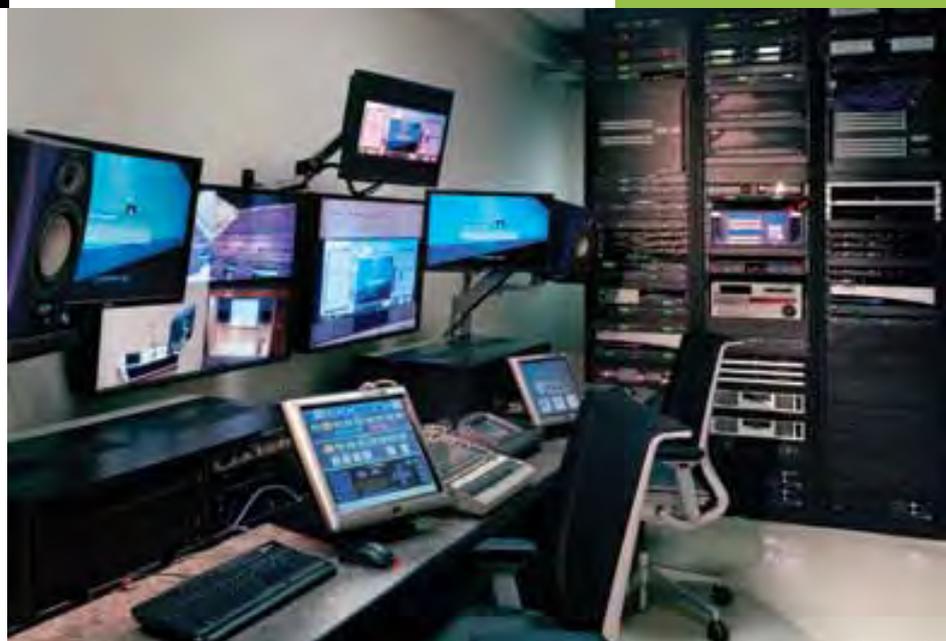INTERNATIONAL DESIGN INSPIRATIONS FEATURING CHRISTIE MICROTILES

# HIGHER EDUCATION

# UNIVERSITY OF PENNSYLVANIA
## TRANSLATIONAL RESEARCH CENTER, PENNSYLVANIA, USA

The University of Pennsylvania's new Translational Research Center uses a massive, wall-filling rectangle of 180 MicroTiles in its lobby to drive awareness of the biomedical research advances made by staff and students, and show medical imaging at the highest possible resolution and the richest colors.

Part of the univesity's medical school, the center opened in 2011 with a seamless wall that runs to the ceiling and is almost 27 feet wide. A team of architects, pro AV designers and fabricators collaborated to fit the seamless wall into the overall steel, glass and wood design of the striking minimalist lobby, and carefully embedded a range of supporting technologies.

A huge lobby video wall was always on the wish list when the 400,000 sq. ft. building was being designed and started construction, but the wall only went beyond the idea stage when Christie's MicroTiles came on the market. The stackable display blocks provided the desired seamless look, effectively counteracted daylight glare from lobby windows and surfaces, and provided the sharpness and high quality of color reproduction needed to best show medical imaging coming out of the labs.
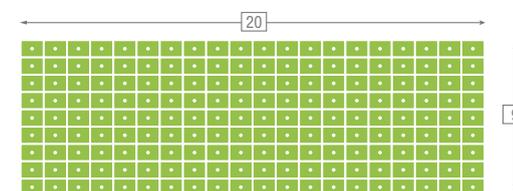
Using the diminutive MicroTiles also limited the amount of space used by the wall, particularly since no rear access is needed to open and service the display blocks. Building operations was also attracted to the low energy requirements of the LED-based MicroTiles, as well as their extra-long operating lives and lack of consumables such as bulbs or filters.
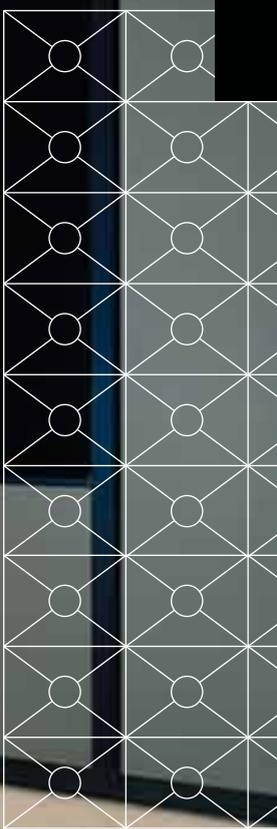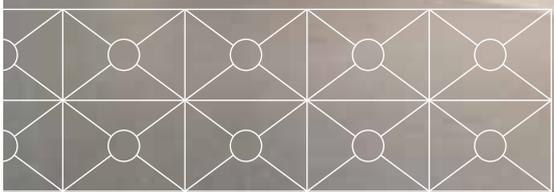
The wall is connected to the center's fiber optic network, providing broadband access and enabling viewing or participation in streamed video conferences, using an embedded HD video camera. The wall also has an integrated audio system and touch panel, and is used for everything from building information and showcases to backdrops for functions.
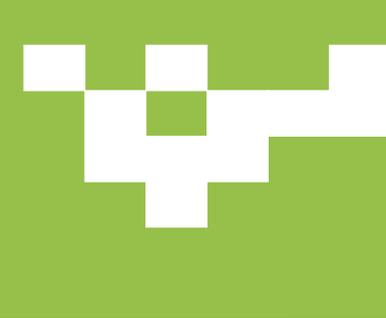
PROJECT TEAM

Advanced AV
Cerami & Associates
RP Visuals

CONFIGURATION

# UNIVERSITY OF SALFORD
## MANCHESTER, UK

Fully flexible multimedia clusters of MicroTiles let Manchester's University of Salford reach a goal for a publicly accessible digital interactive showcase for visitors and students. A unique digital learning space, dubbed The Egg, uses sets of MicroTiles in different arrays to showcase projects and ideas.

The digital learning center is part of the MediaCityUK development that's home to BBC North, ITV Studios and several independent creative, digital and media firms. The learning center is home to 1,500 students training and doing research in radio, TV, computer games, and digital media production.

The design brief for the facility included a flexible space in the entry area where technology could be deployed in different ways. Design pre-conditions included a requirement that any video wall display be free-standing on the facility's raised floor, and not structurally fixed to the building. The university also wanted the flexibility to re-arrange display designs and placement as needed, making MicroTiles an obvious and ideal solution.

The building opened in fall 2011 with a single wall of MicroTiles 8 high by 15 wide, but the pro AV integrators designed in structural frameworks that have since allowed the wall to be re-configured and used as series of different multimedia elements inside The Egg. The MicroTiles are the highlight technology, but the center is also using interactive touch tables and projection technology for student experiments and showcases.

### PROJECT TEAM

Electrosonic

### CONFIGURATION

15 × 8

# WILFRID LAURIER UNIVERSITY 100TH ANNIVERSARY
## WATERLOO, CANADA

Organizers of a gala dinner celebrating Wilfrid Laurier University's 100th anniversary used a custom wall of MicroTiles, fitted to form the number 100, as the backdrop for speeches, presentations and the evening's entertainers.

The university in Waterloo, Ontario held a celebration dinner recognizing 100 of its most exceptional alumni during its October 2011 Homecoming weekend. The focal point for the stage was a set of MicroTiles - 5 forming the number 1, and 12 forming each of the zeroes.

Nominated and selected out of a pool of nearly 80,000 graduates of the Canadian university, honorees as diverse as opera sopranos and ambassadors were recognized at the event - cited and presented on stage as a series of visuals ran on the multimedia 100 back-drop behind the lectern.

Motion media designers developed a series of seg-ments that picked up the color and design theme for the centennial celebrations, and used effects such as video fireworks as part of the ceremonies and through performances that ranged from a choral group to a rock band. Designers also used the MicroTiles blocks to show visuals of Sir Wilfrid Laurier, who was Canada's prime minister the year the university was founded.

### PROJECT TEAM

Arsenal Media Inc.
Christie Experiential Marketing

### CONFIGURATION
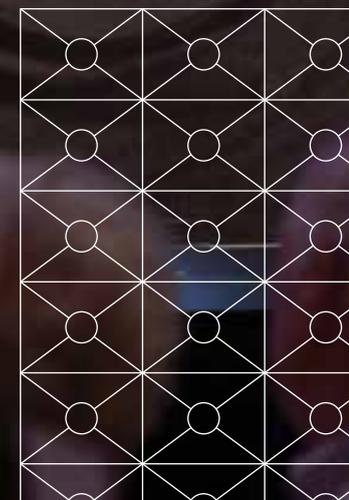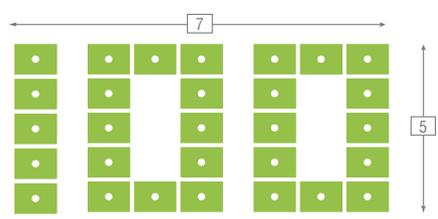
# PERIMETER INSTITUTE FOR THEORETICAL PHYSICS, STEPHEN HAWKING CENTRE

## WATERLOO, CANADA
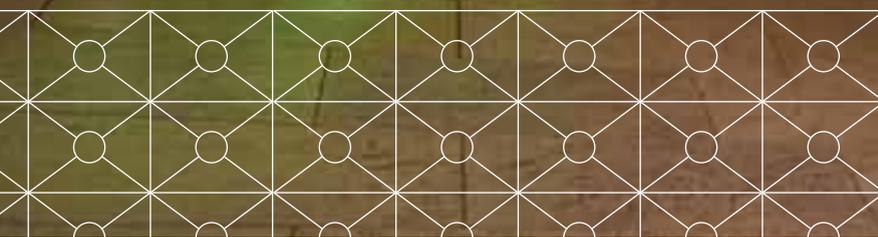
## SHAPE STORY

The Stephen Hawking Centre at the Perimeter Institute for Theoretical Physics wanted a visual display design that fused messaging, mission and architecture for the main entry of its labs and lecture facilities in Waterloo, Canada. The result was an entirely new, unique take on display wall shape that seems appropriate for an institution built for ideas.

