AIA TAP BIM Awards
2014 Professionals’ Choice BIM Award

Brian Skripac - 2014 Chair AIA Technology in Architectural Practice
Your Moderator and Host from AIA TAP

- Brian Skripac, Assoc. AIA
  - 2014 Chair of AIA TAP
Award Winning BIM 2005 to 2014 – 10 Years!

2005, 2006, 2007, ...

What's in a name?
A lot, actually.

If we didn't have BIM, we wouldn't have a National BIM Standards Committee - an important component in the

Education Thrives, Process Arrives, Design Survives

BIM Comes Alive

The 4th Annual AIA TAP BIM Awards reveal the liveliness BIM demonstrated in 2007 - a year called a tipping point for this advanced technology tool set.

The fear that institutions of higher education were not hitting their groove with BIM is allayed with four awards in the academic category.

AIA Technology in Architectural Practice (TAP) presents its 8th Annual Building Information Modeling (BIM) Awards honoring projects that have used technology as a mechanism

The 2012 BIM Awards

The AIA Technology in Architectural Practice (TAP) presents its 8th Annual Building Information Modeling (BIM) Awards honoring projects that have used technology as a mechanism

2009 BIM Awards

The 2009 Awards reveal that what was award-winning five years ago is becoming common practice today. The use of BIM processes alone is no longer worth heralding. We are able to look into process details and recognize subtle refinements and artful applications. See www.aia.org/tap

2010 BIM Awards

The 2010 Awards reveal that what was award-winning five years ago is becoming standard practice today. The use of BIM processes alone is no longer worth heralding. We are able to look into process details and recognize subtle refinements and artful applications. See www.aia.org/tap

2011 BIM Awards

The 2011 Annual Building Information Modeling (BIM) Awards are presented by AIA Technology in Architectural Practice (TAP) to recognize projects that have used technology as a mechanism
2014 AIA TAP BIM Awards Jury

Norbert W Young FAIA
Jury Chair
Greenwich CT

Ajla Aksamija, PhD, Assistant Professor
Department of Art, Architecture, and Art History
University of Mass. Amherst MA

Boyd Black
University of Chicago
Chicago IL

David Fano
Chief Technology Officer

Paul Teicholz

Bradley E Workman
Vice President, Technology & special Projects
ZweigWhite
Fayetteville AR

To be Presented at 2014 AIA Convention BIM Awards Reception and Ceremony | Chicago | June 25 2014
You are the Jury!!

- Here in person at BIMForum | Boston
- Voting for the 2014 Professionals’ Choice BIM Award will be immediately after these presentations
- Take Notes and Be Prepared to VOTE!
Vote!

https://www.surveymonkey.com/s/Y5LL2TP
Vote!

1. Based on the 2014 Professionals' Choice BIM Award Presentations you have just seen at the BIMForum here in Boston, choose the presentation that, in your opinion, best satisfies the criteria of Process Improvement Excellence Using BIM.
   - Enchanted Storybook Castle --- Walt Disney Imagineering
   - Northwestern Mutual Van Buren Office --- Mortenson
   - Outpatient Care Pavilion --- Cannon Design
   - Pegula Ice Arena at The Pennsylvania State University --- Crawford Architects USA
   - Perot Museum of Nature and Science --- Morphosis

   Please explain why you chose this presentation as the 2014 Professionals' Choice BIM Award Winner

2. Please provide your email address. (This is mandatory, but will be kept confidential) This ensures the integrity of our BIM Awards voting process and also provides an email contact for us to get feedback from you on this event and elicit your thoughts and ideas on the future course of AIA TAP BIM Awards.
Criteria for 2014 Professionals Choice BIM Award

Delivery Process Innovation

- Outstanding examples of BIM use in collaborative project delivery (such as Integrated Project Delivery), integrating planning, design, construction and operation to fulfill project goals
- Project is built or under construction
- Documented quantified benefits in efficiency and quality
- Documentation of innovative processes used to realize the project
- Preservation or enhancement of design intent with lower delivery costs
- New forms of collaborating or partnering
- Innovative new tools and methods!
You are the Jury!!

