

# Big Buck BUNNY





Code Name: Project Peach  
Director: Sacha Goedegebure  
Art Director: Andreas "Andy" Goralczyk  
Story by: Sacha Goedegebure  
Produced by: Blender Foundation & Blender supporters

Length: 9:56  
End Credits: 1:46

Awards: MovieSquad Audience Award & HAFF Audience Award at the Holland Animation Film Festival

Website: [peach.blender.org](http://peach.blender.org)  
Web Release: May 20, 2008

Project Orange – or Elephants Dream, as it became – was a test case. But, according to Ton, the idea was always to keep going: “It was a whole year after the premiere of Elephants Dream when I opened the studio, but the idea was there from the first day.” It took some time, subsidy applications, and a coincidental real-estate opening on Amsterdam’s Entrepotdok, where Ton had been living in a houseboat, to make this idea a reality.

For legal and operational purposes, the creative work needed to be done under a different umbrella than the non-profit Blender Foundation that still drives the development of the actual 3D software today. Thus the Blender Institute, Blender’s creative studio, was born.

Then there was the matter of the project itself – what could possibly follow Elephants Dream? First thing’s first: a new project meant a new codename. Ton chose Project Peach because, like Elephants Dream’s “Orange” code name, the word could equally stand for either a color or a fruit. Peachy.

## The Point of Peach

Like Elephants Dream before it (and every project since), the goal of the Peach project was two-fold: while releasing an entertaining film was important, perhaps even more important was using that to drive the further development of the Blender 3D software itself. (And of Blender users, via new tutorials.) This included (better) UV mapping, shading, render pipelines, skinning, and more (later released as Blender 2.46). Luckily, in addition to Brecht Van Lommel and Campbell Barton on site, there were volunteers from around the world helping on the tech side. “There was really, after Elephants Dream, much more attention from developers everyone,” Ton explains.

The hair and fur rendering, however, especially needed some extra special attention. Not only that but, after the surreal adventure that was Elephants Dream, Ton thought the studio needed a more commercial venture. “People were complaining that we made something dark and not understandable,” Andy Goralczyk said of the response to Elephants Dream.

The public seemed to have an alternative request for the software company’s second film: “Make it furry and funny.” Ton knew just the cartoonist for the job.

## Toony Loons

Sacha Goedegebure was originally brought on as the art director and story writer, his cute-but-crass strip drawings having tickled Ton’s funny bone. Sacha had become a regular poster on the Blender Artist forum, sharing not only his Sunday-section-of-the-newspaper-ready sketches, but also exploring concepts of translating the 2D world to 3D (with Blender’s help, of course). Most importantly for the “furry and funny” project, Sacha confesses, “I don’t know why, but whenever I draw there has to be a furry animal in it.”

His vision for the film became all the more important once original director Lyubomir Kovachev stepped out at the beginning of the production, giving Sacha the chance to step into the director’s role. “What Ton does is he takes people who show some sort of skill or talent in something and gives them a chance to get experience in the industry,” Sacha explains. “In my case it was making silly jokes in my cartoons, which he thought I could translate into a 3D animation.” But Sacha credits the success of Big Buck Bunny as a film to the team around him: “I was surrounded by a lot of strong artists – artistically strong and technically strong. I gave them a very simple story, and they were able to make something really great with it.”

This team of seven, the first to christen the new Blender studio, included Sacha and Andy, again serving as art director, who were joined by Enrico Valenza of Italy, Nathan Vegdahl of the USA, and William Reynish of Denmark on the artistic side – with Brecht (from Belgium) and (Aussie) Campbell tackling the technical side.

Project Peach had a team. They had a rabbit. They had some ambitious technical targets. Thanks to strong DVD pre-sales and some key subsidies, they even had a budget. Now they just needed to make a film.

