SECOND EDITION : The Official Mini Magazine

MARVELOUS DESIGNER

MARCH 2024 #2nd ISSUE

+13 ARTWORK SHOWCASE

"IT'S BEEN A *GAME-CHANGER*...

THE VERSATILITY AND POWER OF *MARVELOUS DESIGNER*."

—
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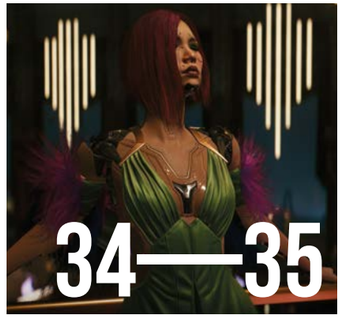
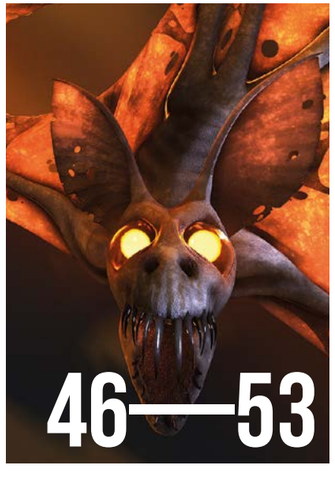
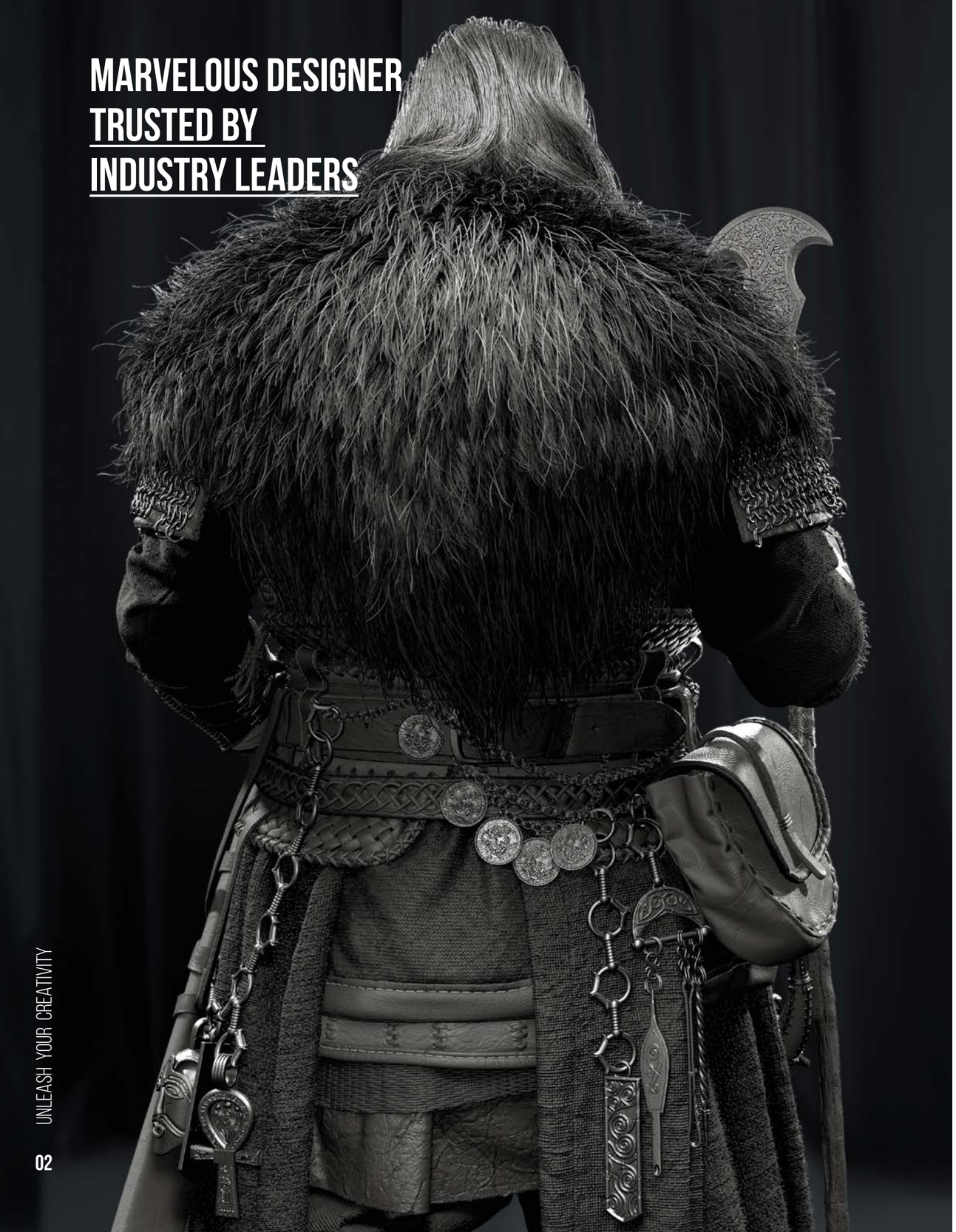
CONTEXT





MARVELOUS DESIGNER TRUSTED BY INDUSTRY LEADERS



| CHARACTER ARTIST

ARTSTATION.COM/NISHAS

Interview with

NISHAS VN

ODIN

My name is *Nishas VN*. I'm a senior game character artist with more than 7 years of experience in the Game industry and 2 years experience in graphic design. I've worked on quite a lot of games during the years with the last one being *Alan Wake 2*.

When did you start using Marvelous Designer and how did that affect your workflow process?

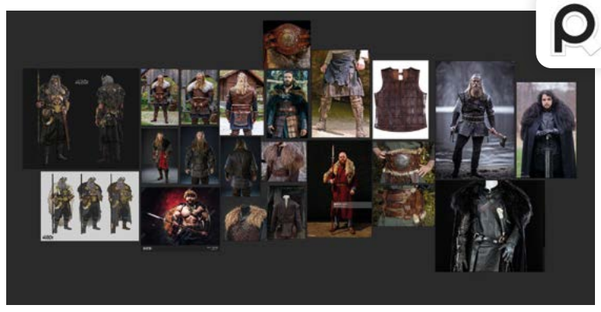
Seven years ago, I ventured into the world of *Marvelous Designer*. My journey began by immersing myself in online tutorials on *YouTube*, gradually uncovering its immense potential. This software has revolutionized the fashion and 3D design industries by enabling the creation of lifelike 3D clothing and fabric simulations. Not only confined to fashion, but *Marvelous Designer* has also started making waves in the realm of gaming. Its integration into games, like the renowned *Metal Gear Solid V: The Phantom Pain by Konami and Kojima Productions*, showcased the software's versatility and impact beyond traditional design spheres. Witnessing its application in such high-profile projects piqued my interest and solidified my belief in its far-reaching influence.

Marvelous Designer has remarkably streamlined my workflow, replacing time-consuming traditional cloth sculpting with hyper-realistic garments in mere minutes. Its extensive library of fabrics allows for the authentic capture of cloth materials, elevating the realism of designs. Moreover, *Marvelous Designer* not only enhances cloth creation but also significantly expedites other processes, such as high-poly and low-poly UV mapping, ultimately saving valuable time across multiple facets of the design pipeline.

Explain the project's creation aspects, including intentions, goals, cloth design approach, and references.

Let me delve into my recent project featuring *Odin Alfiifir*. This endeavor posed unique challenges, particularly in clothing design, prompting me to explore *Marvelous Designer's* capabilities beyond traditional garment creation. I aimed to showcase a versatility for readers' benefit in this venture, *Marvelous Designer* played a pivotal role, not only in crafting the clothing but also in designing elements like the bag, cape, and boots adorned on his waist. Often overlooked, *Marvelous Designer's* prowess extends beyond typical clothing design; it aided me in achieving remarkable results, notably in crafting authentic leather boots. Many tend to underestimate its ability to create such intricate details, opting for sculpting methods that often result in unnatural folds. *Marvelous Designer,* however, provides a more intuitive and realistic approach to crafting these elements.

Prior to diving into the creative process, gathering references is a crucial step. For my personal projects, I typically blend design freedom with inspiration rather than strictly adhering to a specific concept or reference. For this particular endeavor, I drew from a Norse Viking dress as a foundation, embellishing it with numerous additional elements to seamlessly integrate it into a fantastical setting. This approach allowed me to infuse elements of my imagination while retaining the essence of the original Norse design.



In my *PureRef* canvas, I curated a diverse array of costume concept and prop inspirations. This compilation served as a rich tapestry of ideas, guiding me to craft a design that strikes a balance between cohesion and distinctiveness. The goal was to create a unified yet uniquely individualized piece, drawing from various sources to inspire a cohesive and original design.

Inspired by the great YONG YI LEE for Alföör The Wizard (Odin)

Once I've determined the direction for my creation, it's time to import the base mesh or avatar. While many opt for default avatars in *Marvelous Designer*, I prefer a more controlled approach. It's crucial to have greater influence and control, as clothing inherently influences the form of the underlying flesh. This detail often gets overlooked. Therefore, sculpting any potential influence is essential to ensure a seamless integration between the clothing and the body underneath.

