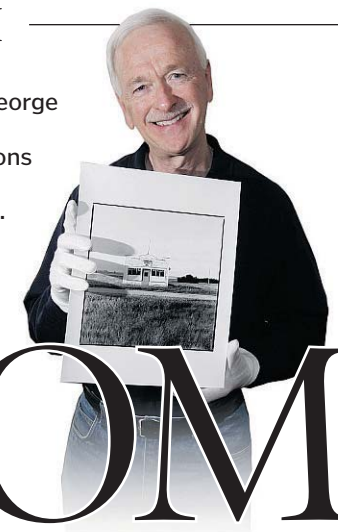
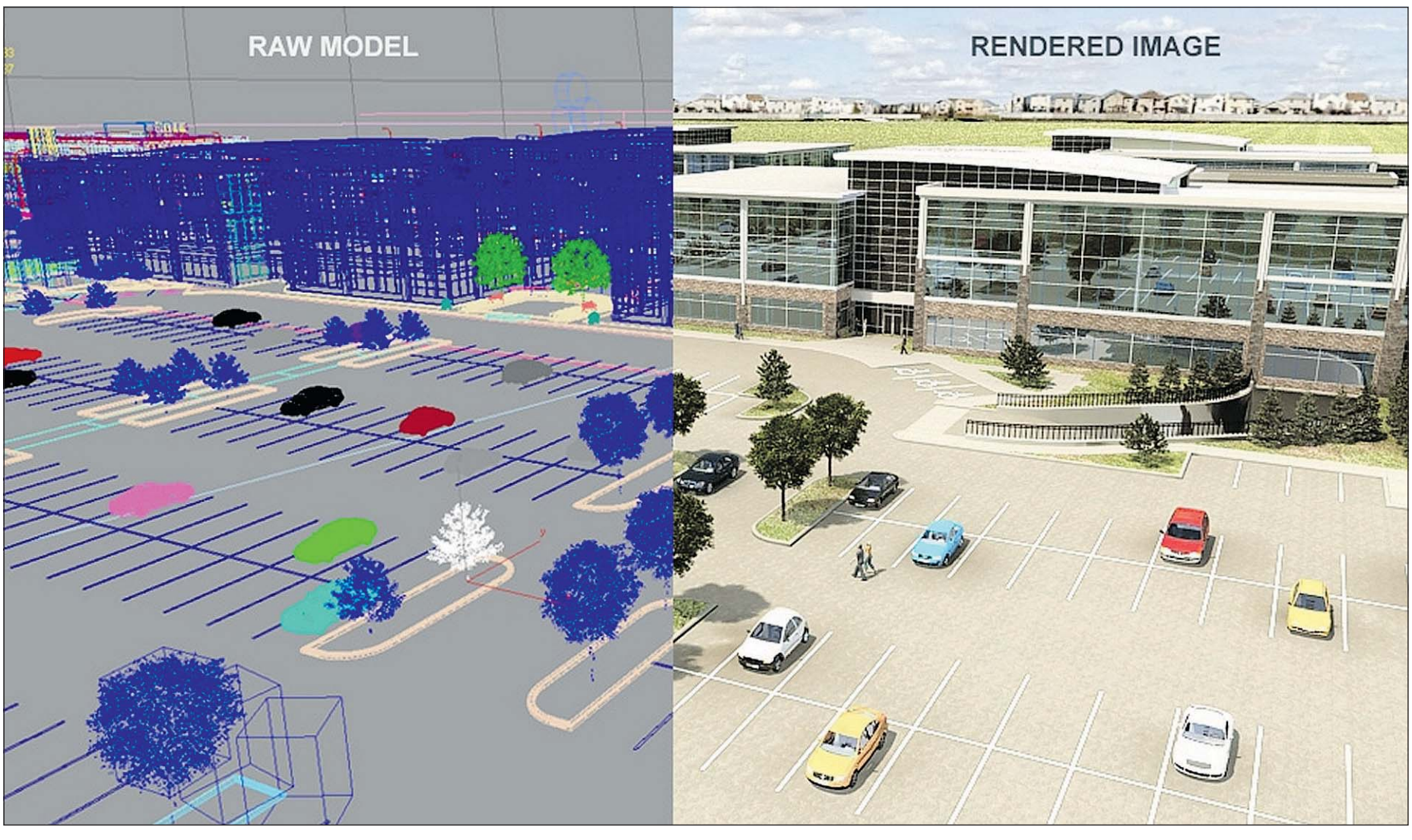
ROOM WITH A VIEW Photographer George Webber's favourite room highlights his passions while providing an oasis of calm. **See page I3.**



NEW HOMES

EDITOR: BARB LIVINGSTONE 403-235-7339 WWW.CALGARYHERALD.COM/HOMES SATURDAY, JULY 31, 2010



Courtesy, Riddell Kurczaba Architecture Engineering Interior Design Ltd.

