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DIGITAL PRODUCTION

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animago 2019
Gewinner & Nominierte im Porträt!

... dazu Projekte
360-Grad-Webseiten, USD, Blender, PopXport, Modeling ...

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Arnold, Houdini, Clarisse, MC 2019, Golaem und mehr ...

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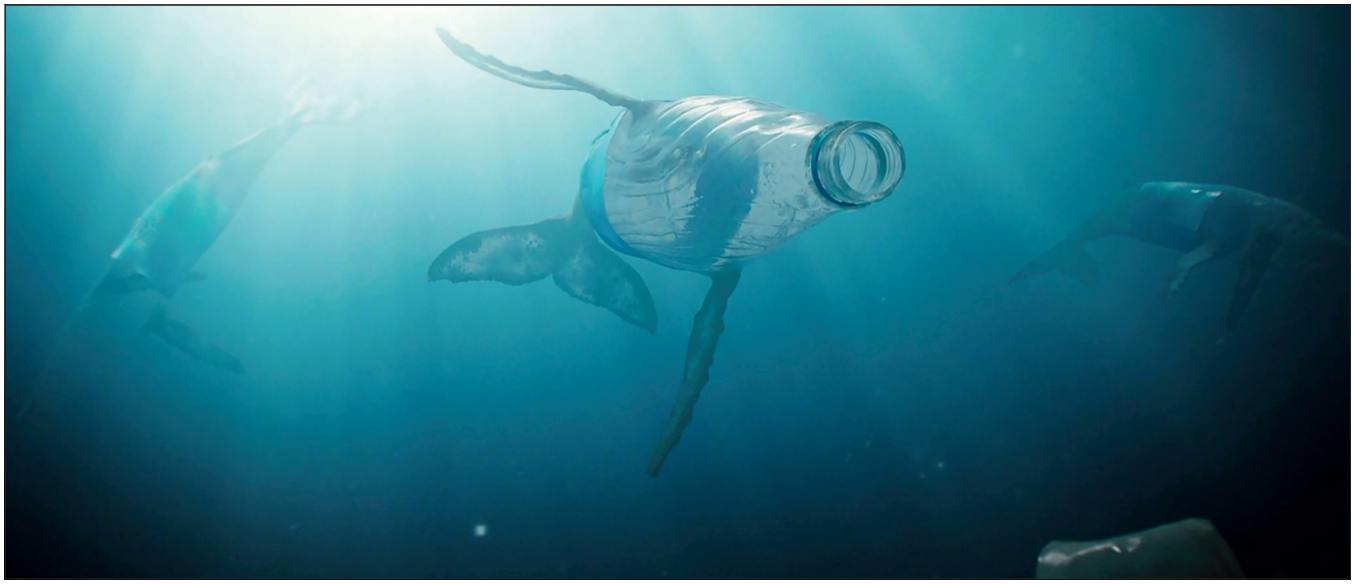
The Beauty

In “The Beauty”, the team of the Filmakademie Baden-Württemberg takes us on a deep dive into an otherwise unpleasant part of the world. However, beautiful pictures and sounds from the depths of the oceans can be seen and heard – consisting of flip-flop swarms, coral reefs made of plastic cutlery and straws, plastic bag jellyfish or bottle whales. The film by director Pascal Schelbli approaches a big problem of our time in a very creative and different way – which not only impressed our animago jury. As winner of the animago „Jury's Prize“ category, we take a close look at the process and implementation of the project. **by Tom Jansen**

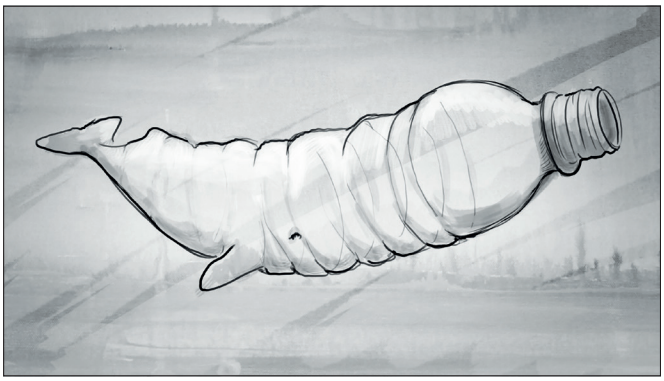
WINNER JURY'S PRIZE

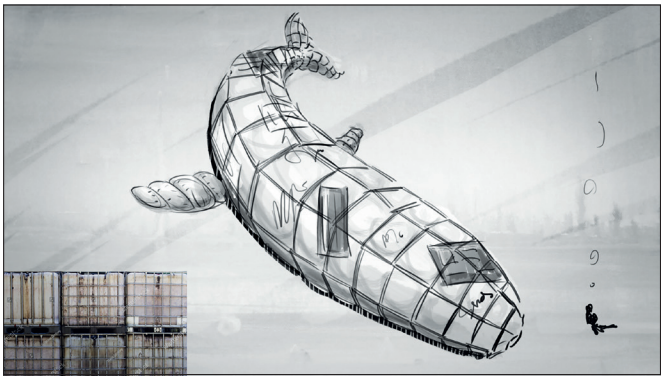
The Jury: The topic is everywhere, but only a new generation of master storytellers can tune in the level of sarcasm, technical perfection and eye-catching absurdity to drive the point all the way home.

