March 2019

UNDERSTANDING THE OTHER

BRIDGE MUSEUM

Autodesk to provide design illustrations

Hagen Deloss, a Community Forum Specialist for Autodesk, has agreed to lend his talents to shaping the look and feel of the Bridge Museum.

Jamey Gottlieb, Bridge Museum Board President and Senior Director of Corporate Strategy & Development for Sony Interactive Entertainment, commented, "Autodesk's facilitation of Hagen to take the concept and flesh it out even further is very much appreciated. Not only is Autodesk the premier brand in creative software development, Hagen's background in cartoon and video game development is equally important, given our target audience of 6-18 year olds.

Hagen added, "The Bridge Museum's installation project sounds amazing! Engaging children in interactive experiences teaches real world application, and sounds super fun. I look forward to being part of the project. With my Entertainment Industry background, I hope to bring

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MTC commits to support accompanying program

The Metropolitan Transportation Commission (MTC) has offered partial financial support for the Bridge Museum's accompanying program of educational events that will run concurrent with the six-month exhibition.

The program, which consists of seminars, presentations, and youth engagement events such as a Popsicle stick bridge contest and a drone film festival, is intended to help Museum visitors delve deeper into the transportation challenges of and opportunities in the Bay Area.

Andrew Fremier, Deputy Executive Director of Operations at MTC said, "The Bridge Museum's accompanying program takes on some of the key issues in the Bay Area for the coming decades. It is important to make the transportation sector as undertstandable as possible to the general public. The Bridge Museum's proposed program is an important step in that direction, complementing the work that MTC is already doing."

The program's proposed components include the following:

- Presentation - "Taxes, Transportation and Transparency - where the dollars go"
- Panel Discussion - "Comparing the Bay Area's demand for bridges with other cities"
- Bay Area growth scenarios and transportation impacts
- Poster contest for the Southern Crossing - what role for branding in large infrastructure projects? (*continued, p. 2*)

Above, the western span of the Bay Bridge, one of a number of bridges that are in the remit of the San Francisco-based Metropolitan Transportation Commission.

Mostar - reconstruction's symbolism

The **symbols section of the Bridge Museum** intends to highlight four bridges, which have gone well beyond their use as structures and have become symbols. The Bridge Museum intends to highlight the "Old Bridge" at Mostar in Bosnia and Herzegovina.

Built in the mid-1550s uniting the banks of the Neretva River, the bridge lasted until November 1993 when it was destroyed during the war. The bridge cut off two opposing religions and ethnicities - Bosnian Muslims and Catholic Croats, living along the rivers's left bank and right bank respectively.

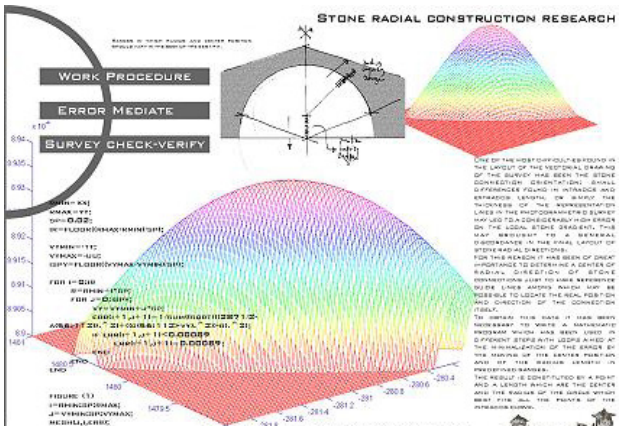
Manfredo Romeo was just 30 years old when he was arguably handed one of the 21st century's most meaningful architectural and engineering challenges - rebuilding Mostar's Old Bridge.

The bridge remains part of the Ottoman Empire's architectural canon. Indeed, the Mostar bridge is one just a few bridges to have attained UNESCO World Heritage Status. Despite some iconic bridges, the United States does not have one bridge attaining that status - Bosnia and Herzegovina has two.

Mr. Romeo has agreed to share his archives, which provide an idea into restoring a 16th century analog bridge with a 21st century digital reconstruction.

Manfredo commented, "The task was overwhelming, not only in the architecture and engineering, but also the dozens of stakeholders - politicians, aid agencies, the High Commissioner for the country, you name it. I was very fortunate to have a great team around me, both local and international, who constructed piece by piece, as much as possible, the Old Bridge at Mostar. Rebuilding the physical structure was important and I believe helped in some small way to move the two sides closer together."

As part of the accompanying program, we look forward to Mr. Romeo sharing his stories with museum visitors in person. They will no doubt be of particular interest to budding architects and an array of Bay Area stakeholders likely to find his experiences fascinating.



