

SPATIAL GROWTH MODELING

As the bay area grows, the need for computer modeling to plan infrastructure and the building of new communities rises markedly.

The space age meets the information age in a high-tech computer planning tool now being compiled for the Tampa Bay Regional Planning Council.

Reams of information are being fed into a system of eye-catching virtual reality models that can be run on a simple laptop. And the NASA-supported technology, called Spatial Growth Modeling, makes it easier for decision-makers, planners and the public to ask, "What if?" and get answers in easy-to-digest graphics that dramatically display the impact of growth on roads, water resources, and local budgets.

Want to see the impact a new housing development would have on local roads and water resources?

Click! Combined databases reveal a satellite image of the area with the roads most heavily traveled in red.

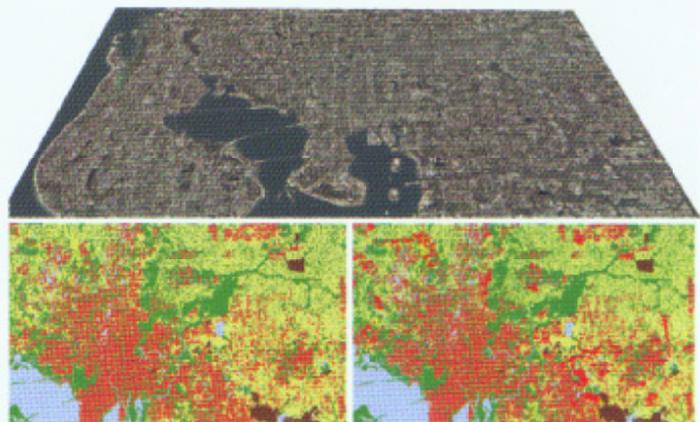
What if you add a few more lanes to those roads or some new alternative routes to help relieve traffic?

Click! The troubled roadways are no longer in the red but the change in traffic shows the stress some local streets might endure as a result.

Wondering what a Category 3 hurricane would do to the Tampa Bay area?

Click! There's a before-and-after image of what a storm surge would do to downtown Tampa that brings home the warnings of erecting critical buildings in harm's way.

Curious about the strengths and weaknesses in the bay area in the



event of a terrorist attack?

Click! By merging readily available information into one combined database, planners can assess the availability of police, hospitals, evacuation routes, and any number of needs and spot the strengths and weaknesses that need attention.

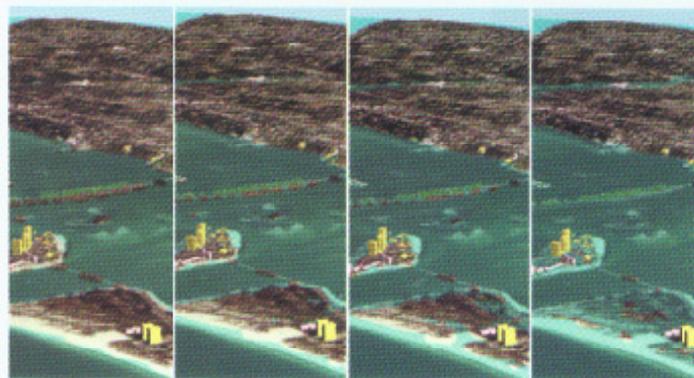
"The information is already available," says Wil Orr, director of the NASA program at Prescott College, in Prescott, Arizona, whose team was hired to construct the Spatial Growth Modeling project for the Regional Planning Council. "Piles of data and pages of staff reports can often bury decision-makers in paper and numbers so that it's hard to see the critical issues," Orr said.

"It's usually an elected official who comes to us and says 'I'm drowning in data and dying for knowledge,'" Orr said.

That's just what sparked Pinellas County Commission Chair Barbara Sheen Todd, Vice Chair of the Regional Planning Council, to bring Spatial Growth Modeling to the attention of other local decision-makers.

"I think the Tampa Bay area is ripe for having this type of tool for the policy-makers," Todd said. "We could use this to look at water resources, development patterns, social services, economic development – there's no limit to the variables we could use. And the planning council can serve as a major technological resource center."

It will take about two to three years to build the suite of digital





**1990 Landsat Imagery
2002 Color Aerial inset**

planning models and cost about \$400,000. But once the investment is made, alternative development scenarios can be easily analyzed and the data used to reveal how decisions will play out over time.

The Regional Planning Council has been joined in this effort by Pinellas

County, the Southwest Florida Water Management District and Florida Department of Community Affairs.

The partners will combine resources to aid regional planning while using the technology for their own planning purposes as well.

Planning Director Avera Wynne said the

Regional Planning Council is excited about having such a graphic-friendly tool to show the public the kind of issues the region is facing.

"We live in a video-game world," Wynne said, "and this makes it easier for the public to get excited about taking part in the planning process." ♦