- **Enchanted Storybook Castle**
  Walt Disney Imagineering
  *Presenting:* David Van Wyk, FAIA, David Abair AIA, Eric Anderson AIA

- **Northwestern Mutual Van Buren Office**
  Mortenson Construction
  *Presenting:* Roberta Oldenburg, LEED AP

- **Outpatient Care Pavilion**
  Cannon Design
  *Presenting:* Sarah Plum Janssen, LEED AP | Christian Torres

- **Pegula Ice Arena at The Pennsylvania State University**
  Crawford Architects USA
  *Presenting:* David Murphy AIA, Joe Corvaia

- **Perot Museum of Nature and Science**
  Morphosis
  *Presenting:* Cory J Brugger AIA
Enchanted Storybook Castle
Walt Disney Imagineering

- David R Van Wyk, FAIA
- David Abair AIA
- Eric Anderson AIA
from DREAM to REALITY

ENCHANTED STORYBOOK CASTLE
AIA TAP BIM AWARDS 2014
PROJECT NAME
Enchanted Storybook Castle

PROJECT LOCATION
Pudong New District, Shanghai, China

OVERALL HEIGHT
60 meters (196.8 feet)

NUMBER OF FOUNDATION PILES
1,076

NUMBER OF DESIGN DISCIPLINES
142

GROUNDBREAKING DATE
April 8, 2011

TARGETED OPENING
Late 2015
1

PROGRAM IN A MODERN CASTLE FACILITY

RESTAURANT
Fountain Pumps for Water Show
Fully Functioning Kitchens

LARGE OUTDOOR STAGE SHOW
Retractable Theatrical Light Towers
Green Rooms

BOAT RIDE SYSTEM
Fireworks Launchpads
Boat Ride Maintenance Facility

CENTRAL DOUBLE HELICAL GRAND STAIRCASE
Operations Offices

INTERACTIVE WALK-THROUGH ATTRACTION
Retail Cash Rooms

CHARACTER MEET & GREET
Retail Store
Roof Top Garden

ONE COMPLEX MODERN FACILITY
WITH HISTORIC ARCHITECTURAL DETAILING
It became evident that Revit offered more potential BIM advantages than AutoCAD.
> Few team members had Revit experience
  > Bring in BIM Coordinator/Revit expert
    > Team learning sessions (2/week)
    > Timely project-specific training
The team created an array of intelligent, parametric content
We developed a kit-of-parts that could be organized, quantified, and tracked throughout the project lifecycle.

