

COMPANY

Tata Interactive Systems

LOCATION

Mumbai, India (Headquarter)

SOFTWARE

Autodesk® Maya®**Autodesk® 3ds Max®**

Tata Interactive Systems innovating the E-Learning space

Creates immersive 3D learning solutions using Autodesk 3ds Max and Autodesk Maya

We use Autodesk Suite which includes Maya, 3ds Max, Softimage and Mudbox to create all our 3D animations and virtual worlds. Our team is well trained on these software and they allow us to efficiently deliver high quality learning experiences for our customers across verticals.

— **Manisha Mohan**

Executive VP,
Tata Interactive Systems.



Image courtesy of Tata Interactive Systems

Did you know that there are animation based learning programs to help workers evade disasters in cruise liners and oil & gas plants? Or that medical students can now see the complete process of human heart pumping blood through the entire body without ever having opened one? The answer to these and many more questions is yes. And making such amazing immersive and interactive E-learning content is Mumbai headquartered Tata Interactive Systems (TIS).

With 11 offices across the world and an army of 400+ instructional designers, animators, graphic artists and programmers, TIS is creating a variety of learning solutions that leverage 3D animation to the fullest. It forayed into E-learning in 1991, and over the years has gained the repute of being one of the strongest players in this space with its custom-made solutions for Healthcare, Manufacturing, Aviation, Retail, Education, and Corporate sectors.

Going 3D

During its early days, TIS did a mix of cel, 3D and flash animation for its learning solutions. But with time there was a growing interest and demand for rich media content and visualization, and this led to an increased focus on 3D content. "The challenge always was to teach a complex concept

in a much simpler way, and this could be beautifully surmounted with visual storytelling and 3D animation as it is engaging and immersive," says Manisha Mohan Executive VP, Tata Interactive Systems.

Initially, TIS used 3D animation for intro or splash animations, which were created for different industries including Banking. Back then, these sequences were put together using 3D Studio 2, now known as Autodesk 3ds Max. However, going forward the company started setting its foothold in the education industry by creating e-learning animations for the school education market (1st-12th grade) in UK and Europe. As these solutions were meant for kids, they were always rich in animation.

TIS did not limit itself to the education sphere alone; working with a Medical College in UK it provided its students with animation on critical health conditions like 'Child Birth' and 'Cancer'. "Animation also fits very beautifully in topics like genetics which are shown at a microscopic level as these cannot be shot live," Manisha adds.

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Key Projects



Image courtesy of Tata Interactive Systems

The project that is known as one of the important milestones in the history of animation at TIS is 'Jojo in Numberland'. Mentored by Sir Antony Jay (of Yes Minister fame), this was the very first full-fledged cell animation DVD by the company. "Sir Jay visited many schools in the UK and realized that children struggle with visualization in mathematics in the areas of place value, multiplication and division. And this led to the idea of creating a set of animated CDs that helped children visualize mathematics called 'Jojo in Numberland'. This also triggered the creation of the animation team at TIS," says Manisha.



Image courtesy of Tata Interactive Systems

TIS forayed into virtual world creation with a project for Canada's largest retail pharmacy chain, 'Shoppers Drug Mart' (SDM). With the revenue of over 11 billion this pharmacy chain has an employee base of 57,000. Within the SDM store environment, there was a need for an interactive 'discovery' learning experience to help Associate Owners make the transition from their role as Pharmacist, with limited accountability, to business owner, with whole store accountability.

TIS stepped in and created a virtual world for familiarizing the employees with the errors in the store environment and how to counter them. The project was built on a game engine with assets developed on Autodesk 3ds Max and Autodesk

Maya, and the business impact created by it was immense. No surprise it also picked up the Gold Brand Hall Award for the 'Best Virtual World'. "The store concepts which would have taken around 9 months of learning, were successfully taught in 3 with our program, which I feel is the reason for winning this award," says Manisha.

Interesting 3D simulations for training nurses have also been created by TIS, that teach and enhance their communication, decision-making and prioritization skills. And for the operators in the Manufacturing sphere, they've designed solutions, which would help avoid catastrophic incidents and errors. "These segments are very important to us, as teaching about the decisions that would prevent a risk to life is the end goal of these programs."

For the Indian market, TIS has delivered 10,000 hours of E-learning content for Indian school students from Pre-Primary to 12th Grade under the brand 'Tata Class Edge', which has now become a separate entity of Tata Group.



Image courtesy of Tata Interactive Systems

One Solution – Multiple Platforms

The future success of all of the learner centric programs does revolve around their ability to be compatible with multiple platforms. And here TIS uses 'Responsive design', which provides optimal viewing experience, easy reading and navigation with a minimum resizing, panning, and scrolling across a wide range of devices from desktop computer monitors to mobile phones.

For most of its multi platform 3D learning solutions TIS creates less detailed, low poly CGI models and focuses more on textures. It optimizes the program to a level, which allows the content to load and display much faster. The game play takes prominence over visual detail for most mobile users, and TIS tries to achieve a fine balance between these elements to give the best user experience.

Entertainment vs. E-Learning

Entertainment and E-Learning go hand in hand when it comes to making story-based learning appealing to the audience. But as E-learning caters to serious business sectors as well, it faces certain constraints. The team at TIS has to tone down the fun aspect in some cases and focus on learning as well as competence of learners on the job.

While most studios across the globe have specialized departments for every 3D skillset, TIS believes in instilling multiple skills in their artists. Just like all entertainment animation creators do, TIS also creates full-fledged storyboards before executing any learning project. "Our 3D animation team works with instructional designers and subject matter experts to understand the scientific basis of a subject, look and communication that would complement it, and then proceed to animate."

As TIS deals with companies from across the globe, cultural sensitivity and usage of appropriate humor in the content being created is key for the studio. Additionally, when dealing with newer subjects it undertakes intensive research to be true to the subject matter. For customizing the solutions even further, TIS also takes into consideration the behaviour and preferences of different age groups that they are catering to and study the psychological approaches that they will take to understand the technical and scientific aspects.

New Technologies and Future Focuses

TIS is currently dabbling with newer ways to deliver learning solutions on Google Glass, Google Cardboard and Oculus Rift. Striving to make its roots stronger in the augmented reality space, it is also working on a program for the manufacturing sector, in which a worker would be able to see the internal functioning of a high-end machine by just holding the iPad against the given part of the machinery.