Above, left - Romeo explains - "We learnt all the secrets of the bridge from the recovered ruins." Stones recovered by divers once peace was restored for the bridge's reconstruction, with the temporary bridge in the distance. **Above, right**, one of the digital models created during the reconstruction.

AUTODESK, continued

something unique to the table."

Jamey continued, "While analog aspects will have a key role at the Bridge Museum, the subject matter needs to remain accessible to school-age children. There are a number of opportunities for teaching empathy to these kids. This could be an important innovation in delivering content and inspiring learning, particularly for teens."

MTC, continued

Museum Executive Director Richard Dion commented, "MTC's support is important for us - we look forward to working with them on delivering the program for the aspects incorporating its work and to contributing to a deeper understanding of the sector among Bay Area communities."

We *get it*, but what's *in it*?

Following up from our February newsletter, we continue providing more detail with regards to potential exhibits in the Bridge Museum. Some of these exhibits are drawn from our **Narrative** - a 30-page document which has "chunked out" the exhibition's sections and themes, using archives - to create a unique exhibition.

The Museum's Education Working Group, consisting of leading STEAM /educational experts, has gone over the draft, which will serve as a useful input into framing the exhibit.
Working Group Members include:

- Margena Wade-Green, (Leader) Faith Network of the East Bay / former Community Outreach for New East Span / Director CareerBridge
- Roma Groves-Waters, Principal, Martin Luther King, Jr. Elementary School, OUSD
- Terrence Holliday, Work Based Learning Liaison at Oakland Unified School District
- Michelle Hutcherson, Faith Network of the East Bay, Assistant Director of CareerBridge
- Kimberli Stafford - Director, Brain Balance Achievement Center, Oakland

"We really value the feedback of the Education Working Group. They are on the front lines of educating the next generation of engineers and architects and it is crucial to have their input. We look forward to continuing the dialogue with them about making the exhibition as purposeful as it can be," said Executive Director Richard Dion.

Typology of bridges (wall, 50 feet long x 10 feet high) outlining beam, arch, cantilever, truss, cable-stayed and suspension bridges, starting with the beam as the first, most ancient and is the shortest of all types of bridges. Each section will discuss the physics, the particular forces at play and famous examples, following up from the Environment section. This approach will expose children to the scientific and technical aspects and the numerous parts and terminology of each type of bridge.

In front of each bridge type (approximately ten feet long), a hands-on / interactive station will invite children to make use of what they will have just learned. Below is one example, geared towards children 6-10, which allows them to understand the concept of the truss.
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Above, children building truss bridges together, part of the typology section. Each station will have 3-4 possibilities to create a certain type of bridge.

Bridge quote? We got you covered.

"That bridge – what happened on that Sunday has changed America forever."
— Congressman John Lewis recounting the impact of the confrontation with police on the Edmund Pettus bridge on Bloody Sunday, March, 1965.

"Of all the things that mankind in its drive for life erects and builds nothing is, to my mind, better or more valuable than bridges".
— Ivo Andric, 1961 Nobel Peace Prize winner, author of *Bridge on the Drina*, in which a bridge in the town of Visegrad, Bosnia acts as a witness to 400 years of history.

We *get it*, but what's *in it*? (continued)

(*continued from p. 3*)
The entire typology could also be fixed as numerous laser-cut cardboard shapes (ca. 12" x 18", oversized rivets, suspension bridge outline, Brooklyn bridge's gothic arch, Sydney Harbor Bridge nicknamed the "coat hanger" because of its shape), attached to the main wall via magnets. Visitors would pick a shape that interests them, turn it over for the "label"/story and then fix it back on the wall when finished. Each bridge type would have 10-12 oversized magnets, which would explain the type further, potentially color-coded to highlight STEAM, the most iconic and historical aspects.

Educational Value - in one long exhibit, students will be able to quickly grasp the engineering aspects of the main types of bridges. To see the big picture of the various options will reinforce what they will have learned in the diorama section (see February newsletter). Creatively presented through oversized objects attached via magnets (with "labels" behind them), the visitor will equally have a hands-on approach through using the stations located adjacent to each bridge type.

Above, a Virtual Reality headset, allowing an immersion experience for projects such as the western Bay Bridge bike path (**right**).

Virtual Reality Station - while many historical bridges were created through analog means, advances in technology have enabled designers, architects and engineers better understand the impacts and realities through the use of virtual reality. By putting on a headset, this technology quite literally immerses someone in a location, enabling to see it as if the person was there. It is also an important tool for communities, allowing them to understand how a bridge will sit in an environment.

Educational Value - this exhibit will use VR to highlight several bridges, giving students and introduction to the technology as well as help them understand the nuts and bolts of how the bridge is assembled. It will particularly provide older students an introduction into (and also familiarity with) the practical application of advanced technologies, fast becoming an integral part of the design and planning process for projects in the built environment.