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SCIENCE FICTION ARTIST IN-DEPTH INTERVIEWS

Digital Art LIVE

'SECOND SKIN' ISSUE

'PIXELUNA'

PAOLO CICCONE

DEANE WHITMORE

ISSUE TWELVE
SEPT 2016

VUE • TERRAGEN • POSER • DAZ STUDIO • REAL-TIME 3D • 2D DIGITAL PAINTING • 2D/3D COMBINATIONS

Developing Derivatives of the DAZ Dragon 3 in ZBrush

Learn to build Appealing Variations to vend in the DAZ 3D store

Sat 15th/Sun 16th October 20:00 BST/12:00 PDT/15:00 EDT

Live Webinars Includes HD Recordings

DAZ Dragon 3 Quest

Join us on this quest to discover some **fantastic variants of the DAZ Dragon 3**. By the end of this mini-course, you'll **know how to generate some clever derivations of the standard DAZ Dragon 3** by the use of morphs. Along this journey you'll **gain some essential ZBrush skills** in order to produce your own compelling reimagining of this model.

Most importantly, **the DAZ 3D store has already indicated they would be pleased to sell the best of these variants that you create**. PLUS we've agreed to create a sale on the DAZ 3 Dragon with DAZ 3D, so you can take the model for yourself to play with and create your variations.

We're going to be working in ZBrush 4R7 and as long as you have a basic knowledge of ZBrush, you should be able to follow along with what we're doing.

We recommend you **come along to both sessions** to get a comprehensive understanding of how to create compelling new Dragon 3 versions.

Session 1 : Saturday 15th of October – DAZ Dragon 3 Tour and Anatomy

- A complete tour of the DAZ Dragon 3
- An examination of dragon anatomy
- Building morphs for iterative designs of dragon 3

Session 2 : Sunday 16th of October – DAZ Dragon 3 Tour and Anatomy

- Gain ZBrush skills to build the morphs
- Making the morphs work for your in DAZ Studio

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BONUS

Poser and DAZ Studio Best of CHARACTER Artwork

Saturday 1st October 20:00 BST/12:00 PDT/15:00 EDT

Create more **IMPACT** with your character art

Learn essential tips to get your character artwork **NOTICED**

Have you wanted to create more impact with your character art?
Want to learn a whole series of valuable tips that can get your character artwork noticed?

Join us for this webinar with looking at the **very best examples of character artwork published** in our magazine **since 2010**.

During this session you'll learn:-

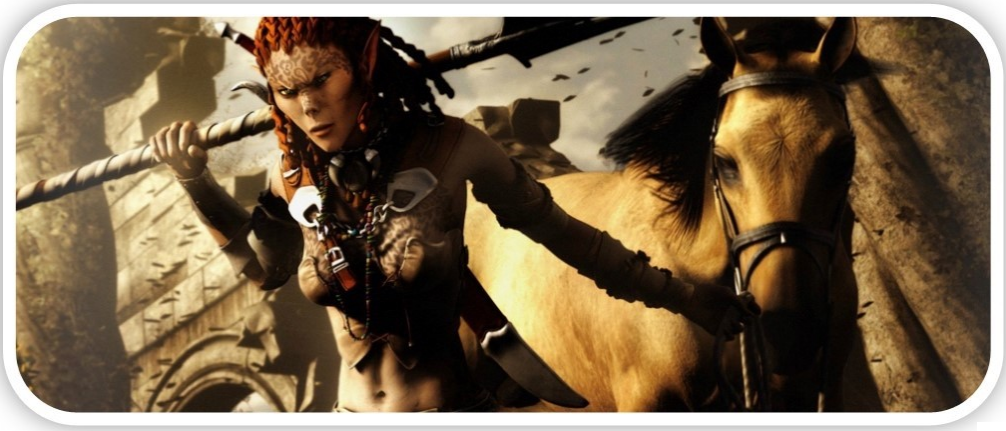
- What makes good character art
- What makes a good pose
- How expressions can make or break a scene
- Good composition for characters
- Placement of the virtual camera
- Dramatic lighting for a scene
- Telling a story in a scene
- Some good lighting techniques for characters

We'll include examples of artwork generated by both Poser and DAZ Studio.

DAZ Studio and Photoshop artist **Esther Mann** will be our special guest and she'll be presenting what she's learned in producing outstanding character artwork that **tells a story with impact**.

Date, Time and Duration

Date : Saturday the 1st of October.
Start Time: 20:00 BST (London)/12:00 PDT (Los Angeles)/15:00 EDT (New York)
Duration: 1.5 hours



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BONUS

SHARE YOUR EXPERIENCE

SHARE YOUR CREATIVE STORY

We are actively looking for artists or content creators that would enjoy the opportunity of teaching other artists in a live setting.

Would you like to work with Digital Art Live as a partner in presenting some of our live webinars? We're particularly looking for artists and content creators with DAZ Studio and/or Poser in mind.

Use the link below to submit your application and we'll get in touch!

https://digitalartlive.com/presenters

Past and Present Presenters : Syyd Raven, Eric Van Dycke, Paolo Ciccone, Kim Schneider, Charles Taylor

Front Cover:
"Reality Sisters" by Rian Bergwerff.
Daz Studio and Reality.

'SECOND SKIN' ISSUE

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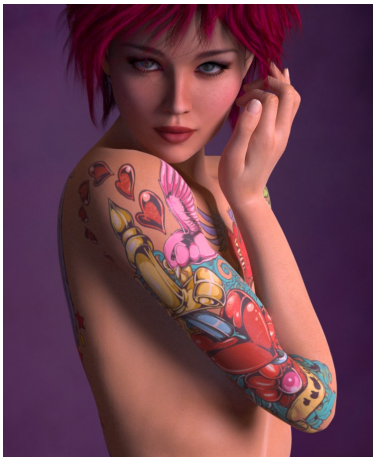

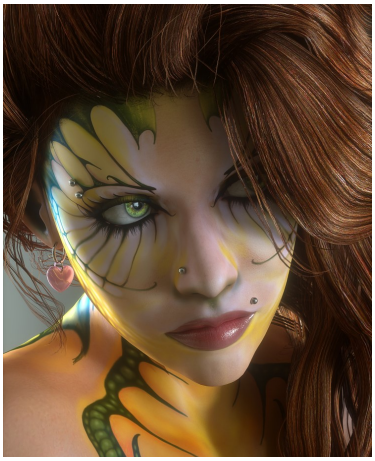

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Credits for pictures, from top left: detail from "One of a Kind" by MadamGoth; detail from "Tuning In" by Sandra Bauser at www.sandrabauser.com; detail from "CosmicSynx" store character promo by 'Pixeluna'.

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EDITOR'S LETTER

WELCOME...

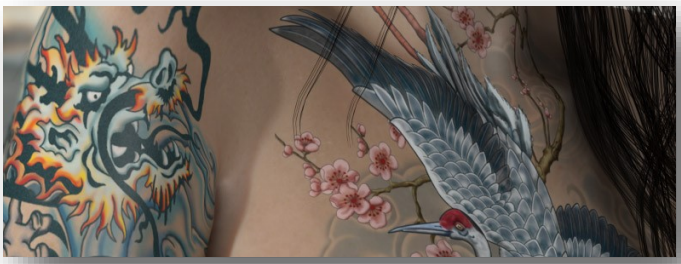
"The digital art medium allows for precise and delicate imagery on the skin, much more than what can be achieved in the real world with a tattoo. So as we thought about the theme for this issue, we realised that there was a wealth of fantastic artwork that deserved to be promoted in demonstrating these advantages.

Rendering the canvas on which this artwork goes is no mean feat. Skin material has proved problematic in rendering accurately until more recently. It's a complex material involving multiple layers. Different skin layers absorb and reflect light at different amounts. Physically based rendering, taking into account physical rules of light and materials can now render skin with accuracy. By including the rules of sub-surface scattering, the ways that light interacts with translucent materials- and then applying these in the render engine have made the best advances for realism.

Our expectations are high. We are very familiar with the detail of skin, of which we are acutely in touch with every day. The finest visible features such as small wrinkles and skin pores are 0.1 mm in size of which we notice. So the anticipation of a life-like character does depend on the aspect of accurate looking skin.

I think Pixeluna in her interview hit the nail on the head as to why the digital medium provides a great way to explore skin artwork without having to necessarily experiment using your own skin!

" I really love to draw and paint but… who will buy them? No-one that I know of, so I apply my doodles to the skin of the 3D characters that I make. People love them then, because the skin designs I make are detailed and unique. I am crazy for tattoos, especially the intricate and colorful ones, but I'm so scared of needles… so my 3D girls get tattooed instead!"



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PIXELUNA

Digital Art Live talks with **Pixeluna** about Poser and DAZ content development, tattoos, collaboration, switching to the DAZ Store, and the making of her fabulous 'Arcane Seer' character (right).

DAL: Pixeluna, welcome to Digital Art live magazine. Do you prefer 'Jenny',or 'Pixeluna'?

PL: My friends call me Jenny, but I'm better known to the 3D community as 'Pixeluna'.

DAL: I see, thanks. Let's start with your early days. You were trained at university in advertising, I understand? That's a somewhat unusual creative foundation for 3D artists, in my experience. Tell us about that, please? What was it like, and where? And how has it then fed into your art and content production?

PL: As a young girl I found my love for art and enjoyed drawing comics and fashion clothing designs. I eventually went to the University of Santo Tomas in Manila, the capital of the Philippines, studying Fine Arts and I majored in Advertising. This gave me a broad base of knowledge to apply in various art fields. When most people hear "major in Advertising" they only think of the layout side of the process of making an advert. Advertising is actually very broad and it covers many things. Such as fashion design, photography, product development of a consumer item from production to print, animation, radio and TV marketing strategy, even creative practices such as ceramics and pottery, printmaking, and silkscreen printing, to name just a few.

DAL: Has the advertising profession changed since you were at university?

PL: Things were so different back then, when an advertising layout could be done without the aid of image-editing software and computers. Everything was done by hand, pens and camera-ready colour separation process using an acetate sheet and white board.

DAL: Wow, that sounds like good training, though. I understand that many degree courses today force the students to do at least some of their course work 'old school', non-digital, just to keep those skills and approaches alive. They're found to be very useful in learning, re-shaping the pathways in the student's brain.

PL: Eventually the times change and the I saw the use of computers being implemented at work. And it did make the job much easier.