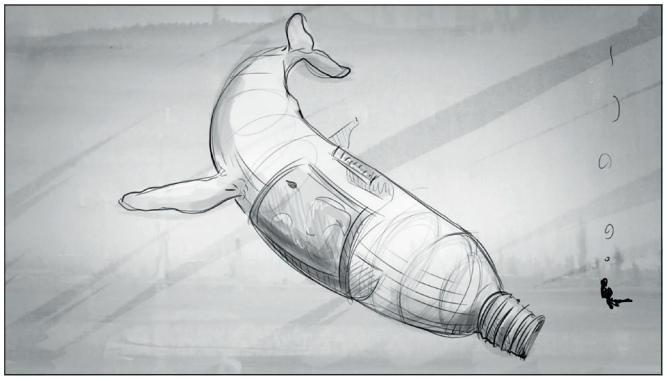
DP: When was the last time you went diving? And what got stuck on your flippers?
Pascal Schelbli: When I got my diving license in 2013, I never thought that I would need it 5 years later for something like this. It all started with a picture of Honduras where you could see the surface of the sea covered with garbage and a drawing of me showing a Roche with a flip-flop flap. I showed these and other drawings to my class at the animation institute and the Roche won the race high and dry. I went on and developed several of these creature combinations. As of the time, two essential questions arose: How do I wrap these into a story or implement them into film? It was important to me that the film had a message and would draw attention to this topic. That's when I thought to myself: "Why not make some sort of underwater documentary, showing how plastic merges with the oceans?" I wanted to let the viewer dive into a world in which the feelings of guilt disappear for a moment, just to realize that the solution to the problem must be a different one.

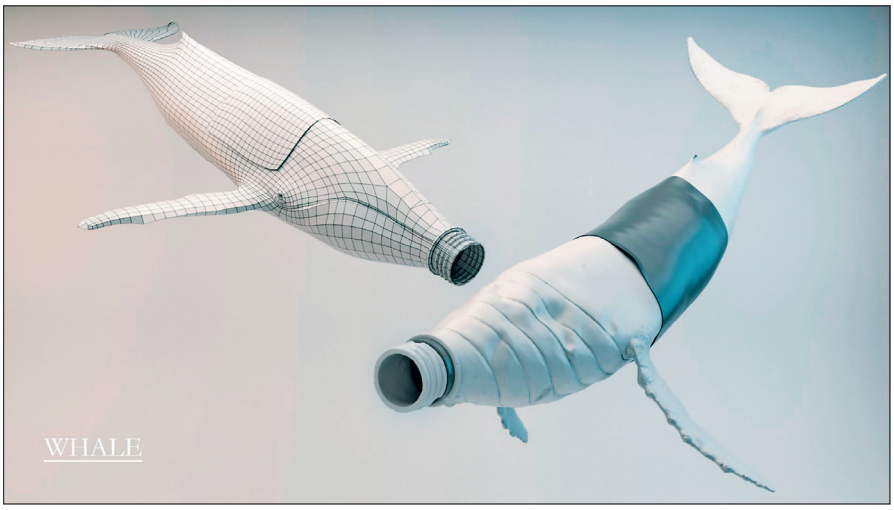


For the whale the team chose a plastic bottle as counterpart.







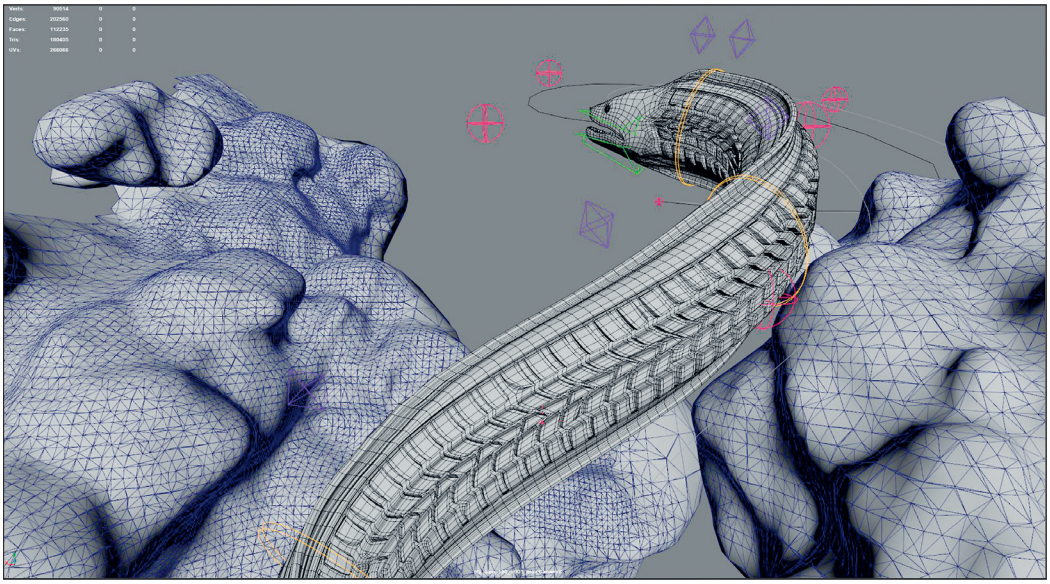


DP: So how did you decide which creature-garbage-combinations to use?
Pascal Schelbli: Good question. The moray eel and the pufferfish were easy to choose. But for the other ones there were many different and interesting options: seahorses made of straws, whales made of various plastic barrels, squids made of plastic bags and more. After having googled possibly every existing plastic part and known sea creature, the ones that made it into the film were the most exciting combinations to me.