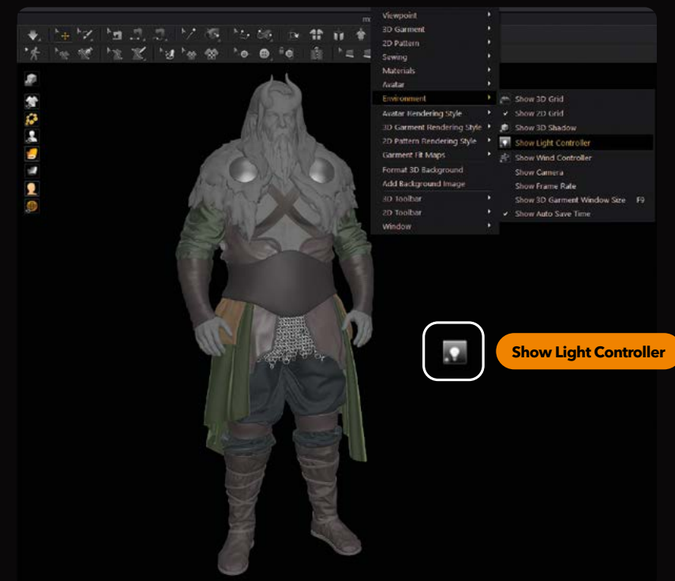
From my experience, I've learned that achieving realistic clothing hinges greatly on the initial fitting of the garments. It's crucial to focus on clean patterns and precise fitting as natural stitching and realistic folds tend to emerge more natural during simulation. I advise limiting the use of pins to necessities, as excessive pinning and forced folds can contribute to an unrealistic feel in the clothing. To maintain authenticity steer clear of excessive pinching or symmetrical folds, aiming instead for balanced and natural drapery. Additionally, when dealing with layered clothing, it's advisable to avoid utilizing the fast (GPU) simulation, due to complications with layered garments, it's best to avoid utilizing the (GPU) simulation, as it may not effectively handle the complexities inherent in layered clothing.

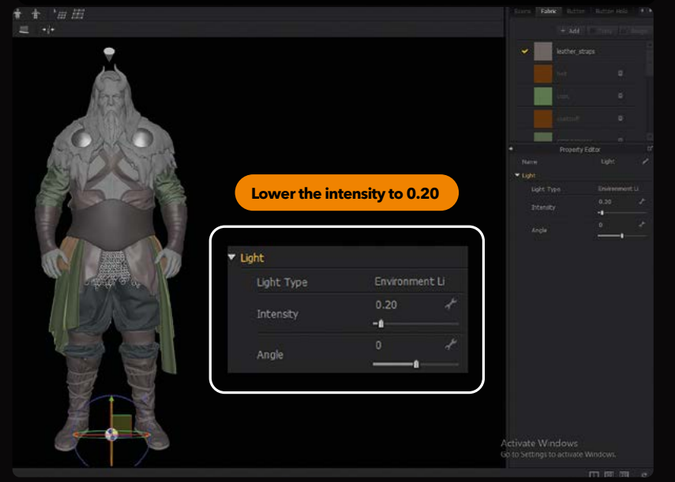
Many decorative elements such as ornaments and weapons were deliberately excluded from *Marvelous Designer*, as their impact on the clothing simulation was minimal. Hence, I chose not to import these details into *Marvelous Designer*, opting to address them separately outside the software.

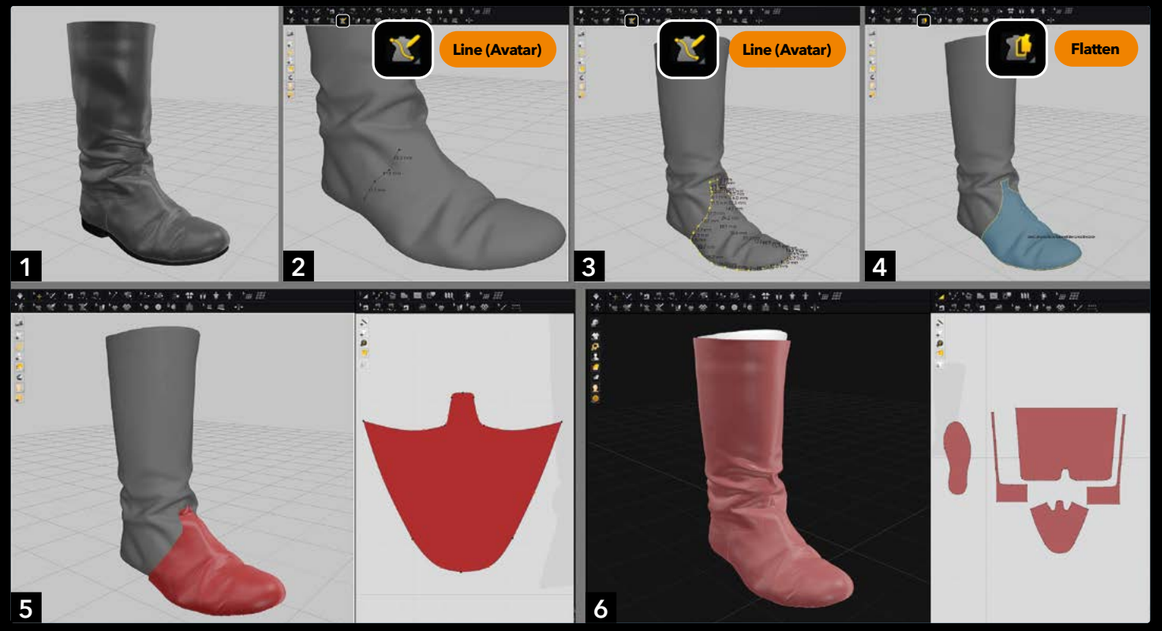
ACHIEVING REALISTIC CLOTHING HINGES GREATLY ON THE INITIAL FITTING OF THE GARMENTS.

Share your approach to working with Marvelous Designer. What tricks have you discovered to boost efficiency, and what advice would you offer to new users?

Prior to diving into the task at hand, I make it a point to set up the lighting meticulously. Getting the lighting just right is crucial as it significantly amplifies the overall appearance and visibility of folds and wrinkles in the design.





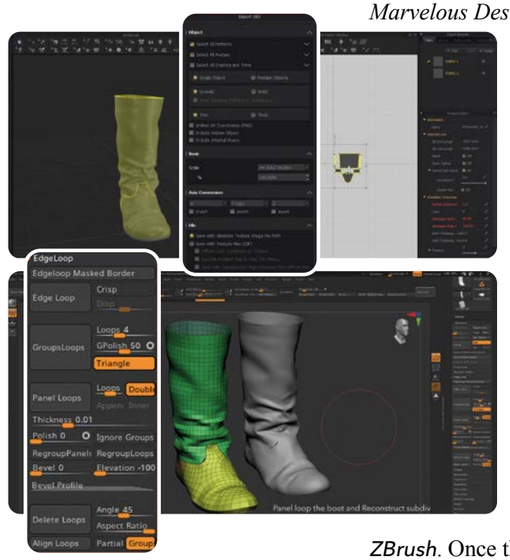


CONSTRUCTING THE BOOT

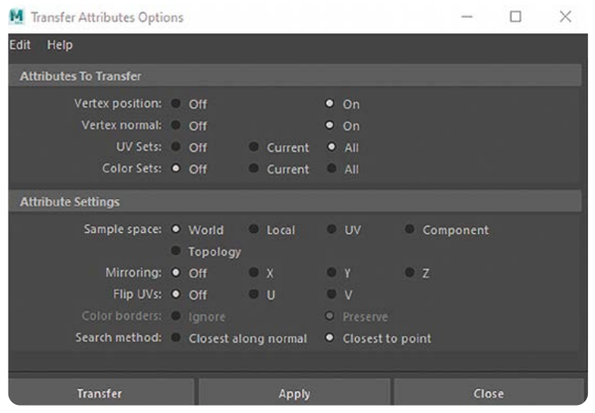
I adopt a different approach in crafting boots by initially sculpting a base model in *ZBrush*, which I later import into *Marvelous Designer*. Using this base mesh as a guide, I employ the *Line tool* to delineate the boot's outline, refining it further with the *Flatten tool* to generate a visible pattern, reflecting in the 2D pattern window. Once the entire boot design is established, I simulate its appearance, utilizing the *ZBrush* base mesh as the avatar mesh within *Marvelous Designer*. This methodology allows for precise control over achieving the desired fold Mixture in the design.

My workflow within *Marvelous Designer* follows a clear path. Initially, I focused on constructing a clean pattern and stitching to generate a blockout file with low particle distance. This blockout serves as the foundation, aimed at refining the fitting precisely without relying on excessive pinching or excess fabric. Once the primary fit is perfected, I progress to the secondary detail stage, increasing the particle distance to introduce moderate folds and simulate additional intricacies. Finally, in the temporary detail phase, I set a high particle distance to add the final touches and meticulously finalize the file.

Explain your process of moving between Marvelous Designer and other software. How do you prepare your project for a smooth transition?

