

APPLICATION STORY

Dimension 3D Printer Builds Mountains in Switzerland

"By putting traditional craftsmanship side-by-side with modern digital technology, we are building a bridge between the past and the present, which helps us engage a broader audience. A museum is not just an archive for old art, but also a signpost to the future."

— Anette Gehrig
Swiss Alpine Museum

The current special exhibit at the Swiss Alpine Museum (SAM) in Bern from now until February 2008, "Building Mountains," will show visitors how landscape modeling has developed over the years. The proportionally correct depiction of landscapes has helped man gain a better understanding of natural features for more than 200 years. In addition to the careful observation of nature, the transformation of a two-dimensional map to a three-dimensional relief is a process requiring many discrete steps and a craftsman's highly honed skill. The work of Xaver Imfeld (1853 - 1909), Switzerland's most renowned panorama artist, relief maker, cartographer and engineer, is part of the exhibit that focuses primarily on an interactive segment about the art of "building mountains." Thanks to the very latest 3D technology from Dimension, tradition and progress are coming together in an ideal way in Bern.

The Dimension Solution: Modern 3D Technology and a Traditional Approach to Building

As a counterpoint to traditional relief modeling in the form Xaver Imfeld mastered to perfection, the museum is presenting futuristic technology for the first time in the form of the Dimension 3D printer. Whether users need elevation profiles, industrial prototypes, architectural models of buildings, or setups for movie stages, Dimension delivers accurate models, layer by layer, made of durable ABS plastic.

Thanks to Dimension's 3D technology, the Swiss Alpine Museum can create models of the 3,970-meter (13,000 feet) Eiger or the Matterhorn, the seventh-highest mountain in the Alps at 4,478 meters (14,700 feet), in just a few hours. These spectacular peaks are a challenge not only for the relief builder, but also for the Dimension 3D printer. To create a model of the Eiger using a 3D printer, the museum specifies a section; in a second step, the Topographical Institute in Bern sends it to Proform AG as a digital map. Proform then prepares this map as 3D CAD data for the Dimension 3D printer.

Interactive Exhibit Concept Is a Visitor Draw

The Swiss Alpine Museum in Bern wants to show visitors all types of relief modeling in a lively special exhibit entitled "Building Mountains." The traditions of old-fashioned manual relief making are juxtaposed against the technology of the digital age. While landscape relief maker Toni Mair will make appearances in a workshop specially built for the exhibit and build models using traditional materials and tools, the Dimension BST 768 will crank out multiple correctly scaled versions of the Eiger or Matterhorn in record time.

Anette Gehrig from SAM comments, "By putting traditional craftsmanship side-by-side with modern digital technology, we are building a bridge between the past and the present, which helps us engage a broader audience. A museum is not just an archive for old art, but also a signpost to the future. This is why the Dimension BST 768 increases the exhibit's appeal." Anette Gehrig is very much involved with the concept for the special exhibit, because for the SAM, "Building Mountains" is primarily about getting visitors actively involved with the exhibit. There are twenty "play stations" with tasks to do and problems to solve; each offers a in-depth look at relief making and working techniques as well as modern technology and helps visitors gain a deeper understanding of landscapes. The Dimension BST 768 is a permanent part of the exhibit and will be in action for the entire run of the exhibit. Models of the mountains built by the Dimension 3D printer will be available for purchase in the museum gift shop.



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