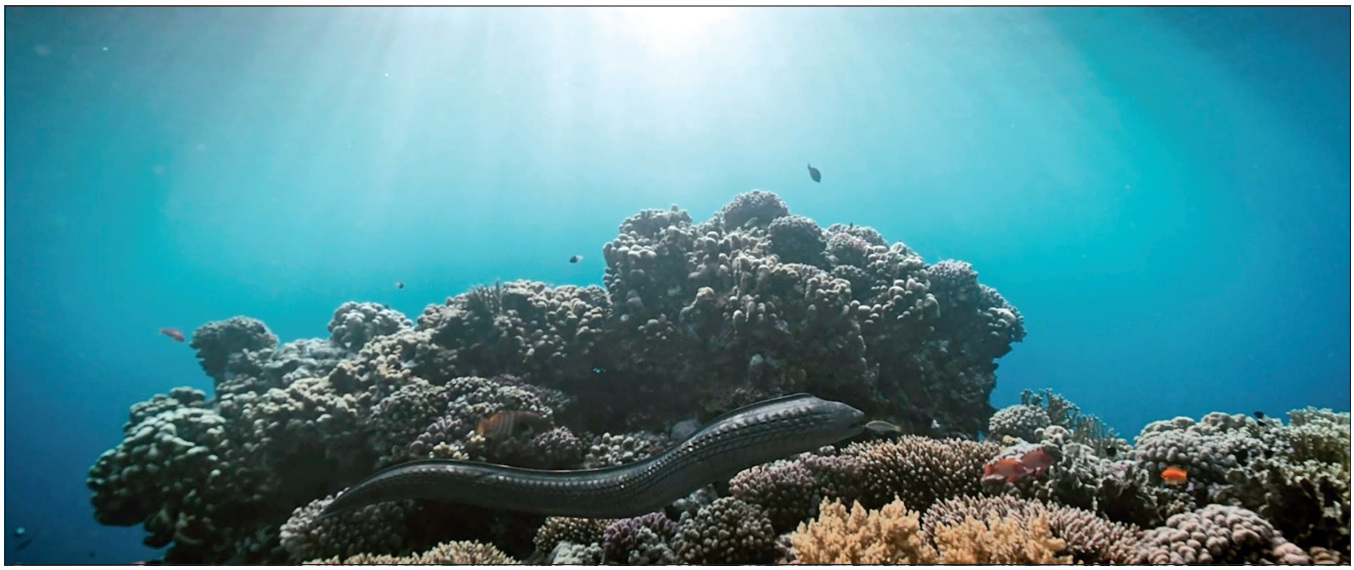
DP: Did you design many different creatures in your iterations of the storyboard?
Pascal Schelbli: Everything went straight forward. Apart from the fact that the moray eel had quite an attendance in too many shots, the final character design and the animatic were set from the very beginning.

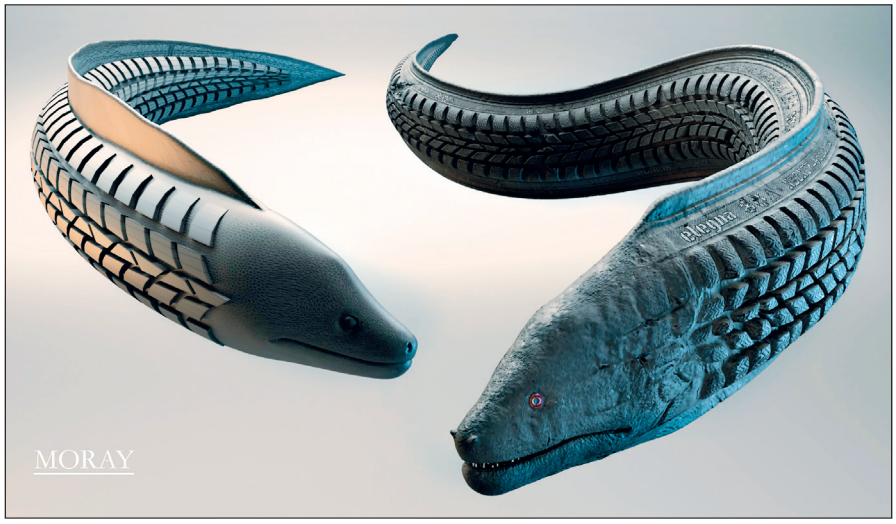
DP: How long did you work on the film and what was the size of your team?
Pascal Schelbli: It took us 20 months from the first sketch to the final film. When the idea and the story emerged, we had a great team of friends joining the crew: David Dincer, who studied cinematography, specialized in the course of his studies to become an excellent underwater cameraman. That's when it became clear that we would actually shoot it and not do full-CG. Marc Angele supported the project from the very beginning and brought outstanding shading, lighting, and compositing skills to the table. In addition we had Noel Winzen, an animation and rigging genius like no other, Lukas Gotkowski, the Houdini magician, Fynn „ZBrush" Große-Bley, Aleksandra Todorovic and Tina Vest, who produced this elaborate project, and Alexander Wolf David and Robin Harff, who also provided goose bumps on the audio level.