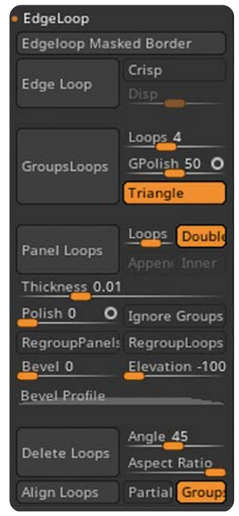


To convert the *Marvelous Designer* file into a clean topology, I utilize *Maya's Transfer Attributes tool*. After exporting, I save two sets of files named boot3D and boot2D. The boot3D file is the direct export from *Marvelous Designer*, while the boot2D represents the 2D pattern version obtained by right-clicking and selecting **"Reset 2D Arrangement."** Next, I import the boot2D file into *Maya* and proceed to create a clean topology using either the *Quadraw tool* or by employing *ZRemesher* in *ZBrush*. Once the retopology process is complete, I save the file as bootretopo. To finalize the transformation, I configure the *Transfer Attributes* settings accordingly through the tool's options.



Following the retopology process, select the boot2D file first, then the boot retopology file in *Maya*. Utilize the *Transfer Attributes tool* and click **"Apply"** to transfer the UVs from boot2D to boot retopology. Once the transfer is complete, adjust the *Transfer Attributes* settings as needed to ensure the seamless transfer of UVs between the files.

Afterward, right-click and choose **"Smooth"** to increase the subdivision of the boot retopo in *Maya*. Following this, select the boot 3D file first, then the boot retopo file, and click **"Apply"** in the *Transfer Attributes tool*. This action directly transfers the boot retopo attributes to the boot3D file. Next, clear any history by selecting **"Edit"** and then **"Delete by Type > History."** You can proceed to remove both the boot3D and boot2D meshes. Export and save the boot retopo mesh. Subsequently, import it into *ZBrush* and access the *Geometry* tab, selecting **Edge Loop > Panel Loops**. Employing this function provides thickness to the boot. Apply **"Reconstruit"** to revert to lower subdivisions, resulting in a refined and clean high-poly boot mesh.



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CHARACTER ARTIST

ARTSTATION.COM/NASTYAKUKOSH

Interview with

ANASTASIA KUKOSH

RASHEEDA

My name is *Anastasia Kukosh*, I am a student at *Think Tank Training Center*. My passion for the arts started in my childhood, then I joined the Master's degree in Fine Art. After this formation, I began my journey in 3D modeling less than a Year ago. My goal is to join the future industries of the new generation of AAA Games. I used different softwares in my workflow, one of them is *Marvelous Designer*.

When did you start using Marvelous Designer and how did that affect your workflow process?

I started using *Marvelous Designer* at Think Tank about three months ago when we were given an exercise to make a leather jacket. During the exercise, we learned about insert offset lines, layers, pressure levels, and more.

For my final project in the second term, I decided to choose a character with clothing to gain a better understanding of the workflow. It turned out to be a great and successful experience where *Marvelous Designer* helped me solve half of the problems that I was worrying about.

As a student, how much time did you find sufficient to gain confidence in using Marvelous Designer?

I was pleasantly surprised by how easy it was to start using *Marvelous Designer*, and within a month, I was able to achieve some results. However, to produce high-quality work, you must invest more time in learning shortcuts, selecting the appropriate tool for each situation, and researching information for the tools you are unfamiliar with. If you take a break from using *Marvelous Designer* for some time, it can feel like starting from scratch again.

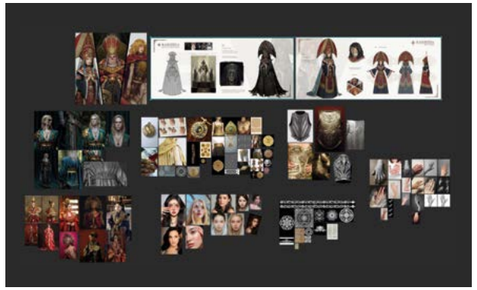
Explain the project's creation aspects, including intentions, goals, cloth design approach, and references.

After studying at *Think Tank* for 7 months, I decided to use the concept of Maisie Mei's "*Rasheeda – Holy Maiden*". As I only had a month to complete it, I had to work fast and determine which parts would be the most time-consuming. Since I had no prior experience in character creation, I assumed that designing clothing and retopology would be the most challenging aspects.

The main goals were to use the right workflow, mastering fabric texturing,rendering in *Marmoset Toolbag*, achieving a lifelike facial representation, and to try working with hair cards.

Share your approach to working with Marvelous Designer. What tricks have you discovered to boost efficiency while building the hat?

I think that using *Marvelous Designer* is a good way to quickly and accurately block out the character's shape and simulate it in 3D space. If I like how it looks, I can then proceed to add more detailed features or move to other programs, like *ZBrush*.



1 When I start a project, I begin by creating a mood board. This board contains a lot of visual information about the project, and I conduct my research using various platforms such as *Google*, *Pinterest*, and *Artstation*. I have a dedicated section on the board for clothing, where I gather patterns, textures, and information on how the clothes move, among other things.

2 In *Marvelous Designer*, I begin by importing my custom model onto the canvas. Then, I create the garment by crafting simple shapes while referring to real clothing garments for inspiration. This helps me avoid making errors and ensures folds are accurate. Sometimes, I use frozen parts of the mesh to achieve specific shapes. My workflow in *Marvelous Designer* involves importing a custom model onto the canvas and creating basic patterns to form the foundation of the garment.

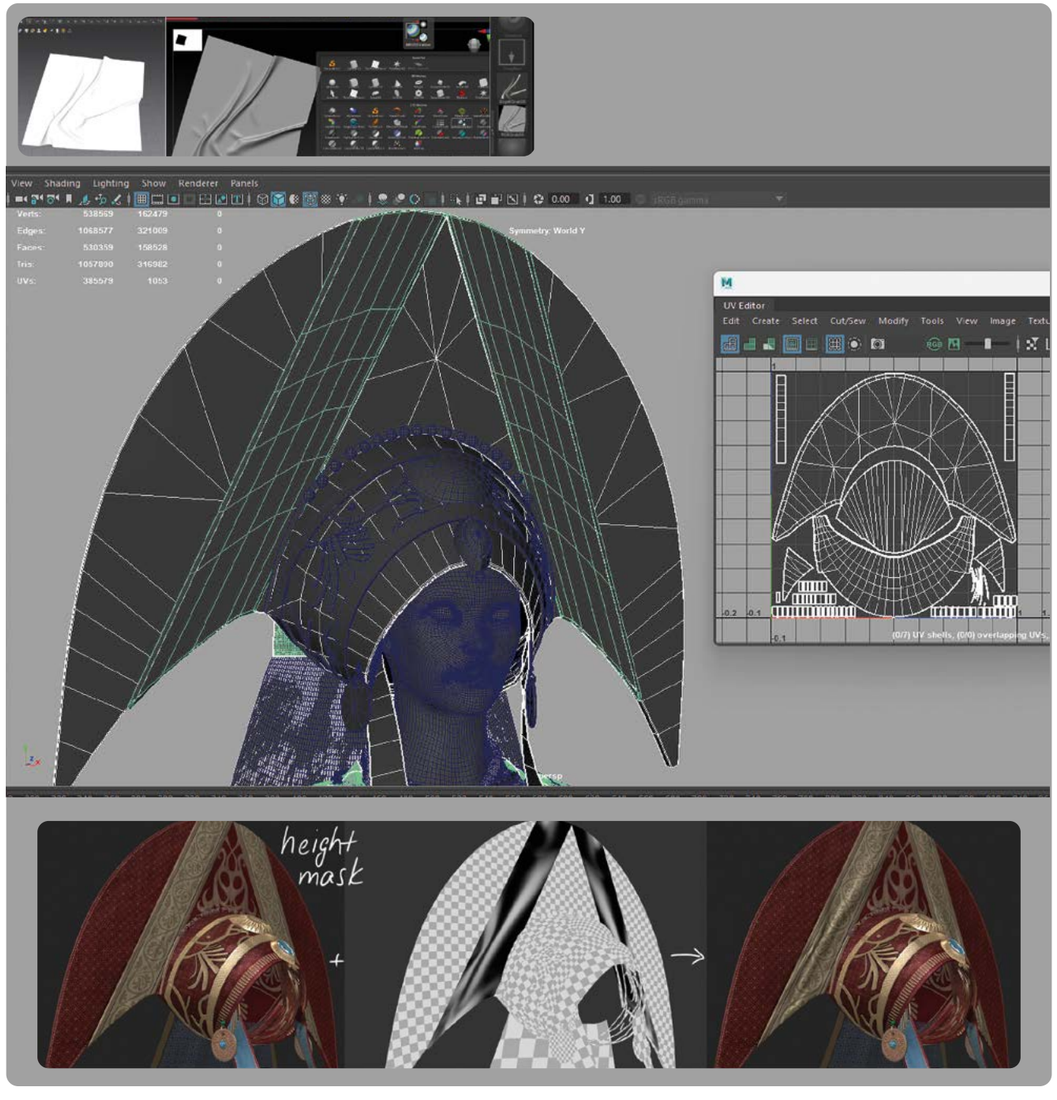
I conduct research and draw inspiration from existing designs to enhance the authenticity of my garment's construction. Emulating natural folds and drapes often yields more realistic results compared to attempting to replicate them from your head.

