

Technology will half the cost

GAINESVILLE, Fla. — Cost-effectiveness for the client and speed are challenges Geoscience Golf Development Services has tackled since it began developing the program for its computer-driven "flyover" videotapes of proposed golf courses.

"One of the reasons we wrote our own software programs is that we wanted to stay in a PC (personal computer) — off-the-shelf — environment," said Geoscience President Larry Hawkins. "The work-station environment is very expensive. There's a cost breakpoint where this is cost-effective for [prospective clients]. And we really had to contain the cost because it is a major animation production..."

"So we put a lot of work into saving on equipment, software and things of that nature."



A view created by Geoscience Inc. of the 10th green at Elbow Valley from one of the hillside homesites overlooking the course outside Calgary, Alberta.

Hawkins said some clients get so excited about the flyover's possibilities as a marketing tool that they don't worry about the cost.

"But when it comes down to pure economics, we really have to be cost-effective," he said.

A major part of the solution

lies in advances in the speed of computers, including processors due on the market this year that will half processing time, Hawkins said.

In a Geoscience videotape, the flyover of each hole takes 12 to 17 seconds. There are 30 frames per second of viewing. Each frame must be ren-

dered as a separate image. Depending on the complexity of the image, it can take 15 minutes to 1 hour per frame to create.

"You can see the magnitude of the work," said Hawkins, who employs three people working full-time on the images.

Computer animation adds extra punch

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"It bridges that marketing gap" between conception and construction, said Hawkins. His "site previews" are attracting interest for use in developing, marketing, designing — even obtaining permitting approval.

"A developer looking for money, a marketer seeking to sell memberships in a proposed golf course, an architect wondering, 'What is this going to look like?' ... all of the above will be interested in this," Hawkins said.

"The biggest interest is from the developer. They can use these animations as the showpiece at their preview center while the course is under construction, to show to prospective members and homesite buyers."

Geoscience can even preview views of the golf course from surrounding homesites.

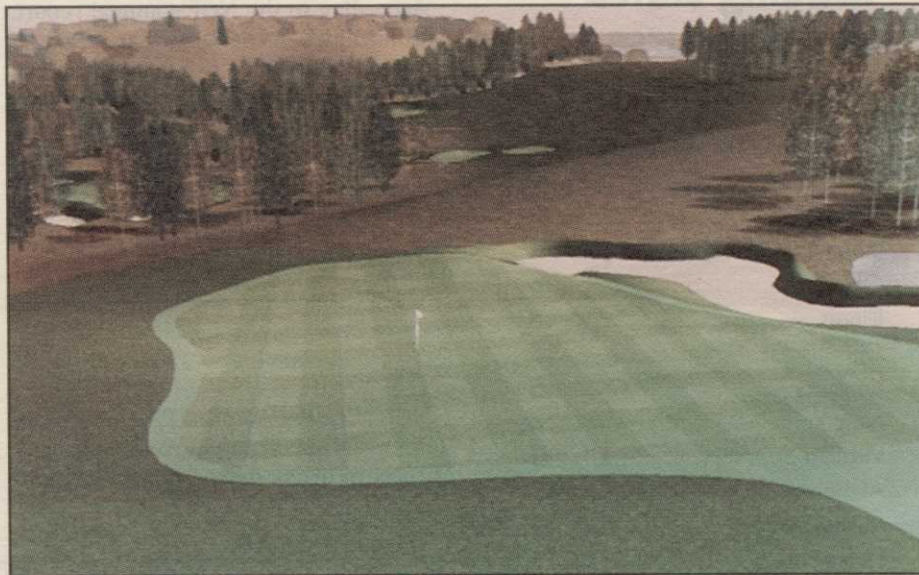
Aaron Alberts of Elbow Valley, a development being planned outside Calgary, Alberta, Canada, said he plans to integrate the video with "a residential component — possibly on that video or as a section of the marketing video we display here."

"We'll probably do a mix [of animation and real-life video]," he said.

Asked if he envisioned using the video to obtain financing, Alberts said: "You bet, if we decide to build another golf course, it's very effect in showing past materials for present projects, in obtaining financing or simply preliminary marketing to builders and potential investors."

Geoscience put four years of research and development into the software, taking the industry standard system to a more sophisticated level — the fly-over. It creates a sense of action, movement.