DP: The whales and pufferfish have transparent materials under water. How did you manage to create them realistically?
Marc Angele: The texturing and shading work were some of the hardest tasks of the project. Under water there is a different IOR for materials than in air, so all reflections behave completely differently. For example, a surface under water reflects 100% from a much steeper angle, so the Fresnel



The eel was combined with the surface of a tire.

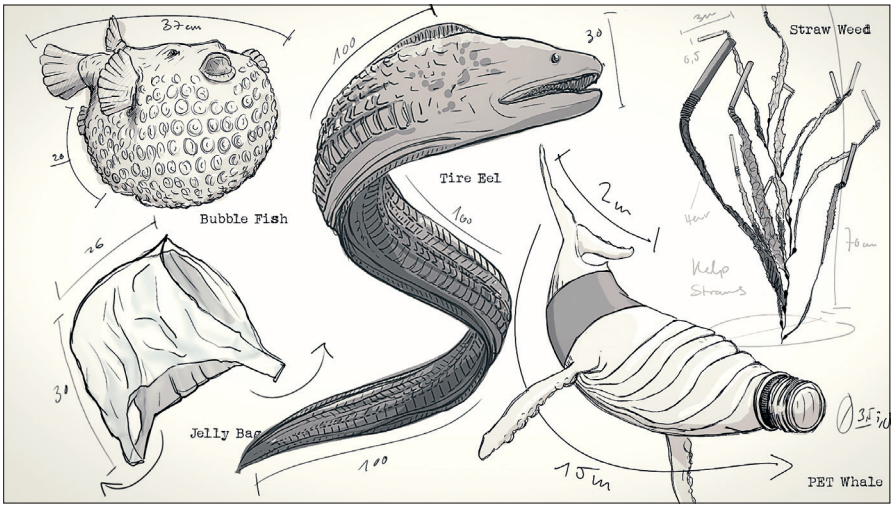




effect is much more visible. Fortunately, we had taken a lot of reference material during our shoot in Egypt and were able to observe the effects very well. In the end, we didn't quite stick to physically correct values, as our viewing habit is different and the resulting effects would probably have confused the viewer. In modeling however, we absolutely had to stick to reality. After a lot of back and forth we noticed that we can't fake too much in the shader. The models really had to be modeled exactly as they were – for example double-walled. For the pufferfish, we modelled a geo for each bubble, which then received an IOR for air. This way we were able to control every element in the shader. The additional geo didn't really make the simulation of blowing up any easier, though.

DP: **The swarm of flip-flops was, with the art direction of fish behavior, certainly a simulation marathon. What was your approach and how did you implement it?**

Lukas Gotkowski: The flip-flop swarms were created in Houdini. We created point clouds in 3D space and moved and oriented them using vector fields. These fields were generated in such a way that they depicted the movement patterns you would see in a swarm of fish. The movement of the particles could be adjusted by further parameters to change the speed or the size of individual small swarms. This way we were able to manipulate the movements not only realistically but also with artistic control. After creating the simulation, several models of the flip-flops were attached to the particles, transferring the position and orientation of the particles. In addition, further variables were