DAL: Yes, in production it's much quicker. Tell us about how you first encountered Poser 3D art,please? How and where did that happen?

PL: Ah, well… I discovered Poser in 2008 while browsing for a 3D program at Fry's Electronics. I was looking for something that I could use for my magazine layouts. I purchased it more out of curiosity, but that was when I got hooked by it and… the rest is history.

‘PIXELUNA’ / JENNY

USA

DAZ STUDIO |
POSER |
PHOTOSHOP |

WEB

Picture: Extended version of the main promo image for Pixeluna’s “Arcane Seer” character, available for Poser and DAZ Studio.

DAL: Was there anyone who especially helped and encouraged you, in the early days?

PL: In the early days with Poser, most everything I learned with the software was self-taught. As I got more involved in the 3D community, I met several influential friends. Some of the earliest friends were 'Shadownet', 'Ghostman', 'StudioArtVartanian' and 'Midnight Stories'. I worked on several projects together with 'Ghostman' and 'Shadownet', and continued refining my skills. We eventually moved to RuntimeDNA where I met Syyd and Eric ('Traveler'), who were very helpful in learning DAZ Studio.

DAL: I understand you've also been an active collaborator on making 3D content, when you were at Runtime DNA. With 'Ghostman' and 'Shadownet', for instance? How did that process work out for you?

PL: The best part about collaborating with them is that we split the work, based on our specialties. We start each project by brainstorming and sharing ideas, then I make a comprehensive sketch detailing the front, back and side of the outfit and props. Next step, 'Ghostman' models the outfit and 'Shadownet' rigs it, while I make the textures.

Then we test the product ourselves, or even past it on to our testers. The last stage is making the library content and my favourite part, promos.

DAL: Yes, well, the process certainly pays off. You've made some of the most striking of recent fantasy and cyber figures for DAZ/Poser. As a popular DAZ/Poser content vendor, you recently moved to the DAZ Store from Runtime DNA, after the DAZ purchase of RDNA. Has that move been a success for you?

PL: Yes, I am very pleased with how things have turned out.

DAL: What's your view on what 3D content vendors need to offer to their customers at present? Apart from their usual 'high quality' and 'compatibility' needs?

PL: I'd say that they should offer unique and original products that are worth someone having in their content library. Products that can be used with many possibilities are more appealing.

DAL: I agree, 'unique but flexible'. Where would you like to see the DAZ/Poser scene 'go' in the future? What new trends do you see emerging? On price, content diversity, usage,all sorts…

PL: Well, it seems that the trend nowadays is realism in renders, 3D printing and computer gaming. I've seen more and more vendors are opting to offer commercial licenses with their bundled products. As for the price and content diversity, there are those who stay in their own comfort zone and others are starting to break out from their shell and then a new wave of style and content is born.

DAL: Yes, I suspect we'll see a new surge and probably new styles from users in what in the UK is the 'new baby boom', a surge of kids who will be starting in on 3D creation from circa 2021 onwards, becoming older adolescents 2023-28, and then surging into the universities and long-term apprenticeships circa 2026-35. We have a few years to wait yet, but I'm very hopeful for that future generation that's currently the amazing baby boom we've been having here in the UK over the past five years, and which shows no sign of stopping any time soon. We seem to have babies and toddlers everywhere you look, and the supermarkets usually now dedicate two double-sided aisles to romper-suits, nappies, toddler clothes, baby food etc. Midwives are worked off their feet, and infant school reception classes are so full that the kids are almost falling out the windows.

So... it's very encouraging to think that this critical mass of kids and their creativity will be bursting into the world circa 2020 onwards. And of course there will be so many opportunities for them to earn over the Internet. Talking of which, so you think you might become a full-time content maker/vendor? Or are you that already?

PL: I'm just about full-time with my content development. What I love about this business is that I can fit it around my busy lifestyle.

Picture: promo images for Pixeluna's "Arcane Seer" character, available for Poser and DAZ Studio.

DAL: Sounds great. This is our special 'Second Skin' issue, on tattoos, cyber-skins and skin plugins. What's your favourite 'go-to' item in your runtime, for getting creative and 'making a picture' which centres on skin?

PL: I don't actually have a 'go-to' item *per se*. I like to research a theme or idea to build a concept and much of my content is made from scratch and hand drawn.

> "From my studio windows I can see cacti, xeriscapes, and scorpions."

DAL: You make a number of tattoo based content packs, which you sell on your own store and also on the DAZ store. Where does your interest in skin tattoos come from?

PL: Well, here is the short explanation. I really love to draw and paint but… who will buy them? No-one that I know of, so I apply my doodles to the skin of the 3D characters that I make. People love them then, because the skin designs I make are detailed and unique. I am crazy for tattoos, especially the intricate and colorful ones, but I'm so scared of needles… so my 3D girls get tattooed instead!

DAL: Yes, the whole "forty hours being prodded with a needle" thing is somewhat off-putting! I very much like your fantasy 'Arcane Seer' character / clothing combo, which also has a strong skin element. Could you talk us through her making, please, from start to product launch? The workflow, the tools… you can 'talk techie' here.

PL: Oh, thank you. I've mentioned the workflow process earlier, but I can continue that with describing making the Arcane Seer skin. First, I gather the fancy textures that I like in a folder. It can be a leaf, a tree bark or 'alien skins'. I use Photoshop and create my own brush and style, by combining two or three of these textures. At this point, I have already saved the character OBJ file that I can import to Photoshop and I then paint the texture on a separate layer. If it looks good to me, I merge it down. Merge down the layers in Photoshop. This is also the best way to work on seams. When all the textures have been built and saved, I then open my Poser software and apply the materials to the figure, render the character. I can then make sure that all material seams were covered. I play with the shaders, adding the bump maps, displacement maps, and so on until I'm satisfied with the effect in the render.

Then, I save the full material that users will see applied to the Arcane Seer skin to the figure. Then the thumbnails for the content library are made. And lastly, the promotional image layouts are composed in Photoshop.

My process has changed a little bit recently, since I have been focusing on DAZ Studio these days.

DAL: Thanks. So you use an extra utility software for content production?

PL: I'm a little 'old school' and so I do not use many plugins, as I like to do my work by hand. I mainly use DAZ Studio, Poser and Photoshop for content creation. I am already satisfied with what such software can offer right now. If anything, I wish Photoshop had a better rendering system and an improved integration with other 3D programs.

DAL: If *Digital Art Live* could dip into the office's magic 'Dobby Bag' and lift out a new 'Super Magic Helpful Software' that would help your work, what would it look like?

PL: Mmm, well… maybe that would be a software that can do *everything* that Photoshop, DAZ Studio/Poser and ZBrush can do, all rolled into one. That would be useful!

DAL: Do you do any clothing design in real-life? Is there a cross-over from 3D back into some form of real-world creativity?

PL: Yes, I did! I've designed my sister's bridal gown and also worked as a designer for a clothing company back then, specializing in casuals and sportswear.

Picture: promo image for Pixeluna's "Mitsuko".

DAL: Right, that must have been very useful experience for content production. What the view from your studio window like? And whereabouts are you in the world?

PL: From my studio windows I can see cacti, xeriscapes [low-maintaince 'gardens', designed for sustainability in very low-water desert environments], and scorpions. I live in the southwest region of the United States. It's extremely hot during the summer and very cold in winter time.

DAL: Xeriscapes, that's interesting, I hadn't heard of that name before. Wow, so that environment sounds very cool. Well… *cool* if you have air-conditioning and good heating — which I imagine everyone does there.

/Laughter/

Is there a good scene there for the local creatives, or are you mainly reliant on the Web for like-minded people?

PL: Just like most everybody in this business, I have more online friends than locals.

DAL: So, what about travel? Where would you most like to visit, and why?

PL: Italy and France, to see the historical remnants of art such as the masterpieces of our famous painters and sculptors, and the architectural buildings in Athens, Greece. These are great destinations that will widen my inspiration and to see the things I've only seen in books, magazines and movies.

DAL: What media are you a fan of, these days? Especially in terms of science-fiction?

PL: I really enjoy science fiction movies with a good story line. ArtZone, DeviantArt and Pinterest are also places that I look at to stir the imagination and gather ideas for my projects.

DAL: I see. And who are your favourite inspirational artists these days?

PL: I have so many inspiring artists in my list. Just to name a few, I love the works of Alphonse Mucha, Norman Rockwell, Luis Royo, Boris Vallejo and Julie Bell.

DAL: What would you like to try that you haven't had time or chance to get around to?

PL: I would like to paint big wall murals, learn how to sew matching dog-outfits for my pug dog, and paint on ceramic home *décor* items.

DAL: If someone was thinking of making a move into making and selling 3D content, what three tips would you give them?

PL: First, believe in yourself and know your specialty. Research is your best friend. Never stop trying. These are the three important things that taught me how to stay in the art business. It applies to both real life work and in my 3D business.

DAL: Thanks. Yes, early research is important, if only to make absolutely sure that someone else hasn't done it before. It saves you time in the long-run, as long as one is disciplined about it And it's even more important today, because we absorb so much media every days, and so may then unconsciously re-use someone else's concept months or even decades later. And there there's always some fan somewhere who will pick up on that.

Also, would you recommend having a specialist do the promotional store pictures? I often think that store pictures don't do a product justice, though yours are fabulous of course!

