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Software puts development in public's hands Program can help show residents how decisions affect neighborhoods

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GALVESTON - An innovative new software package could put an end to the days of city officials making plans in back rooms or spoon-feeding information to the public at boring meetings.

The Community Health and Resource Model "will shift the power of understanding and decision-making to the public," said Steven Mikulencak, who helped create CHARM with Texas A&M Agrilife Extension Service in Clear Lake.

CHARM makes answering questions about development nearly as easy as using the popular SIM City computer games. With a light pen marking an image projected onto a piece of butcher paper taped to a table, anyone can draw a circle around their neighborhood and find out how it would be affected by a storm the size of Hurricane Ike, whether it could support a community store or a bus stop. The answers come within seconds.

The map packs geographic, demographic and economic information into grids representing 40 acres. By clicking a few boxes, a user can paint in information and get rapid answers to questions about how development will affect water use, traffic or the environment, for example.

Mikulencak, program coordinator for Agrilife's Coastal Watershed Program, and John Jacob, program director, developed CHARM with help from consultants and tried it out at a workshop last week in Galveston. They are considering making a room available for the public to use CHARM in their Clear Lake offices and will eventually put it on the Internet.

"I call it participatory democracy," Jacob said.

Consequences revealed

The area covered by CHARM, southern Harris County and all of Galveston County, is expected to grow from its current population of 628,000 to more than 1 million by 2035. CHARM's developers wanted to give planners and the public instant answers on the consequences of planning or not planning for that growth.

Mikulencak dragged the light pen in a circle across the image to add 126,000 people to the map. He wanted to know how much more damage would result from the added population if another Hurricane Ike struck the area.

CHARM quickly produced a chart showing $16.63 billion in residential damage alone. That compares with $7.25 billion after Ike struck the same area in September 2008. Total damage in all areas affected by the storm was about $30 billion.

CHARM can allow the public to check assertions made by planners and developers on how a development would, for instance, affect taxes or traffic.

"Let's say you have a potentially controversial development coming in," Jacob said. "You could play with different scenarios and the answers could be had very quickly."

Informing the public

CHARM is in the vanguard of an evolving effort to use technology to democratize the decisions on what and how to build in a

community. That effort began more than a decade ago after Lyman Orton - whose family owns a nationwide mail order business, Vermont Country Store - joined the planning commission in Weston, Vt.

Orton didn't like what he saw.

"He saw decisions being made in the dead of night at town hall," said Doug Walker, who helped Orton develop the software that made CHARM possible. "He really believes in the importance of people participating in decisions about their own future."

Orton founded the nonprofit Orton Family Foundation to develop CommunityViz software and other tools to empower the public. Walker was chosen to head the for-profit Placeways to market and service the software, which Mikulencak and Jacob used to build CHARM.

Although thousands of governments around the world are using CommunityViz, none has used it in quite the same way as Jacob and Mikulencak, Walker said. Walker was unaware of anyone putting a CHARM-like program on the Internet.

Jacob said CHARM is a natural extension of Agrilife Extension Service's watershed planning, which requires community involvement. Agrilife is part of the Texas land and sea grant system that is "really about putting the brain trust at the community's and the people's disposal and helping them make better decisions," Jacob said.

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Using a grant from the National Oceanic and Atmospheric Administration and help from Placeways, the two scientists cobbled together CHARM from three software programs, a Nintendo Wii console, a light pen, a projector and a laptop. They spent about $42,000.

Future uses

Dustin Henry, an urban planner for the city of Galveston, was among dozens of city and county planners who saw CHARM for the first time at a workshop last week. Henry was impressed.

"It seems really innovative because it takes accurate, real, on-the-ground data down to the household level and provides real-time results on what would happen to that property if you develop it a certain way," he said.

CHARM can be modified to zoom to a single house, said Jacob, who also wants to add a three-dimensional view and the ability to draw in new buildings. Mikulencak said CHARM could even be modified to answer questions about redrawing city council districts.

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