Additionally, I occasionally leverage frozen parts of the mesh to manipulate and achieve unique shapes.

HAT MODELING

For faster results, I created a low poly hat and achieved a fabric look through texturing alone, without using *HighPoly*. The process was significantly faster and produced satisfactory results.

I used *Marvelous Designer* to create folds on a piece of fabric. Then, in *ZBrush*, I used *RMGBZGrabber* to create an alpha. I used this alpha as a height mask in *Substance Painter*.

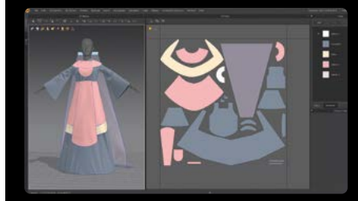


Explain your process of moving between Marvelous Designer and other software. How do you prepare your project for a smooth transition?

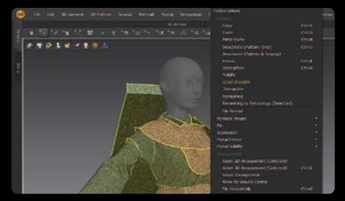
For me, the quickest method was to export garments with UVs from *Marvelous* and reconstruct them in *Maya* before working on them in *Zbrush*. This way, I can preserve the UVs for baking. Additionally, I created most of the fine details such as seams, fabric structure, and microfolds in *Substance*.

THE MORE I USE MARVELOUS DESIGNER, THE BETTER IT GETS.

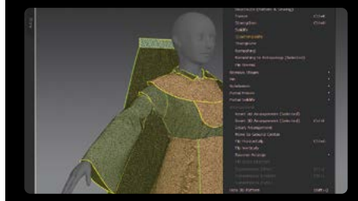
HERE ARE THE STEPS:



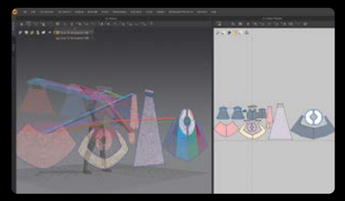
1 Organize UVs for export and **ensure no overlap** for **retopology.**



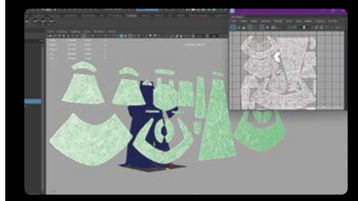
2 **Export** simulated dress with UVs with **particles distance 5.0.or less.**



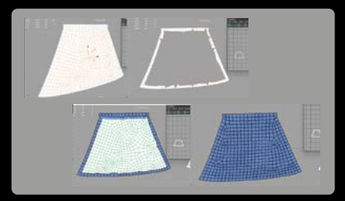
3 Select the all garment, **right click > "Quadrangulate"** with **particle distance 20.0**



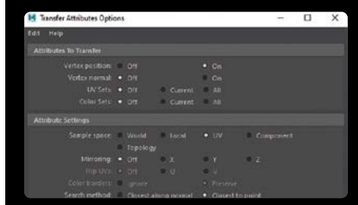
4 Make All mesh **flatten and export it > (Reset 2D arrangement all).**



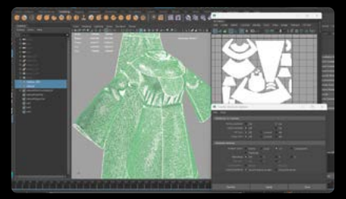
5 **Import to Maya** both versions from *Marvelous Designer* and the Avatar character.



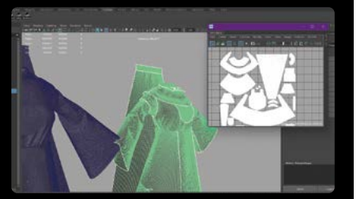
6 Prepare the Flatten Version to **Retopology** (Tip: Duplicate your flatten version and make live surface).



7 Transfer your UV's from the old flatten version to the retopology one. (Tip: Use Transfer attributes).

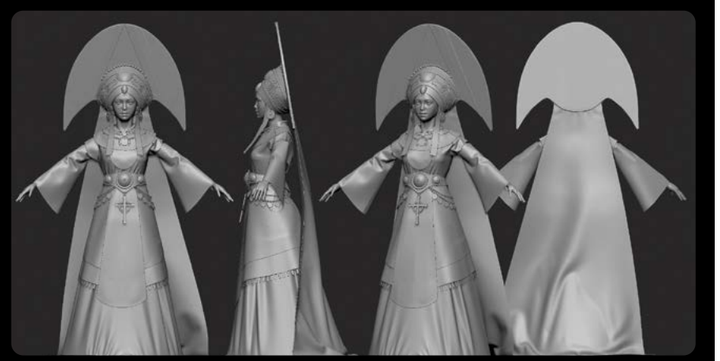


8 Transfer the vertices position of the simulated one on the flatten retopology to finally have a lower clothes resolution simulated.



9 Smooth this low version and transfer vertices again *(step 8)* to have a defined **High poly.**

10 **Import Into Zbrush** and **Reconstruct SunbD** and Autogroup it. So here we have ready Mesh to work on with **High poly** and **Low poly.**



How can you describe your overall experience of the use of the Marvelous Designer?

I am very happy about using *Marvelous Designer!* Without it, it would've been difficult for me to achieve this result in just one month. The more I use it, the better it gets. Work speed is faster and provides a solid foundation for sculpting. Definitely *Marvelous Designer* must be in use in my work.

MARVELOUS DESIGNER TRUSTED BY INDUSTRY LEADERS

Interview with

DIGIC PICTURES

ASSASSIN'S CREED MIRAGE

DIGICGROUP.COM/PICTURES

MARVELOUS DESIGNER TRUSTED BY INDUSTRY LEADERS

Could you introduce the recent project – Assassin's Creed Mirage?

Tamás Varga
(character supervisor):

We are very pleased that *Ubisoft* has chosen *Digic* again for the trailer of the latest *Assassin's Creed* game.

Mirage takes the series back to its roots, with renewed emphasis on stealth, parkour and assassination, and a solid narrative-driven campaign set mainly within a single historical city, Baghdad 9th Century. Baghdad was the center of the Caliphate during the Golden Age of Islam. It was perhaps the greatest cultural, commercial and scientific center of the world at the time – and it is here that the protagonist, the street thief Basim, meets the Assassin Order.

So, as well as the main characters, it was also very important to portray the city and its inhabitants as vividly as possible, as a kind of living backdrop to the story of the protagonist's coming of age.

IT WAS ALSO VERY IMPORTANT TO PORTRAY THE CITY AND ITS INHABITANTS AS VIVIDLY AS POSSIBLE.

How is Marvelous Designer integrated in the project pipeline?

Tamás Varga
(character supervisor):

We have been using *Marvelous Designer* for a long time and by now we are well aware of its capabilities, so we knew from the beginning that we would rely heavily on this software to implement the characters.

The clothing for the main characters (assassins, guards, etc.) was extremely complex: overlapping layers of different fabrics and armor, tight-fitting garments and baggy capes – all things that *Marvelous Designer* was clearly the solution for.

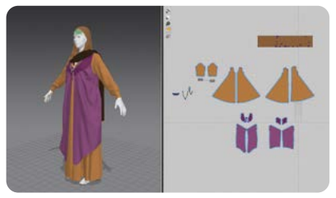
But we also knew in advance that our characters would be moving through the Baghdad crowd throughout, that they would be surrounded by these "extra" characters (plain extras in English) in a lot of scenes, and that our director wanted to highlight some of these citizens. So it was decided very early on that all the other characters' outfits in the film would be made in *Marvelous Designer*, and simulated in every shot.

This required a number of major improvements, but luckily in many cases we had been working on each of these for years and this became our first project where all the pieces of the puzzle finally fell into place.

Zoltán Turkovich
(CFX lead):

From the modeling phase to the final simulation, the work on the suits was done in *Marvelous Designer*, on the CFX side the finalization of the simulations done in *Marvelous Designer* was done only in 3rd party software.

Due to the large amount of assets and varied mass in the project, we developed a script called *AutoSim* tool, which after the final body animations on the Background characters were done, it automatically ran the *Marvelous Designer* cloth simulations with default settings and saved them directly to the rendered shots, saving a lot of manual work on the project.



On Hero assets, usually the rendered garment is just driven by the simulated *Marvelous Designer* garment in our pipeline, but on this project, also due to the large amount of variation on the Background characters, the raw *Marvelous Designer* geometries were uploaded and rendered.

What is the strength of Marvelous Designer compared to other simulation tools?

Tamás Varga
(character supervisor):

The most important strength of *Marvelous Designer* is that it can simulate extremely beautiful and detailed clothing, and very quickly.

It is also a big advantage that it can be used for asset production. In a lot of the shots in the film, we rendered the background characters one by one with models made in *Marvelous Designer*.

Zoltán Turkovich
(CFX lead):

– Sample-based modeling, due to the clothing setup, it is easy to achieve authentic, realistic clothing simulations.