Sound-overs and voice-overs can add yet another dimension.



A still-frame view, taken from the animated video, of Elbow Valley's as-yet-unbuilt 17th green, with the 10th green in the trees at left rear.

"It takes the hard information that's in CAD and turns it into the soft, viewable information that the average person can watch a video of," said Scott Applegate, vice president of information systems for the Gary Player Design Group. "It's really an accurate representation. It's getting toward the artistic."

"The closer you get to realism in a rendering model situation, the closer you are into getting somebody into virtual reality... A lot of people go out to buy a lot and can't imagine what it's going to be like. By showing them a video and the playability of the golf course, you can pretty much guarantee a sale."

"I've got my finger on the pulse of this technology," Applegate said, "and [Geoscience's system] is far and away the best for realism. I've seen upwards of a couple dozen variations of a theme. Until I saw Larry's video, everything was pretty contrived."

Accuracy?

"Our renderings, in terms of scale, are as accurate as the architect's plans," Hawkins said. "That's what we really worked hard at perfecting. If an architect specifies he wants

a two-tiered green with a rise of a foot and a half, we have to be able to show that. If he specifies he wants raised elevation at the back of traps or hazards and it's a matter of a only few feet, we will show that."

WHAT'S NEEDED

To do its work, Geoscience requires a topographical map and aerial photos of the entire site, and the development and course architect's plans.

A day or two is spent on site, photographing the trees, documenting the features and what they look like, "so that we can get the detailed image we're after," Hawkins said.

"We can begin with the routing plan, but as the golf course gets designed that's how we know where to place bunkers, mounding and detailed features like that," Hawkins said.

The time required to complete the animation depends on how it is scripted. "For example, if we just do fly-overs of golf holes, it takes three to four months. If we're doing a full-blown presentation — showing the entire site plan and how the golf course integrates into the terrain — it

Animation was 'the next level' for Geoscience

Geoscience got into animation as an outgrowth of its permitting work. It was providing CAD services to golf course architects and developers, including Gary Player Design Company.

As a result, some of its clients started asking if the company could render conceptual views of golf holes.

"The more we did, the more interesting it got ... and the more encouragement we got," Hawkins said.

So in March 1992 Geoscience unveiled its new capabilities, gaining Mission Hills as one client, along with others in New Jersey and New York. Its work at Mission Hills was preliminary, three-dimensional conceptual "still" renderings of clubhouse turns and areas that involved water features at the Gary Player course.

Then along came the developers of Elbow Valley in Calgary, Alberta, Canada, which features a golf course designed by David Graham and Gary Panks.

The Elbow Valley video includes a lot of background because it was a three-dimensional model of the entire 1,100 acres.

"Otherwise, we'd do a narrow view of just the golf course envelope. Here, we showed more of the surrounding territory. That was important because this site has so many beautiful features and streams," Hawkins said.

Aaron Alberts of Elbow Valley said he will use the site preview primarily as a marketing tool.

"The biggest interest is from the developer.

They can use these animations as the showpiece at their preview center while the course is under construction.'

— Larry Hawkins

takes five to six months," Hawkins said.

But, he said new computer processors due out this year will cut that time about in half.

Besides the normal low-level fly-over, Geoscience will do a high-altitude fly-over that shows the golf course in perspective with the landscape.

"We're really enjoying it. It's almost like putting together a television script — finding out what the clients want and how they perceive their program going, how they want to market it and what they want to emphasize about the site," Hawkins said.

"We're working on three projects now we're trying to get the owners [to use this]," Applegate said. "The amount of data we've got on a computer level would make what Larry does extremely easy for our clients to pay for and for Larry to create."

A TOOL FOR APPROVALS?

Asked if such a video could be effective at an approval hearing before a government board or agency, Hawkins said: "We're getting ready to do some [still rendering] concepts on wetland mitigation adjacent to a golf course for permitting approval. We have done similar things, but not to the three-dimensional level and not to the golf course level."

What is the next frontier for the pioneering Geoscience?

"We're headed toward full 3-D presentations of an entire site development plan as built, from drawings from the architect, the planner, the engineer. We'll put in roads and lots and the infrastructure such as the clubhouse. We can do that now, but one has hired us to do it," Hawkins said.

But he is confident "people would rather have a live video presentation of their project than a scale model."