A wall of 84 MicroTiles is set in a pair of abstract sideways "V" formations in the main lobby, the wall bisected by a functioning passageway into a room. Graphic artists steadily populate the displays with custom messaging about the institute and its purpose, as well as high resolution images and animations relating some of the advanced thinking of institute scientists.

Theoretical physics is about abstract thinking, and that point of view extended to the overall design of the building - where not even the office windows have predictable four-sided shapes. The two elements of the lobby wall work up from visibly narrowed base rows to wider tops, with a back frame holding them in place and some of the MicroTiles covered in part by a decorative surround to create the odd angles.

Building video displays into walls is usually ruled out because of poor ventilation and the lack of rear access for servicing, but MicroTiles generate little heat and are easily serviced from the front.

The Institute had previously used plasma displays in public areas to relate basic information and scheduling. Switching to the high resolution MicroTiles displays allows researchers to display highly detailed scientific images and computer-generated animations they've produced to a much broader audience.

The amazing thing about this technology is that we've only scratched the surface of what we can do with it," said Perimeter Institute COO Michael Duschenes. "We know what the possibilities are, but I don't think we're even close to using them yet."

### PROJECT TEAM

Perimeter Executive Management Team
RP Visuals
Teeple Architects
Westbury National Show Systems
Christie Research & Innovation

### CONFIGURATION
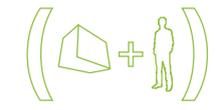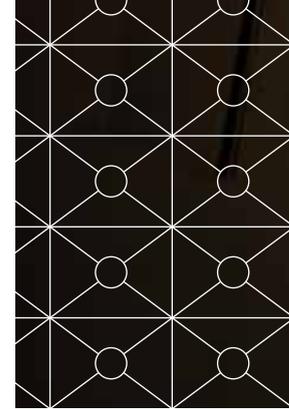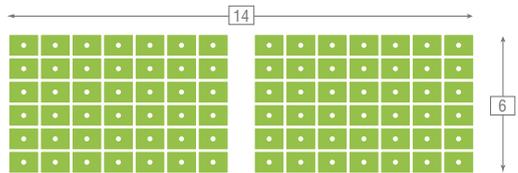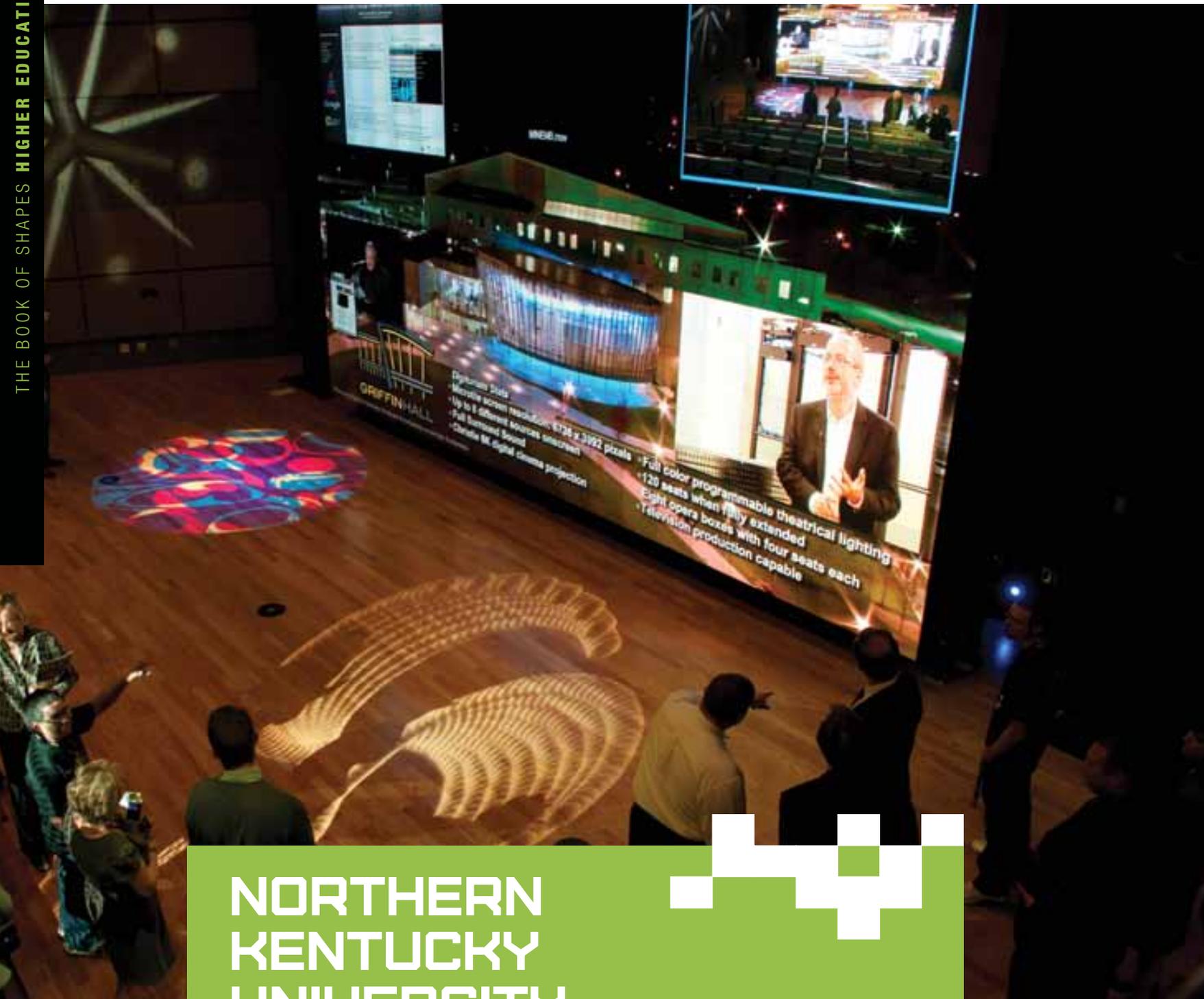
# NORTHERN KENTUCKY UNIVERSITY
## KENTUCKY, USA

## SHAPE STORY

A mammoth video wall of 285 MicroTiles fills the stage of the Digitorium at Griffin Hall, the home of Northern Kentucky University's College of Informatics, and serves as a focal point for learning on everything from advanced homeland security training to opera and student films.

Opened in time for September 2011 classes, the facility has a wall of MicroTiles 15 high by 19 wide at the rear of a unique 120-seat auditorium, built with ultra-high resolution visuals and interactivity in mind. It's used for purposes as diverse as virtual performances and collaborative gaming, to workflow modeling, 3D visualizations and cyber-warfare training.

Dean of Informatics, Douglas Perry, describes Griffin Hall as "an entirely new environment in which students can learn, grow and play in the best sense of the word," and the Digitorium is its heart.

The two-storey Digitorium's 25 by 15 foot (7.6 by 4.6 meter) video wall can display one large image, or multiple, smaller images from any combination of sources — fed by students working in the news laboratory, broadcast center or production control labs.

The university uses the Digitorium video wall to display information about the campus, events and student film and animation projects, as well as collaborative projects with performing arts groups - the wall serving as a massive visual backdrop. PCs built into eight opera boxes flanking the main seating area also allow for live interaction from groups - the inputs displayed on the wall. NKU makes the space available, as well as a network operations center (NOC) for private and government groups.

### PROJECT TEAM

Acentech Incorporated
Diversified Systems
RP Visuals

### CONFIGURATION
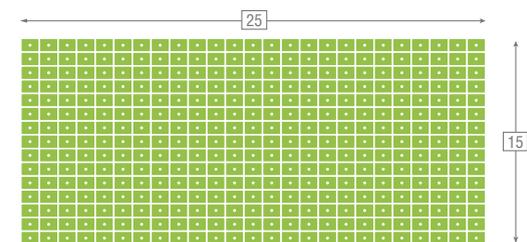
# NORTH CAROLINA STATE UNIVERSITY
## NORTH CAROLINA, USA



## SHAPE STORY

Budding video game designers and developers are using a massive digital canvas of MicroTiles to scope, plan and deliver projects in an ambitious and expanding gaming lab at North Carolina State University.

A prototype wall of MicroTiles already in use will be supplanted by four permanent video walls, using more than 400 displays, when the new James B. Hunt Jr. Library formally opens in early 2013 on NC State's Centennial Campus in Raleigh. The new walls range in scale from 80 to 120 displays, and fill entire walls of rooms.

The university's Digital Games Research Initiative puts the best technologies available in the hands of students and faculty, giving graduates a competitive edge in the burgeoning electronic game industry.

The area's Research Triangle Park is already the East Coast hub of the video games industry in the U.S., with many jobs being filled by NC State grads.

The size, scope, flexibility and technical characteristics are giving students invaluable experience working on large space, highly social games. One student who did a test-run of a new game on the giant surface gave his succinct opinion of the wall and its impact: "This is epic."