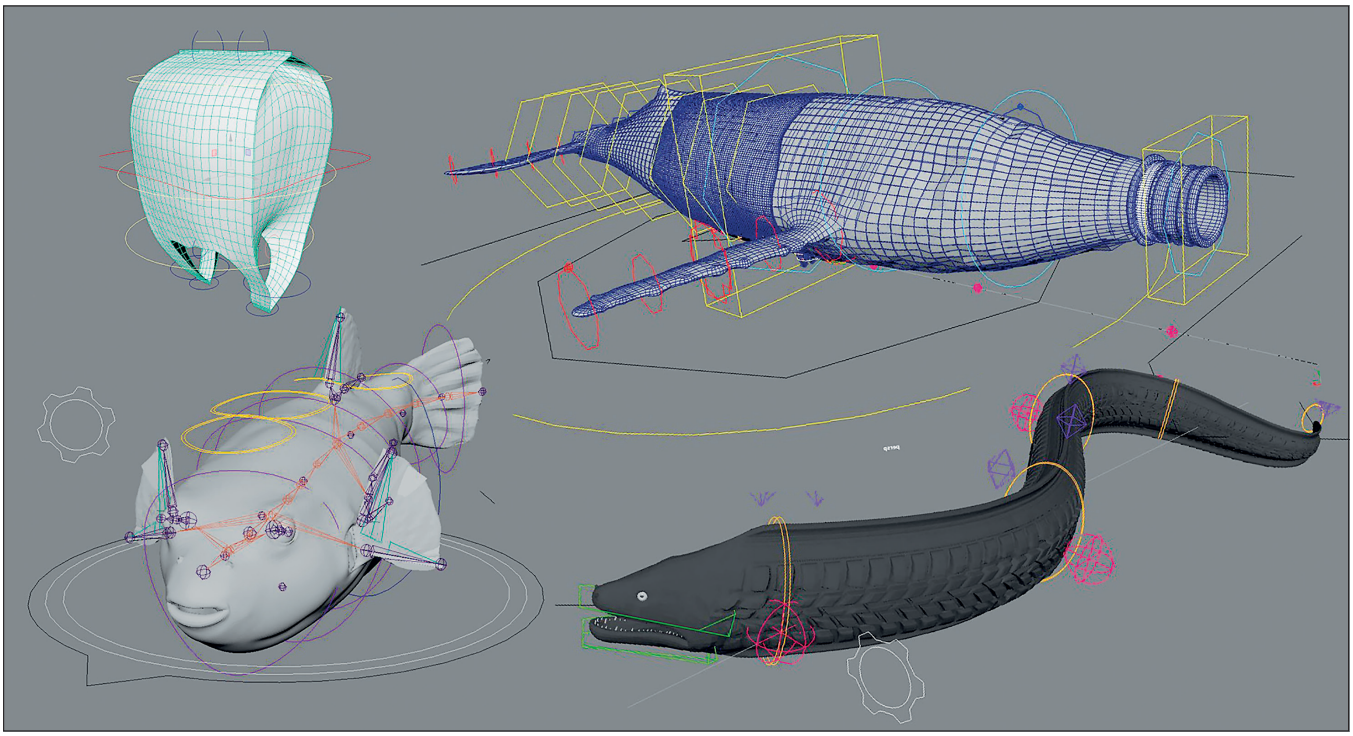


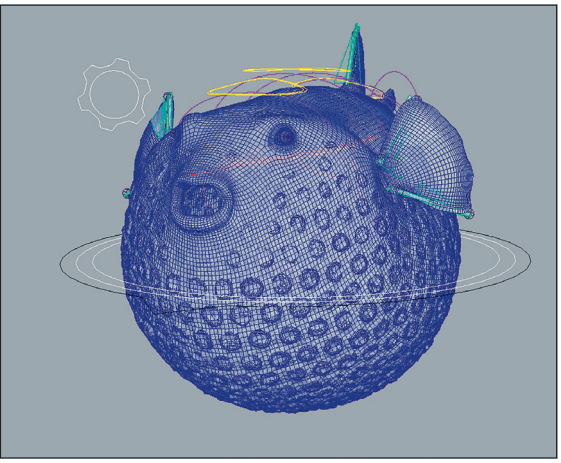
distributed to the points which were helpful for shading – e.g. the size and coloring. The output of the data was done with Arnold's exporter (ASS-files) in order to process them as flexibly as possible and in any software package for rendering in Arnold.

DP: Rendering everything then was certainly a challenge?