– The software is very easy to learn, it has a simple learning curve, so even novice CFX artists can learn it quickly.

– When the body animations are properly set up for clothing simulation, the clothing simulations run very stable, allowing easy clothing simulation of large amounts of characters.

Could you give examples of some of the iconic scenes and characters Marvelous Designer has been used for?

Zoltán Turkovich
(CFX lead):

– To me the most iconic sequence is the depiction of the Baghdadi bazaar and bazaar crowd, with lots of clothing variations, colors – really achieved the look and feel of a live and vibrant market.

– CFX-wise, the hood-turban removal of the initiation ceremony was a challenge to keep the costume simulation authentic with heavy contact animation.

If you could give advice to a person that just started to work with Marvelous Designer, what would it be?

Norbert Geresdi
(Modeling Artist):

Keep it simple! :) Although it's an exciting challenge to realize a well-drawn concept, it's usually a lot of work. Customizing even the simplest looking garments can be super challenging, so it's worth studying classic patterns first.

Edina Schmidt
(Modeling Artist):

TRY TO MODEL YOUR CLOTHES FIRST!

József Sáfár
(CFX artist):

EXPECT POST-SIMULATION POST-PRODUCTION AND HAVE FUN!

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INSTAGRAM.COM/HALF_MT_STUDIOS

Interview with

HALF M.T STUDIOS

VOICE IN THE HOLLOW

I'm *Miguel Ortega*, a director and VFX supervisor at *Half M.T Studios* in Los Angeles, California. The studio, co-founded by Tran Ma and myself, gets its name from us – Half Miguel, Half Tran. Recently, we completed "*The Voice in the Hollow*," an African Animated Horror film rendered in *Unreal Engine 5*. We made this film with a small team, backed by the support of *Gnomon*.

Congratulations on the winning of the Jury Award at SIGGRAPH 2023! Can you tell us more about the project: 'VOICE IN THE HOLLOW'?

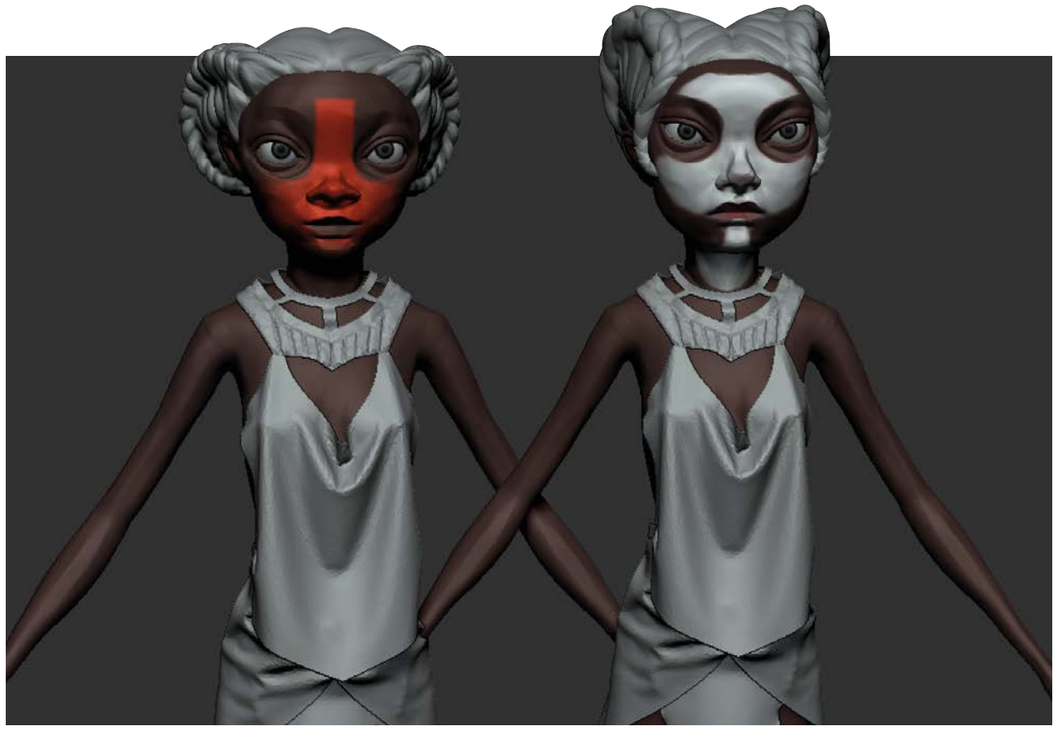
We're really honored to have won that award. I've been attending *Siggraph* ever since I was a student at *Gnomon*, which is over 18 years now. Getting an award from them means a lot to us. *"The Voice in the Hollow"* is a horror film we made completely in Swahili. It centers on two sisters and their jealousy. We managed to wrap it up in just 10 months, during the last part of the COVID pandemic.

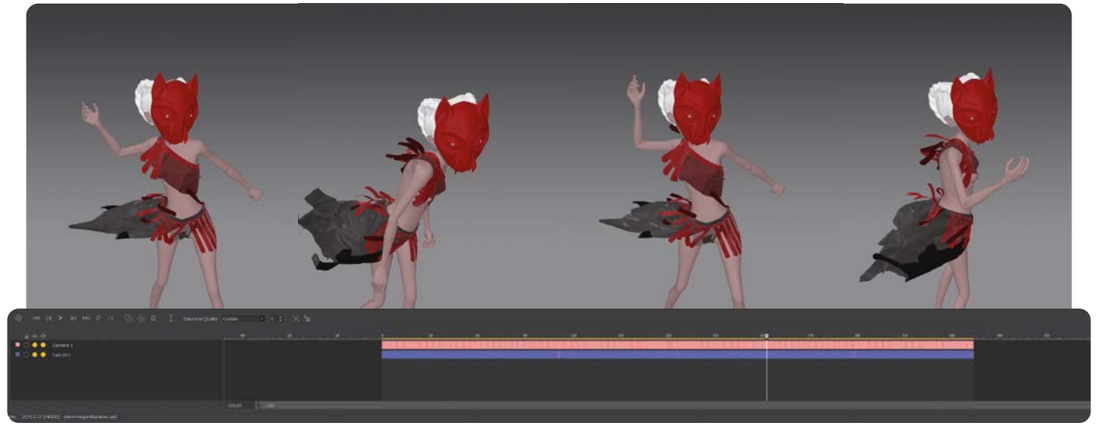
MARVELOUS DESIGNER PLAYED A CRUCIAL ROLE IN OUR FILM.

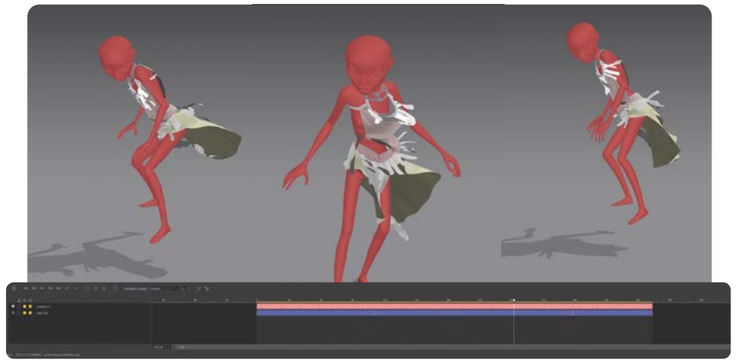
Why did you decide to use Marvelous Designer? How did it help you serve art direction?

Marvelous Designer played a crucial role in our film. We mainly used Megascans assets, tweaking them into something entirely new. But with *Marvelous*, we found we could add a lot of complexity to our sets without much effort. Fabric created in *Marvelous* looks real, intricate, and beautiful, and it's surprisingly easy to work with. This was a game-changer for Tran, our lead *Marvelous* artist. She was able to quickly bring a wide range of fabric details into our scenes, adding depth and realism in a short amount of time.

On top of enhancing our sets, we also used *Marvelous Designer* for all our characters' clothing. It was a straightforward process to design and simulate the cloth entirely within *Marvelous*. This tool really streamlined the way we brought our characters to life, giving them a more authentic and dynamic look with minimal hassle.







Could you give us examples of some iconic scenes and characters Marvelous Designer has been used for?

My favorite scenes where we used *Marvelous* are definitely the ceremony sequence and the final fight. In the ceremony scene, I got the set to a point where it looked pretty good, but then Tran came in and just elevated it. She added fabric everywhere – hanging from the ceiling, wrapped around bones, laid out as rugs – and it looked incredible.

For the final fight, using *Marvelous* really added to the drama. We turned up the wind effects, so the characters' clothes were dramatically flapping in the wind, which I loved. It brought so much intensity to the scene. And all of this was designed and simulated in *Marvelous*, which shows how powerful the tool can be.

We know that VOICE IN THE HOLLOW is successfully made with Unreal Engine 5. Can you give us a quick overview of your pipeline involving Marvelous Designer, Unreal Engine 5 and other tools?

Since we're a small team, finding the easiest and fastest methods is crucial for us. We discovered that using *Alembic caches* worked best for our workflow. Our process started with animating the characters in *Maya*. Then, we did shot modeling to address any deformation issues. After that, these models were brought into *Marvelous Designer*.

