SOLID TERRAIN MODELING, INC.

less virtual... more reality

THE WORLD’S MOST ACCURATE, FULL COLOR, PHYSICAL MODELS OF GEOGRAPHIC TERRAIN
FULL COLOR PHOTO REALISTIC 3D MODELS ARE NOW A REALITY

Solid Terrain Modeling's unique automated manufacturing process brings precision, speed and stunning realism to physical modeling.

"Solid Terrain Modeling exhibited some of the most amazing 3D renderings of the earth's surface that I have ever seen."

Joseph J Kerski, PhD
Geographer - Education / GIS
US Geological Survey

Solid Terrain Models... as real as it gets!

STM models are actual physical models that people can gather around, touch and view from any angle, allowing for a deeper understanding of the information presented. Precisely cut in dense polyurethane foam, our models hold exacting detail, giving a completely realistic rendering of the land formations. Add to that, brilliant full-color hi-resolution printing of satellite imagery, aerial photography or other graphic data on the dimensional surface and the scene comes alive. STM Solid Terrain Models provide a level of understanding not found in any computer model, ordinary topographic model or flat map. Our models can be any size - from table top to wall mounted or even tiled to fill an entire exhibition hall.

front cover: Mt. Everest
client - National Geographic Society
scale - 400 meters/inch
size - 48" x 68"
Elevation data from map contours by Swissair Photo + Survey
Image from aerial photography by Swissair Photo + Survey
**Combining the Worlds of Flat Maps, Satellite and Aerial Imagery and 3D Physical Terrain Models**

STM Solid Terrain Models are as beautiful as they are informative. STM’s patent-pending technology makes these models accurate and affordable, producing models in days - not months!

Starting with a block of hi-density polyurethane foam, Solid Terrain Models are cut on our computer-controlled milling machines from digital elevation data; giving unparalleled accuracy and realism to the terrain. Unlike old-fashioned models, there are no stair-stepping topographic layers, just clean, crisp, natural detail, showing the landscape as it truly is, with every nuance and detail of the surface.

Once cutting is complete, our custom printing machines fly inkjet print heads over the surface of the model, printing any type of image in full vibrant color. The result is a model that conveys an understanding of the information presented far better than any other mapping technology available.

"The STM model really brings the geography of the Olympic venues alive. It's like nothing I've seen before! You get a bird's-eye view of the whole area - the snow on the mountains, the downtown area, the airport, the lake. The model has such exquisite detail and color, it takes your breath away."

D.D. Hilke, PhD, Executive Director of The Children’s Museum of Utah

Salt Lake City client - Children’s Museum of Utah scale - 1250 meters/inch size - 48" x 72" Elevation data is USGS 30 meter Image is Landsat7 from WorldSAT
STM Solid Terrain Models Are Communication Tools that help people see and understand topography in a direct and reliable way. STM Solid Terrain Models have many advantages over virtual computer models and flat maps. Computer models can be difficult to interact with, confusing to get a bearing and impossible for a large group of people to gather around. And flat contour maps are just hard to read. When looking at an actual physical model the information is immediately available, everyone "gets it" right away - scale, distance, terrain, points of view, sight lines, etc. allowing for a deeper understanding of the information presented.

STM MODELS COMMUNICATE CONVINCINGLY … HELPING YOU SELL YOUR PROJECT, SELL YOUR POINT OF VIEW, WIN YOUR CASE OR SAVE LIVES.

Homeland Security/Emergency Response
Planning and coordinating across multiple organizations are critical elements of emergency planning and homeland security. STM models greatly facilitate planners by providing a common, visual, geospatial reference of any area of interest. Emergency response professionals use STM Solid Terrain Models to map floodplains, dam breaks, fires, and lethality zones for weapons of mass destruction. The models are excellent briefing aids in operations centers.

STM’s versatile manufacturing process ensures that models can be made in as little as 24 hours. They are also light and portable. These features make them perfect for coordinating emergency responses across multiple agencies and jurisdictions.

"This model helps us provide firefighters with continual strategic and tactical training for fighting fires in the geographic area where wildfires are most likely to occur. The model represents this area far more accurately than any maps or photos we have. During an actual wildfire, we can transport the model to the incident-area command post and use it to plot the fire as it burns. The model will give the incident commander a real-life picture of the area, where the fire is and where it is going. In addition to access roads, jurisdiction lines and possible hazards, fire officers will be able to see the geography, scale, distances, terrain, points of view, and sight lines."