THE PEACH OPEN MOVIE PROJECT PRESENTS



# Big Buck BUNNY

WRITTEN AND DIRECTED BY SACHA GOEDEGEBURE – ART DIRECTOR: ANDREAS GORALCZYK – LEAD ARTIST: ENRICO VALENZA  
ANIMATORS: NATHAN VEGDAHL, WILLIAM REYNISH – TECHNICAL DIRECTORS: CAMPBELL BARTON, BRECHT VAN LOMMEL  
MUSIC BY JAN MORGENSTERN – PRODUCED BY TON ROOSEDAAL, BLENDER FOUNDATION

LICENSED AS CREATIVE COMMONS 3.0 ATTRIBUTION

[WWW.BIGBUCKBUNNY.ORG](http://WWW.BIGBUCKBUNNY.ORG)

SPONSORS: creative commons nederland digitale prioriteiten wavemage Sun Maqina FILMMORE blenderinstitute



### Pulling a Rabbit out of a Hat

For the artists, the production started with a five-day workshop with Arno Kroner, then affiliated with Disney Animation Studios. “They were constantly screaming with laughter!” Ton remembers of that week. Their laughter set the soundtrack to Ton and the technical team gutting the floors to install wires that could handle the streams of data about to be unleashed.

Soon the story was set: a tale of fur and revenge inspired by Predator, Rambo, and Home Alone, painted with a pastel palette. “Sure, it’s about bullies, and that sometimes you have to stand up to bullies,” Sacha allows, “but that’s just additional. In the end it’s about entertaining people.” Though he does intentionally provoke, too: “I want to make people laugh, make them sad, make them angry – I want to get a reaction.”

### The Reaction

With a little on-the-side help from the old Elephants Dream crew, Big Buck Bunny finished production only a month behind its original schedule. (“Which is quite amazing when you think about it,” Sacha muses.) The film premiered at Amsterdam Oosterpark’s Studio/K, a popular film-and-nightlife complex (then brand new), on April 10, 2008.

What did people think? “There were, of course, different opinions,” Sacha recalls, “but it wasn’t heavily polarizing.” Not like Elephants Dream. Andy explains, “Big Buck Bunny was more mainstream. But it was really the breakthrough for Blender: you

can still see it nowadays playing in [Dutch electronics store] Mediamarkt.” Sacha has stumbled upon it playing in electronics stores in Singapore as well.

It also made the festival rounds, wound up as an exhibit in the Noordbrabants Museum for modern art, landed Sacha and Andy speaking gigs (Sacha even as keynote speaker) at that year’s CG Overdrive in Singapore, and was later re-rendered in stereoscopic 3D (by Janus Kristensen in 2013). And so the bulging bunny quietly endures.

Not that Sacha didn’t get the more passionate responses he sought as well. For one, the colorful, action-oriented film was a big hit with the knee-high crowd. Ton recalls the reaction of a mass of 4- to 8-year-olds at the CineKid Festival: “All the kids loved it, but hated the rodents. They just wanted to know, ‘Why? Why did they do it??’”

There was also some specific feedback from the adults: according to Andy, “A lot of people hated the [bird] pooping at the end.” Ton and Sacha both recall one loyal Blenderhead being upset enough by it to re-cut his own poop-free version of the film. Sacha had been inspired to include the scene by being the victim of his own pigeon-poo experience outside the Blender Institute. (An experience team member Enrico later shared.) “It’s likely that I started with the poop joke, and then I made the entire story around it,” he jokes. And he’s satisfied if it ruffled a few feathers: “I want to provoke something – whether it’s entertainment or upset. I guess it worked.”

“As a movie I found Big Buck Bunny quite upsetting – it’s like if Tarantino decided to make a 3D movie.”

Anonymous review, 2008

SPACE FOR  
ANOTHER  
SKETCH



JC ("Buck")

The working title of the short was "A Rabbit's Revenge," but Sacha wanted the final title to be Big Buck Bunny (little-known fact: a male rabbit can be called a "buck") because he liked the alliteration. Also, the John Candy character Uncle Buck was a stylistic influence - which is why the team called the bunny "JC" around the studio.