### PROJECT TEAM

Pearce Brinkley Cease + Lee
RP Visuals
Snohetta
The Sextant Group

### CONFIGURATION

16

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85
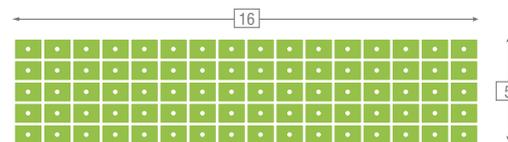
# CLARKSON UNIVERSITY
## NEW YORK, USA
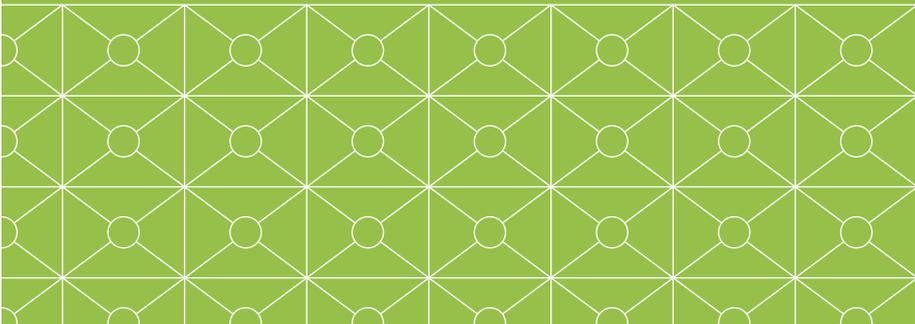
A wall of 80 MicroTiles is the centerpiece of the central amphitheater in Clarkson University's new student center - used for everything from multimedia backdrops for performing bands and comedians to live sports broadcasts and video gaming.

The upstate New York college's students - whose raised activity fees helped bankroll the center - wanted a central hub for the school that was technologically advanced, flexible, cost-efficient and fun. After reviewing different display options, Clarkson's IT team settled on a wall of MicroTiles 8 high by 10 wide - the decision influenced by ease of servicing, long operating life and the brightness levels that made daylight glare a non-issue.

Turned on in time for fall 2010 classes, the wall runs on media servers, has a dozen inputs and has a touch panel controller. Built into a backing wall at the base of the amphitheater, the display is easily visible throughout much of the student center's main area.

Multimedia design students are using the wall as a canvas, and learning how to develop creative for the MicroTiles. The wall has been used as part of live stage performances and ceremonies. It was a "Watson" site for IBM's Jeopardy Challenge. It's also the best screen on campus to watch a big game.

PROJECT TEAM

Video Visions

CONFIGURATION
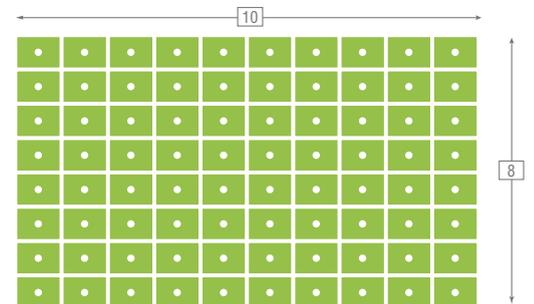
# UNIVERSITY OF IOWA

## CARVER-HAWKEYE ARENA, IOWA, USA

### SHAPE STORY

When The University of Iowa and philanthropists put $43 million into revitalizing the arena that's home to most of the college's sports teams, they wanted a new entrance that generated excitement from the first glance of sports fans. A wall of 70 MicroTiles now delivers that in a way not possible with other technologies.

The airy new entrance to the Carver-Hawkeye arena is lit, in part, by sunlight - warm and inviting for visitors but a big problem for conventional screen technology that's not capable of overcoming glare. Using the brightness and saturated color properties unique to MicroTiles, visuals pop through the ambient light. The embedded wall runs around-the-clock programming team videos, slideshows of players and games, player profiles, schedules and digital video art.

"The Christie MicroTiles wall is definitely a big focal point of the entire renovation project, not only for the people walking through the lobby, but also from the standpoint of the university itself," said Nate Lawrence, VP Operations for Electronic Communications Systems (ECS).

Donors who helped bankroll the renovations, completed in fall 2011, see the big 7 high by 10 wide wall as a tool to energize student athletes as they walk in, and dazzle athletes being recruited to attend Iowa one day and put on a Hawkeyes uniform.

### PROJECT TEAM

Electronic Communication Systems Inc. (ECS)
KJWW Engineering
Neumann Monson Architects

### CONFIGURATION

10
7

## SHAPE STORY

The Wisconsin Institutes for Discovery developed a pair of stunning MicroTiles multimedia walls to greet visitors at its new facility at the University of Wisconsin-Madison. Fully interactive and designed into the overall architectural plan, the walls build relationships between the scientists and researchers and the local community.

The facility, completed in 2010, was designed as a true center for discovery. A pair of media walls that visitors see on arrival were designed to be engaging and fun, but also function as information portals for the institute, its people and their work.

The Entrance Portal on the main floor uses 34 MicroTiles - 2 high and 17 wide - that grab attention and draw in people through visual devices like a mosaic of the eyes of resident researchers and a virtual blood vein people can manipulate using gestures.

The Discovery Wall, also on the main level, combines gesture and multitouch support on a wall of MicroTiles 4 high by 10 wide, letting multiple visitors simultaneously call up and work with information about the facility, events and donors. The wall is also used for presentations.
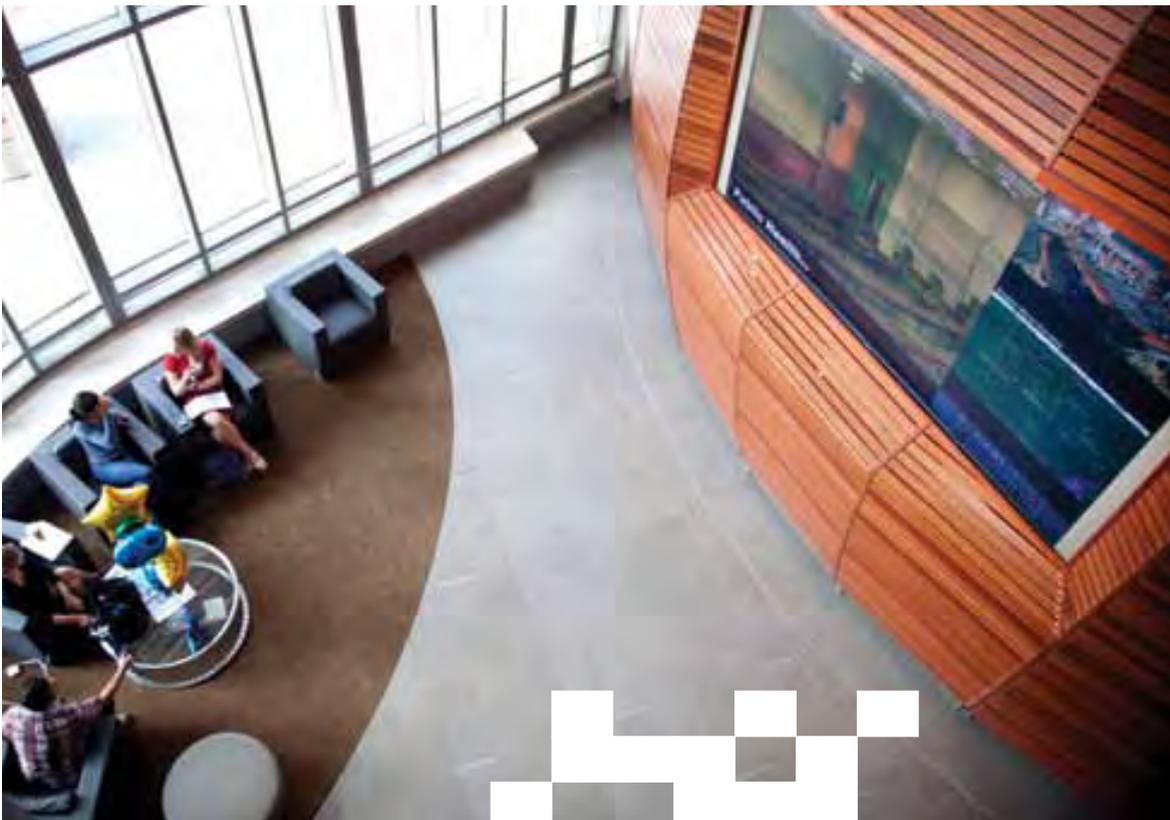
### PROJECT TEAM

AVI Systems
Float 4 Interactive
R2W Inc.
Sensory Interactive
Zebradog

### CONFIGURATION

# UNIVERSITY OF WISCONSIN-MADISON, WISCONSIN INSTITUTES FOR DISCOVERY
## WISCONSIN, USA
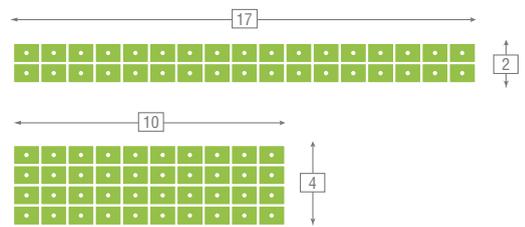
# EMORY UNIVERSITY,
# ROLLINS SCHOOL OF PUBLIC HEALTH
## GEORGIA, USA





# LANSING COMMUNITY
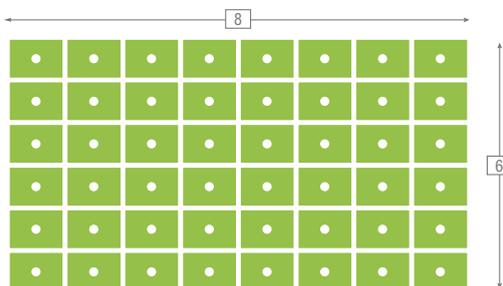# COLLEGE
## MICHIGAN, USA

## SHAPE STORY

When the Rollins School of Public Health in Atlanta was designing its new Claudia Nance Rollins building, one of the goals was integrating a powerful visual display into the lobby that would greet people and serve as both a showcase for the research school's work and an information center for students and staff.