In *Marvelous*, we'd create the cloth simulations, and then export them as *Alembic (.ABC)* files back to *Maya*. There, we reassigned the material properties before finally moving everything into *Unreal Engine*.

I'm sure there might be simpler ways to do this, but with our approach, we were able to turn around a shot in just minutes. This speed and efficiency were vital for our project's success, given our team's size.

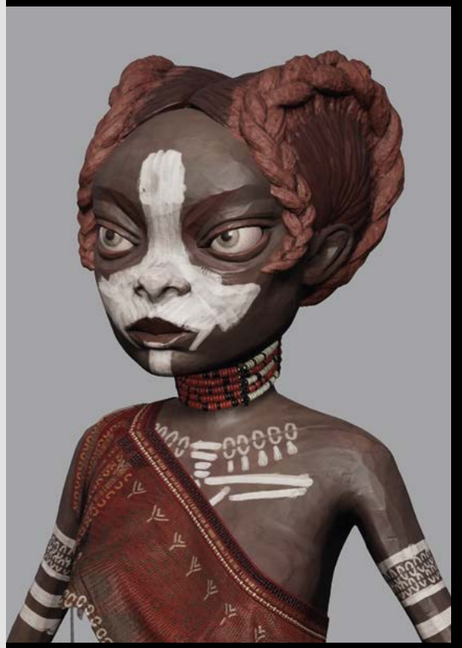
We saw that the characters' clothes are animated in Marvelous Designer. Were there any challenges when you animated characters' clothes in Marvelous Designer? How did you overcome the challenges?

After we had a basic concept for the clothing in *Marvelous Designer* but before fully rigging the characters, we would first import the naked model into *Mixamo*, the free online rigging application. There, we applied basic running or jumping motion capture animations. This step allowed us to then bring these animated models back into *Marvelous Designer*, now with the clothing applied.

At this stage, while the character deformations weren't perfect, it was a critical point for us to identify any potential issues in the clothing simulations. We were constantly balancing between what looked visually appealing and what performed well in simulation. If the clothing simulation didn't act as we anticipated, we'd adjust the costume design until it matched our expectations. This method was a practical way to ensure that the clothing would look good and behave realistically in the final animation, without having to wait for the characters to be fully rigged.

Are there any tips and tricks with Marvelous Designer that you can share with the community for animators?

A lot of what we've learned comes from Megan's (from the *marvelous designer* channel) incredible tutorials on *YouTube*. She's a fantastic resource, and I definitely recommend checking her out if you want to learn from the best. Also, every Friday at 1 PM PST, we do a live stream on the *Gnomon YouTube* channel. In these sessions, we dive into the process behind our current film. We're experimenting with *Marvelous Designer* in some pretty unconventional ways, especially using it for architectural details, which is turning out to be quite extraordinary.



How can you describe your overall experience of the use of Marvelous Designer?

We absolutely love *Marvelous Designer*; it's been a game changer for our work. Our passion for it has inspired our latest project, where we've created an entire world made of fabric. Every detail, from the spoons and forks to the intricate Art Nouveau architecture, is crafted in *Marvelous*. This project, a testament to the versatility and power of *Marvelous Designer*, wouldn't have been possible without our deep commitment to exploring the full potential of this tool. So thank you guys!

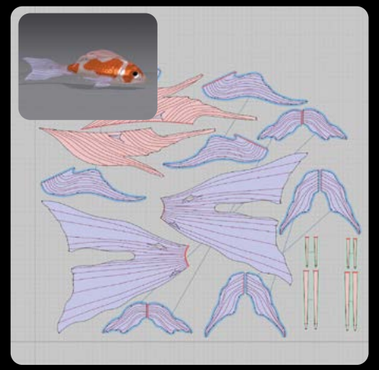
GO BEYOND CLOTHING

Creating Fish using Marvelous Designer

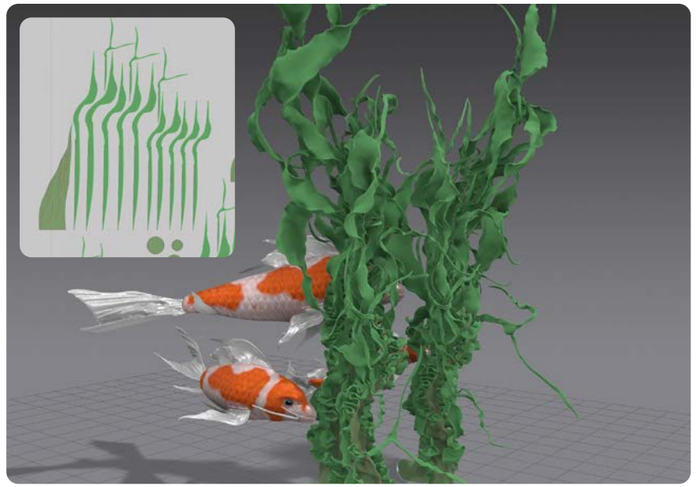
Koi Fish Creation Tips by Sean Frandsen

Marvelous Designer has excellent cloth sim capabilities and is useful and effective to simulate motion for things other than just garments. For the Koi fish I animated an avatar of a fish swimming to start and then built fins and whiskers for the fish.

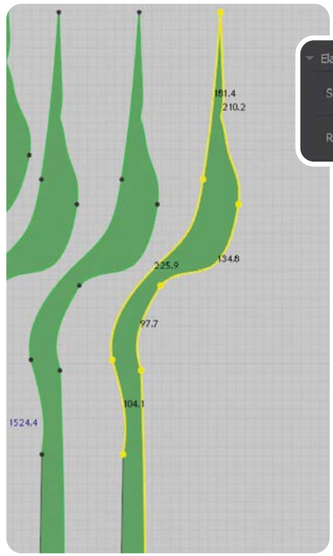
I lowered the gravity to 400 and the air damping to 2500 in the simulation properties in order to have the movements of the fins resemble an underwater feel. For simulated animations like this, it can take awhile to get the desired result. For example, I found I needed to tweak the fabric properties on the fabric I used for the fins. In the image (opposite), there are two fabrics. For the top fin and the whiskers I needed fabrics that would not have too much bend as the whiskers would need to keep their shape and the top fin would lay too flat. Both fabrics have higher air damping on the fabrics as well.



Once I was happy with the movement of the fish fins I decided to add some seaweed for the fish to swim through. First I exported the fish with the simulated fins as an alembic. I added three more fish to create a Koi family. Because I couldn't have the seaweed sink to the bottom I needed to adjust the simulation properties further by decreasing the gravity to -400. This would make the seaweed want to slowly move up which is how it would move realistically under water. With the fins already simulated correctly and then added together with the original fish avatar and exported as an alembic for the new avatar, changing the properties would not affect the fish movement.



First, I made circle patterns and froze them on the floor. This way the seaweed could not float up and away. I made a partial circle main stalk and then attached the fronds to it. Seaweed fronds like these have a rippled edge. By selecting the frond edges not sewn to the stalk, I applied an elastic to them. I needed to play with this until I got the desired look.



Above are the settings I used.

The full tutorials for the Koi and the seaweed can be found on the *Marvelous Designer Youtube* page including the finished simulation of the finished scene. Enjoy trying out different ideas. *Marvelous Designer* is a creative and intuitive tool for creating scenes like this. It is also fun!

CREATION TIPS OF THE JELLYFISH

by Sergio García

To create the jellyfish, I considered creating a base mesh that would emulate the movement of the jellyfish, but it would not have any relevance when rendering since, once the jellyfish is simulated, the base geometry is erased or made invisible from where we build. It just points in the right direction and does nothing more than the contraction movement.

What kind of shape do you want your jellyfish to be?

Depending on your preferences, you should work with a wide base, or a more domed one...

After choosing a reference to follow, let's plan how we are going to sew/cover the base geometry.

In my case, I preferred to wrap the base mesh for the head, and, working with positive and negative pressures, I aim for a jellyfish in which the body starts near the center of the head.

For the stability of the jellyfish as a whole, I applied *Pin* to Avatar to maintain the position of the most important patterns when building the head. The connection between body and head would be the most unstable part, for this matter you can cut the pattern in two leaving the external part of the ellipse carrying out most of the pins if not all, leaving the internal ellipse more space to interact with the movement of the head and the body.

By simulating you can see how its fixation effect is, in case you are not comfortable with its application, you could try other ways. As I did.

After several tests, I realized that the function of the pins could be replaced by the inside of the jellyfish's head by applying *Strengthen* and maintaining negative pressure, which would "glue" this pattern to the area where it is expected to be. End up with not a pin in the connection between body and head.