“The first thing I came up with was three rodents as the antagonists. It didn't matter much which species they were, as long as they were small and cute. I wanted the juxtaposition. Later I wanted to make them more different [from each other]. The leader had to be the small, evil one. The ditz, the tall goofy one. What was left was something chubby and cute, and a chinchilla seemed fun. Later I discovered [on TVtropes.com] these were all movie tropes. I think that shows we sometimes do things instinctively without actually being aware of it.”

Sacha Goedegebure, director



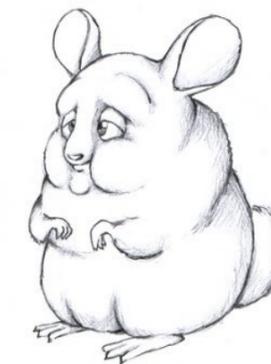
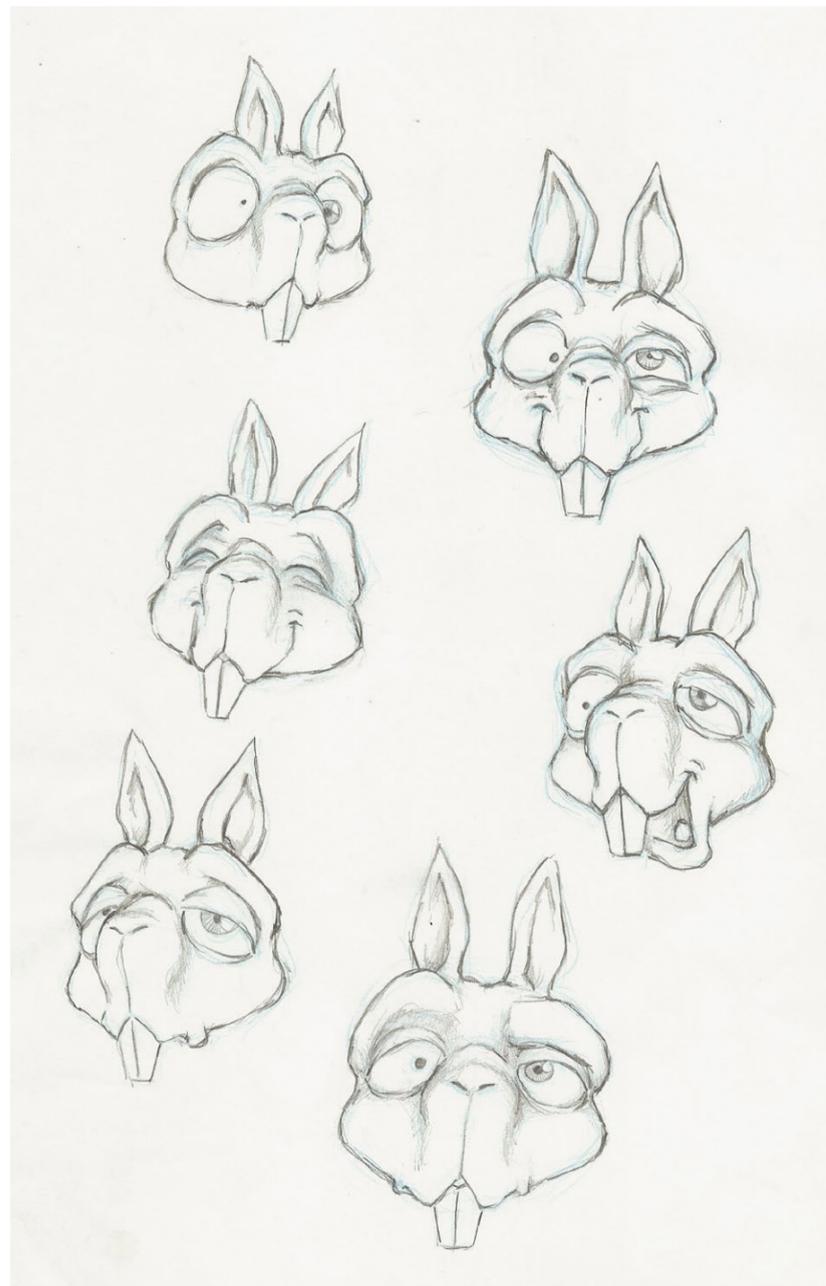
“Frank is the name of Henry Fonda's character in Once Upon a Time in the West. Frank has this nice brown color and bright blue eyes, and that's exactly how Henry Fonda looked in that film.”