The school, part of Atlanta's Emory University, opened in 2011 with a stunning 6 high by 8 wide MicroTiles wall nested into a convex, wood-paneled enclosure above the entry. Much more than just an architectural showpiece, the wall gets heavy use from early morning to late at night running a wide variety of content, everything from lectures and presentations to live video streams from across campus, and student and faculty photography.

## PROJECT TEAM

AVI-SPL
Waveguide Consulting

## CONFIGURATION



## SHAPE STORY

A set of 15 MicroTiles is set inside a polished limestone wall as the focal point for a poignant tribute to military veterans from the counties that feed students into Michigan's Lansing Community College.

Initiated by veterans on the school's staff and board of trustees, the Veteran's Memorial in the bright rotunda of the Health & Human Services Building uses a 3 high by 5 wide array of MicroTiles angled almost magically into a hard stone face. Content cycles through patriotic visuals and profiles that recognize and honor Congressional Medal of Honor and Distinguished Service recipients from the area.

## PROJECT TEAM

AVI-SPL
Waveguide Consulting

## CONFIGURATION



89

# UNIVERSITY OF WATERLOO, FACULTY OF ARTS REAP PROGRAM

## WATERLOO, CANADA

### SHAPE STORY

A pair of MicroTiles arrays are among the main toys in a digital sandbox developed to spark ideas and nurture interactive display innovation in Canada's technology triangle.

The interactive walls were turned on in fall 2011 for the opening of the FELT Lab in the Waterloo region. Run by the University of Waterloo's Research Entrepreneurs Accelerating Prosperity (REAP), the industry-supported lab allows young research entrepreneurs to innovate by mashing together new and emerging technologies. REAP began as a joint research project with Christie in 2008.

Named after an old felt factory in the town of St. Jacob's, in space provided by Quarry Integrated Communications, the FELT Lab's many technologies include 32 MicroTiles set in a 4 high by 6 wide format, and a separate 8 unit Big O format. Students use the displays to test ideas about the application and experience of motion and touch interfaces.

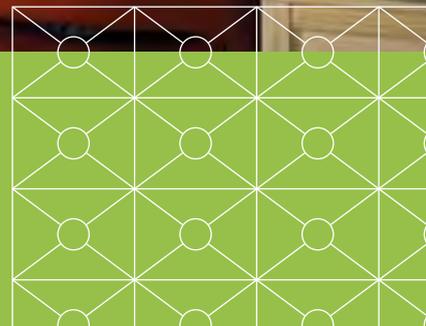An additional 24 tiles are used in research at REAP's on-campus offices.

### PROJECT TEAM

Dynamix Professional Video Systems Inc.
Float 4 Interactive
Mad Hatter Technology Inc.
Quarry Integrated Communications Inc.
University of Waterloo, Faculty of Arts
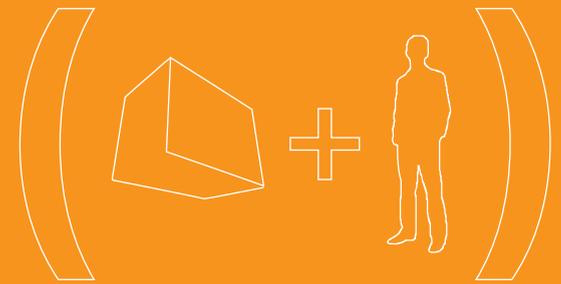Christie Experiential Marketing
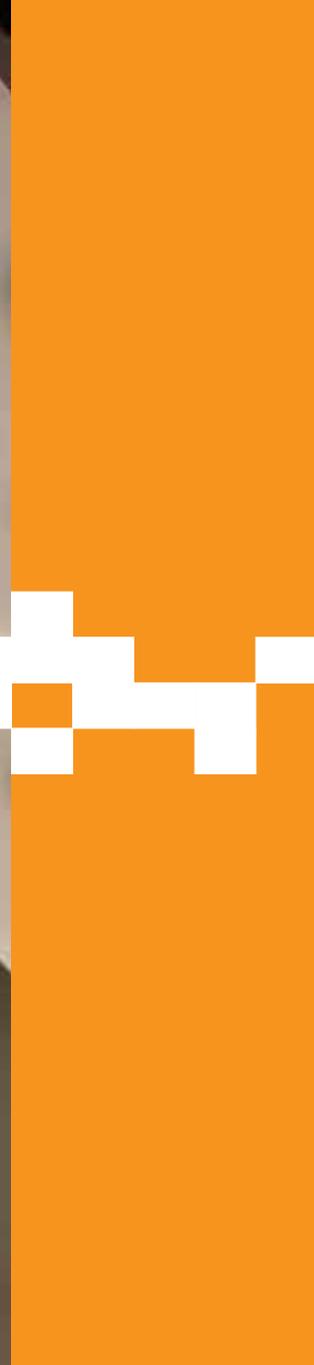
### CONFIGURATION

INTERNATIONAL DESIGN INSPIRATIONS FEATURING CHRISTIE MICROTILES

# RETAIL ENVIRONMENTS

newlook.com

# NEW LOOK
DUBLIN, IRELAND

## SHAPE STORY

Fashion retailer New Look wanted high-impact visuals and compelling marketing content in front of shoppers as soon as they entered the company's new flagship store in Dublin. A wall of 50 seamless MicroTiles, embedded in the bulkhead above the entry escalator, now greets Irish fashion lovers as they walk into the huge Jervis Street Shopping Centre store.

Opened in late 2010, the two-level Dublin store uses a 5 high by 10 wide configuration of MicroTiles to drive awareness of what's available in the downstairs retail space, and also helps set the hip mood for shoppers - the custom motion graphics running in tandem with a special New Look audio mix.

The project brief for the new store focused on a media solution that had to be show-stopping, but also effectively promoted the breadth of available products and guided shoppers as they entered the venue. It also had to have brightness and physical properties that counteracted already bright store lighting, ensuring consistently impactful visuals.

The use of MicroTiles also effectively addressed some practical store operations concerns. Building virtually any large-format display technology into a feature wall is risky because maintenance requires access to the rear. MicroTiles, however, are easily, speedily serviced from the front. Automatic, real-time color calibration also negated one of the regular, manual chores required with more conventional video walls.

Choosing MicroTiles also eased capital and operating budget concerns. The LED light engines are rated for at least seven years of 24/7 service, and energy consumption is minimal when compared with many other display technologies.
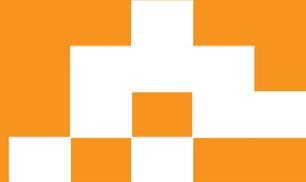
### PROJECT TEAM

Mood Media Corporation

### CONFIGURATION

10

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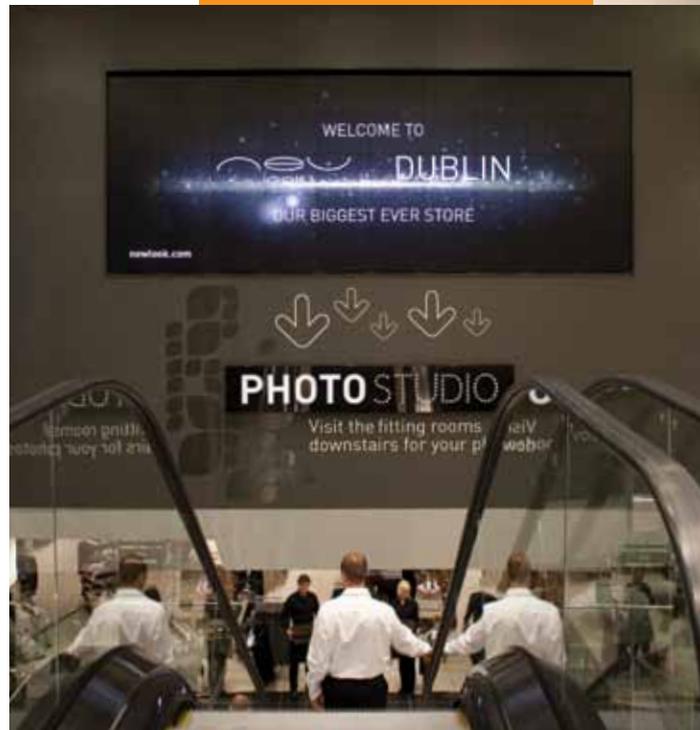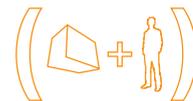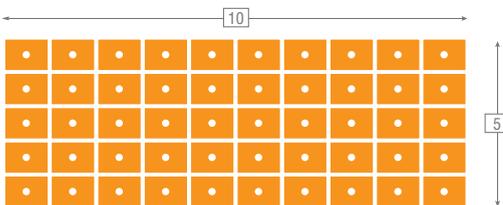
# THE VIRTUAL SHELF™
## 2012 NATIONAL RETAIL FEDERATION
## "BIG SHOW", NEW YORK CITY, USA

### SHAPE STORY

Rich, fully interactive and commerce-enabled displays are part of the overall brand and merchandising strategy and decor, through The Virtual Shelf™ concept demonstrated to retailers and manufacturers at the 2012 National Retail Federation "Big Show" in New York City.