Shanghai Castle Architectural Ornamentation Codes

<table>
<thead>
<tr>
<th>Color</th>
<th>Code</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AO_CAP</td>
<td>Capital</td>
<td>Head of a pillar or column</td>
</tr>
<tr>
<td></td>
<td>AO_CAR</td>
<td>Character</td>
<td>Character Busts or Sculpture</td>
</tr>
<tr>
<td></td>
<td>AO_CBL</td>
<td>Corbel</td>
<td>A projection to support a structure above it</td>
</tr>
<tr>
<td></td>
<td>AO_COL</td>
<td>Column</td>
<td>Does not include capital or plinth/base</td>
</tr>
<tr>
<td></td>
<td>AO_CRS</td>
<td>Cresting</td>
<td>Ornamental sculpture pattern elements on top of a roof</td>
</tr>
<tr>
<td></td>
<td>AO_ENT</td>
<td>Entablature</td>
<td>Horizontal continuous lintel above columns</td>
</tr>
<tr>
<td></td>
<td>AO_FIN</td>
<td>Finial</td>
<td>Ornament at the apex of a roof or similar structure</td>
</tr>
<tr>
<td></td>
<td>AO_FRI</td>
<td>Frieze</td>
<td>Broad horizontal band of sculpted decoration</td>
</tr>
<tr>
<td></td>
<td>AO_PED</td>
<td>Pediment</td>
<td>Triangular element surmounting a portion of columns</td>
</tr>
<tr>
<td></td>
<td>AO_PLT</td>
<td>Plinth</td>
<td>Base of column or other element</td>
</tr>
<tr>
<td></td>
<td>AO_SDN</td>
<td>Spandrel</td>
<td>Zone above an arched window</td>
</tr>
<tr>
<td></td>
<td>AO_TRM</td>
<td>Trim</td>
<td>Linear decorative elements typically along the edge</td>
</tr>
<tr>
<td></td>
<td>AO_TUR</td>
<td>Turret</td>
<td>Small tower attached to a larger building element</td>
</tr>
<tr>
<td></td>
<td>AO_DOM</td>
<td>Dome</td>
<td>A rounded vault forming a roof or ceiling</td>
</tr>
<tr>
<td></td>
<td>AO_WTR</td>
<td>Window Trim</td>
<td>Trim elements surrounding windows</td>
</tr>
</tbody>
</table>
Custom scripts allowed our Revit and AutoCAD files to easily and automatically provide daily output of architectural Revit information for other disciplines.
Using Navisworks, the Architecture team merged the Revit model with input from other disciplines. Regardless of software preference, the team stayed coordinated with a completely integrated building model.
Team coordination from opposite sides of the globe
We leveraged BIM for quick design iteration by exporting backgrounds, sketching over by hand, updating and checking the model, and then generating new backgrounds.
Intelligent parametric modeling allowed the design to be easily adjusted without re-building content.
Attributes assigned to geometry allow the team to visualize a material breakdown of the building, which assists in making design, construction and operational decisions.
Partnering with our park operations team, we were able to leverage BIM for crowd simulation studies.

- Guest flow patterns
- Demand by space
- Pinch points
BIM enabled the team to address construction, maintenance, and operational challenges before going into the field.
BIM reviews in immersive 3D ‘DISH’ display

‘The ‘DISH’ is a fully immersive 3D projected room used for virtual mockups.'
The final model, incorporating all 142 disciplines.
1 PROJECT OVERVIEW

2 BIM IMPLEMENTATION

3 BIM ADVANTAGES

4 CONSTRUCTION
SUMMARY

1 PROJECT OVERVIEW
- Complex Program
- Rely Heavily on 3D Modeling

2 BIM IMPLEMENTATION
- Detailed & Organized Model Content
- Global Collaboration

3 BIM ADVANTAGES
- Facilitating Design
- Coordination

4 CONSTRUCTION
- 4D Planning
- Visualization
Northwestern Mutual Van Buren Office
Mortenson Construction

- Roberta Oldenburg, LEED AP
Collaboration

A Cohesive Team: Sharing BIM Responsibilities

Paramount to the success of this project was the cohesive team that collaborated from day one. The team openly communicated and shared information through a variety of mediums, including BIM. BIM was a shared responsibility that tied all project stakeholders together—from the architect to engineer and construction manager to trade partners.

The team identified concerns, objectives, and goals for the project’s BIM coordination process. All stakeholders were involved in this process including the owner, architect, construction manager, and sub-contractors.
“... BIM was a **fantastic tool** for our team; it allowed us to visually see our new office space prior to construction starting. The original 1920’s concrete construction was renovated many times over the years and few areas were square and plumb. Without laser scans and BIM models, our risk of cost changes would have dramatically increased. The virtual mock-ups proved **valuable** as we were **making final design decisions** and ensured the end result would fit our needs, would be easily maintained, and meet our expectations as a 21st Century Workspace. We were also able to post virtual fly-throughs to the internet to share with our employees and it proved to be a great way to engage 6000+ people into the construction process. **BIM truly impacted the success of our project.**”

Northwestern Mutual
Project Goals

- Deliberate timely decision making
- Clear open communication
- Work installed right the first time with no injuries
- Identify efficiencies and opportunities for prefabrication

