

Oshkosh programmer brings virtual reality to history

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With video games today, you can try your hand at piloting a combat plane, playing a competitive game of tennis or even walking a virtual beagle — all from the comfort of your favorite couch.

But virtual reality isn't just a game for UW Oshkosh's T. Kim Nguyen, a programmer analyst in administrative computing. With a recent \$45,530 grant from the Institute of Digital Theology, he's programming a virtual-reality, 3-D computer model of York Minster Cathedral in England.

"I was asked to work on the project because I had done similar work, beginning two years ago, on a virtual reconstruction of the Basilica of St. Francis of Assisi in Italy," Nguyen said.

Virtual reality allows people to experience activities and places they might not otherwise have the opportunity to take part in or travel to. "Even if you were physically at one of these monuments, you probably wouldn't be able to absorb all the material that was presented to you during a quick, guided tour," Nguyen said.

The basilica project, led by faculty at St. Louis University, involved importing a 3-D model of the church, created from architectural drawings, into a real-time game engine. Then the model was "skinned" with high-resolution photos of the basilica's frescoes, stained glass windows, ceiling vaults and other features such as the pulpit.

"I used the game engine to create clickable hot spots throughout the interior, so that users can call up information about particular features and their relationship to others around them," Nguyen explained. "I also scripted a fly mode so users can float to the ceiling to look at vaults and other features up close, even though they are far off the ground."

The York Minster Cathedral project will be even more complex due, in part, to its larger size. "We plan to create a much higher resolution model to give as much lifelike realism to the reconstruction," Nguyen said.

The recent grant covers the first year of the York project, which is estimated to take almost five years to complete.

For more information about the basilica project, [click here](#).

To see a quick demonstration, [click here](#).

Also, to see a copy of the Polk Library's basilica CD-ROM, [click here](#).