For the head, cloned and placed the head pattern on itself, applying a higher pressure value on the external part than on the internal part, so that at a certain distance both layers can give the sensation of gelatinous. (Only visible when textured)

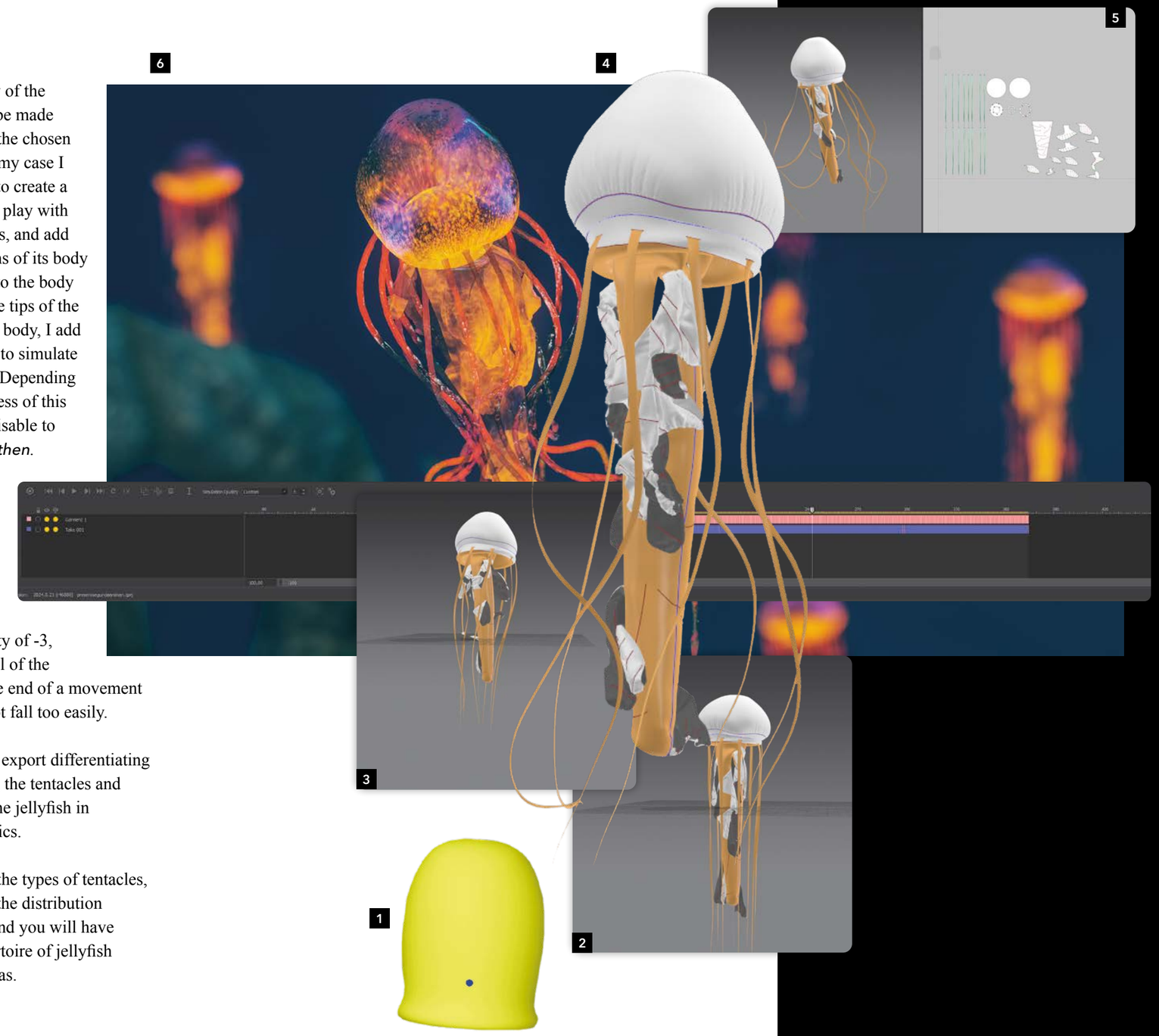
The body and tentacles can be worked in different ways. The outer tentacles can be posed as fine fibers composed of two patterns with the normal maps inverted to each other. It is advisable to apply *Strengthen* in these patterns so that they have a more realistic movement when simulating.

The body of the jellyfish can be made according to the chosen reference, in my case I have chosen to create a conical body, play with transparencies, and add the expansions of its body by sewing it to the body pattern. At the tips of the addons to the body, I add internal lines to simulate rough edges. Depending on the thickness of this part, it is advisable to apply *Strengthen*.

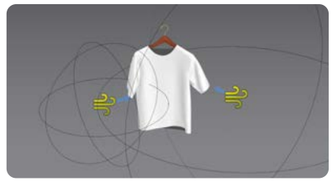
For a correct simulation, emulating an underwater movement, I apply a gravity of -3, so that the fall of the patterns at the end of a movement cycle does not fall too easily.

Finally, I export differentiating the head part, the tentacles and the body of the jellyfish in different fabrics.

Change the types of tentacles, the quantity, the distribution of the body and you will have a whole repertoire of jellyfish to fill your seas.

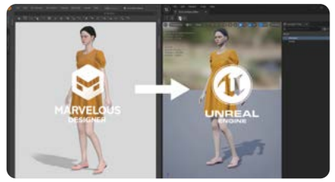


WHAT'S NEW IN MARVELOUS DESIGNER 2024



Multiple Local Wind Controllers

Open up the possibilities for the creation of marvelous animation with more **Wind** interactions. **Wind** can be tricky sometimes and that must be expressed on clothes!

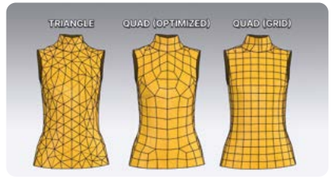


Marvelous Designer LiveSync

From ***Marvelous Designer*** to ***Unreal Engine*** with a single click. Send accurately simulated garments, avatar, and animations to ***Unreal Editor*** and make adjustments in real-time, eliminating needs of file exports and imports.

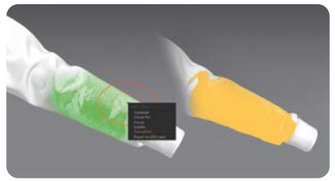
Video Capture

Exporting video of your simulated garments in motion is now possible. This allows for you to share videos with others including supervisors in studios etc.



Automatic Retopology

Optimize your retopology workflow by setting the amount of faces required. First version available with "***Marvelous Designer 2024.0***" and will be upgraded with the upcoming updates.



Partial Strengthen

Affect specific areas of your patterns to be affected by **Strength**.

Softbody Simulation

Upgrade ***Marvelous Designer's*** male and female avatars with soft body deformation functions for more realistic fits.

EveryWear

EveryWear is a feature package designed to enhance your ***Marvelous Designer*** creations for digital environments such as gaming, the metaverse, and entertainment. It streamlines the integration process by eliminating the need for repetitive Level of Detail (LOD) tasks. With tools such as **Auto Fitting, Rigging, Texture Baking,** and **LOD**, you can effortlessly incorporate your designs into any digital space.

Auto convert to avatar

Bring your avatar into ***Marvelous Designer*** in the easiest way. Choose a gender and a range of ages and adjust your custom avatar with ***Marvelous Designer's*** converter, which will be integrated as part of your avatar folder for fast access.

COMING SOON TO MARVELOUS DESIGNER

AI Texture Generator & AI Graphic Generator

AI brings efficiency to the texture workflow, from prints and mosaics to basic textures that allow to visualize or conceptualize designs in the most accessible way. Additionally, the **AI Graphic Generator** enables you to input keywords, effortlessly producing a variety of texture images for you to select and create designs.

Animate Wind/Gravity

Animate wind and gravity of simulation caches, allowing you to create more dynamic and realistic animations.

Soft Selection

Engage with garments using enhanced simulation tools with ease, allowing for the dynamic customization of interaction parameters.

Animation Data Support in USD format

Animation data will be exported with **USD file format**. Cloth animation caches can be transferred to other **DCCs** using **USD**.

WHAT'S NEXT?
MARVELOUS DESIGNER'S USER-FOCUSED MINDSET

Exclusive Tutorial for User Community

Exciting news! Our tutorial page is now live. If you're a ***Marvelous Designer*** subscriber, finding your learning materials and staying current with industry trends has never been easier.

No more struggling to search for tutorials across different platforms! We're dedicated to simplifying your learning journey, allowing you to focus on skill enhancement with minimal stress. We've expanded our partnerships with tutorial creators to bring you a more extensive array of learning materials that cater to your specific needs.

Our First Academic Tour in 2024

SHOWCASE THE SEAMLESS INTEGRATION OF REALISTIC CLOTH SIMULATION INTO PROJECTS.

Starting from January 2024, we have kicked off our Academic Tour, visiting academic institutions across the United States and Canada. In our first journey in January 2024, we had the privilege of visiting the ***School of Visual Arts and Pratt Institute***. During these visits, we engaged with numerous enthusiastic students and educators, delving into discussions about ***Marvelous Designer***.

This opportunity allowed us to showcase the seamless integration of realistic cloth simulation into projects, eliminating the need for complex setups or time-consuming processes. Through live demonstrations and workflow sessions, we were able to highlight the user-friendly aspects of ***Marvelous Designer***.

We are eager to extend our reach to as many academic institutions as possible. If you are a faculty member or representative of a university, we welcome inquiries and look forward to connecting with more educational communities! **(support@marvelousdesigner.com)**

CVF eCLOsystem
+ ALL AT ONCE ACCOUNT SYSTEM

CLO Virtual Fashion

About CLO Virtual Fashion.