A set of 12 MicroTiles - 2 wide by 6 high - were nested into a wall emulating the design and branding of a high-end apparel retailer's merchandising and fixtures, with products resting on flanking shelves. Intended as a visual destination within a store, shoppers could Touch and Shop to sort through available products, categories and colors, select and compare items, and then touch a Buy Now button to complete purchases.
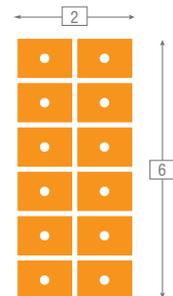
Developed by Montreal's Arsenal Media in collaboration with MicroTiles inventor Christie, The Virtual Shelf also includes mobile features such as QR code promotions and text-message coupons, social media sharing features, and an ambient audio lounge soundtrack to enhance the attitude and fun of the experience.

"We believe it answers today's consumer expectations regarding their in-store experiences while providing innovative merchandising opportunities for retailers. The concept uses minimal space without diminishing the impact of the sales experience and access to full inventory," explained Denys Lavigne, president of Arsenal Media.

### PROJECT TEAM

Arsenal Media Inc.

### CONFIGURATION



### SHAPE STORY

Japanese department store retailer Kintetsu blended a unique stair-step set of 10 MicroTiles into a special Christmas 2011 promotion developed for a concourse area between a pair of Osaka's busiest commuter rail stations.

The Kintetsu Heartful Christmas Fair used large-format print graphics, custom cutouts and the MicroTiles to fully take over the triangular wall space on the ground level of Kintetsu's main store in Abeno, Osaka City, with the promotion built around the popular Swedish comic series *The Moomins*.

### PROJECT TEAM

Dia Nippon Printing

### CONFIGURATION

THE BOOK OF SHAPES **RETAIL ENVIRONMENTS**
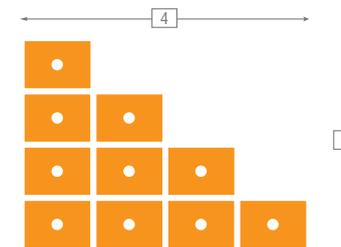
# FRESH
## NEW YORK CITY, USA

### SHAPE STORY

Understated elegance, architectural quality and design flexibility, coupled with exact color matching, made MicroTiles the only true option for Fresh when the luxury beauty brand renovated its New York City flagship store in 2011.

A "Storytelling Wall" at the back of the store - 3 MicroTiles wide by 8 high - nests seamlessly into the old-world apothecary design approach, the content reinforcing the brand. A cluster of 9 MicroTiles at the storefront brings the Fresh brand story to life through original film and video footage. Both clusters are clearly visible to passers-by.

The Union Square store's designers were drawn to the MicroTiles by what they called their "magic invisibility" - the display finish, flexibility, color reproduction and clarity that all put the focus on the content, not the technology. Using MicroTiles allowed the designers to make digital visuals a natural part of the overall design, and not just a feature. Ecstatic with the new design, Fresh rolled it out to stores in the U.S. and Asia.

### PROJECT TEAM

Materials & Methods
Studio Mapos
Christie Managed Services

### CONFIGURATION
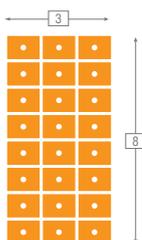
The world is becoming a display.

We've long thought of pixels in terms of the tiny elements that form images on computer monitors, TVs and other electronic gadgets. But technology is rapidly changing how we'll all see pixels, and on what. Pixels will be everywhere.

They'll be on kitchen countertops, on meeting room windows, on the glass in appliances and automobiles, on architectural walls, ceilings and floors. And certainly on just about any fixed sign used to communicate information.

We'll see pixels choreographed to create better experiences - not only for the aesthetic value, but also with tangible, measurable business objectives in mind. It won't just be about how one technology was applied - "what we did with a video wall" - but how a palette of digital technologies were applied to express an idea.
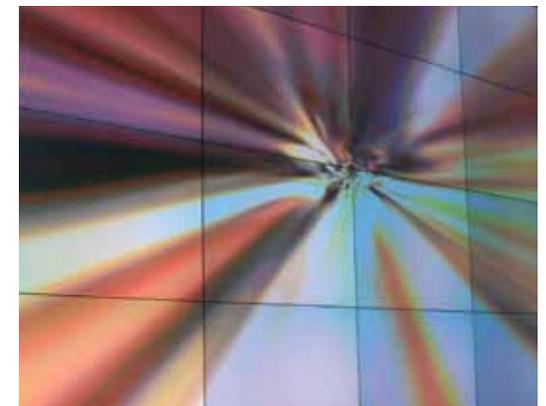
# PIXELS EVERYWHERE

## CONCEPT FIRST

The best applications of digital visuals start with concepts and goals. Designers think creatively about the experience and what it can deliver, and how that fits within the context of the place and its dynamics. Once that's established, designers can then think about how to drive the pixels.

This is already happening in professional sports - where owners and their marketing teams steadily seek ways to amplify the live game experience and spectacle at their stadiums. They're fighting the large LCD and plasma televisions and high-definition broadcasts that make watching the game at home a compelling option.

The newest and most recently refurbished sports and event centers are now symphonies of orchestrated pixels. Giant display walls, like the MicroTiles at the University of Iowa's Carver-Hawkeye Arena, greet fans as they enter. Arena and stadium corridors have displays on walls or suspended at intervals from the ceilings.

There are screens where printed menus once were at concessions. There are interactive fan components, like the MicroTiles-centric BuzzWall™ used by pro football's Miami Dolphins. And in the main halls, the digital scoreboards hanging in the middle have been supplemented by digital ribbon boards that run pixels around the seating areas. Game openings and introductions are now produced shows with orchestrated lighting and massive, spectacular digital projections.

## CHANGED DYNAMICS

Pixels everywhere is already changing the dynamics of how people seek information. Smartphones and, particularly, tablets have changed expectations and behaviors. At casinos in Las Vegas, people are routinely walking up to printed posters in lightboxes, and poking, swiping and pinching the images - assuming they are touch-enabled screens.

There will, increasingly, be an expectation that material that could be digital will, in fact, be digital. Not just in casinos. Everywhere.

This pixels everywhere mindset - or perhaps pixels where they should be - is both a challenge and an opportunity. Technology such as MicroTiles was designed from inception to work with a space, not against it.

Putting one or many conventional displays into a designed space presents multiple operating challenges, and almost always requires compromises. MicroTiles, by comparison, can all but disappear into a design - no matter the shape.

*What I do know is that pixels will soon be everywhere. And it will change almost everything about how we live our daily lives and how we relate to the people and objects around us.*

Bob Rushby, Co-Inventor, Christie MicroTiles

# THOUGHTS ON PIXELS

**by Bob Rushby**

I have a vision of the future ….a vision of incredible potential beauty; a future filled with new opportunities, where the world around us becomes a digital canvas for expression, for communication, and for interaction. It's a vision of a world of digital light. A world where pixels are everywhere.

Most people don't think much about pixels at all. In fact, I don't ever recall hearing pixels discussed at a cocktail party. But in my mind, I see pixels everywhere. Most people simply haven't noticed them yet. And if you look carefully, you'll see them too.

What I do know is that pixels will soon be everywhere. And it will change almost everything about how we live our daily lives and how we relate to the people and objects around us.

To see what this means, consider the lowly light bulb. Simple electric lighting is something we use but don't really *see*. Take a moment and look around you to see how many sources of electric light are nearby. Imagine what will happen when digital technology replaces traditional electric lighting with something that is much more capable …when surfaces around us emit or reflect modulated light. Light that is pixelized. Then *light* will have become *digital light*. Pixels will be everywhere. Will it really happen? Will it change our lives? It has already started. Take a careful look around you and you'll see it has already begun.

What are the implications? What social, political, technical, and environmental effects will we see? What will it mean for art, for communications, for advertising, for journalism? Will we see beautiful pixels or will we see digital light pollution? Will *the digital light future* simply become *'PowerPoint™ Everywhere'*?

I'm an optimist. I see a future where we will be able to look up from our private, isolated worlds of mobile devices and begin to work, interact, and collaborate with the people around us on the very surfaces of the walls where we work or live. Where the floors in buildings will guide us quickly and safely to where we want to go. Where our offices and dwellings will use digital light to adapt to our moods, to inspire us, and to truly connect us with others in ways that could never have been done before.

MicroTiles was conceived as important early steps in this vision of digital light. The idea was to create a digital canvas where pixels could be simply another building material and become part of the world around us. Pixels that would illuminate. Pixels that would inform. Pixels that would inspire. Pixels that would be everywhere.

When will we know that the world of pixels everywhere has arrived? When we no longer call it 'digital light' and once again simply call it 'light'.

It won't be long.

# PUSH AND PULL PIXELS

Digital technology and a connected world has transformed how pixels are generated and used. Media was long about pushing information one-way - by broadcast and print. Now it's a two-way conversation, at least.

Touch interfaces, mobile devices and social media are already producing and affecting content. But there are more contributors emerging - affecting the pixels we see.

Sensors and systems are already starting to drive and shape visuals - manipulating content though movement and shadows, even through elemental recognition of the types of people looking. Information systems, working with controlling software, will dynamically change content and make scheduling decisions based not on what operators stipulate, but what the data suggests.

It's an exciting time. The notion of pixels everywhere opens so many possibilities, and the visual building blocks are in place to make it all happen.