An example of how the virtual reality process can turn the rough data of a computer model, left, into a close approximation of how a project will appear, right.

Dream homes become (virtual) reality

No geeky glasses are in this 3-D facility led by 26-year-old

TERI MCKINNON
FOR THE CALGARY HERALD

When people think about 3-D, they likely imagine geeky glasses and Avatar-like creatures jumping towards them in a movie theatre.

But 3-D isn't just for Hollywood blockbusters. One of the most sophisticated 3-D visualization studios exists in Calgary — and it is being used by the development industry to produce life-like project renderings and animations.

Leading this local transformation of real estate renderings — from a paper-based analog industry to a digital wonderland — is the Riddell Kurczaba Architecture Engineering Interior Design Ltd. and its visualization manager, Kerry Harwood, a 26-year-old, self-proclaimed computer geek.

He is a digital storyteller, using technology that, on a global basis, has revolutionized how development models are done.

This new-generation technology helps citizens understand the impact of urban projects, showing them, with a reasonable degree of clarity, what a new project will look and feel like.

The collaboration of architect, engineer, developer and programmer recreates building projects in a digital 3-D manner to communicate a message.

Harwood, who first dabbled in 3-D technology when he was 12 years old, traded in plans to become a veterinarian after becoming enchanted by the wizardry of 3-D compositing — and after evaluating the length of post-secondary study required for each profession.

A graduate of the University of Lethbridge's New Media Bachelor of Fine Arts program, Harwood took an internship in Auckland, New Zealand, with an award-winning media company specializing in high-end 3-D visualizations.

Since then, he has helped build the local 3-D visualization group (known as RKA3D), and is focused on building the practice into one of the elite production studios in Canada.

SEE REALITY, PAGE I4

CREATING WORLDS

Unlike traditional architectural sketches and artist renderings, 3-D visualization uses computers to create virtual reality images using accurate information on building materials, design specifications, environment and landscape. This basically involves:

■ Modelling — Architect and engineer concepts (such as floor plans, elevations and design finishes) are processed by computers and integrated via software to create a 3-D shell on which the project will be based.

■ Texturing — Adding things like colour, pattern and lighting to create the illusion of depth, dimension and shadows.

■ Animation — This creates the illusion of movement through the model using things like motion capture (real human movement) and flyby (moving in 3-D space like an airplane or bird).

■ Rendering — Each frame is computer generated in high resolution media based on modelling, texturing, lighting and animation.

■ Compositing — Bringing all the rendered frames together in a sequence of still images to create an animation. Adding transitions, sound, music and special effects to complete the presentation.

— Teri McKinnon

FROM PAGE I1

REALITY: Useful tool

"We live in a visual society and it is becoming more and more so every day," says Harwood. "3-D visualization allows individuals who may not know how to read blueprints and architectural plans a clear and accurate tool to sum up an entire development permit package in a few images or short animation."

> We are pushing the envelope in terms of an audio visual experience with more detail, depth, dimension and realism.
>
> **KERRY HARWOOD, RIDDELL KURCZABA ARCHITECTURE ENGINEERING INTERIOR DESIGN LTD.**

Bob Holmes is a convert. The former planning and transportation commissioner at the City of Calgary, and a former senior vice-president of capital projects at the Calgary Health Region, he has seen 3-D visualization used at the Calgary Planning Commission and also used it on projects he has been responsible for, such as the South Health Campus.

Holmes believes 3-D technology is a useful tool for a designer, but its additional value is in communicating the development to others.

"3-D technology can be very useful in explaining projects to citizens, such as redevelopment projects in existing communities. It's also a very useful tool for facility planners and interior designers working with user groups, particularly with large and complex projects like hospitals, airport terminals and other complex buildings."

"The fact that this technology is now available locally will mean that it will be used more often and more cost effectively," he says.

Calgary Municipal Land Corporation (CMLC) used 3-D technology to highlight many aspects of the revitalization of East Village — specifically to showcase infrastructure programs and introduce the vision for East Village.

"If a picture speaks 1,000 words, then an animation allows the user to have a virtual sensory experience," says Susan Veres, senior manager, marketing and communications at CMLC. "Through 3-D animation, the viewer not only got a sense of what East Village would look like when built, but also got a detailed perspective of how a resident will experience and live in the village."