Challenges

- Existing 1920’s building had undergone an addition and numerous renovations
- Low ceiling heights in the basement
- Clean look for exposed systems

Strategies

- Point Cloud Mapping
- Design Finalization Through Virtual Mock-ups
- Prefabrication
- Model for Facility Management Team
Scan of basement, second, and seventh floor verified existing structure

- Identified structural anomalies
- Expedited design of interior spaces and MEPFP systems preventing rework
- Crucial to have the existing structure scan of the basement to assist with pre-planning
- Scan allowed team members to go back and review the structure even after the walls went up – reducing time spent in field verification.
As the design team, we collaborated with Northwestern Mutual’s facilities team to achieve the desired 21st century aesthetic and workplace environment. The use of BIM was integral to the project’s success by allowing us to quickly and accurately visualize how our design solutions integrated with the existing building conditions and our trade partners’ solutions. Raised access floor, partially exposed ceilings and the integration of mechanical systems resulted in very constrained clearances, and the benefit of BIM allowed us to anticipate areas where we could gain that necessary inch.  

Eppstein Uhen Architects
Design Finalization

- Owner finalized design
- No rework after installation

Conference Room

- Assisted owner in visualization of ceiling
- Ensured MEPFP systems fit
- Identified cost implications

7th Floor
Prefab System

Prefab Sequencing

3D Coordination

Labor Efficiency and Quality Control

GPS Total Station Hanger Placement
Metrics

VALUE ADDED RESULTS:

1. Prefabrication labor transferred to the shops from the field for both plumbing and piping

- 2,500 hours saved
- or 20%

2. Prefabrication drastically reduced installation time for Fitters.

- 640 hours
- VS
- 3,140 hours

3. Quicker transition of trades to complete work.

Insulators and drywall contractors came in earlier, which contributed to the success of the fast-track schedule.

4. Eliminated excess material and shipping waste

- 1% Material waste from pipe cutting as low as 1%

5. Reduced field corrections and change orders

- 20' sections in the shop vs. 10' sections in the field reduce couplings, reducing possibility of future leaks

6. Overall prefabrication in the shop savings

- 10% schedule savings
- or $20k savings

7. Prefabrication in the shop utilized more rigid construction techniques (to withstand shipping) – ultimately benefiting the end user

8. Created accurate as-built models for use by the Facilities Team
Collaboration with Facilities Team

- Team established facility maintenance goals including placement, accessibility to equipment, and ensuring proper paths to replace equipment if needed.
- Meetings with the owner’s engineers, electricians, technicians, and trade partners to review space.
- Walk throughs were held once a month to show progress and help everyone get a better understanding of the building before they need to service it.
Overall Impact of BIM

- Completed nearly one month ahead of schedule
- Nearly $1 million under budget
"BIM is a non-negotiable Tool for us, it's how we build. It provides us the opportunity to build faster and more efficiently. Our team coordinated the building systems, prefabricated work off-site saving time and money, installed high-quality work, kept everyone safe, and provided the owner with a comprehensive model for future maintenance."

Mortenson Construction
Northwestern Mutual Van Buren Office Building
Milwaukee, Wisconsin

Northwestern Mutual®

eppstein uhen : architects

Mortenson construction

Roberta Oldenburg, LEED AP
roberta.oldenburg@mortenson.com
Outpatient Care Pavilion
Cannon Design

- Sarah Plum Janssen, LEED AP
- Christian Torres

http://prezi.com/m6ldblnumy5m/?utm_campaign=share&utm_medium=copy&rc=ex0share
Outpatient Care Pavilion
Cannon Design
Pegula Ice Arena at The Pennsylvania State University
Crawford Architects

- David Murphy AIA
- Joe Corvaia
Integrated Team Utilizes Advanced Tools and Processes to Deliver the New Pegula Ice Arena

2014 AIA TAP BIM AWARD Submission

Project: Pegula Ice Arena
Visual Communications Secures a Donor

During the feasibility study phase, multiple modeling tools were used alongside traditional two-dimensional mediums to evaluate and communicate the project's feasibility. This work played a role in securing the largest private gift in Penn State history totaling $102 million and later facilitated an additional $6M in additional donations.

