Atomic Cartoons

Beat Bugs

Rachit Singh explains how Qube! and Python helped with the work needed for the Netflix show

For a series that has been in production for one and a half years, *Beat Bugs* has been a catalyst for tremendous change at Atomic Cartoons.

The Netflix show – based on the premise of all-singing, all-dancing bugs and featuring popular songs by The Beatles – had some tight deadlines, which is no surprise when you consider that the entire show was created as one and then later on was split into two seasons that debuted merely months apart from one another.

It was up to Rachit Singh, head of technology, to solve the problem of speed, alongside a team of pipeline TDs and supervisors who needed 100,000 frames rendered. "The *Beat Bugs* schedule was definitely pretty aggressive in terms of time constraints, just because they needed to get all the seasons done by a specific date," he explains. "So we pretty much had to work across all the departments and the whole pipeline just to make sure we could hit those deadlines."

With huge amounts of data moving through the pipeline across departments, efficiency and the use of Python in automating processes proved to be a huge winner.

"Pretty much every time [it was] down to how much we could actually automate so that we could take people out of the equation," explains Singh. "They don't have to worry about what they need to do and instead focus on how they make the art."

That wasn't all, though – during work on *Beat Bugs*, Singh found a roadblock in Atomic's renderer. "Mental ray is not a very efficient renderer, so to get around some stuff we had to crank up some settings." Singh mentions that this was due to render artifacts appearing, but luckily render farm manager Qube! came to the rescue. "Qube! is a very laidback render manager," Singh explains. "It doesn't do a lot; you can actually configure it to do whatever you want it to do.

"I find it very flexible to use. I can set up different job types – I can set up my own job types. It has lots of management that you can do centrally for logs and configs, which is very handy when you're managing 500 nodes on the farm. If you want to push a config, it's very easy to push that config down all those workers."

Though it was definitely hard work, Singh speaks highly of the project and how constructive the process was in the end for the studio: "We learned a lot as well, so we now have so many things changing going forward on new shows. It was a valuable experience for sure."

Singh also reveals that Atomic Cartoons will be moving over to using RenderMan more in the future. "RenderMan on [our] new show is very exciting. I think everybody in the studio is excited about it.

"Also we will be adding a lot of cold and new tech for managing our assets and leveraging Shotgun more for the asset management part of our pipeline. We are also rewriting our caching solution, just to help with animation and caching animation. That will help in getting the caches properly down the pipe." With so many plans, the future's looking bright for Atomic Cartoons.


01

02

PROPRIETARY VERSUS OFF THE SHELF

Discover why Atomic Cartoons' asset manager is proprietary and how it works with Autodesk Shotgun

"When you are in production it's very hard to develop production software while the production is going on," begins Singh. "We decided that Shotgun is a good production tracking system and industry-standard software as well. We decided to go with it and that cut down on development time for the production tracking system. We actually want to control that and so that's why we decided to do our own asset management, and it keeps us flexible too. In the future if we don't want to use another production tracking software, we can just hook up our asset manager to Shotgun and then we don't have to be totally dependant on that."
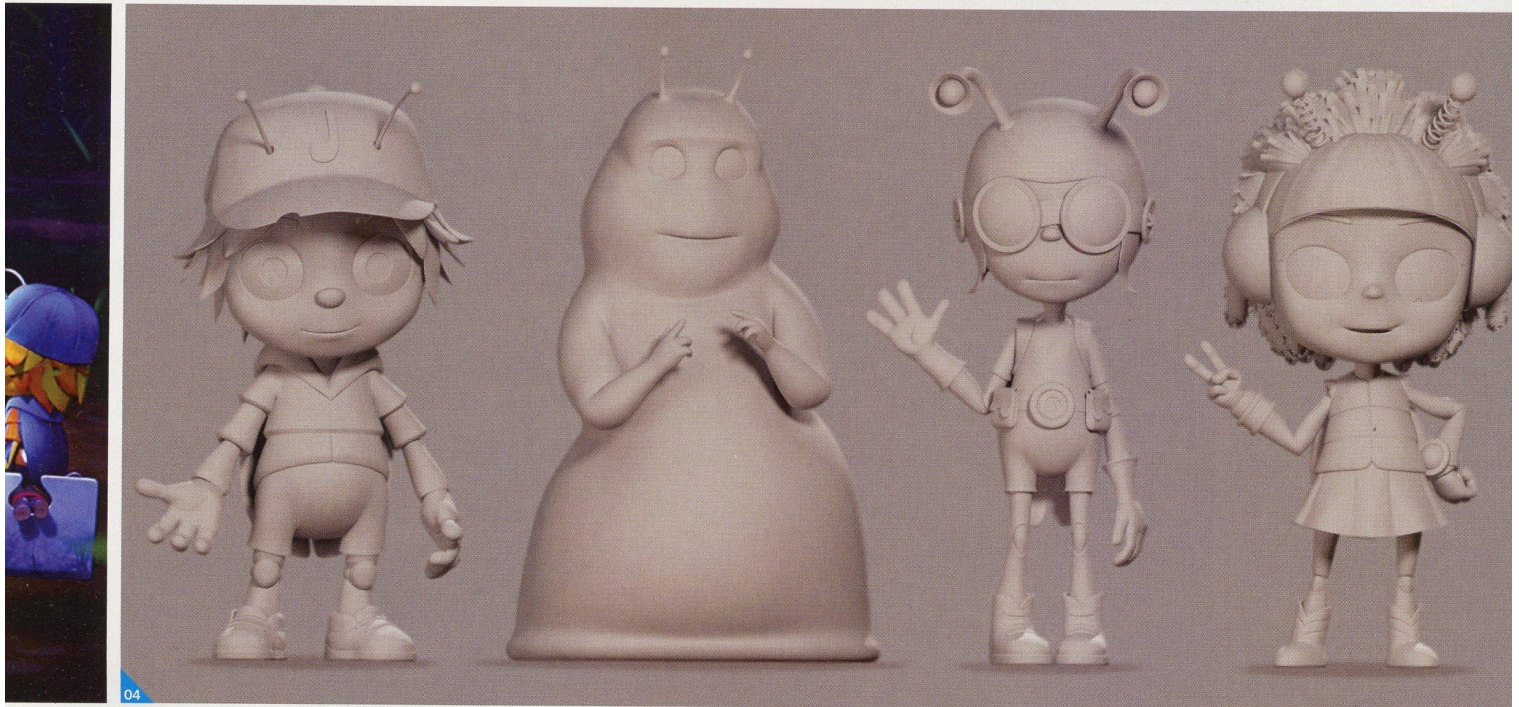
01 Atomic Cartoons used Maya for modelling, lighting, effects and animation for *Beat Bugs*

02 "The features we used in Qube! we didn't find in other software, so we kept going back," says Singh

03 Working across all the shows in the studio, Singh states, "It was a step up from the last show we did"

04 "We try to keep our tools as similar as possible for 2D and 3D," says Singh of the different show types

05 The post-production team would work on making the changes necessary for the *Beat Bugs* broadcast

> " We pretty much had to work across all the departments and the whole pipeline just to make sure we could hit those deadlines "
>
> **Rachit Singh,**
> **Atomic Cartoons**