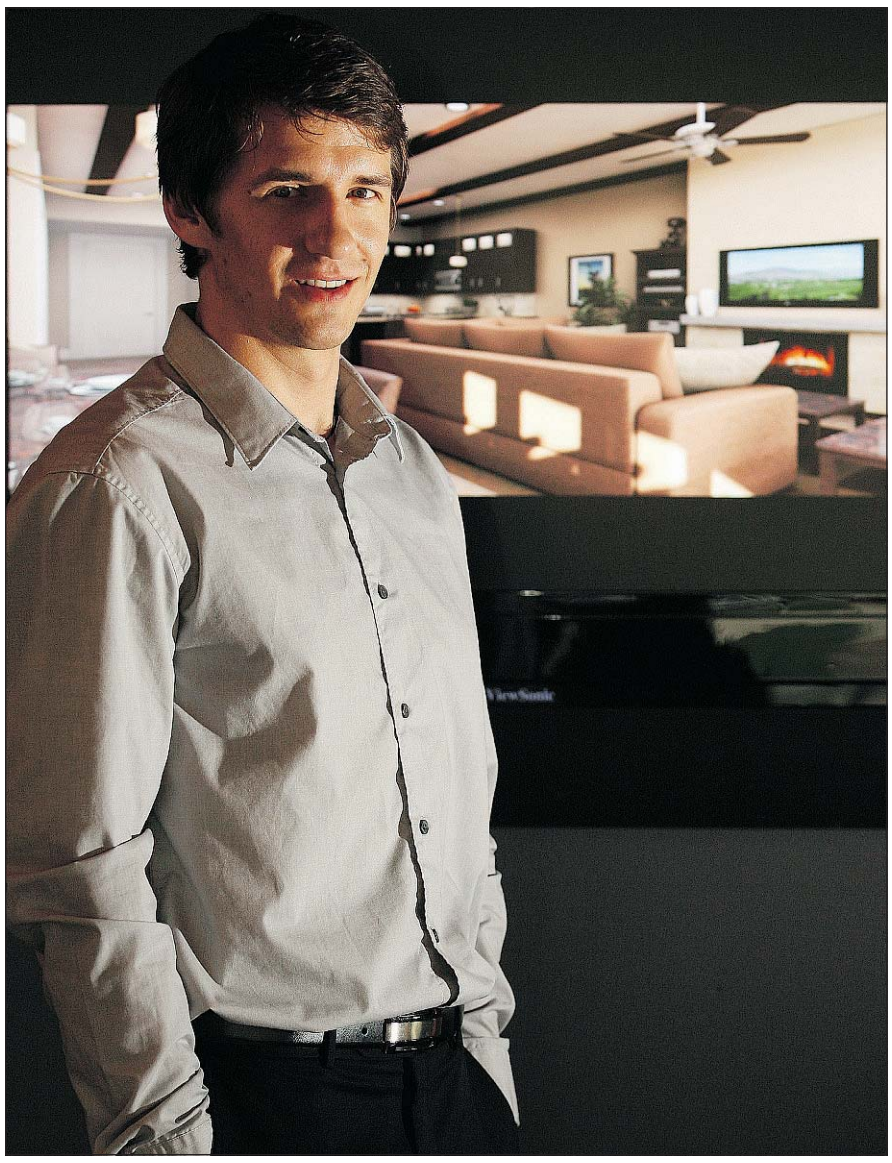
The RKA3D team met extensively with CMLC, listened to its vision for an urban village of 11,500 people, and created a 3-D animation highlighting the urban design, public spaces, streetscape and architecture of each of the character districts in the East Village community.

"It is becoming common practice to use this technology because of its ability to influence and provide real context; for the developer audience it helps them understand size and scale of building, massing concepts, road programming, etc.," says Veres. And "advancing the concept means advancing the approval for funding."

3-D virtualization is integral in a broad scale public engagement campaign designed to plan, educate, inform or improve community acceptance of projects. "I consider it one of the most critical sales and marketing tools in our arsenal," she says.

This makes the future bright for RKA3D, which has also applied the technology to redevelopment projects, home renovation projects and, more recently, oilsands projects.

Harwood believes the rapid advancement of technology can only bring a more detailed interactive experience.



Stuart Gradon, Calgary Herald

Visualization manager Kerry Harwood is aiming for cinema quality in five years.

"We want to create a much more immersive environment that people can relate to and get a better sense of what is happening" he says. "We are pushing the envelope in terms of an audio visual experience with more detail, depth, dimension and realism."

With the dramatic rise of professional and personal digital acquisition, digital projection and increased demand for high definition resolution, Harwood's five-year goal "to be at cinematic quality" seems achievable.