Design Phase Success Factors

» BIM allowed real-time input, visualization, and enhanced design process

» BIM/virtual environments, enabled the customer to make better decisions

» Model-based processes resulted in reduction of design, fabrication and construction time

» Design to fabrication reduced time and cost

» BIM enabled prefabrication
Schematic Design Model Became the Basis for CAVE

The design model evolved in the schematic design phases and later became the basis for models utilized in the CAVE. As the seating bowl and structural grid design was confirmed, the detailed model was started in the latter stages of schematics. Detailed development of the BIM model by all disciplines began in the design development phase and was finalized during construction documentation.

“...drawings are one dimensional, and so it kind of gave us a first step feel of how the arena was going to look. The CAVE experience gets you more excited, and it gets you kind of thinking differently on the usage of the facility.”

— Kim Pegula
Donor, Pegula Ice Arena
The CAVE Experience

During the design phase, Penn State entered the building 18 months prior to construction via the 3D immersive environment created in a Computerized Automatic Virtual Environment (CAVE) inside the Applied Research Lab on the Penn State campus. The CAVE experience is created by multiple projectors directed at four walls and the floor of a 10’x 10’ room.

Our team was able to walk down steps and hallways, look into the community rink from the main concourse, read the displays of hockey history on the Legacy Wall, and “walk” up the grand staircase and into the club level and enter one of Pegula Ice Arena’s 14 suites.

We were also allowed to focus on specific areas with the coaches and athletes, such as the locker rooms, offices, and suites which ensured scope and layout of these spaces met and exceeded expectations well in advance of construction. Numerous adjustments to the office space were made at no cost to construction as a direct result of the first CAVE visit, directly averting over $475,000 in changes after or during construction.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost of Change</th>
<th>Cost Averted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reception desk modifications - club</td>
<td>$2,500</td>
<td>$12,000</td>
</tr>
<tr>
<td>Glazing extension above community rink</td>
<td>$8,000</td>
<td>$6,000</td>
</tr>
<tr>
<td>Chain valve relocation</td>
<td>$2,000</td>
<td>$5,000</td>
</tr>
<tr>
<td>ICA office space reconfiguration</td>
<td>$4,000</td>
<td>$3,000</td>
</tr>
<tr>
<td>Coach’s locker room reconfiguration</td>
<td>$3,000</td>
<td>$8,000</td>
</tr>
<tr>
<td>Drain pan in electrical room</td>
<td>$3,000</td>
<td>$5,000</td>
</tr>
<tr>
<td>Emergency eye wash addition</td>
<td>$40,000</td>
<td>$350,000</td>
</tr>
<tr>
<td>Mechanical room lighting relocation</td>
<td></td>
<td>$10,000</td>
</tr>
<tr>
<td>Screen wall reductions</td>
<td></td>
<td>$40,000</td>
</tr>
<tr>
<td>Glass guardrail height adjustment</td>
<td></td>
<td>$10,000</td>
</tr>
<tr>
<td>Site signage</td>
<td></td>
<td>$10,000</td>
</tr>
<tr>
<td>Total costs of changes</td>
<td>$62,500</td>
<td>$538,000</td>
</tr>
<tr>
<td><strong>Total direct cost savings from use of CAVE</strong></td>
<td><strong>$475,500</strong></td>
<td></td>
</tr>
</tbody>
</table>

“Using the on campus “CAVE” to walk college recruits through a full scale virtual model of their college hockey experience, before the Pegula Ice Arena was built, was instrumental in us signing key college recruits during our first year of Division I play.”