CLO Virtual Fashion's mission is to empower everything related to garments – from concept to design, manufacturing to marketing, and fitting to styling.

Our All at Once Account System

In order to create a more seamless connection across all ***CLO Virtual Fashion*** products and services, we are introducing a new account system. With a single email address, you can now access all our products and services.

Our range includes 3D fashion design software, digital content management, virtual collaborative workspaces, an open marketplace, and a community platform. All these elements are interconnected, aiming to provide users with a more creative, efficient, and enhanced experience while maximizing the value of each garment.

Bid farewell to workflow interruptions. You can now directly access ***CLO-SET*** and ***CONNECT*** asset libraries from ***Marvelous Designer*** without the need for extra logins.

CVF eCLOsystem
CLO VIRTUAL FASHION'S SOFTWARE AND PLATFORMS

CLO Virtual Fashion

Changing the World with Virtual Garments.

Evolved from the word "**clothing**", **CLO Virtual Fashion**'s mission is ***to empower everything related to garments*** – from concept to design, manufacturing to marketing, and fitting to styling.

With more than **20 years** of research and development in accurate garment simulation, we are leading the market by digitally creating, merging, consolidating, and converging all components related to digital garments through our state-of-the-art 3D Cloth Simulation Algorithm.

From 3D fashion design software, digital content management and virtual collaborative workspace, to open marketplace and community platform, all of **CLO Virtual Fashion**'s products and services are interconnected to provide users with a more creative, efficient, and enhanced experience, while maximizing the full value of each garment.

Our product portfolio includes:

3D Design Software
- **+ CLO** for apparel designers and fashion brands
- **+ Marvelous Designer** for 3D artists in the gaming, animation, and VFX industry
- **+ Jinny** for non-professionals to create 3D costumes

Virtual Collaboration & Creation Workspace
- **+ CLO-SET**

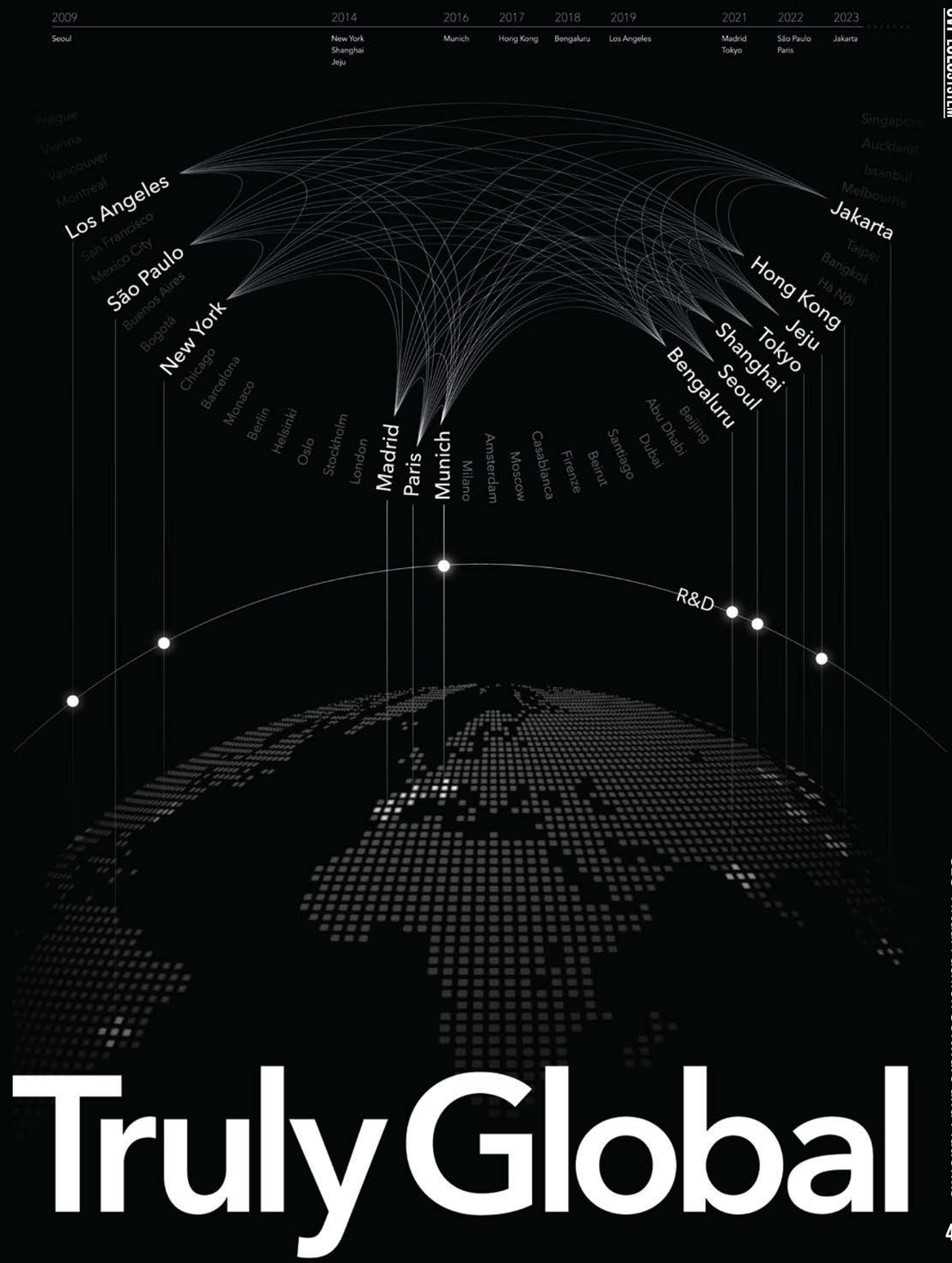
Fashion Creatives Community Platform
- **+ Connect** by CLO-SET

Integration plug-in system
- **+ CLO-Vise**

By touching each and every step of the journey of a garment, we envision our technology and solutions to create a new ecosystem to bring countless benefits to the industry. Building efficient and sustainable workflow, reducing production time and cost, enabling higher accuracy and quality, we believe our solutions are leading the innovation to bring the world where every real garment is tagged to a virtual garment, and vice versa.

CLO Virtual Fashion is a global company with 12 offices in over 10 countries including New York, Los Angeles, Munich, Madrid, Seoul, Jeju, Shanghai, Hong Kong, Tokyo, Bangalore, São Paulo, and Paris.

CLO



Truly Global

WHAT WE PROVIDE

3D FASHION DESIGN SOFTWARE

CLO
Software for the clothing and fashion industry that realizes design, production, fitting, and runway in virtual space based on 3D cloth simulation technology.

WWW.CLO3D.COM

MARVELOUS DESIGNER
Software that is primarily used in computer graphics and VFX, gaming, and movie animation.

MARVELOUSDESIGNER.COM

JINNY
Software that allows you to create virtual costumes optimized for the metaverse without knowledge of pattern making.

CONNECT.CLO-SET.COM/JINNY

VIRTUAL COLLABORATION AND COMMUNITY PLATFORM

CLO SET
A collaborative 3D creation workspace that maximizes the value of the 3D assets by bridging stages of the product life cycle in one centralized digital space.

STYLE.CLO-SET.COM/ABOUTUS

CONNECT
A global community of fashion creators and an open marketplace where they can share portfolios and create a network.

CONNECT.CLO-SET.COM

SOLUTION

CLO-Vise
A management system for all products and manufacturers with digital assets to reduce production time and enable efficient communication.

WWW.CLO3D.COM/EN/ENTERPRISE/CLO-VISE

GALLERY

NEWSLETTER ARTWORK BY OUR VERY OWN MARVELOUS DESIGNERS

Back To School
Time to go BACK TO SCHOOL! Witness how *Marvelous Designer* can craft an adorable backpack.

© Reina Ko 2023.08

International Peace
In celebration of International Day of Peace.

© Sherry Yao 2023.09

Halloween Bat
Ready to make your own Halloween costume or creature? A Halloween bat with *Marvelous Designer*!

© Megan Dellario 2023.12

© Brandon Yu 2023.11

Thanksgiving Pop-Up Card
Wishing You a Joyful Season of Gratitude – a special Thanksgiving card using *Marvelous Designer*.

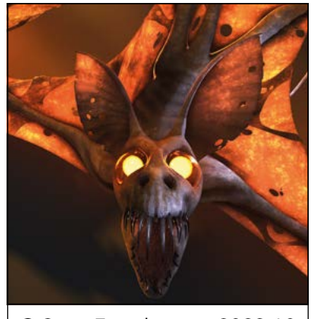
Winder Dress
The presence of a woman exudes timeless sophistication, weaving seamlessly into the tranquil ambiance of the winter landscape.

© Brandon Yu 2024.01

Year of the Dragon
Dragon crafted with *Marvelous Designer*!

© Reina Ko 2023. 08

© Sherry Yao 2023.09



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© Brandon Yu 2023.11

© Sergio García 2024.02

Spaceship
We've crafted the exterior of a *Marvelous Spaceship* through a workflow utilizing *Marvelous Designer* to complement hard-surface modeling.

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https://connect.clo-set.com/portfolio/99263/collection

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