Sacha Goedegebure, director



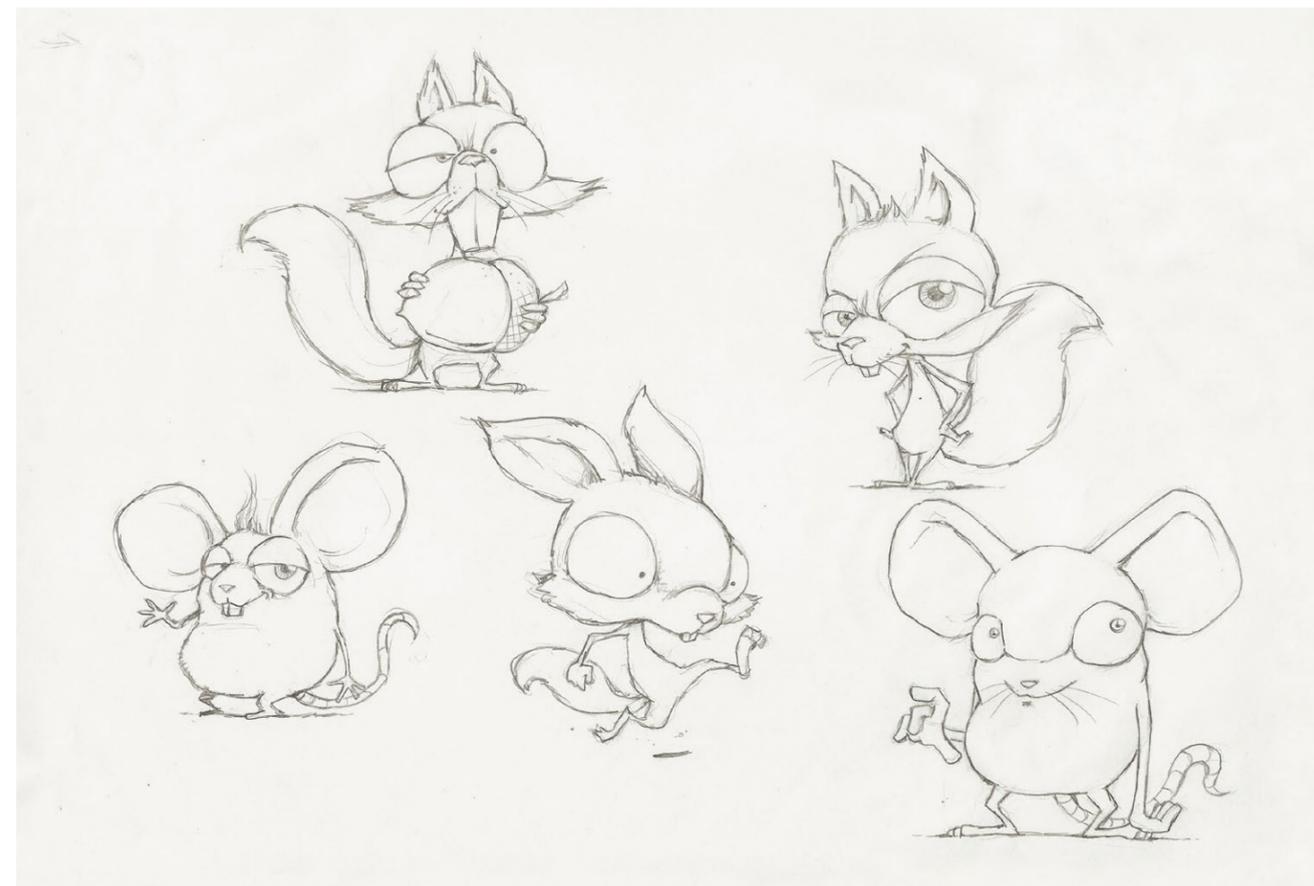
“We went to an Indian restaurant and there was a waitress called Rinky. We were like, ‘OK, we’ll name one of our rodents after you.’ I don’t remember her response; I hope she was flattered.”

