

# SCIENCE FOR SOCIETY

## Web Site Gives Public a Bird's-Eye View of Landscapes

BY SUSAN MCGINLEY

A team of researchers at The University of Arizona has developed and created a Web site that gives a bird's-eye view of the landscape. The tool was created to assist ranchers and other managers who work closely with the land and make decisions on how to handle our natural resources.

"RangeView provides frequent satellite images online to enhance the ability of natural resource managers, including ranchers, to manage the landscape," says Chuck Hutchinson, director of the Office of Arid Lands Studies (OALS) in The University of Arizona College of Agriculture and Life Sciences.

Stuart Marsh, director of the OALS Arizona Remote Sensing Center, Barron Orr, assistant professor and geospatial extension specialist, and Assistant Professor Wim van Leeuwen researched and developed the decision support database site to display satellite digital images in a way that allows users to analyze the characteristics of the land.

"This tool offers the ability to zoom in on your ranch, forest, or habitat and monitor changes in vegetation through time," Orr

says. The images highlight variation in vegetation greenness allowing users to compare greenness between years and also to view greenness compared to a 15-year average, to the previous year, and as it changes every two weeks.

Though the U.S. Geological Survey has been producing the index from satellite data since 1989, this is the first time it has been made easily accessible for the general public.

"This enables Web site visitors to assess the greenness of any area of interest in the U.S., Northern Mexico, and Southern Canada," Marsh says. "For each location and for certain dates, you can see if it's greener or less green than usual, which may help a natural resource manager make a more informed management decision." An "animate" button can show two-week variations over the past years that can help managers evaluate fire potential or other critical applications.

From the very beginning, the research team worked closely with stakeholders to develop the Web site. Ranchers and members of 25 agencies participated in outlining their needs. Additional studies led the researchers to understand their users and audience. This research has helped Hutchinson, Orr, and Marsh recognize what promotes or impedes people to use the technology.

Finding out that RangeView allows a person to zoom in on any familiar geographic area often trumps qualms users may have about learning a new computer application.

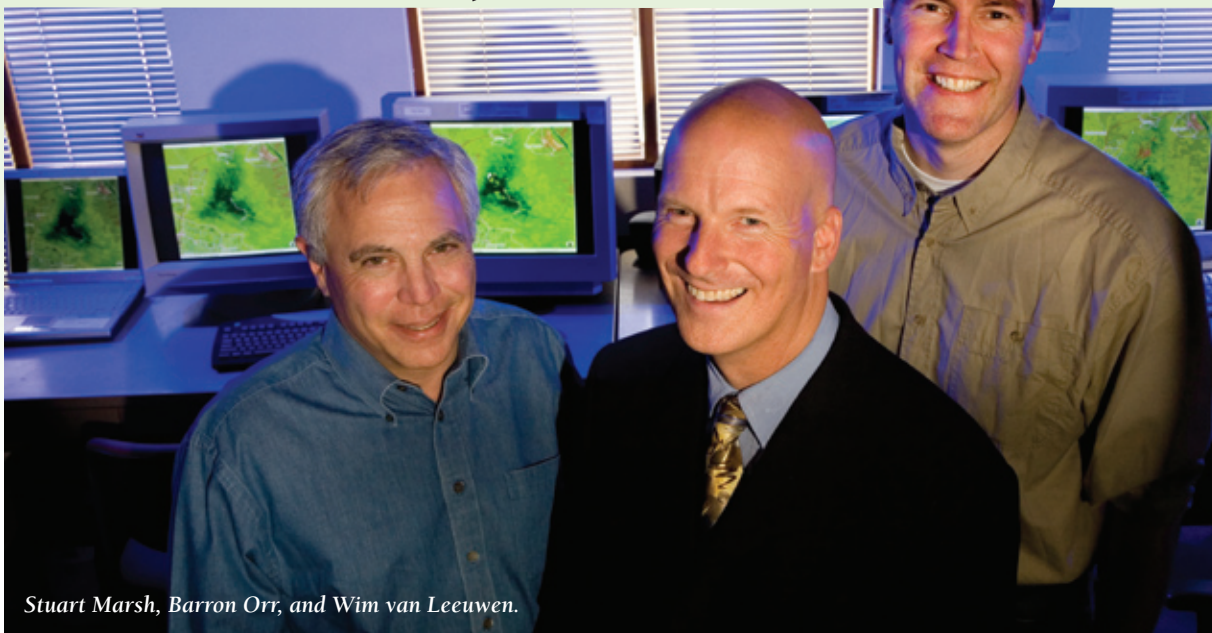
"They forget they're using a computer mouse and want to get that cursor arrow on their ranch," says Doc Lane, director of natural resources for the Arizona Cattlemen's Association and Arizona Wool Producers Association. "This is one of the few times I've seen that we could really translate up-to-the-minute research into our current operation."

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*These four RangeView images show the greenness of Tucson from 2003-2006.*



Stuart Marsh, Barron Orr, and Wim van Leeuwen.

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