CHRISTIE EXPLORATIONS

# TODAY & TOMORROW
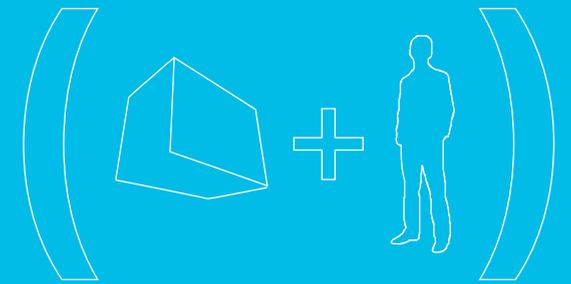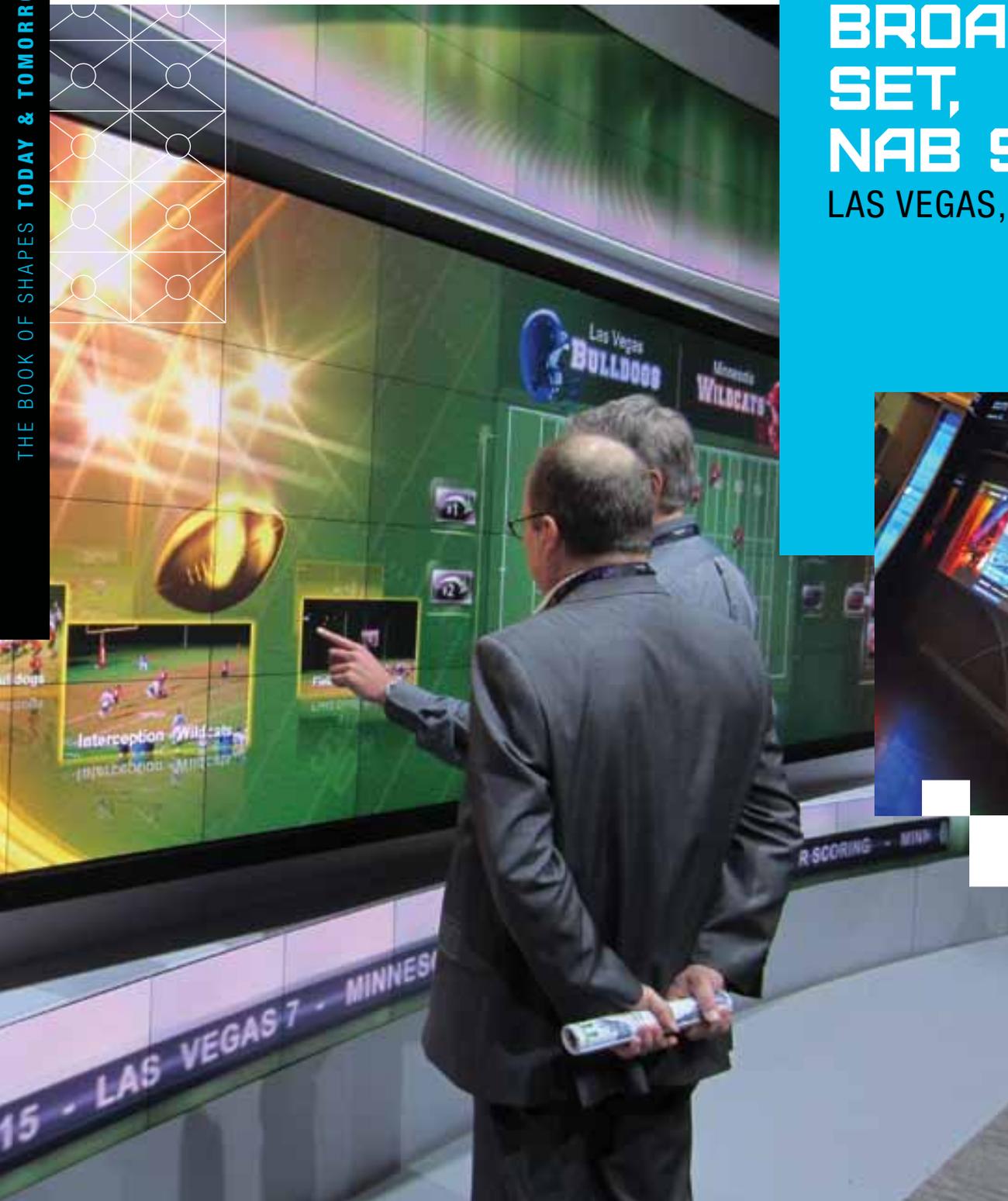
# BROADCAST SET, NAB SHOW
## LAS VEGAS, USA

National and commercial broadcast networks around the globe are using MicroTiles as the backdrops and accent pieces on sets, drawn by the ability to introduce shape as well as the brilliant technical properties of the modular displays.

MicroTiles are becoming an integral part of broadcast sets, and each year Christie Digital's experiential marketing team pushes the envelope on possibilities when it builds a demonstration broadcast set and supports multimedia content in its booth at the huge National Association of Broadcasters (NAB) trade show in Las Vegas.

At the 2012 NAB show, which drew broadcast engineers and producers from around the world, Christie demonstrated a broadcast set that changed from one design to another with a simple touch. The set featured a flat wall of 48 MicroTiles surrounded by a concave backdrop of 138 more MicroTiles

Framed by sensors, the center wall enabled on-air personalities to use the massive display as an interactive wall, manipulating, opening and closing content features using simple multi-touch gestures. Content carousels, pop-up windows and moveable, zoom-ready content elements blended with live video feeds and data-driven graphics across a massive canvas.

At earlier NAB shows, Christie has shown concepts that build horizontal single and stacked strips of MicroTiles into the desks of on-air hosts and on the headers of backdrops, vertical columns flanking sets in gentle curves, and in odd clusters - such as skyscraper/ cityscape arrays - used as feature elements.

Networks and regional broadcast studios are using MicroTiles as backdrops and accents because of the seamless display capabilities, visual quality and flexible design options. They also like the lowered Total Cost of Ownership, minimal footprint and quiet operation.

CONFIGURATION

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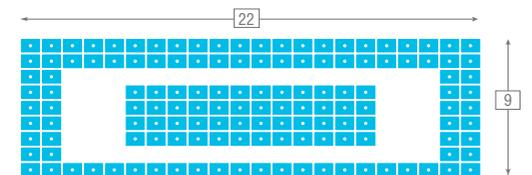
# THE BIG O
## A UNIQUE PRODUCT DISPLAY



# THE SKYSCRAPER
## A BIG CITY SKYLINE AMBIENCE

### SHAPE STORY

### CONFIGURATION

Using MicroTiles in unusual shapes and patterns can surprise and delight viewers, but they can also be stacked and arranged to be evocative. That's the case with explorations of MicroTiles stacked in rows at various heights, the shape immediately evoking the ambience and emotions of big city skylines.

A simple stack of 14 MicroTiles - 4 wide at the base - can relate the landscape, and visuals are easily built and mapped to make the most of the unusual shape. What works well to relate landscapes also works, in the same way, for relating objects such as logos and presentation graphics, like steadily climbing sales growth.



### SHAPE STORY

### CONFIGURATION
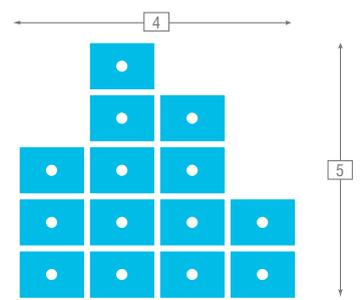
Relating digital screens to merchandised products has never quite been done like the Big O display style developed for brands and merchants. Instead of putting a luxury watch below or beside a display, the watch is part of the display, sitting in the O, framed all around by rich visuals.

It's a unique concept that changes the proposition of adding a digital display to a fixture, to making the display the actual fixture. A typical Big O configuration might use 14 MicroTiles (4 on the top row; 4 on the bottom row; and 3 on each side). Sensors at the edge of each unit easily make one or all the MicroTiles interactive.



102
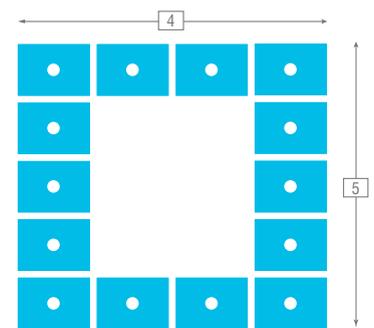
# ESCALATORS
## DIGITAL SIGNAGE EXPO 2010
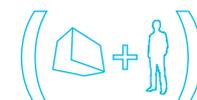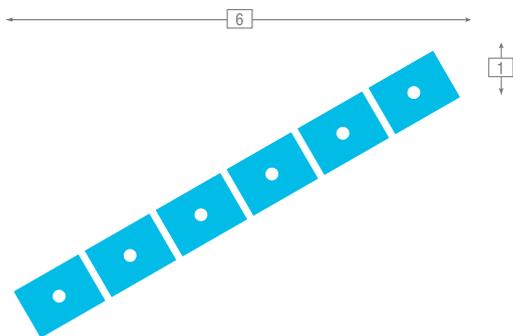## LAS VEGAS, USA

### SHAPE STORY

The long rising and descending trusses of escalators have often been "skinned" by marketers with printed graphics, but using seamless stretches of MicroTiles really bring the forms to life.

Christie formally introduced the MicroTiles product to the digital signage and Pro AV industries at the 2010 Digital Signage Expo trade show in Las Vegas, filling a booth with visually intriguing configurations, and also taking the MicroTiles out of the trade hall and into the common areas.

Three imaginary escalators in the convention center lobby were lined with 1 high by 6 long strips of MicroTiles, creating a 4320 by 540 pixels ribbon of motion graphic visuals set at a 30-degree angle.

Christie played content promoting the product and concept, as well as welcoming messages to trade show attendees. The simple configuration needed nothing more than a Mac Mini and an iTunes playlist to drive the content.

