

Speakeasy FX  
(www.speakeasyfx.com)  
Westfield, New Jersey

Autodesk® Softimage®

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—Eric Thivierge  
3D Technical Director  
Speakeasy FX

# Brand New and Familiar

Speakeasy FX uses Autodesk Softimage to create magical 3D muppets that look just like they used to.



Image courtesy of Speakeasy FX.

## Summary

If you are of a certain age, you'll no doubt agree that there is something sacrosanct about *Sesame Street*. It isn't just that, having premiered on PBS in November 1969, the Sesame Workshop show has been around as long as a lot of us. It isn't just that our old muppet friends Grover, Cookie Monster, Oscar, and even latecomer Elmo, don't seem to have aged a bit. No, the timelessness of *Sesame Street* owes as much to the comfortingly familiar mannerisms of its characters as it does to their unending childhoods.

Still, time does march on. Even on *Sesame Street*, things change. When the show's makers were looking to create an entire segment of the show using digital technology in place of the traditional puppets that have become synonymous with *Sesame Street*, they had to be sure to maintain that unique muppet magic that has been so much a part of our lives. To create brand new 3D characters who would remain familiar to audiences, Sesame Workshop turned to Westfield, New Jersey-based SpeakeasyFX. The company made extensive use of Autodesk® Softimage® software to help create 13 nine-minute episodes of *Abby's Fairy School*, a new segment on *Sesame Street* starring Abby Cadabby, a young fairy who gets together with her classmates to develop reasoning, critical thinking, and problem-solving skills.

## The Challenge

As if creating 13 fully-CG episodes of *Abby's Fairy School* weren't enough, director Jan Carlee and the SpeakeasyFX animation team were also charged with creating footage for a series of online games for [Sesamestreet.org](http://Sesamestreet.org). Since *Sesame Street* has always relied on the dexterity and artistry of traditional puppeteers, it was crucial that these CG characters retain their muppet characteristics. This resulted in a number of challenges, particularly when it came to creating truly dynamic hair and fur for Abby and her friends.

After extensive conversations with puppeteer Leslie Carrara, who provides Abby's voice, and after watching hours of *Sesame Street* footage, the Speakeasy FX team studied hair samples from the puppet together with a large collection of photographs. Of all the characters on the series, however, Abby is the only one who actually existed in "physical" puppet form. For the other characters, as well as the plethora of giants, whales, cheese and pasta dinosaurs, and talking chairs and lunchboxes, to name only a few, Speakeasy FX worked closely with the *Sesame Street* team to figure out the characters.

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“We had to figure out what exactly makes a muppet,” says Scott Stewart, executive director at Speakeasy FX. “The slightly crossed and droopy eyes, the interchangeable noses, the bobbing heads, these are just some of that Muppet magic. To preserve that original creative vision, we built our digital models as if a hand is manipulating them from the inside. This was critically important in helping us find the right balance between CG and traditional Muppet performances.”

There were also a lot of pencil sketches, creative collaboration, and use of Softimage.

#### The Solution

In the end, Speakeasy FX used Softimage to help create more than 500 new props and characters for the series, all of which required advanced fur and cloth simulations as well as complex rigging. Throughout, the company relied on Interactive Creative Environment (ICE) in Softimage software to quickly help generate the multitude of magical effects at *Abby's Fairy School*. ICE was used to help simulate particles, bubbles, a genie in a bottle and even a macaroni twister.

“Creating the macaroni twister was particularly fun for our animators,” says Eric Thivierge, 3D technical director at Speakeasy FX. “The particle system in Softimage enabled us to create a believable twister almost automatically, without too much labor required from our animators. We were also able to develop a deform tool that allowed a genie to believably squeeze in and out of a bottle. Using Softimage meant our rigging department was able to come up with tools and rigs that left our animators free to concentrate on performance. The result was more funny jokes and a level of animation that was higher than even we had hoped to achieve.”



Image courtesy of Speakeasy FX.

“Softimage ICE gave us the bandwidth to include a lot of effects and magic, allowing us to deliver a level of quality that exceeded initial expectations,” says Stewart. “After building our ICE trees and toolsets we were able to easily customize and add effects and magic to shots in an extremely labor-efficient way.”

#### The Results

The success of *Abby's Fairy School* is just the latest in Speakeasy FX's 6 year history. An integral part of that success has been through the company's loyalty to Autodesk Softimage software.

“We've been using Softimage since we opened our doors,” said Scott Stewart, executive director at Speakeasy FX. “Our mandate on this project was to bring movie-quality animation to *Sesame Street*, quickly and on-budget. Softimage was vital to achieving our goals. We were able to do everything we needed to do using a single software workflow. We absolutely love Softimage for its versatility.”

For more information about Autodesk Media & Entertainment software, visit [www.autodesk.com/me](http://www.autodesk.com/me).



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