

Lights! Camera!

Animatronics!

By Aaron Lam



"Want to see a rat dissection?"

Special effects guru Walter Klassen pulls out one of his latest creations: a rat with its slit belly pinned open, intestines and blood oozing out. Don't worry, it's not a real rat. It's just a puppet for the upcoming movie *Colony*.

When you walk into Klassen's studio in Toronto, you are greeted by a moose, an alligator, a walrus and a zombie-like alien suspended from wires. His puppets look totally convincing, able to move with the flick of a switch or the manipulation of a joystick. From the deer in *Tommy Boy* to the giant flea from *The Outer Limits*, Klassen has spent the last two decades building animatronic creatures for film and television.

"I studied mechanical engineering at Ryerson," says Klassen. "When I got into effects, I realized that nobody was doing animatronics, so I started specializing and going into a direction nobody else was going. It was more fun that way and it gave me a better market position."

Klassen has watched the technology of animatronics develop: "It was simple at the beginning, maybe some radio-

controlled work, but now it's moving more towards computer programming. I realized I needed more people, like electronics and computer guys."

Animatronics requires a number of skills in order to build a convincing puppet that can perform on camera. Machinists must build the skeleton, electricians must wire it for movement, sculptors must create a convincing skin and painters must put on the finishing touches.

"For animatronics, you certainly



need to have a good math background because there's a lot of geometry and math involved," says Klassen. "You need good motor skills, knowing what materials can and can't do. You need a certain fearlessness. You can learn if you're around good people who are willing to teach you."

Many of the skills required to succeed in animatronics are learned outside of the school environment. "To this day, there's still no book on animatronics," says Chris Bridges, owner of Deluca Bridges in Toronto. "I always took things apart as a boy to see how they worked. At 17, I created my first animatronic prop, which was this sea creature-looking fishman. I learned by trial and error doing things on my own."

Bridges did animatronics work for *Honey, I Shrank The Kids: The Series* and *Mimic*. Most recently, he created a severed android head for *Jason X*. Even when toted around by another character, the head "acts" with a full range of radio-controlled facial expressions.

"The skin for the head was silicon, remote-controlled and wired for jaw and eye movements," he explains. "Seeing this severed head talking and looking around was thrilling."

According to Bridges, you don't always have to start from scratch: "The equipment you need for animatronics is all pretty modular. It's mostly off the shelf, like the servos and actuators. Even if you use pneumatics, it's pretty much plug and play. All you need is a basic understanding of electricity. If you have an innate mechanical sense, you have a good head start in the field."

Bridges taught the animatronics course at Completions International, a make-up school in Toronto. According to Nadia Brandler, president and founder of Completions International, make-up, prosthetics and animatronics are invariably linked to one another. The outer appearance of the creation is as impor-

doing something right."

Jason Ehl, owner of Backbone Special Effects Inc. in Toronto, was also an animatronics teacher at Completions. His education in engineering from Queen's University helped lay the groundwork for his career in the film industry.

"When people think of animatronics, they think it's got to be a robot dog or a monster," says Ehl. "But really, animatronics is anything that has to look like it's doing something on its own."

For *RoboCop: Prime Directives*, Ehl built remote-controlled laser turrets and constructed the suit and weapons for the villainous Bone Machine, including enormous robotic arms with four rotating guns.

ing on the market."

According to Bridges, computer graphics will never make animatronics obsolete: "Animatronics has a presence because it's a tangible thing. The lighting is real and it's three-dimensional. There will always be a place for it."

In front of his studio, Klassen demonstrates an animatronic rat from *Colony*. Wearing what appears to be a wire-frame glove with cords running into the rat's rump, he uses his fingers to manipulate different controls. The rat comes alive, its body writhing like a living, breathing creature. Klassen can't resist the chance to taunt a dog that walks by.

He laughs. "Sometimes this doesn't feel like work." ■



tant as its internal workings.

"You've got to be artistically inclined," says Brandler. "In animatronics and prosthetics, sculpting is crucial. Creating the under-skull and fitting the pieces together is an art form in itself. You must build the skin to fit, whether it's going to be fitted on a performer's head or it's going to be used as a puppet."

Brandler says that taking a course in animatronics is a great way to learn the basics and save yourself some frustration. "Before, people would take years and years just trying things out, playing with things and hoping they would work out. Going to school eliminates a few years and you gain the confidence of knowing that you're

"They had actual Scorpion sub-machine guns packed into them, hosing to run the tear gas and a rocket launcher. At the beginning, they were quite the novelty [for the actor], but at the end I think his arms were getting pretty tired!"

Ehl says that there is no such thing as a "typical" day in his field: "You're building a prototype every time you go to work."

Many people are reluctant to enter the field because they fear that there isn't a sustainable industry for animatronics in Canada. However, Brandler is optimistic about the opportunities. "The market in Canada is absolutely enormous," she says. "There are only going to be more and more films com-