Sacha Goedegebure, director



“Gamera is the name of a very round Japanese [turtle] monster. Our Gamera is the most innocent thing, so you want to give him a scary monster name.” (Ton is surprised by this answer for one reason: “I always thought of the chinchilla as a girl!”)

Sacha Goedegebure, director



Before there was Gamera there was...a mouse.

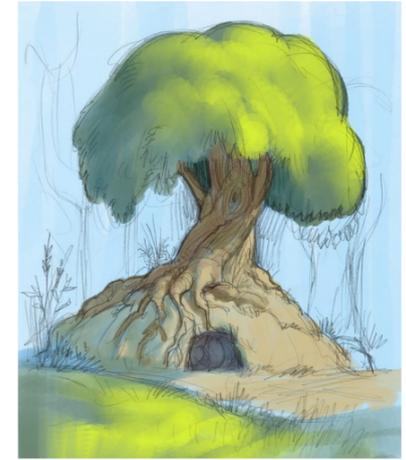
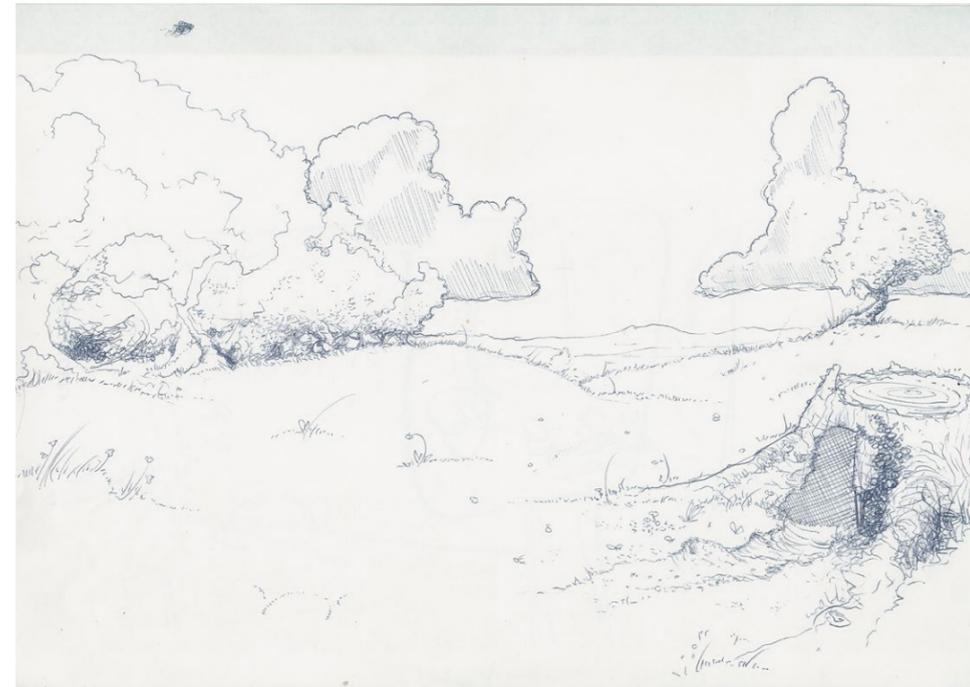
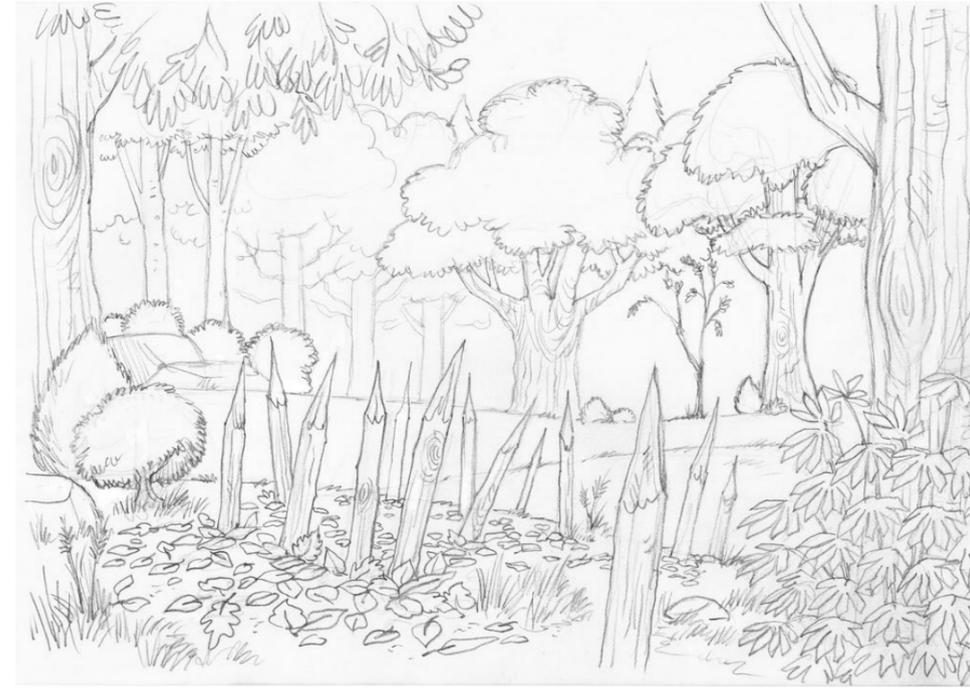
**Beautiful Buck Bunny**