### CONFIGURATION

6

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## SHAPE STORY

Sensors embedded along the perimeter of MicroTiles video arrays make them fully interactive, opening up countless possibilities for how visual display technology is applied and the shapes they're delivered on.

Wide, eye-level walls of MicroTiles have been used by Christie at numerous trade shows in North America and Europe to demonstrate different interactive capabilities, with variations intended both for presenters and for public engagement.

Sensors that accurately track and recognize interactions, without requiring physical overlays on the display surface, make it possible for one or multiple users to open, manipulate and create content on screens.

Interaction and engagement has been central to the appeal and marketing of MicroTiles since the product launch. At the New York events showing the MicroTiles for the first time in late 2009 to architects, engineers and Pro AV specialists, a huge horizontal wall on the stage used Float4 Interactive's sensors to track the gestures of people of all ages, sweeping and wiping visuals around the canvas.

At the 2011 InfoComm Pro AV trade show in Orlando, Florida, Christie worked with Baanto ShadowSense technology to create an interactive graffiti wall that enabled several users to simultaneously "tag" a virtual brick wall with their own drawings and messages, using an oversized paint brush and digital tool kit.
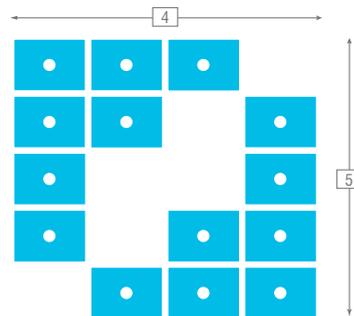
## CONFIGURATION

16

6

# BIG INTERACTIVE WALL
## NORTH AMERICA
## EUROPE
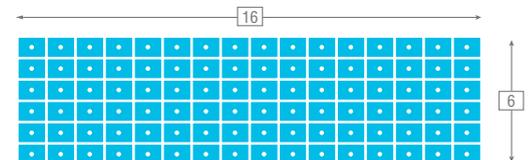
# THE HYBRID SKY
NEW YORK, USA

# BREAK BAR - ISE 2010
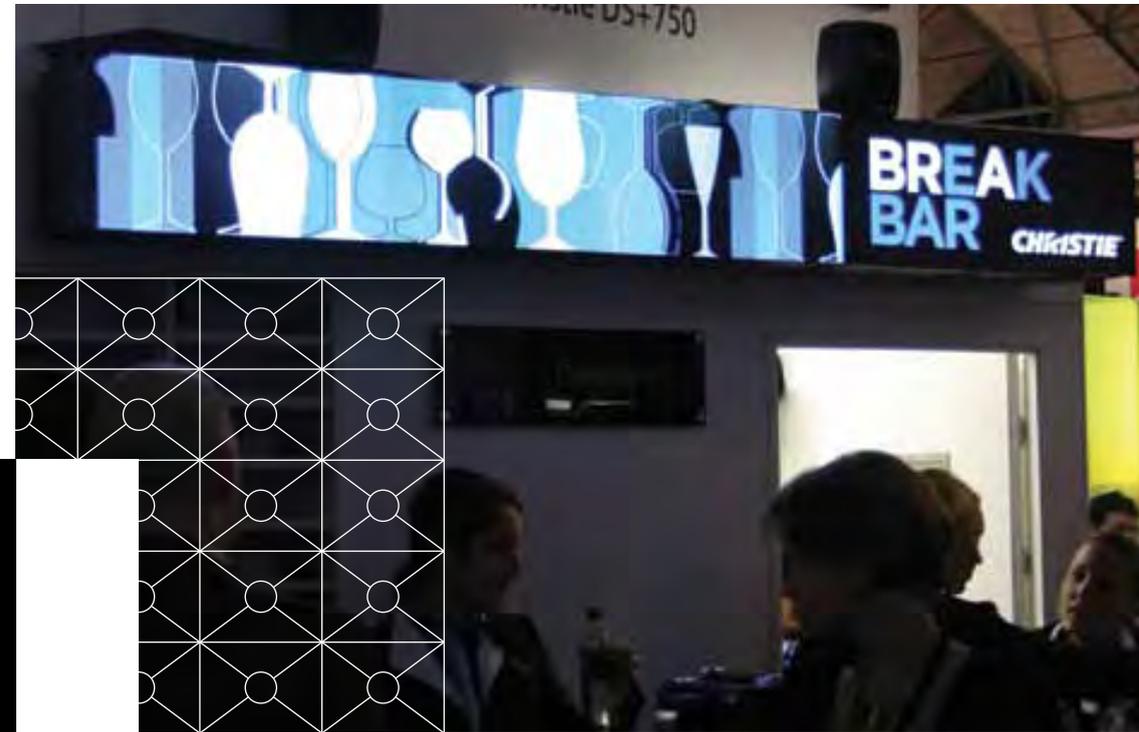AMSTERDAM, NETHERLANDS

## SHAPE STORY

A combination of printed graphics showing the view looking up from below a set of sky-crapers, interrupted by an abstract cluster of 14 MicroTiles, explores the possibilities for a novel ceiling design.

Suspended above the rented space used to launch the MicroTiles product in New York in late 2009, the "Hybrid Sky" concept showed how print and digital - with loops of interesting ambient content - could transform a plain ceiling, giving it a sense of height through the print graphics, and intrigue with the motion media.

## CONFIGURATION



## SHAPE STORY

An eye-catching horizontal strip of 6 MicroTiles served multiple purposes for Christie at the large booth established for the massive Integrated Systems Europe (ISE) Pro AV trade show in Amsterdam in 2010.

The MicroTiles helped welcome ISE visitors in multiple languages, located and branded the Break Bar set-up to pour coffee and end-of-day drinks for clients and guests, and helped reinforce the possibilities for the product, showing the color range, brightness and fun, such as a series of images of poured beer.

## CONFIGURATION



105
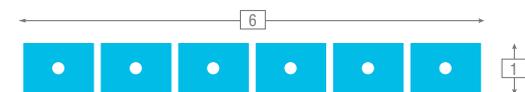
# CHRISTIE WORLDWIDE HEADQUARTERS INSPIRATION ZONE

## CALIFORNIA, USA

The lobby of the Inspiration Space at Christie's U.S. headquarters campus is designed to immediately show customers how MicroTiles have changed the conversation about digital displays and architectural spaces.

The Orange County, California, building is filled with arrays of MicroTiles in interesting shapes, showing possibilities and generating ideas for Pro AV experts, architects, retail designers and brand marketers.

A huge portrait cluster - 5 wide by 10 high - is set into the main lobby wall, nested into a vase shape created by the wood finish. A wide strip of MicroTiles is set into a lobby bulkhead wall, in a gentle concave shape. A vertical strip of 5 MicroTiles is set into a corner functions as a virtual aquarium. Two 1 by 5 wide strips are embedded into a feature wall, picking up the angle of the staircase to the second level.

Just inside the lobby, in a meeting space, a wide horizontal sweep of MicroTiles is built into a wall above a credenza, and nearby, another cluster set as a Big O - with MicroTiles surrounding a middle cavity - shows retail applications and lets visitors play a virtual pinball game using touch sensors.

Content in the space varies from corporate and product marketing to thoroughly playful, such as scenes from virtual escalators running on the diagonal strips.

CONFIGURATION

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10

106
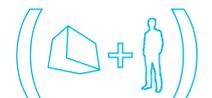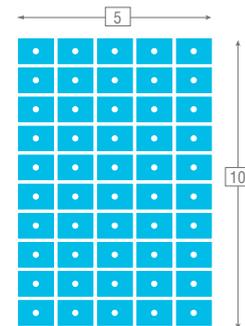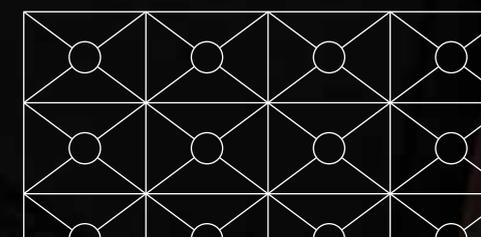
# COMMUNITECH HUB
## WATERLOO, CANADA

### SHAPE STORY

The Communitech Hub in Kitchener-Waterloo, Canada, exists to foster innovation in digital media, so it only made sense to use clusters of MicroTiles to change up how digital displays are normally used in office lobbies.

The reception desk at the non-profit innovation center has a backdrop wall with 12 MicroTiles set directly into it, forming an "O" that surrounds a static Communitech branding sign. Another 4 MicroTiles extend digital into the airspace above the backing wall.

On an opposing reception area wall, another set of 13 MicroTiles cascade ambient visuals across a horizontal bulkhead strip above a seating area. The MicroTiles are a stark contrast to the old exposed concrete and ironwork of what was originally a massive tannery building in Downtown Kitchener.

Programming on the MicroTiles celebrates the business partners, supporters and members of Communitech, which brings together collaboration, innovation and commercialization of new tech and solutions in digital media and mobile computing.

### CONFIGURATION
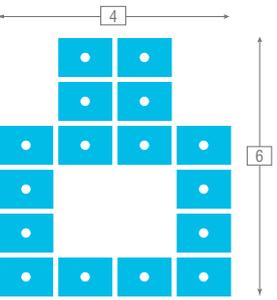
## SHAPE STORY

Columns of MicroTiles are built into the premium wood walls of the main lobby at Christie's Worldwide Centre for Engineering & Innovation offices in Canada, under the same roof where the product was conceived and developed.

Visitors to Christie's main offices get an immediate, intriguing look at one of the company's primary products, walking into the lobby and seeing five 1 wide by 5 high stacks of MicroTiles that are set directly into the entrance wall.