— Guy Gadovsky
Head Coach Men’s Hockey Team
The Pennsylvania State University

**better decisions engaged stakeholders fostered collaboration recruiting & marketing**
Building Enhancements

As an example of one of the many items discovered in the fully immersive environment, the donor recognized a flaw in the placement of the windows overlooking the community ice rink. From his vantage point, he could not see where the children would be sitting on the team bench directly below. This flaw was made evident by the full-scale immersive environment he was participating in and lead to the change being made early — prior to construction.
Construction Phase Success Factors

» Construction manager’s involvement throughout the design phase
» Use of visualization technology to convey the project schedule
» Integrated project delivery approach
» Streamline communication through the use of Project Connect

Due to the complex geological formation of the project site, the team decided to model the surface of the bedrock. Through the analysis of the surface it was determined a redesign of the foundation was required – not only did the foundation have to be changed, but the sequence of work also had to be adjusted. The 4D model was used to analyze possible options and alternatives and the team selected an optimal solution. The 4D model was essential in communicating the schedule with the customer and allowing them to make important decisions that had the potential to greatly impact the project outcome.

30 days were taken off the project schedule and $260K was saved
Disruption Avoidance

The Arena is situated with proximity to multiple underground utilities including an underground communications ductbank that provides data and telephone connections to the entire Penn State Campus. Supporting this ductbank during construction required extensive shoring along one entire side of the facility. Through the use of BIM, the project team identified an opportunity to dramatically reduce the quantity of shoring by re-configuring and reducing the size of the team showers allowing two outboard shearwalls to move inboard. This change also allowed the equipment in the hydrotherapy vault to be moved to a much closer adjacent room improving operational use and maintenance of the equipment for the life of the building.

solving this issue resulted in
$200K in customer savings
improved project schedule & simplified logistics
Design to Fabrication

Our Right of Reliance and BIM approach to steel modeling accelerated and simplified the traditional submittal process. The structural engineer created the Tekla fabrication steel model that was used to procure the materials five weeks early and then, pursuant to the project BIM Execution Plan, delivered the model to the steel detailer to generate shop drawings.

Design to Fabrication Measurable Results

- $100K in savings
- Five week reduction in schedule
- Increased project team collaboration
- Reduced time in design to construction
- Increased efficiency of submittal process
- Reduced redundancy in BIM effort

$100K in savings 5 weeks saved in the project schedule
Improved Project Execution with Identified Value and Coordination

BIM techniques were utilized to enhance estimating, improve planning, foster communication amongst the team, and close the “last 100 foot” gap by placing model-based solutions into the hands of the builders in the field.

**Model-Based Estimating**
50% reduction in takeoff time

**Integrated Work Planning**
Improved safety, quality & efficiency

**Mobile Technology & Connectivity in the Field**
Single source of accurate information

**4D Modeling**
Enhanced communication & schedule certainty with 30 days saved

**Virtual Mock-Ups**
Confirmation of quality & constructability

**3D Building Coordination**
Improved system operability
Business Results

The ability to visually communicate and allow stakeholders, donors and potential athletes to experience the arena in the 3D, 4D, and the immersive environment (CAVE) helped drive business outcomes resulting in success exceeding original expectations.

1st season sellout
(exceeded projected revenue by 35%)