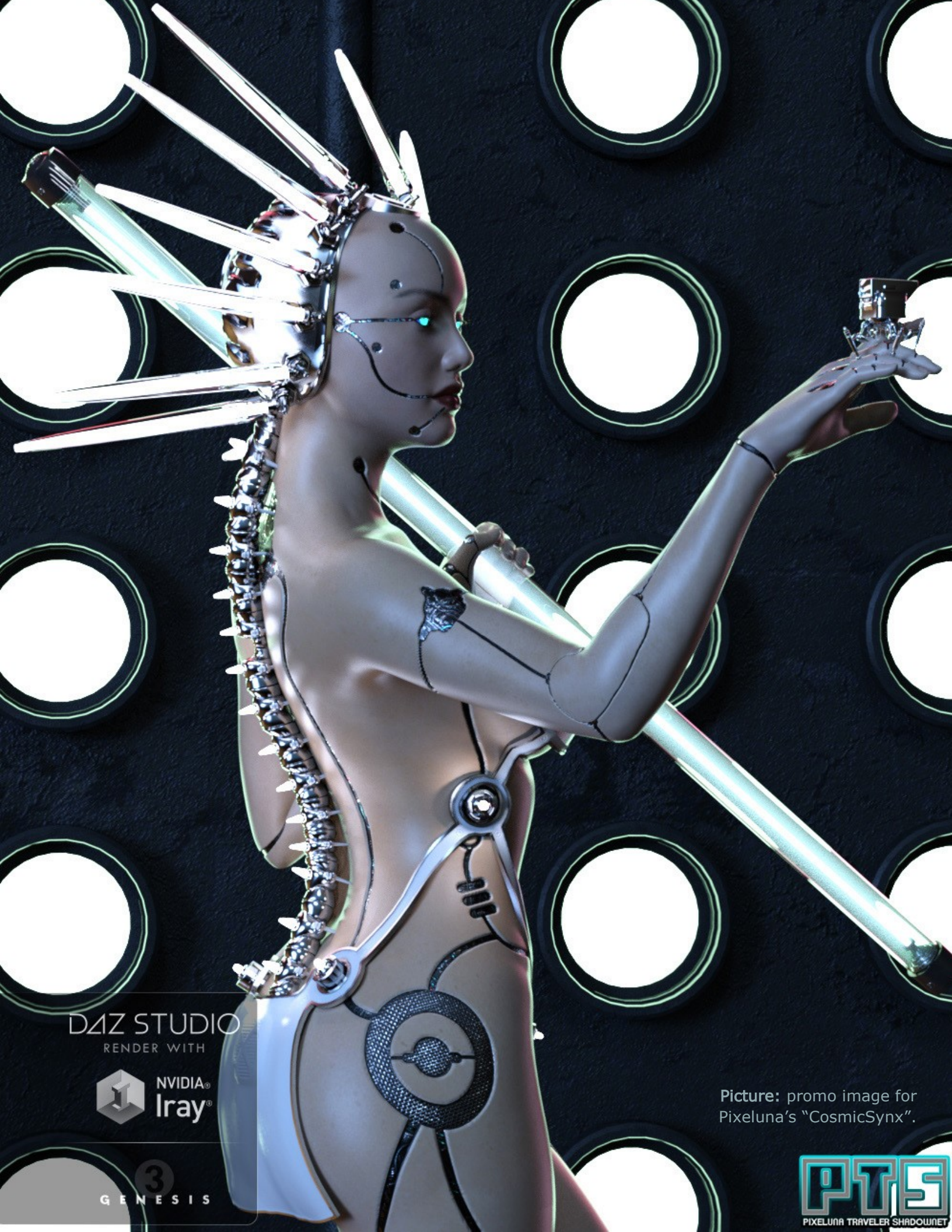
PL: If layout is not your *forte* then hiring a by-the-hour specialist may be the way to go. That's easy to do these days. It depends on how much a specialist will cost compared to how much you expect to make on the product. The promotional images set the first impression of the product.

DAL: That's great, thanks for this interview, and we wish you all the best in the future.

PL: Thank you, it is an honour to be featured in your magazine!

Pixeluna is online at:

http://pixeluna.deviantart.com/



Picture: promo image for Pixeluna's "CosmicSynx".

PTS
PIXELUNA TRAVELER SHADOWNET

Pictures: promo images for Pixeluna's "Domina".

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Every new issue can be sent to your email address, simply by subscribing to our mailing-list...

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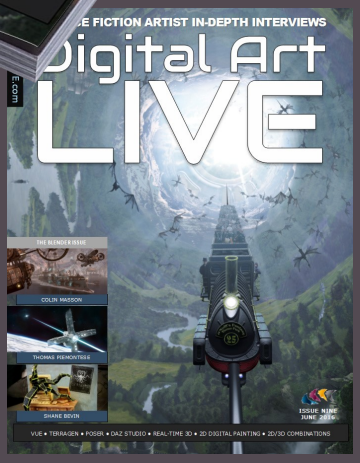

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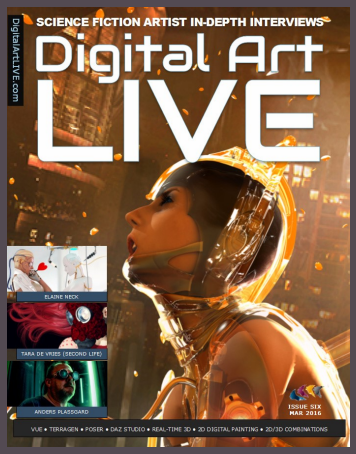

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PAOLO CICCONE

Picture: Reality render by Peter von Stackelberg.

Digital Art LIVE chats with the Reality plugin author and developer **Paolo Ciccone**, about 3D skin, skin settings, Apple Mac support and more.

Paul: Welcome again, Paolo, to *Digital Art Live*. As the author of Reality, the rendering plugin for Poser and Daz Studio, we thought you would be a good fit with our special Second Skin issue on tattoos and skin patterns and sci-fi markings.

Paolo: Thank you very much, Paul. It's a pleasure to be here again.

Paul: Now… skin. I think it's an interesting material and it's quite a challenge to render realistically, until maybe relatively recently. Why do you think that skin was a challenge for 3D artists to represent realistically?

Paolo: That's a very good topic. Well, skin is a very complex material, first of all. I mean, objectively skin is not like plastic. Plastic is just a shiny surface with a pigment in it. The first 3D renderers, they were all pretty much rendering skin as some type of plastic. And still today, whenever a new artist starts working with 3D and that person doesn't have much experience, the results are often "plastic-ky". Skin is a very complex material. It's a flexible material. It's made of many different layers and there are many different colors involved in the layers. Just looking at your hand, you see general skin pigmentation, but then there are the veins, so you can clearly see the bluish tint of the veins. Then, if we look at the knuckles, we see that there are areas that

are more reddish than other parts of the fingers, other parts can be a little darker. And then if you look at the palm of the hand, it becomes more reddish, pinkish. So there are many different hues even in the same spot, in the same area.

Skin is made of layers, and then these layers have a certain amount of moisture, and finally we have hair on the back of the hands, sometimes also on the lower fingers. So it's a complex material and it's the one thing that we look at the most. They are in my field of vision. All the time. Because we know very well and it's very hard to fake it with technology.

Now, traditionally, 3D renderers, before the PBR, the physics-based rendering revolution, they were designed to stop rendering whenever the result was good enough. So the inherent design of the program was to not be as accurate as possible, just accurate enough to trick our eye. Well, that can be done with some other materials, but with skin is much, much harder to do that way.

With the advent of PBR we can simulate the scattering of the light under the surface of the skin, 'subsurface scattering' in the jargon. That extra quality of the image that really makes it more credible.

Paul: I think what surprised me when I was reading up this week, I didn't know that the multiple layers of skin absorb and scatter light differently. I had assumed that each layer would be at the same.

Paolo: At the surface of our skin, most of the surface of our skin is actually dead skin. It's little flakes, you know. They say a good portion of dust, you know, the dust we see in the air is actually dead skin. And if you have a cat, it's also cat fur!

Paul: So how can the Reality plugin help with realism with skin materials in a render?

Paolo: Well, Reality uses a renderer called LuxRender. We were the first to do this in the Poser and Daz Studio universe – we're celebrating six years of Reality, so this interview is really right on time. I actually think the Reality is the reason why we now have so much widespread PBR rendering today in this market. We popularized the technique; we popularized the idea that you could have a PBR render from Daz Studio or Poser.

> "I added an option to render just a portion of the animation. Let's say that you have animation Poser or DAZ Studio, and that animation is 200 frames long and you want to just render 50 frames in the middle — now you have that option."

The old rendering, the biased rendering, is like using oil color, oil paint to draw a realistic image. There are some artists, not many, but some artists, who are *really good* at doing this. They use traditional paint and canvas and they can also create photo quality images. As you can imagine, that takes an incredible amount of skill and it's very good at a certain distance, but it doesn't hold true at the close up. It was a technique that was used in Hollywood for creating some special matte backgrounds. Of course, it only works when the camera is looking at it and there's a certain distance. But step closed and… it's made out of paint. So that is the traditional way of rendering through biased rendering.

Then we have PBR, and PBR is like photography. It's basically recreating the quality of light and the quality of materials using a very precise physics emulation. And with that, it is now possible to emulate all kinds of materials, not just skin. Then we are able to emulate what happens in nature, but we do it inside a computer or do it with software.

So Reality was able to use LuxRender, and LuxRender is an open source project, so there isn't any kind of commercial motivation behind their project. It is designed to create the most accurate emulation of physics in a renderer. That is the main goal of LuxRender.

And so, in adopting it, I was able to bring that technology to the market before anybody else and provide a very accurate result. Over time we tweaked it. We made it better and better and better. In Reality 4 there is a skin material, and this can be automatic when you enable it. Many times it is assigned automatically by Reality in the right way, but if you apply it manually, it will generate a very realistic approximation of skin. Of course, Reality skin comes by default with subsurface scattering included.

It has a couple of different techniques involved. There is the normal glossiness, translucency applied, and there is subsurface scattering, which is done through the inclusion of volume, which basically if you look at your, I don't know, your Genesis or Victoria 4 shape, this is a model, and inside, you know, generally they are empty. Well, Reality puts a volume. Think of a volume as kind of a fog or a mist. So it puts a mist, a volume inside that shell, and so it makes the material that is the outer shell translucent so the light goes through the material, hits the volume, bounces back through the translucent material.

So that emulates basically what happens with the real skin. On top of that, I added also a touch of a Fresnel material in the mix. A Fresnel material is kind of a metallic...it gives a little metallic sheen. And so, with just... generally, 10% of it, it gives that amount of reflectivity we see on the surface of the skin. So all these elements together when centered to a physically based renderer, they create this great material, which looks very, very, very similar to skin.

Paul: Now, I think there's a couple of subsurface scattering parameters in Reality.

Paolo: You don't want me to explain those, do you?

Paul: No, but I was thinking, I know I've seen in the forums that that automatic application of the skin material is really popular with people. They really like that in Reality, because it does a good job. There are also parameters you can tweak. I was looking a few up and... you can change things like the surface thickness of the skin, absorption scale and scattering scale.

Paolo: Right.

Paul: So, do you have any tips on those or don't they change around much...?

Paolo: Well, my suggestion is to generally *don't change* those unless you have a good reason to do so. Because I literally poured hundreds of hours in trying to come up with the right settings. A lot of that was empirical, because it's a combination. You see, the problem is this, a long time, so I see people trying to tweak one parameter and expecting a certain result. What is challenging there is that many of these parameters *influence each other*. So there's a bit of a delicate calque going on in there. Of course, if you want to create a sci-fi alien skin, then tweak.