“The challenge is finding a balance between realism and a style,” explains Sacha. “You want to add a little bit of realism to make it tangible. I think in the end it landed more toward the style side. Like Looney Tunes.” It’s a comparison Ton draws as well: “The camera is quite static [compared to the more cinematic Sintel]. But that also gives it a certain charm. A little bit of a Looney Tunes style.” Sacha admits, “I was scared as hell to move the camera. I had no idea how to do this properly.” But he is satisfied: “I think it works for Big Buck Bunny.”



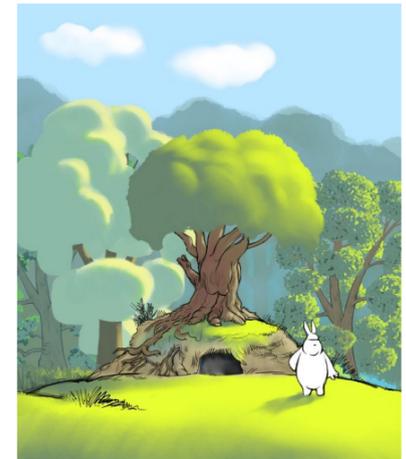
“Some of my favorite moments come from Andy’s work: when you look at the colors and the shading materials, it’s not realistic at all. But it works. What makes it work? I don’t know. That’s why I let Andy focus on lighting and shading.”

Sacha Goedegebure, director



“I provided black and white and gray pencil drawings, so the color was the work of Enrico and Andy mostly.”