Jim Carter, Battalion Chief, San Jose Fire Department

Federal Government/State/Municipalities/National and State Parks
With the advent of STM’s technology, now as never before, federal, state, city and municipal agencies, and national and state parks are acquiring display models of great beauty and accuracy at a reasonable cost. Any information, such as sites-of-interest, streets, trails, man made structures, vegetation, demographics, geological data and more, can be applied to the physical model to communicate effectively to all types of people.
Architecture/Surveying/Land Development

Private land developers, surveyors and architects need to communicate project intent effectively to people ranging from city and federal employees to politicians to the general public. STM Solid Terrain Models are used for internal design reviews, making land acquisition decisions, design presentations, comparing design ideas and refining site grading.

"BHI is using several Solid Terrain Models for client projects. We had such a positive response from clients, we’ve incorporated the models into our business plan."

Dennis Sandin, Manager
Bohanan Huston International
Spatial Data Systems
Overlook Development Project
scale - 200 meters/inch
size - 13” x 25”
Elevation from aerial survey by BHI
Image from aerial photography by BHI

Museums/Exhibitions/Artistic Display

When the National Geographic Society wanted to illustrate the vast expanse of the Grand Canyon, they turned to STM to build a 52-foot long STM model of the region. With the precision of STM’s manufacturing process, continuous scene multi-part terrain panels are tiled together into very large displays that are absolutely breathtaking. Museums, artists and exhibitors commission STM models to replicate artifacts, display planet terrain, and create unique artistic displays of any size and scale.

Education

STM models are particularly valuable for geography classes or other courses with geographic or geologic content. Students love interacting with the models - peering into them, pointing out features and touching their surface. As a result they learn about geography, geology and even history in a way that brings the lesson to life. Educators use Solid Terrain Models to enhance the learning experience and increase understanding.

Military

STM Solid Terrain Models are used to communicate troop deployment during engagement and training scenarios, field operations, and mission planning and engineering. Since the models are easy to interpret, decisions can be made and communicated quickly and effectively. The models allow everyone to interact with the terrain from their own point of view and simultaneously see the details and the big picture, strengthening and streamlining the decision making process.

Afghanistan
client - National Geographic Maps
scale - 15 kilometers/inch
size - 96” x 96”
Elevation data is DTED 0 from WorldSAT
Image is Landsat7 from WorldSAT
Photography: Heather Hoffman, National Geographic Society
Your Data or Ours?

Getting an STM Solid Terrain Model is easy! If you have an active GIS program, you probably already have all of the data needed to create a model. We can work with you to turn your data into a Solid Terrain Model.

If you don’t have your own data STM has access to all major commercial data sources. We can find the right product to fit your needs, virtually anywhere in the world!

Imaging

Any combination of aerial photographs, satellite imagery, maps or pictures, graphics and text can be printed - as long as the image has the same limits and is in the same projection as the elevation model.

Designing your STM

Choose the area you want modeled and decide how big you want the model to be. It can be as simple as that. We will work directly with your GIS group or find the data you need in our network.

If you would like to discuss your project - give us a call. STM can help you determine the right size, scale, vertical exaggeration and display method. We can even provide a custom carrying case if your model needs to travel.

Systems Available

A select number of licenses are available to acquire the manufacturing equipment and software package to service the mapping and modeling needs of sector specific customers. Please contact an STM representative if you are interested in licensing this model making technology.
“When we remodeled last year, we had a chance to create a museum display to the outside. We decided to feature STM models and artifacts from around the world to invite visitors to take a closer look. The models are spectacular – you can see them in the windows from two blocks away. People are drawn to them and come up off the street to find out more about them.”

Susan Norton, Director
National Geographic Society
Explorers Hall

“As scaled-down representations of actual landscapes, STM models are ideally suited for landscape visualization, providing a comprehensible view of the complex world in which we live. And unlike virtual reality displays, physical models can be viewed by dozens of people at once. Interactivity is a simple matter of strolling around the model to another vantage point. Whether you need a model for a tabletop or to fill an entire room, STM is the undisputed leader in this unique sub-discipline of cartography.”

Tom Patterson
Organizer-International Cartographic Association
2002 Mountain Cartography Workshop

**THIS TOTALLY NEW MODELING TECHNOLOGY TRANSFORMS WHAT WOULD OTHERWISE BE A CONVENTIONAL MAP AND MODEL PRESENTATION INTO A CAPTIVATING EXPERIENCE. WITH THESE HIGHLY ACCURATE AND INFORMATIVE MODELS YOU CAN GET YOUR POINT ACROSS CLEARLY AND EASILY. CALL STM TODAY AND SEE WHY THE CARTOGRAPHIC INDUSTRY IS RAVING ABOUT STM SOLID TERRAIN MODELS.**
Grand Canyon client - National Geographic Society
scale - 663 meters/inch
size - 624" x 78"
Elevation data is USGS 30
Image is Landsat7 processed by JPL.