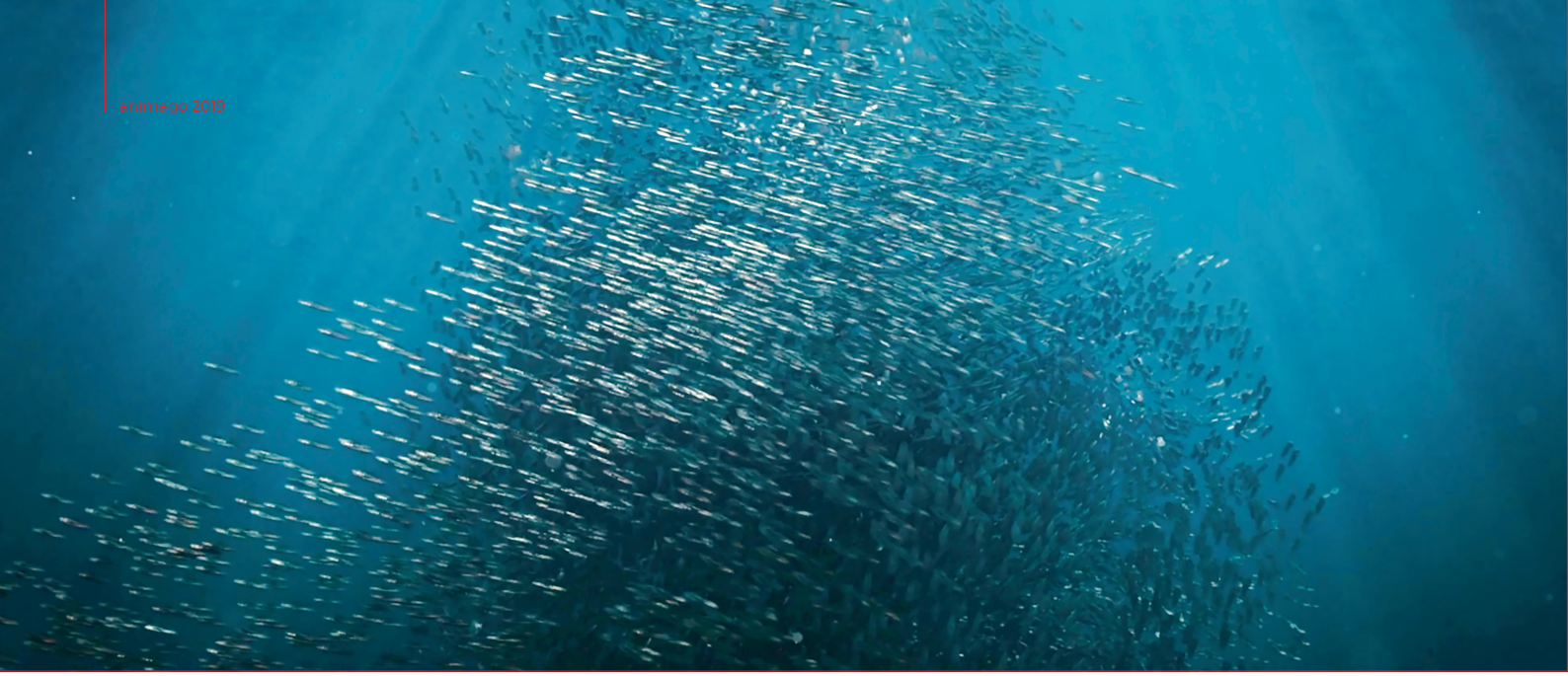
Marc Angele: After the character had been textured and shaded for the first time, the effort in the individual scenes was not that big anymore. In the beginning we created a light rig to simulate the underwater world with enough control. The rig consisted of a water surface with wave displacement, a HDRI sky that only shines above the water surface, a lot of fog under the water surface, a directional light for the sun and a light with a caustic texture for the typical water effects. We recorded the caustic texture in Egypt at the bottom of our all-inclusive hotel pool, which later became one of the most important assets. We could then simply apply this light rig to all scenes, make some adjustments and render it directly. The rendering itself took very different lengths of time. The scenes with the transparent characters took very long, because we had to turn the ray depth extremely high. The other scenes rendered pretty fast. All in all this was easy to handle, since we have a great infrastructure at the Filmakademie with a huge render farm.