Sacha Goedegebure, director



Before There Was Buck

“The first idea was just a random idea,” Sacha begins. Darkly “furry and funny,” this fleeting concept involved a rougher-around-the-edges Little Red Riding Hood-type living among a quirky gang of forest friends, all terrorized by a creepy dandy dude. It was a classic tale of man collects heads, forest critters seek revenge, battle royale ensues, and a last-second reveal shows that the whole story’s been told in a lodge decorated by the forest critters’ (and little girl’s) heads, still singing and chattering away. “I have no idea where it came from, the creepy guy with the animals,” Sacha says now. “I dropped it quickly.” But not before gifting the world with this illustrated glimpse of the film that could have been.



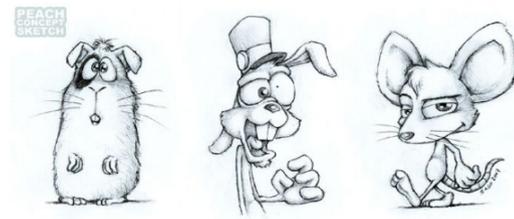
“Besides the ‘Stranger Danger’ concept,” Sacha recalls, “I had the idea of having a bunch of animals (a mouse, guinea pig, rats...) trying to escape a laboratory. It may seem a bit disturbing, but there’s potential for a lot of jokes with rats growing ears and noses from their backs.” However, the goal of this film was to push the fur and grass capabilities of Blender, and Sacha concedes: “Unfortunately, a laboratory heavily lacks grass.”

TON ROSENDAAL MAKES A SMALL ANNOUNCEMENT



“I was the one who insisted on the bunny. I made this drawing before Ton even asked me to join the project – which was still called Project Orange 2 then.”

Sacha Goedegebure, director



“My drawings were simple line drawings, so as reference for 3D art, they weren’t very strong. Without Andy, with just an average modeler, it would have taken much longer to get this right.”

Sacha Goedegebure, director



Looking Back

Remember the CG conference in Asia that asked Sacha to be its key-note speaker? That engagement led to a job offer from the event organizers, 3Dsense Media School (Sacha has a Bachelor of Arts in Teaching). “I was out of a house soon, because I was still living in student apartments. No job, no home, so why not?” Sacha remembers it.

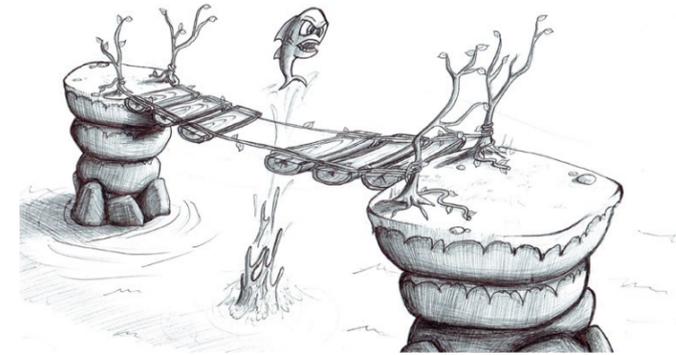
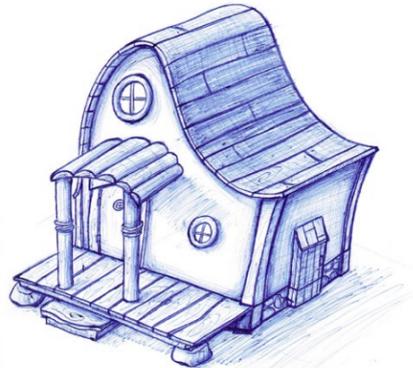
Nine years later he is still in Singapore, now working as the art director of Omens Studios. During his five years there, the studio of eight has grown to a team of 24, with a second team now based in India. “We primarily do preschool animation. Occasionally we do short films, but it’s just not where the money is.” However, this “occasionally” does give him the chance to break out his signature style – “I kill animals, preferably cute animals,” he throws off with his trademark bubbly blond charm – in short films like Gnome and Captain Shmelly. For these films and his commercial work alike, he still uses Blender as his primary software. In fact, “I’m trying to get the rest of my studio to move to Blender, slowly, one department after the other.”