|$6 million in additional donations$

zero punchlist for first event

national ice show completed early

completed over $400K under budget

Additional $1 million in advertising revenue
Penn State Hockey

Inside Pegula Ice Arena

Applied Research Laboratory CAVE Model

GoPSUsports.com
Perot Museum of Nature and Science
Morphosis

- Cory J Brugger AIA
OUTLINE

PART 1: INTRODUCTION

PART 1: STRUCTURAL STEEL

PART 2: PREFABRICATED VERTICAL MEP

PART 3: PRECAST CONCRETE FACADE

PART 4: LOBBY CEILING

PART 5: THEATER
ATRIUM

CORE

CUBE

STRUCTURE

PLINTH

BIM MODEL COMPONENTS
PEROT MUSEUM OF NATURE AND SCIENCE
PLINTH STRUCTURAL STEEL

PLAYHINT STRUCTURAL STEEL
BIM MODEL AND COORDINATION

PLINTH STRUCTURAL STEEL
PLINTH STRUCTURAL STEEL

STEEL INSTALLATION
SHOP FABRICATION

PREFabricated Vertical MEP
PREFabricated Vertical MEP

Installation
PREFABRICATED VERTICAL MEP INSTALLATION
ATRIUM

CORE

CUBE

STRUCTURE

PLINTH

PRECAST CONCRETE FACADE
DESIGN INTENT
PRECAST CONCRETE FACADE
PRECAST CONCRETE FACADE

PANEL PATTERNS
TRANSITION TRIANGLES

PRECAST CONCRETE FACADE
PANEL LAYOUTS
PRECAST CONCRETE FACADE
GEOMETRIC FAMILY MOLDS
PRECAST CONCRETE FACADE
PANEL MOLDS
PRECAST CONCRETE FACADE
PANEL CASTING PROCESS
PRECAST CONCRETE FACADE
PANEL MOCK-UPS

PRECAST CONCRETE FACADE
ATRIUM / PLINTH PANEL FORMWORK

PRECAST CONCRETE FACADE
ATRIUM / PLINTH PANEL MOCK-UP

PRECAST CONCRETE FACADE
INSTALLATION
PRECAST CONCRETE FACADE
BIM MODEL
PRECAST CONCRETE FACADE
FINAL INSTALLATION

PRECAST CONCRETE FACADE
FINAL INSTALLATION

PRECAST CONCRETE FACADE
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PRECAST CONCRETE FACADE
FINAL INSTALLATION

PRECAST CONCRETE FACADE
PART

4
METAL MESH LOBBY CEILING
FINAL INSTALLATION

METAL MESH LOBBY CEILING
CUSTOM HANGER SYSTEM
METAL MESH LOBBY CEILING
GEOMETRY RESOLUTION AND PANELIZATION

METAL MESH LOBBY CEILING
CONSTRUCTION DOCUMENTS

METAL MESH LOBBY CEILING
SHOP DRAWINGS
METAL MESH LOBBY CEILING
INSTALLATION
METAL MESH LOBBY CEILING
SECTION PROFILE INSTALLATION

THEATER
SHEATHING
THEATER
THEATER

FINAL INSTALLATION
THANK YOU
MORPHOSIS ARCHITECTS
YOU are the Jury!!

- **Enchanted Storybook Castle**  
  Walt Disney Imagineering  
  *Presenting:* David Van Wyk, FAIA, David Abair AIA, Eric Anderson AIA

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  Morphosis  
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Vote!

https://www.surveymonkey.com/s/Y5LL2TP
You Choose! 2014 Professionals' Choice BIM Award
(Voting closes promptly at 4PM EDT)

1. Based on the 2014 Professionals' Choice BIM Award Presentations you have just seen at the BIMForum here in Boston, choose the presentation that, in your opinion, best satisfies the criteria of Process Improvement Excellence Using BIM.

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- Northwestern Mutual Van Buren Office — Moriyam
- Outpatient Care Pavilion — Cannon Design
- Pegula Ice Arena at the Pennsylvania State University — Crawford Architects USA
- Perot Museum of Nature and Science — Morphosis

Please explain why you chose this presentation as the 2014 Professionals' Choice BIM Award Winner

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Done
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- Preservation or enhancement of design intent with lower delivery costs
- New forms of collaborating or partnering
- Innovative new tools and methods!

Voting will be open from 2:00 – 4:00 pm
Professionals’ Choice winner announced at the 5:00 pm
Thank You!

- Brian Skripac, Assoc. AIA
  - 2014 Chair of AIA TAP

Join us at the AIA National Convention in Chicago Wednesday, June 23 for the 2014 BIM Awards Ceremony and Reception
AIA TAP BIM Awards
2014 Professionals’ Choice BIM Award

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