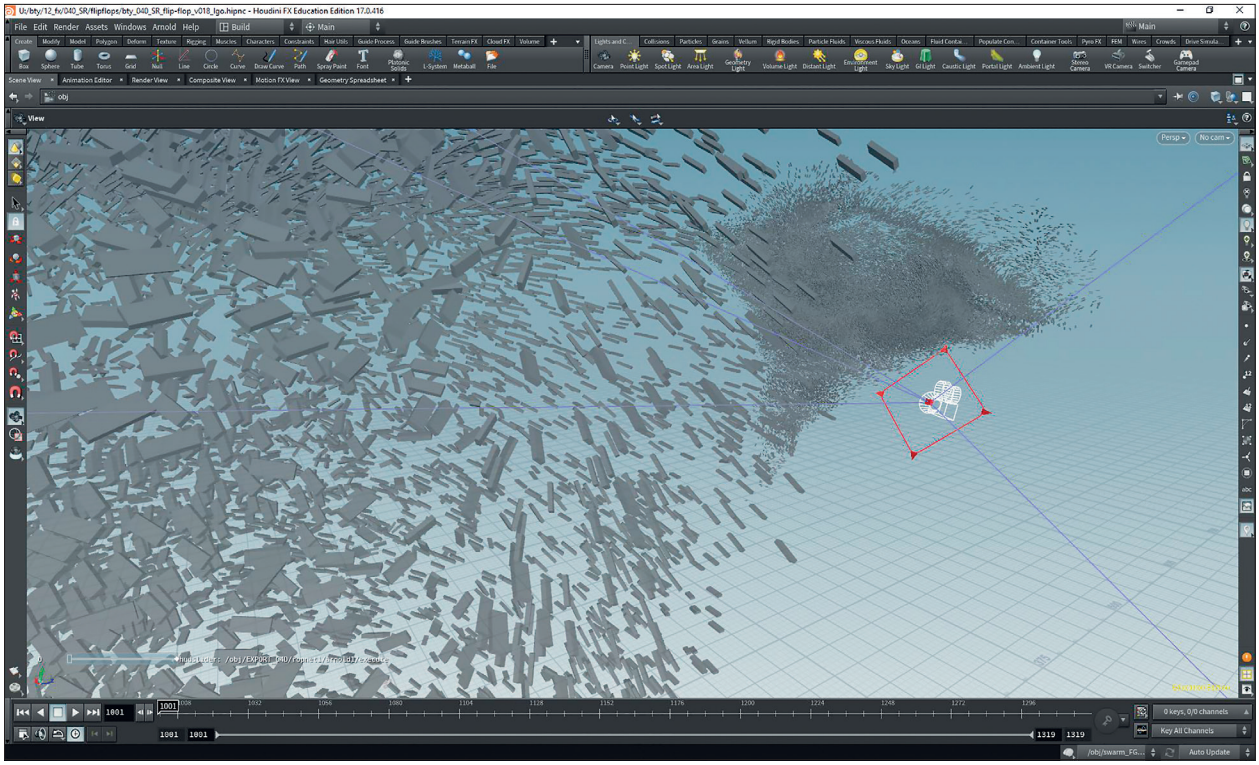
DP: If you had to start from the begin-

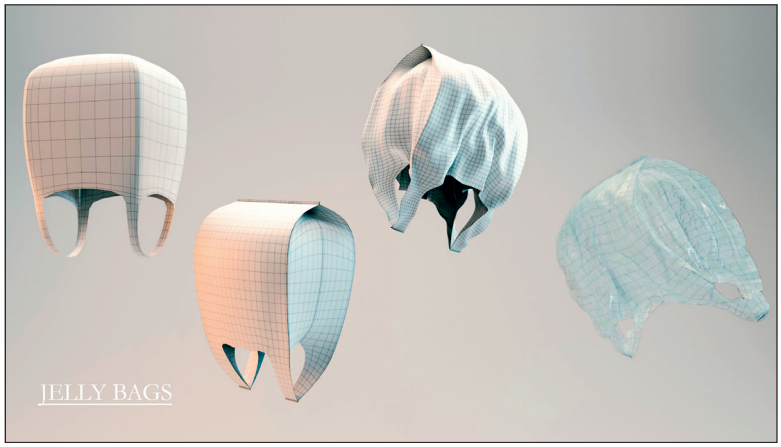


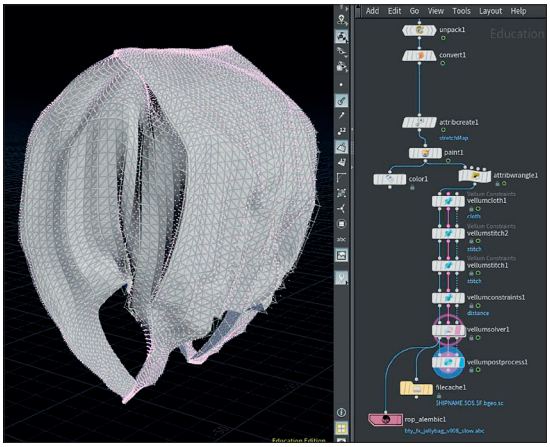


3D model of the pufferfish with plastic bubbles



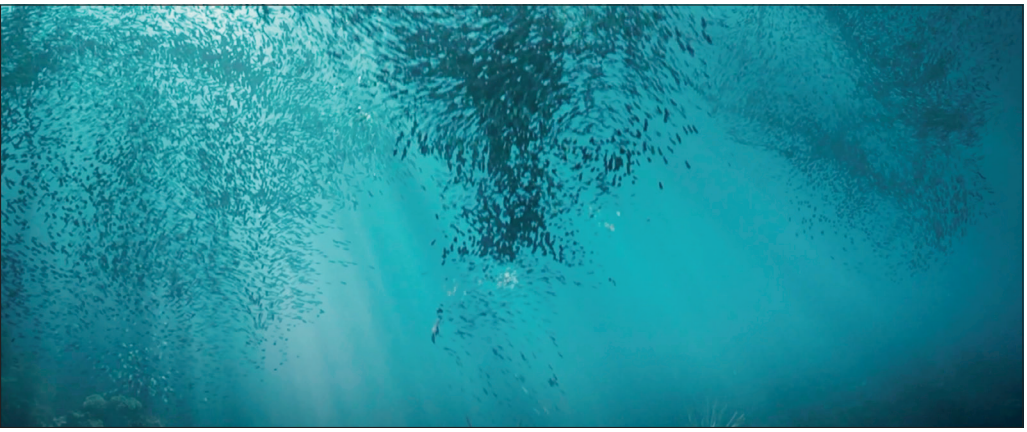


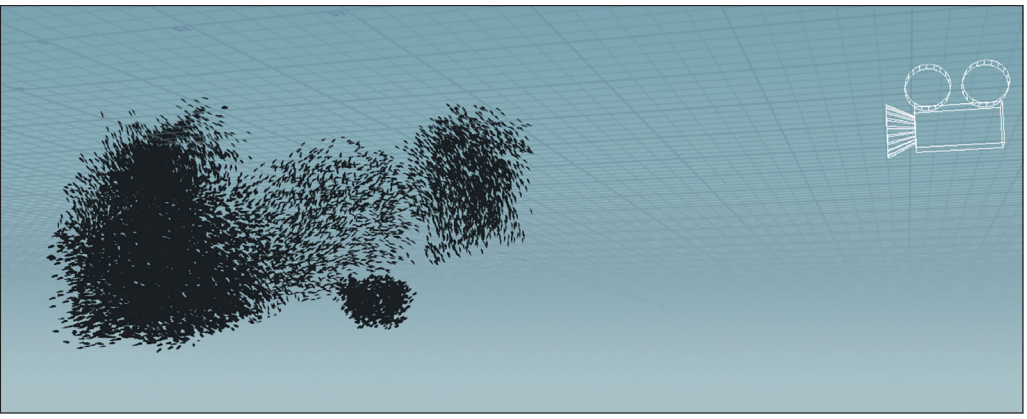




ning, what would you change in approach and pipeline?