Looking back on his Big Buck Bunny days he says, “I didn’t know anything about storytelling. But I think I had an instinct for juxtaposition – even though I didn’t know what juxtaposing was at the time! Instinctively you create things that work even though you might not understand why.” But still, he feels chagrin about his early animation days. “All the things I could have done better...,” lamenting he hadn’t focused more on also creating contrasts in the editing or come up with “better jokes.”

Of course, the Blender software has grown as much as Sacha has. Take the fur and grass, a particular focus of this project. “I remember we appeared on [Dutch talkshow] De Wereld Draait Door and we had a question about why the grass didn’t move. I was impressed by what they were doing at the time, but if I look now, yeah I think the fur and the grass have been heavily developed. Technology has been going so fast. But we have the benefit that it was stylized.” Which is perhaps why it’s still the TV-demo film of choice for electronics stores around the world nine years later.

“Lyubomir came up with that render as reference for shading the fur and the tongue. We were hoping to achieve that kind of look at the time. But over time we’ve decided to go for a more stylized look, something that was more suitable for the character design.”

Sacha Goedegebure, director



### Yo Frankie!

The calls from the community were clear: people wanted to use Blender to make games, and they wanted it to be a relatively pleasant experience. It was time for a game project. And Frank, the 'toonish villain of Big Buck Bunny, seemed ripe to become a video game character. Believing the Blender game engine wasn't up to the task on its own, Ton brought the Crystal Space game engine on board. Together, Blender and Crystal space would make a game with Frank at its core.

"Project Apricot" started halfway through the Project Peach production, continuing another four months after that ended. The overlap in time and subject matter was scheduled for convenience, but Ton says, "I underestimated how difficult it is for new people to pick up existing context. Sometimes it's easier to start from scratch."

"I gave some advice in the beginning," Sacha recalls, "but they definitely went their own way." Not to mention that the studio had gotten a little snug

with 15 people. And there were disagreements about the game content itself. Pablo Vazquez, one of the backbones of the current Blender team who took his first Blender steps out of his native Argentina with this project, recalls conflicts over the levels of cartoon violence and character abilities. "Basic stuff," Ton concurs.

One week the Blender team decided to run some experiments using the Blender game engine itself. Lo and behold, it worked. They decided to just develop their own game – with multiplayer sheep-throwing (thanks in large part to the animation efforts of Brazilian developer Sidney Moraes, Jr.), Frankie-melting lava, "Superman-like" double-jumps and flying squirrel action, and a special monkey named Momo.

In the beginning, Pablo admits, "The Crystal Space version was looking better. They had water and atmospheric effects, nice bump mapping. We didn't have that." The Blender team borrowed the services of Brecht to help Campbell close that gap, adding drop shadows and better bump mapping, for nicer textures. Meanwhile, an excited father in Belgium



named Benoit Bolsee went into bug-fixing overdrive to get the engine game-ready to create with his kid. "As a result, today making games in Blender is much more advanced," Ton expresses his appreciation.

Today it's possible to hunt down both the Blender game engine version (BGE, or "A Furry Vendetta") and Crystal Space engine version (CSE, or "Furry Funny Frankie") of the game online. Or just head to YouTube or the [apricot.blender.org](http://apricot.blender.org) blog for gameplay previews.

This, however, wasn't the project that launched a thousand game projects. "I do think it really helped the game engine, for people to see what it was capable of," Pablo muses. "A new game-engine project could be interesting. Maybe if we had a bigger studio..."

But the game-engine experiment hasn't been forgotten. "Brecht's work lives on in Blender today," Pablo stresses. "The reason you can see detailed textures when you're painting is because of Frankie. So Yo Frankie! actually helped on the Viewport. It's helped Blender much more than anyone realizes."