Of course, there are also all the skin shades. We have all the shades in between, we have all kinds of different hues. One thing is interesting. The layer *underneath* the skin is the same for everybody. The underlying element is made of blood, which is the same for everybody's skin. The same thing is in SSS in Reality. The layer of volume is designed to provide that kind of blood color that is under the skin. There is a great demonstration of this when calibrating professional video cameras. We use an instrument there that gives us a graph of the colors that are visible in the frame. This graph is actually like a… it's kind of like a colour wheel, which we are generally familiar with.

There is one slice of color. There is a range of color that indicates the skin color. So let's say that you have your camera. You're interviewing somebody. That person is sitting on a chair. There is a wall behind that person. There is a table, some flowers. So you're pointing the camera, you look at this color chart, which is,

Picture: by CakeOne, a Reality render as a promo for his "FangTastic" content at the DAZ Store.

you know, very generic. It doesn't show shapes. It just shows the amount of colors in the scene. There will be all the colors for different elements and then there will be a part of the color wheel that indicates how much skin color is in the frame.

Well, what is interesting is that that skin color portion will be always the same regardless of what is the race of the person in front of the camera. It doesn't matter. It's not registering the pigmentation at the surface, but it's actually registering what the camera considers skin tones, which is blood, and it's the same. The camera is actually blind to... it's colorblind, you know. We say the expression colorblind for meaning not, you know, taking notice of any racial difference. The camera is, in fact, completely oblivious to that because it's registering the blood underneath the skin.

In terms of the Reality settings, unless you have some specific reasons to change, then it's best to leave it the way it is. Sometimes you want to change a little bit of the hue. So, for example, there is an absorption color and there is a scattering color. So, the scattering color, it means really the color that is coming back to you once the light is hitting the inside of the volume. Now all this stuff is extremely subtle because there is the outer shell of the skin. So everything is filtrated by the skin, but underneath that is the scattering. If we think about the volume as a volume of mist and if you've been trapped in the fog with a… you know, trapped.

I mean, if you've been driving in the fog with your car, you probably notice that it's not a good idea to use the high beam because then the light will be reflected right at you. You would not be seeing anything. You will be completely blinded by the light. Well, that's the scattering. That's exactly what scattering does to light. That volume has inside the figure using the skin material acts in that way. Now the absorption scale means that the higher the number, the more light will be absorbed. So basically there will be less light reflected out. Those numbers really, they should be kept in that way. They are good for many, many, many applications regardless of the pigmentation of the skin, as I mentioned before. Otherwise, I will say, you know, if you are creating an alien race, maybe they could be changed, but, you know, it's probably best to do on a case by case basis.

Paul: I know there's a light emission modifier in Reality somewhere. Could you use that to make the alien skin glow?

Paolo: Right. You could. Yes, yes, you definitely could do glowing alien skin. In fact, in this light emission modifier in Reality, you can even plug in a texture. So not only it will emit light, but you can create things like glowing veins. So you can have like a pattern of veins and you can make them green and emit light and they will appear in the renderer. Then you have to adjust the brightness of them carefully, but yeah, it can be done.

Paul: What would be good to apply on the skin for something like a repeating pattern of our tattoo, or something like that, without having to use Photoshop?"

Paolo: If you want to do something on the surface of the skin, you have to use the mix texture. So, in the diffuse channel, instead of using just an image map or a color, you would use a mix texture. The mix texture is a texture that basically mixes two different textures. You have texture A and texture B and you can mix them together with a certain pattern. You could have like a mix, in texture A, your basic skin texture, and texture B could be your tattoo or your pattern, and that could be just a solid color.

Let's say that you want to, I don't know, add some blue pattern on the skin for any reason. Then there is a third texture that is the mixer, and the mixer could be a procedural texture. Now, for people who are not familiar with the term procedural texture, a procedural texture is a pattern that is generated by an algorithm by your computer, by the software. It's not painted by hand. It's not a solid color. It's not an image. It's a pattern that is generated by the computer using certain mathematical rules. Many procedural textures are designed to create sort of a random or pseudo random pattern.

Picture: by CakeOne,
a Reality test render.

Picture: "Reality Sisters" by Rian Bergwerff. Daz Studio and Reality.

"We started providing presets on our website. So, for example, a preset for Victoria 7, a preset for the Austrani Outfit preset for G3, which is a great fantasy outfit. So you use the related product in your scene and Reality will be already configured for the best result."

Picture: "Audrey" by Feel-ine. Poser Pro and Reality.

You could use it for bump mapping, for example, to create bumps that don't have a recognizable pattern. They are good to simulate that situation. Other procedural textures, we have a procedural texture for creating bricks, for example. So, in that case, it's a very recognizable texture. There are others. And so basically with a mix texture that you will have in texture A your skin and texture B a color, for example blue, and in the mix texture you could have a procedural texture that creates a pattern, and that will basically mix the blue with the skin according to this pattern. Yeah, it can be done. It can be fun actually.

I will say as a suggestion try, experiment just for the fun of it without any specific goal. There is so much fun that you can gain just by spending an hour playing with the parameters and look what happens. You can set your image to a small format, a small resolution, so it renders quickly. Just try every type of procedural texture. And for each procedural texture, play with the parameters and see what happens. We could talk for hours about how to change one parameter or the other that are procedural textures. They have parameters like the noise amount or the brightness or contrast or the algorithm for the generation of this noise.

Many people have a speed goal: "Oh, I got to have this great image for my next graphic novel" and they're on a schedule or on a deadline, there is pressure. But we don't appreciate the learning process in that condition. So I suggest that once in a while we should just allocate an hour and say, "You know what? I'm gonna just *play with this* and see what happens," and then take note of the results. Sometimes you get a good result. Take a screenshot of the parameters and save it. You'll be using it in a certain situation later on. Procedural textures are very, very powerful and a lot of fun.

Paul: Plenty to experiment with. Tell us more about the textures that ship with Reality.

Paolo: We have fourteen texture types in Reality. When I say type, an image map is a texture type. The solid color is an image type. But then we have a mixer, the mix texture, that's another type, allows us to mix two textures together, and you can nest that process as deep as we want. Then we have things like bricks. We have things like clouds. There's called the fractal noise. There's all the stuff. There's all these things that are incredibly powerful and they *don't use nodes*, you know. A lot of times people think of procedural textures and they imagine this network of notes and noodles. There's nothing like that.

This is really point-and-click simple. It takes time to get familiar with them, like anything. If you want to play guitar, you have to put some hours to learn those chords. Even if you're playing four chords, you got to put the practice to know how to move from one chord to the other. There's nothing like practice. But the way it is organized in Reality is to keep things simple. So there are no nodes, there are no 'node noodles'. It's all point-and-click simple.

At least I think it is.

Paul: Now, Reality has been upgraded, isn't it? Since I've spoken to you last, there's been a 4.3...

Paolo: Yeah, actually I did a 4.3.1 just two days ago, but that was just a bug fix. But yeah, the 4.3 release, yeah, it was a good one, I think. I put some good improvements there.

Paul: One of the main differences for something called additional per-texture copy and paste. What's that?

Paolo: Right. Well, so that is something I wanted to have for a long time. Basically when you are working with materials and you're preparing like a skin or you're doing any kind of customization, you find yourself in a situation where… let's say I'm working on the face of the character and I found the right procedural texture for bump mapping. That could be a case. This is happening after I changed all the other materials. I already changed like the torso, the limbs, the hands, face, head, back of the head. So I already worked quite a bit, but then all of a sudden I find this new texture that

Picture: "Audrey" by TweezeTyne. DAZ Studio and Reality.

"… I found myself wishing I could do a copy and paste of the texture. So I can copy the texture for the bump map texture from the face and then *paste it* for the torso, hip, hands, and legs material."

works so well for the face and I'm thinking, "Wow, I'd like to apply this to all the other materials I already changed."

Well, there are other ways of doing it, but I found myself wishing that I could do a copy and paste of the texture. So I can copy the texture for the bump map texture from the face and then paste it for the torso, hip, hands, and legs material. Now it can be done. It can be done on a per texture basis, which we didn't have before. We had some other ways of doing it, but some of those ways it required a certain amount of planning ahead. So now you can do it at *any point that you want* and it works inside the same material like, for example, you can copy the bump map texture and paste it into the displacement channel. Works perfectly fine.

Or, you can work among materials and you can even copy and paste between objects, which we didn't have at all before. So it's just another way of making things easier and fun to do.

Paul: Now I think you've integrated a new version of LuxRender into Reality as well, which is 1.6. What's the advantage of that?

Paolo: Right. Basically 1.6 has introduced a number of fixes that they had to some issues that were visible in 1.5. For example, there was an issue with textures when using several types of lights. So when you had a smoother texture like what you find normally on a body and using the harsh sunlight or a very bright IBL that could happen with the accelerated modes, not with the CPU traditional mode, but with the accelerated modes that could show... There was a situation where some seams or some artifacts would show on the texture and they fixed that with 1.6.

Picture: "Claire's Ghost". Reality render by Peter von Stackelberg.

In general, it is optimized to render faster than before. It was a plug-and-play replacement. Didn't really change much there, but we did test 1.6 for a number of months before including it. It brings some more stability and more speed.

Paul: Is there anything else you'd like to mention about the new Reality 4.3?

Paolo: I did a couple of different fixes. There were some issues with the cloth material that have been fixed.

I made some new icons so that the look is fresher. Didn't change the UI, so it's still

familiar, but I added some very nicely stylized icons to make it easier to locate all the different parts of the interface.

I also added an option to render just a portion of the animation. Let's say that you have animation Poser or DAZ Studio, and that animation is 200 frames long and you want to just render 50 frames in the middle, now you have that option.

There are some other changes in the way the materials are handled. In the past, I didn't code sign Reality — now it is signed.

> "… yes, you definitely could do glowing alien sci-fi skin in Reality. In fact, in this light emission modifier in Reality, you can even plug in a texture. So, not only it will emit light, but you can create things like glowing veins. So you could have like a pattern of veins through the skin and you can make them green and emit light — and they will appear in the renderer."