Marc Angele: I can't think of many things. Right from the start, we always chose the software that was best suited for the particular task. We used everything we could use: from ZBrush to Maya to Houdini to Cinema 4D to Substance Painter to Arnold, Nuke and then finally to DaVinci Resolve. Since most characters have only one shot, we couldn't and didn't automate that much. We created one or two Python scripts to automate the color workflow, but that's it. But what the project taught me once again is that you have to be as realistic and natural as





The flip-flop swarms were simulated in Houdini.

Team

Director	Pascal Schelbli
Producer	Aleksandra Todorovic and Tina Vest
VFX Supervisor	Marc Angele
Creature TD Underwater	Noel Winzen
Cinematographer	David Iksender Dinçer
Lead TD	Lukas Gotkowski
Modeling	Fynn Grosse-Bley
Music	Alexander Wolf David and Peter Sainio
Sound Design & Mixing	Robin Harff
Color Grading	Fatrat Grading GMBH

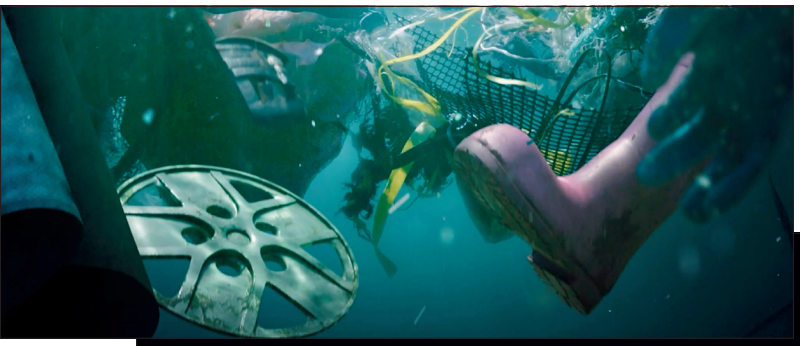
▷ www.filmakademie.de/en
▷ https://thebeauty-film.com

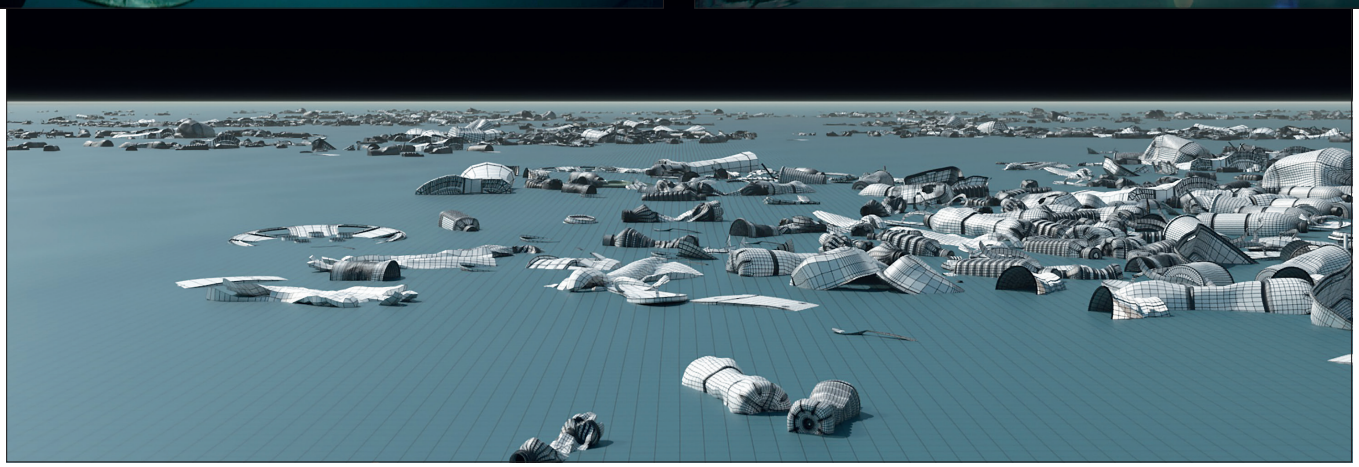
possible. Especially in modeling we could have saved so many tests, in which we only discovered in shading that it didn't work.

DP: **What have you been working on since then?**

Pascal Schelbli: Since August I'm a member of the creative collective PULK (**www.pulk.co**) based in Zurich. We are a group of 10 people. I do freelance work and I am already working on a new film project.

Marc Angele: Parallel to "The Beauty" I worked on a 7 minutes long short film with 36 characters and over 80 shots and we are still in the final stages. When it's finished, I'm going to London for two months working for MPC Advertising. **›tj**





Styrofoam, plastic bottles, bags and more: the 3D models of the garbage that is revealed in the end of the film.