The columns are built into a retrofitted wall to show how technology can support an architect's design, rather than distract from it. Part of the content mix included a replication of the surrounding wood finish, making the MicroTiles disappear and then surprising viewers as they came to life with vibrant visuals.
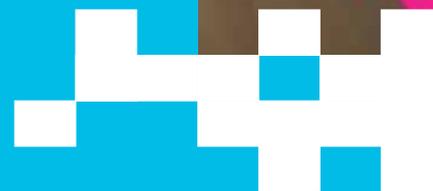
Programming on the columns is a blend intended to show different uses, ranging from a whimsical virtual aquarium to ambient content, demonstrations of wayfinding content and Christie branding.
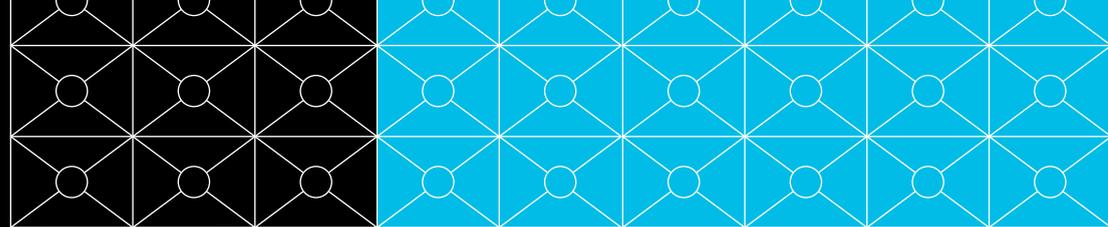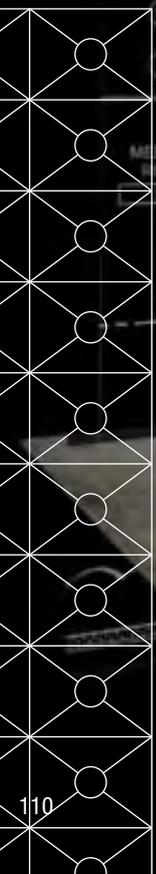
## CONFIGURATION
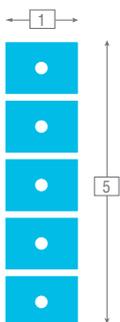
# CHRISTIE WORLDWIDE CENTRE FOR ENGINEERING & INNOVATION
KITCHENER, CANADA
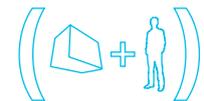
# CHRISTIE LOBBY PROJECT
## KITCHENER, CANADA

## SHAPE STORY

Christie turned 110 of its MicroTiles into a stunning digital sculpture built into the feature walls of the lobby of new office and product showcase space at its Canadian headquarters.

The design priorities for the expanded space in Kitchener-Waterloo were building Christie product into the new lobby to serve as a feature architectural element, supporting the need for wayfinding and corporate information signage, and for inspiring customers.

The architectural and media design teams developed several concepts, and Christie settled on a mosaic that wraps around the structural column for the elevator and flanks a staircase.

The abstract clusters, surrounded by metal finishing, take on an organic look - the MicroTiles seemingly growing off the two visible walls. Though set in entirely unconventional shapes, the aggregate of MicroTiles easily provides a digital canvas for large, impactful ambient visuals developed both by digital media agencies and multimedia classes at local post-secondary schools.

A second set of 11 MicroTiles - again in an abstract cluster - is set into a wall immediately behind the reception desk in the lobby.

The new space is surrounded by glass, meaning the stunning digital display arrays will be visible to the community.

### CONFIGURATION



World leader
in projection technology
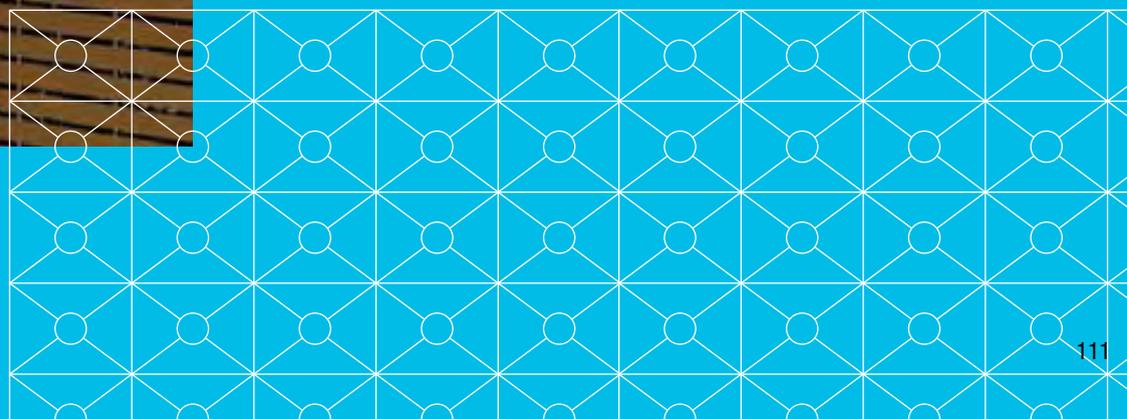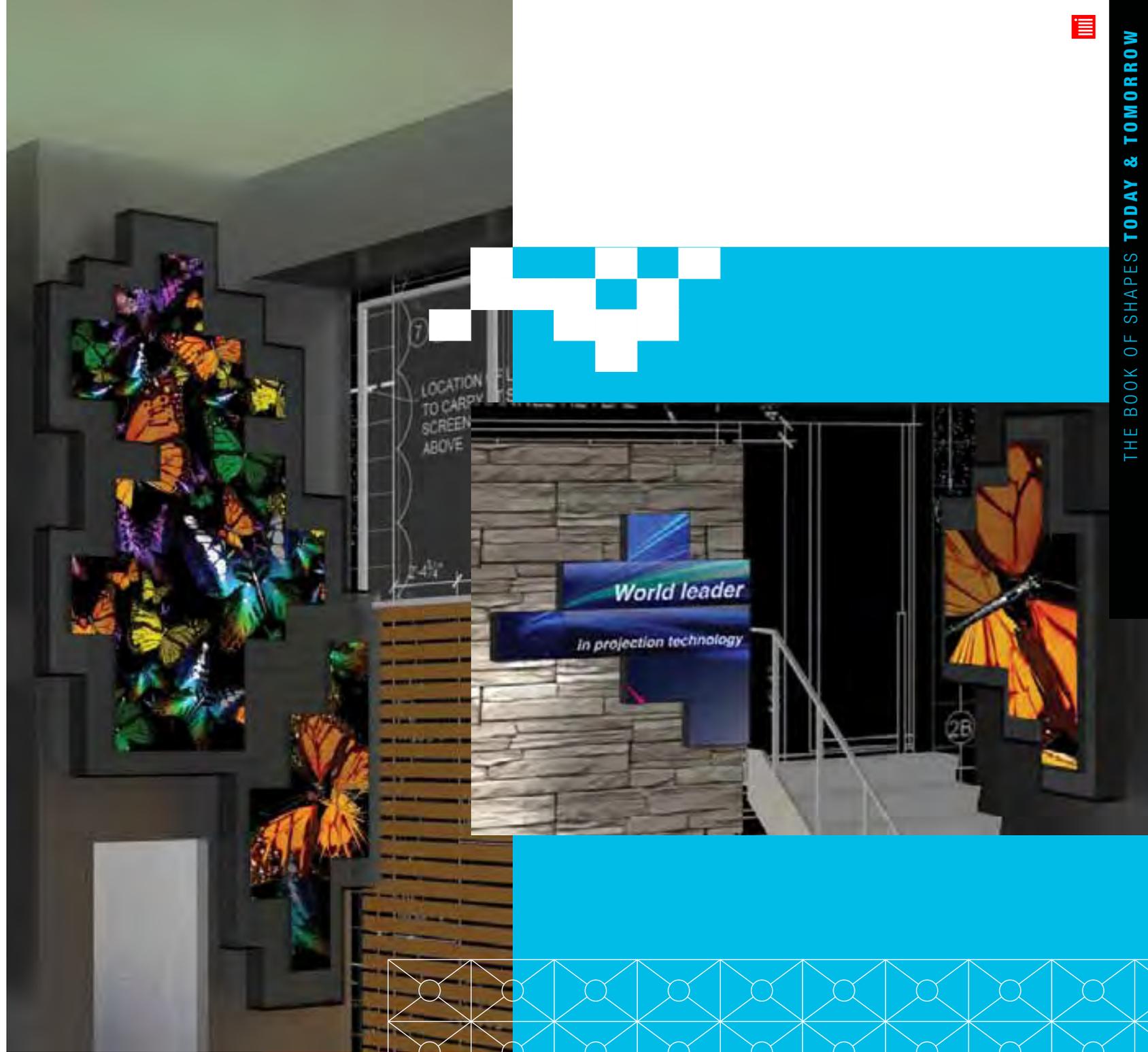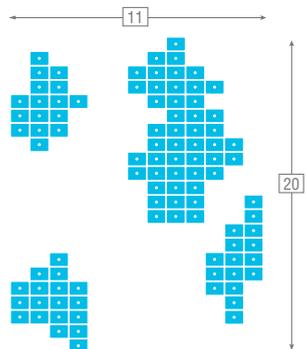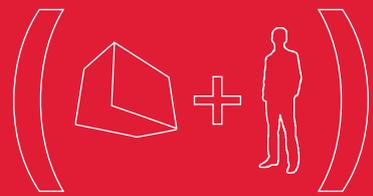
INTERNATIONAL DESIGN INSPIRATIONS FEATURING CHRISTIE® MICROTILES®

**CHRISTIE®**