So when you launch it from Windows or from the Mac, there will be no warning about "this is from an unknown developer!" and asking "do you really want to run this application?!". It's just we make it easier for everybody to trust and run Reality with confidence. I improved the documentation and improved the installer. There are bunch of bug fixes. It was a nice little update, but much more stability in there and easier workflow and more polished than before.

Paul: And you had a surprise phone call from a manager from Apple Computers.

Paolo: Yes. Traditionally we had a problem with Mac OS and GPU rendering because strangely enough, OpenCL. It runs beautifully in Linux, it runs beautifully on Windows, but it crashes dramatically on Mac OS. Same exact program. So I looked into this and said, "How is this possible?" And the reason is simple. The OpenCL drivers are actually part of the operating system in Apple Macs, which means that if Apple does not update them, then you are in trouble. Their drivers were old, were old, old, *old, old*. I wrote a blog post, which was called "Mac OS Users Unite". It was an open letter to Tim Cook, the CEO of Apple, saying, "Look, we have these great machines, this great operating system, we spent thousands of dollars for this architecture we love, then we spent more for a powerful GPU. We can't use it. And we can't use it because you didn't want to update the driver. So please, tell your people to update the drivers."

Well, two days later my telephone rings. I said, "Hello?" and there was the other voice on the side. Apple. They asked me for a certain amount of confidentiality, which I'm gonna respect. Yes, basically I emailed Tim Cook...

Now, with the new version of Mac OS, which is El Capitan version 10.11, they did update the drivers, and I'm happy to say that on the Mac now there is much better success rate than it was one year ago. It's a testament to Apple's willingness to listen to their customers. So they did improve, but it's not perfect. I would say there is a shift in Apple. They're advocating this platform called Metal, and Metal is where they are going now. It's my impression that they are shifting their priorities from OpenCL to Metal, which would be a really sad thing because Metal is *only* for Mac OS. As a developer I can tell you… we cannot develop for a platform that is not meant for 3D rendering.

Paul: So you were able to do a blog post explaining what the outcome with Apple was?

Paolo: Yes. I had an update in the blog saying, 'Mac OS Users Rejoice." So from 'unite' to 'rejoice' where I explained that we did have some success, some changes made in the OS.

Picture: "Obsidian" by 3Drenders. Poser Pro and Reality.

"PBR … It's basically recreating the quality of light and the quality of materials using a very precise physics emulation. And with that, it is now possible to emulate all kinds of materials, not just skin. Then we are able to emulate what happens in nature, but we do it inside a computer or do it with software."

Paul: Now, speaking about social media. I would like to speak about your Reality Facebook group, that's new. So tell us about this.

Paolo: Well, that was an interesting learning experience. I mean, we all talk about the power of social media. We all want to be on Facebook and, I don't know, *get a little bit of attention* from the billion and a half of people there. A few years ago, like two or three years ago, we opened a Reality page on Facebook, which still runs today, and we have a nice following there. I think we have close to a thousand followers. But there was something always missing there. Every week I have a meeting with Kim. Kim Frick is the social media guru for Reality. She's the one who keeps the social media world happy. We discussed this — how is it that we get the Likes, we get every week more Likes, but there is not much engagement that I see? I was surprised because I thought there must be a way for people to post their images, share anything that they need to share about Reality, their questions, but there was not much of that happening. So it turns that the Page, a Facebook Page is designed to have a sort of a one-way only flow. But if you want the kind of

Pictures: "Asteria" by 3Drenders. Poser Pro and Reality. "Reality Kitty Cats" by reality-Rian 'ikke46'. Daz Studio and Reality.

interaction between the different parties, then you have to have a Facebook Group. A Group. Who knew about that? I mean, these are subtle differences. We started the Reality Facebook Group exactly because we wanted to have that kind of interaction.

I mean, for me, social media make sense when people participate. It doesn't make any sense for me to plop some news in the page and never hear anything about it. I like it when there is engagement. So we finally understood the difference. It took some time. We created this new group, which just started.

It is summer so I had my own time off a little bit, but I'm gonna push more for the group and then I have to email our customers and let them know that it is there. Because we actually had a pretty good reaction and I see, in fact, that we have more posts in the Group compared to the Page, even though we have a very small fraction of people participating in the Group right now compared to the almost 2,000 followers in the Page. That was an interesting learning moment.

Paul: Your customers can just Google Reality Facebook group and find it that way?

Paolo: It's called Reality Artists, just search Facebook for **realityartists**, with a final 'S'. The group is open to everybody. You do have to submit the request to be included and I generally… either Kim or, I will enable the account. We can reply generally in a matter of minutes. Yeah, everybody's welcome.

Paul: Okay. What's next for Reality? Do you have any plans you can reveal at this stage?

Paolo: Actually, what I'd like to do is I spent quite a bit of time and energy in perfecting the automatic presets. We started providing automatic presets on our website. So, for example, there is a Victoria 7 preset. There is a preset for the Austrani Outfit for G3, which is a great fantasy outfit. So you use the related product in your scene and Reality will be already configured for the best result. I'm planning to provide more presets so that people can use some of the great products there are in the marketplace in the easiest way possible.

Paul: Okay, sounds good. Now, are there Reality purchase deals at the moment, for the current version?

Picture: "Ankhesenamun" by 3Drenders. Poser Pro and Reality.

Paolo: Right. There is a nice sale current going now at 40% off from our website, preta3d.com. $29.95 instead of $49.95. We have it for Poser and for DAZ Studio, and it works for Windows and Macintosh OS, both 32 and 64-bit versions. We don't charge separately for the 64-bit version whenever you purchase a license for Reality. You get older versions in that edition. There are two editions, one for Poser and one for DAZ Studio, they're separate. But once you buy a license for that edition, you get the download for both operating systems and for 32 and 64. It's completely open.

Paul: Paolo, it's been a pleasure speaking to you today. Thank you very much.

Paolo: Thank you. It's always a pleasure to talk with you and share the little I know.

Find out more about **Paolo** and his **Reality 4** plugin for Poser and DAZ Studio, at:

http://preta3d.com/

BIG CA

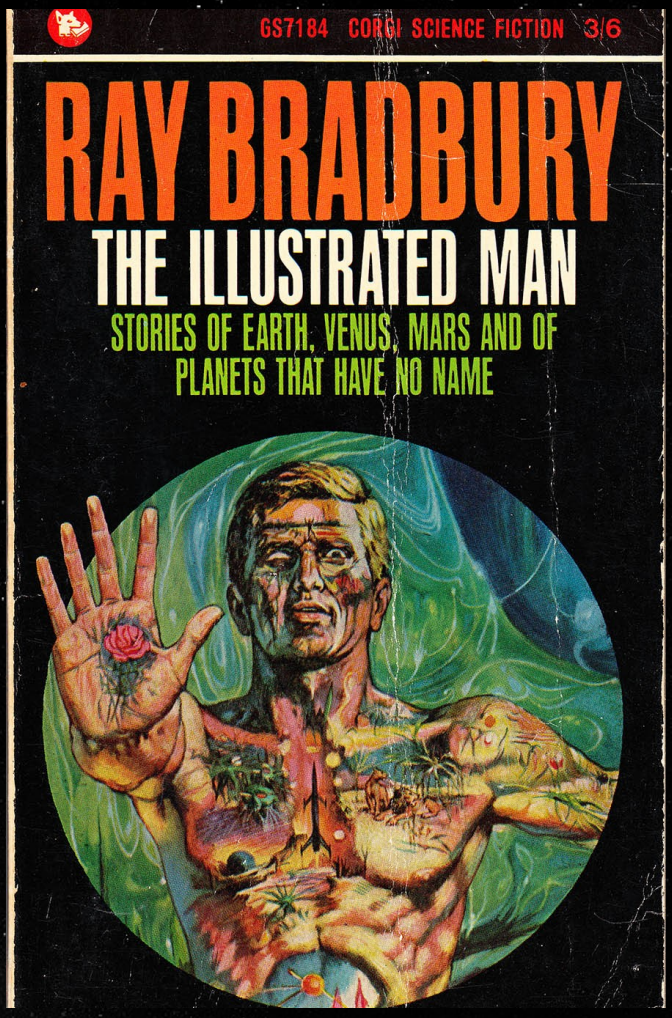
Our friends at **Hivewire 3D** kindly sent us three superb HD renders of their new **Big Cat** animal model for Poser and DAZ Studio. They're purrfect for our 'Second Skin' issue!

TS

Hivewire 3D's new **Big Cat** animal also ships with ten base preset poses, for easy action setup. Plus over 300 morphs and the control dials for them.

Big Cat also has an additional Black Panther texture skin, with lovely subtle mottling of the fur.

CREATIVE IDEA: circle with hand extending beyond it.



CREATIVE IDEA: disintegration blast partly shows skeleton.

SKIN IN SCIENCE FICTION PULPS

The Illustrated Man

Corgi Books paperback (UK) 1965.

How did publishers manage to *not* actually show tattoos on book covers for Ray Bradbury's famous 1951 science fiction story collection *The Illustrated Man*? The earliest cover I can find that actually dared to show tattoos was the British Corgi Books paperback of 1965 (above). Before that for nearly two decades they showed: silhouettes, through which one could see archaic cave paintings; or they used long-shots showing the Illustrated Man standing way off in the distance; and the U.S. Bantam paperback actually had The Illustrated Man with no tattoos at all, but rather burning — presumably so potential purchasers might associate it with Bradbury's more famous *Fahrenheit 451*.

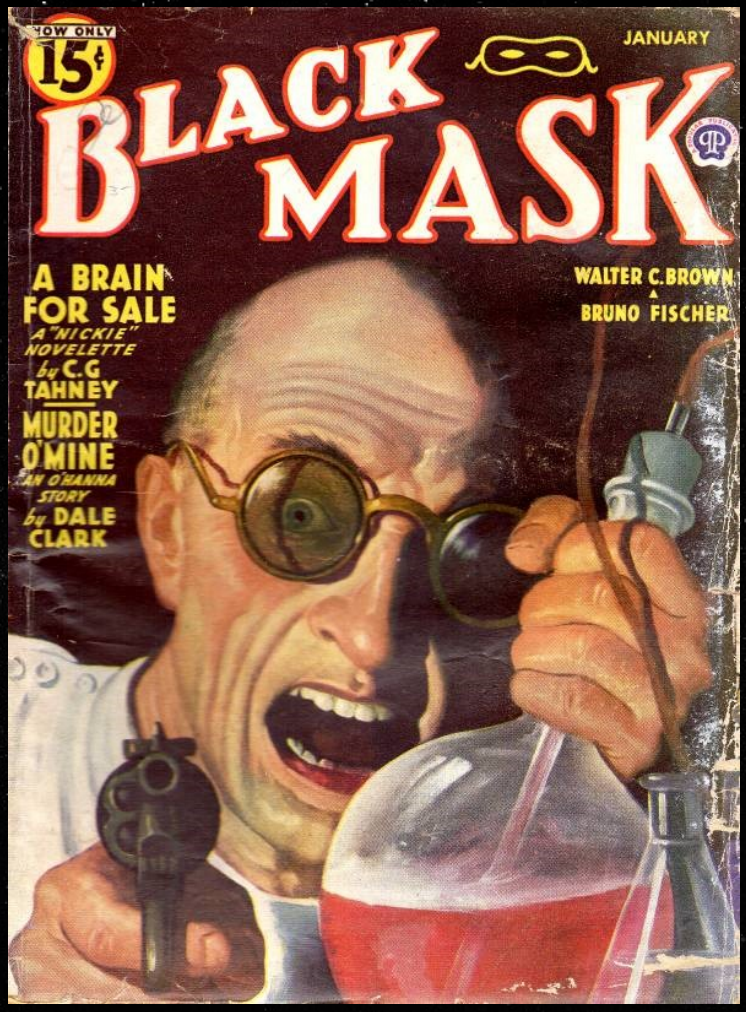
The Shadow

15th May 1942.

For many decades it appears to have been an industry standard that a publisher did not show tattoos on the covers of pulp magazines and cheap paperbacks. From what I can see, only from about 1970 did that industry convention start to break down in the USA. Yet in this striking 1942 cover for the famous *The Shadow* magazine, the industry seems to have no qualms about showing a macabre disintegration ray in action! The cover artist is uncertain but seems likely to have been by **George Rozen** (1895-1973) who trained at the famous Chicago Art Institute and was able to earn a good living from pulp covers in the 1930s and 40s. Here he depicts The Shadow encountering a villain called 'The Light' and using his disintegration blast powers.

CREATIVE IDEA: big cat seen in silhouette, dark skin.

CREATIVE IDEA: light/shadow reveals emotion and lines.



Astounding Stories

July 1939.

The classic science fiction 'planetary landing by explorers' story "Black Destroyer" was paired with a classic cover from **Graves Gladney** (1907-1976), then usually a cover artist on *The Shadow*. Gladney had been lucky enough to be able to train in the *ateliers* of Paris and the art schools of London before the Second World War, and was just establishing his pulp career when the War broke out. During the War he served in counter-espionage and was later one of the first into battle in occupied Europe on D-Day, landing in a combat glider behind Nazi lines with the 82nd Airborne. By 1945, as First Lieutenant Gladney, he led his combat division into the Nazi capital of Berlin. After the War he taught at the Washington University School of Fine Arts.

Black Mask

January 1944.

Atlas Publishing's *Black Mask* title wasn't science fiction, more crime and mystery. But here the magazine's lead story "Brain for Sale", and the classic 'mad scientist' cover art certainly seems to offer the readers a science fiction thrill. The dramatic lighting shows up the age lines and stubble on the face, and the dark glasses add to the sense of madness. The cover artwork is by **Rafael DeSoto** (1904 - 1992), one of the most prolific of the New York pulp artists. DeSoto had trained under Diaz McKenna in Puerto Rico before leaving for America and early work in advertising. He soon found pulp covers more lucrative and less pernickety than advertising work, and he produced a huge amount of covers from the 1930s right through into the 1950s. Then he switched to paperback book covers, as the pulp magazines faded away.

DEANE WHITMORE

Picture: "Porcelain Steel". Poser and the Octane rendering plugin.

Digital Art Live talks with New Zealand artist **'RGUS' (Deane Whitmore)** about tattoos, zebra skin creatures, mixing bits of multiple clothing and character packs, and never accepting caricature art commissions!

DAL: Deane, welcome to this 'Second Skin' themed issue of *Digital Art Live* magazine. Many thanks for agreeing to this 3D artist interview.

DW: Thanks very much for considering me, it's quite an honour.

DAL: Our pleasure. Could you start off by telling us how you first came to discover your creativity? Perhaps at school? Later on? Or did you train in some adjacent area of near-creativity?

DW: It all happened much later on. Although I was artistic at school, I soon dropped the freehand approach to drawing and I then trained as a draughtsman, so Technical Drawing became the norm.

DAL: Ah yes, I remember the terrors of Technical Drawing lessons at school, and the fearsome master who taught it. Set-squares, tracing paper, waxy pencils, massive amounts of maths expended on simply drawing a box. Very offputting.

DW: I eventually got back into more creative artwork, when stumbling over a free copy of the Poser software years ago. From there I hunted across the Internet for anything that I could learn using this new found media production software.

DAL: Yes, it's perhaps getting difficult to convey, today, just how exciting it was to discover Poser back then. When it was really the only pro-am and affordable and usable 3D software other than Bryce. Was there someone special who helped you or inspired you on the way, early on? Alternatively, what in science fiction or fantasy inspired you as a youth?

DW: Oh yes, there were heaps and heaps of very talented people on various Web sites. They helped me and made me want to explore and experiment further. All too numerous to list, and many of the sites are long-gone, but definitely it was the fantasy-themed artists who inspired me and my artwork the most.

DAL: What happened when you first made that the leap to 3D art? What were your first pictures like?

DW: The leap was by accident, it was just installing a very early version of the Poser software and thinking, "this is pretty cool". But then my first renders were actually quite difficult to get "looking right". I was trying too hard to get a sense of humour and realism *at the same time* into my images.

DAL: But you've obviously come a long way since then. Am I right in thinking that you're using DAZ Studio, and have now added the Octane rendering plugin? Or is it Poser that's being used with?

DW: I use both, Octane has been released for both DAZ and Poser, so it really depends on the props and characters that I want to use — as to which software package I use.

DEANE WHITMORE

NEW ZEALAND

POSER | OCTANE | PHOTOSHOP

WEB

DAL: How have you developed your art and themes over the past few years? Have you seen new approaches and ideas popping up?

DW: I have to admit, I do tend towards the realism a lot more these days. With the release of great new rendering engines and lighting techniques and presets, it's hard not to introduce things like a little more realistic skin in a render.

DAL: It's certainly becoming much easier to do good skin with a few clicks. The update and heavily reworked version of EZSkin for Poser 11 came out a few months ago, for instance. I did a little tutorial on that, and once you've learned it it's like "five clicks, and you're done". But what would you like to see added to DAZ (or Poser) and Octane in the future?

DW: Umm…. can't really think of much, straight off. If I do find a limitation in what I'm trying to do at the moment, then I find a workaround. With a little manipulation and imagination, everything is possible.

DAL: This is our special 'second skin' issue, so can I ask, what is the attraction of the tattoos and skin , for you?

DW: I see them as being rather like "a clothing item" for my characters. They "free the mind" a little and help your character to become anything you like. Most of the designs are creative in their own rights, so they almost don't need a character to drape themselves across.

DAL: Is there any DAZ/Poser content that you'd like to see in that regard, which hasn't yet been made? Or hasn't been made to your standards?

DW: More "real tattoo" textures, which use subsurface tetchniques, rather than tattoos that look like "bodypaint designs", that would be good to have in the stores. Looking at all the techniques in skin design and decoration today — I mean real skin, which one can see at the tattoo websites and in that subculture's magazines — I'd like to see more realistic tattoos on 3D models like that.

DAL: Your lighting in renders is very good. What would your 'top three tips', for newcomers to 3D and Octane. Poople who are working at getting their skin and tattoos and skin perspiration and atmosphere all done "just right".

DW: I'd say… get yourself a good set of HDRI images and then definitely start trying to render using an unbiased render engine — DAZ's iRay, Poser 11's SuperFly, or the plugins for those such as Octane and Reality. Spin the image around your scene, too, doing test-renderings of every "likable" position and then deciding which combination creates that perfect scene.

DAL: You've also done a number of science-fiction scene pictures, as well as your science fiction portraits. What is that still attracts you about science fiction, as opposted to fantasy or historical pictures?

Pictures: “A Kiss is Still a Kiss” and
“We Sail at Dawn to the North Sea”.

Pictures: "Be Sure the Love You Give Tonight" (detail).

DW: Anything is allowed in good science-fiction, which means you can put all sorts of things into a scene and still make it believable — if posted under "sci-fi". It frees your imagination and gives you options you can't get from other genre.

DAL: What are your thoughts on the push to ever-greater 3D realism in that area? Does that only work when there are many other elements of realism all anchoring the figure?

DW: No, realism is not necessarily all about lifelike textures, it can be achieved when the scene is believable, where the viewer actually takes a second look and thinks... "yeah, that could *happen*." Realism has a very broad spectrum these days.

DAL: I suppose what I'm asking is how does one plug "character" into a stock model? You do that every well, I think. Do you have any special methods for that, like making a backstory for the character before you begin? Or kit-bashing the runtime wardrobe so that it's different from what any other artist would use?

DW: It's true, I do love mixing multiple clothing and character packs and then presenting my ideas and combinations. Sometimes it works and sometimes I just run with the base clothing pack. It depends on the mood, the scene and the character underneath.

But any commentary on the final image is created after it is finished. I try to put a story to what is finally posted in the galleries, so as to give the viewer "a head start" into imagining what the final picture is all about.

DAL: Am I right in also thinking there's a lot of visual planning in your work, in terms the precision that you bring to the visual layout? It's almost like you have some secret 'graph paper and compass overlay' somewhere in your runtime!

DW: Proportions and layout is as important as lighting, I find. You can have a great character in a great scene, but without the correct and believable composition and layout, all could be destroy with a simple spin of the camera. I am never satisfied with just the one position of the camera or the character, both will get moved and spun in the scene until I feel happy with the layout

DAL: Is hair difficult, in terms of needing a lot of time to get it right? Often I notice hair in 3D renders, but with yours I don't tend to.

DW: It depends on the base hair model and the way the textures are applied to it. I think that the add-on shaders in Octane for hair make all the difference to most hair. That may be what your noticing, or not noticing.

DAL: Interesting, thanks. Could you tell us about your 'zebra skin' pictures? "Porcelain Steel" and "Retro Spec"? They have a really intriguing sci-fi vibe, like there's a lot of backstory going on behind them?

DW: I like to mix colour with monotones. In that context the striped patterns seem to stand out against crisp colours. The two images you mention have a similar theme, as if one striped character *transforms* into another. This is not intentional, but certainly there could easily be a story there…

DAL: Fascinating. Yes, I can see that now. Like the zebra rat is the girl, and they change back and forth. Kind of like a witch, who it was believed would travel at night in the firm of her 'familiar', which would be a rat or a cat.

DW: Could be.

DAL: Many of your gallery pictures are covered with the 'Contains nudity' badge on DeviantArt. What are your thoughts on the changing cultural attitudes to eroticism in pictures? Which has changed enormously, of course. Strict legal censorship through to about 1972, then the floodgates open for "in private" print publications, through to about 1992. Then the mass Internet since about 1998.

DW: I don't have any particular thoughts about this, except I like the freedom of the Internet and that way that it opens up so much more creativity. Poser and Daz Studio are character based software, they rely to a large extent in having a human figure in the scene, so by

natural progression, most artists using them are going to try nude or erotic images at some stage or another. I see no problem with this and in fact rely on it with most of my other images.

DAL: What other software do you use for your pictures?

DW: Oh, just Photoshop to put titles and borders around images or to just lighten and darken the final render. That's all.

DAL: So how long does the postwork take on an average picture? By the sound of it, not long?

DW: Yes, hardly none. That's because I don't have the skills to do postwork, so I rely on Poser or Studio to provide the final image.

> I like to mix colour with monotones. In that context the striped [zebra] patterns seem to stand out against crisp colours. The two images you mention have a similar theme, as if one striped character *transforms* into another. This is not intentional, but certainly there could easily be a story there…

DAL: What software would you *like* to use/learn, if you had the time and money?

DW: I would like to learn Photoshop, and especially using that with sets of hair painting brushes for Photoshop. Hair is to a 3D model like a coat of paint is to a car or house — it can make or break the image.

DAL: What's your working environment like… PC, home office, art studio etc? How long do your renders take in that setup?

DW: I work from home, on a fairly powerful PC. It allows most of my renders to take a couple of hours to do. This means I can render a scene three or four times, until I get things where I like them.

DAL: And that's in New Plymouth, New Zealand? Of course, everyone knows the NZ landscapes now because of *The Lord of the Rings* movies. Is it like that — step out of the back door and you're in Helm's Deep or stepping over some dozing Hobbits?

DW: Yes, actually. New Zealand is a group of relatively small islands at the bottom of the world. We have cold winters, fresh springs and *glorious* summers complete with our constantly fresh and breathable air. I wouldn't trade places to anywhere else in the world.

DAL: Sounds great. After the rather humid summer we've just had here in the UK, having summer days with "built-in air conditioning" sound fabulous. It must make for a productive working environment for a digital artist. Ah, now I was going to ask: I think I noticed that you take commissions on DeviantArt? How has that gone for you?

DW: Yes I do, but I don't do character impersonations. Because I find trying to reproduce real life people or "your last girlfriend's face" demanding, and what I produce *never* pleases the client, you can never get that sort of portrait right. So I'd advise people to avoid that market niche.

DAL: What keeps on inspiring you? And what ideas do you have for future art?

DW: Inspiration comes every time I post a new image to the galleries, and I see what other talented artists are doing. They drive me to learn more and do better. I think in future I'd like to change my image format to horizontal rather than vertical, I think there is still a world of compositions to be explored in this new format.

DAL: Great, well thanks very much for this interview.

Deane is online as **'RGUS'** at:

http://rgus.deviantart.com/

Picture: “Retro Spec”.

Pictures: "Peacock Perfect" and "The Sadness".

GALLERY

Picture: "Whiteout" by BohemianHarlot.

OUR FUTURE SKIN

Skin is a very ancient human canvas. The world uses our skin to paint its impressions onto us, via the inward flow of the senses. Heat, light, touch, pain, comfort. We also use skin as a communication canvas. Even when unadorned, our skin tells others the story of our age, our gender and more. But being human, we go beyond the natural — we tweak and decorate the skin, cover it with creams and perfumes, make-up, tattoos, we partially shave or groom our hair and so frame parts of our skin. We translucently veil, cover and uncover skin with our various clothing items.

Today our science, art and medicine all 'want in' on this very ancient skin game. All these disciplines will set out to transform our approaches to skin, over the next few decades. Already the combination of affordable plastic surgery and changing attitudes to tattoos are shifting our social attitudes to radical skin modification. New medical technologies will further boost this growing public acceptance: by healing burns and wounds; slowly releasing healing drugs; reversing sun-damage; adding healthy-looking tans; curing 'incurable' skin rashes such as psoriasis or eczema and more. Medicine will also want to safely embed devices and sensors under the skin, where they can harvest the warmth of the body for their power needs and stay out of the way of airborne gunk and infections.

Such skin based technologies will doubtless open the way to the widespread safe embedding of communication devices under the skin. These may not just be as humdrum as the equivalent of a 'mobile phone chip' under the skin. Devices may use the *skin itself* as their communication canvas, in preference to a digital screen. They may change the skin's light reflection properties, for instance. Those shiny forming bands on my wrist, while I'm dancing in a dance club? They mean my 'telepathic' skull-phone is set to receive — so just think the right sequence of thoughts in the right manner, and you can send me a 'thought-message'. Or a little skin-tickle, or both.

These sub-skin hardware devices may interface with year-long temporary electro-tattoos that rest just below the skin's surface. Tattoos that are actually nano-metal circuits, with integrated micro-sensors, acting as 'living' passwords and credit-cards micro-millimetrues under our skin. All set to interacting or serve as interfaces with pets, hover-port doors, loved ones, 'smart' clothes, entertainment AR holograms, self-driving cars, drone-deliveries, art drawing tablets and more. They will also be used as semi-medical devices, privately installed to help deal with low-level pain and stress, to deliver just the right cocktail of pain-killers, psychological reassurance, and visual alerts to loved ones. "When mummy's pointy ears turn neon-pink, that means she's had a stressful day but her pain-killer boost is are working fine now... and she's ready for a hug."

Scaffolding of skin growth, and rapid skin growth accelerants, may in future allow radical '3D tattoos' of living sculpted skin on our bodies. This may interface with 3D printing and anti-infection methods to enable a boom in DIY plastic surgery for artistic purposes.

Picture: "Gynoid 0x68" by TweezeTyne. DAZ Studio and Reality.

Want horns? Print, cut, dab, fix a 3D printed 'horn root', and then your skin accelerated-growth patch will grow the skin up around the horn armature. Once grown, the skin will then be subject to a hardening and red-colouring agent. What if we can then move further and meld such technology with ‘living’ body parts harvested from genetically engineering animals? Want some temporary head-fins from reptiles? Living feathers as eye-lashes? Real ram’s horns? What about having a super-tough and waterproof frog skin (‘Nike Hop-a-long’?) on the soles of your feet for barefoot running in the countryside or desert? Such DIY animal skin and horn grafts may become possible in future.

Stanford University has already created an artificial plastic wrap-on skin “that can sense and send pressure signals direct to the brain”. How long before this becomes a micro-mesh electronic skin that we can don and remove like stockings or gloves? Being nano-layer thin, perhaps we may even eventually ‘spray it on’ as electro-skin, just as we now spray on perfume or after-shave. Want to have luminous tiger-striped arms for an evening? Just spray on ‘Tiger-Man ElectroSpray!’ and the near-invisible electro skin will interface with your sub-skin mobile phone chip to display beautiful animated rippling tiger-stripes on your arms all night. Amusing as such novelty spray-on skin technologies might sound, in a more robust form they could also help us to better resist excessive heat, light, and moisture in industrial and similar harsh enviroments. Perhaps such technology will even help humans to live in space or under the oceans. It would certainly be very useful to have a skin infused with nano-particles that deflect dangerous cosmic and other space rays. Combined with skin that heals space-ray or cold damage far more quickly than usual. In alien environments, we may want skin that keeps dangerous alien or sea creatures away from us. Think: a human skin equivalent of the warning stripes on a wasp.

Of course, it may be that robots will do much exploration for us in future, and we will ‘look through their eyes’ using VR units. But even there we may wish the robots to look something like we do. That means adding believable and attractive skin on our robots. Such ‘nice robo-skin’ will be be especially necessarily for in-home medical care-bots and companion-bots.

⊙

Picture: "Android Dreams 2" (detail) by Sandra Bauser. DAZ Studio.

Picture: "Gynoid 0x58" by TweezeTyne. DAZ Studio and Reality.

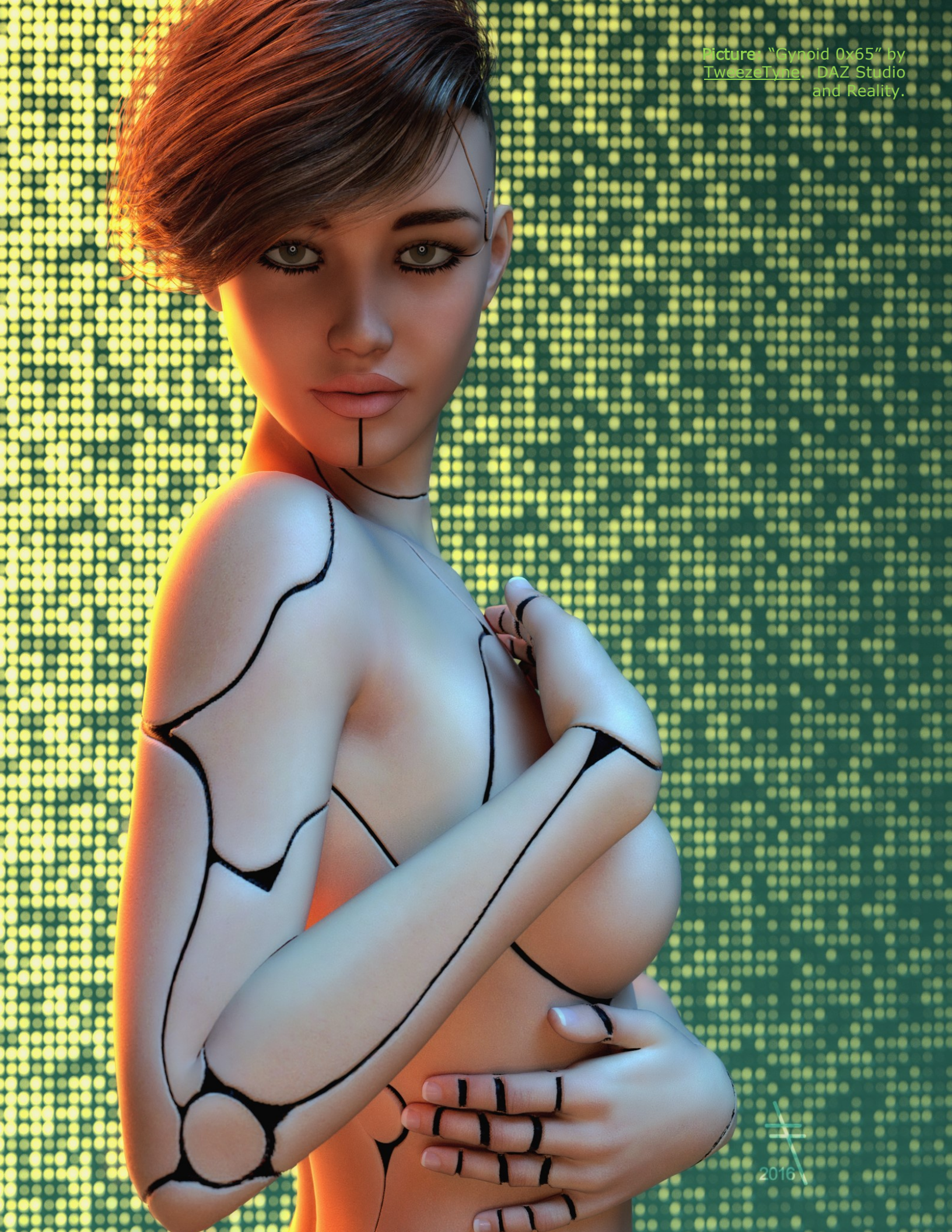
Picture: "Hishy" by Vince Bagna. Poser Pro.

Picture: by CakeOne, a Reality render as a promo for his "FangTastic" content at the DAZ Store.

Picture: "ME3: Jack" by Javier Micheal. DAZ Studio. Thanks to BioWare / Electronic Arts.

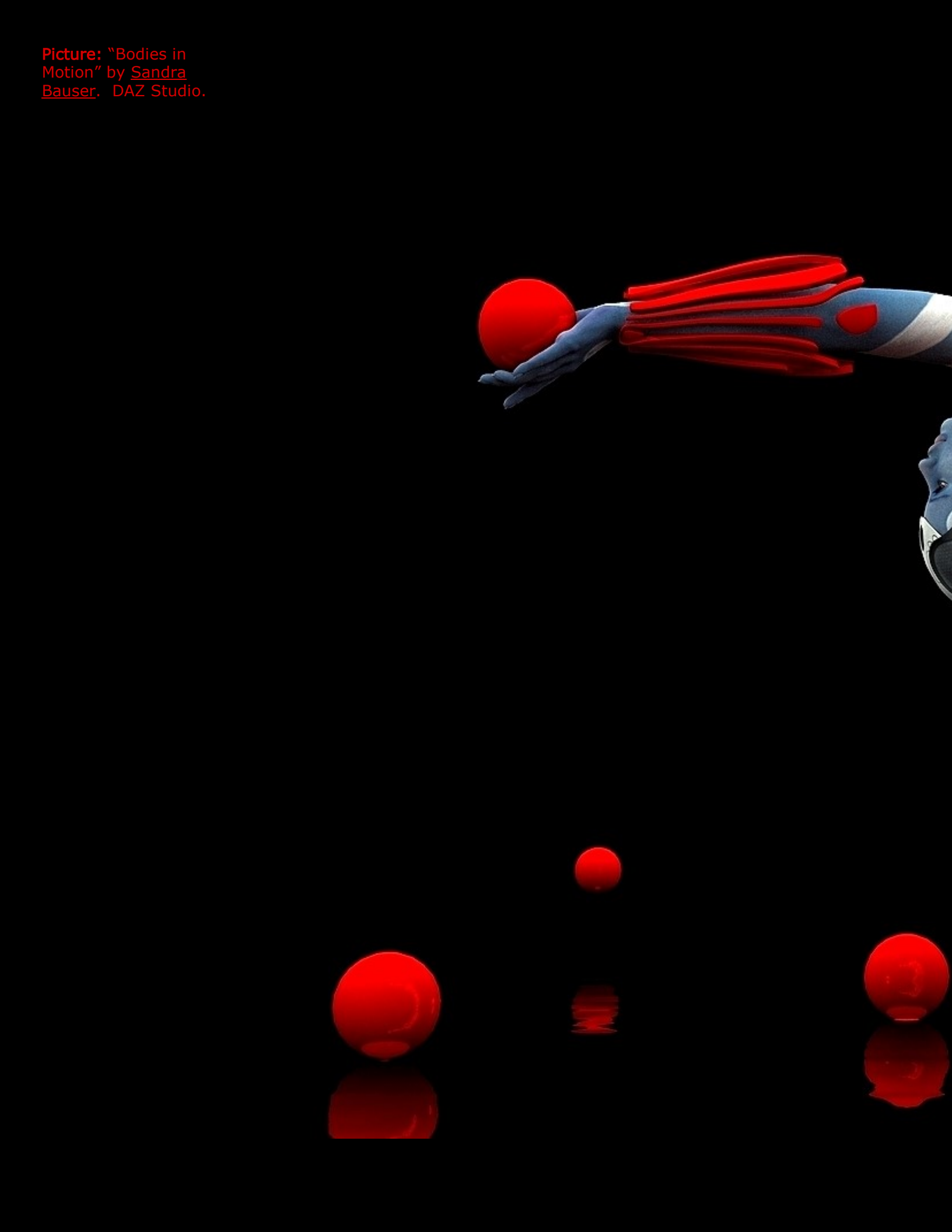
Picture: "Fetish 23" by TweezeTyne. DAZ Studio and Reality.

Pictures: "Try To Remember Me", DAZ Studio and Octane. "Shinra Tensei: Tears", Poser and Octane. Both by Guilherme Marconi.

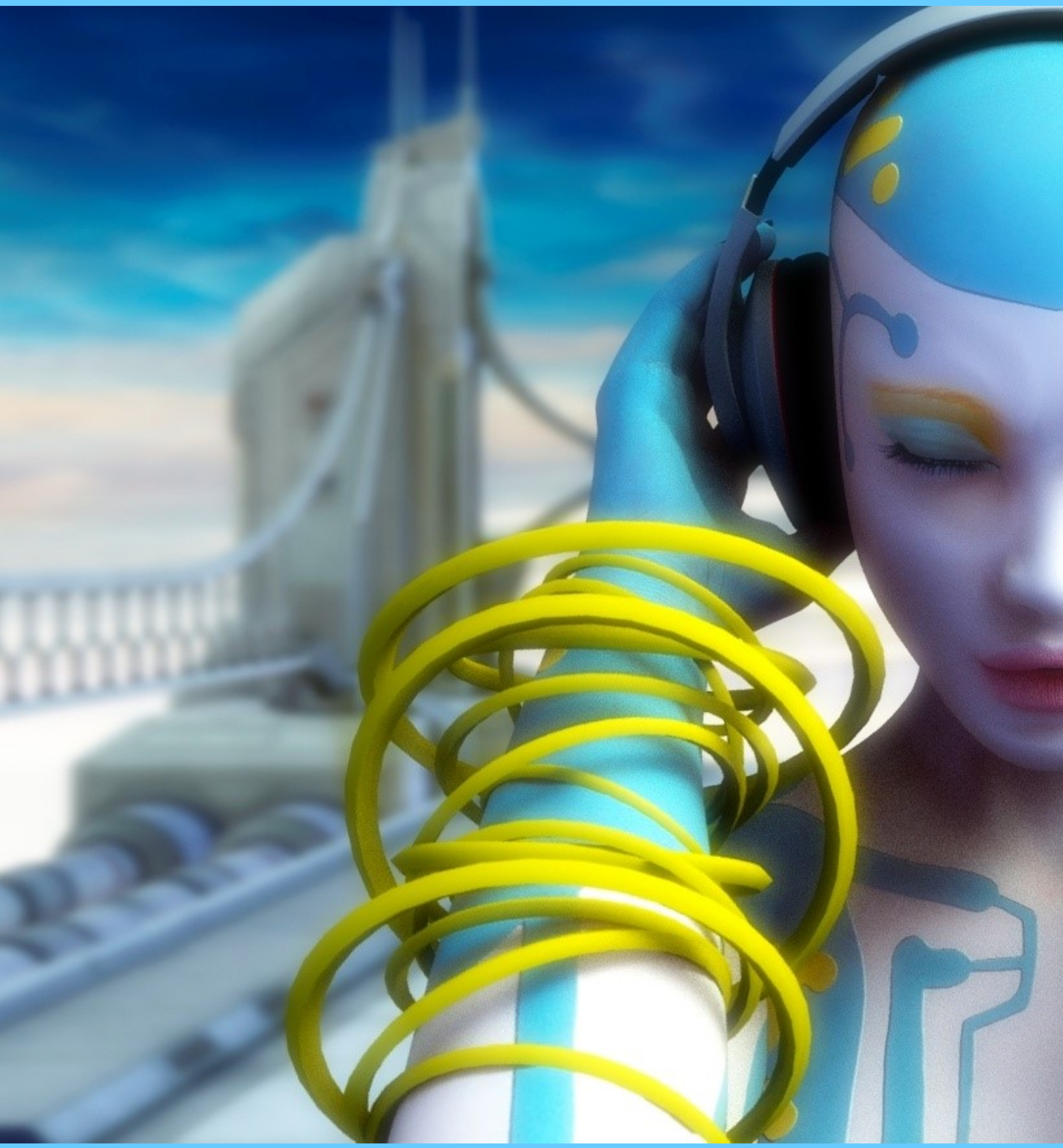

Picture: "Gynoid 0x65" by
TweezeTyne. DAZ Studio
and Reality.
2016

Picture: ""Daemoness" by Jeanette Thompson. Poser Pro.

Picture: "Bodies in Motion" by Sandra Bauser. DAZ Studio.



Picture: "Tuning In"
by Sandra Bauser.
DAZ Studio.



Pictures: "Digital Life" and "Gemini" by Rebecca Elsey, 'MadamGoth'. DAZ Studio.

Digital Art LIVE

Doctor Strange (2016)

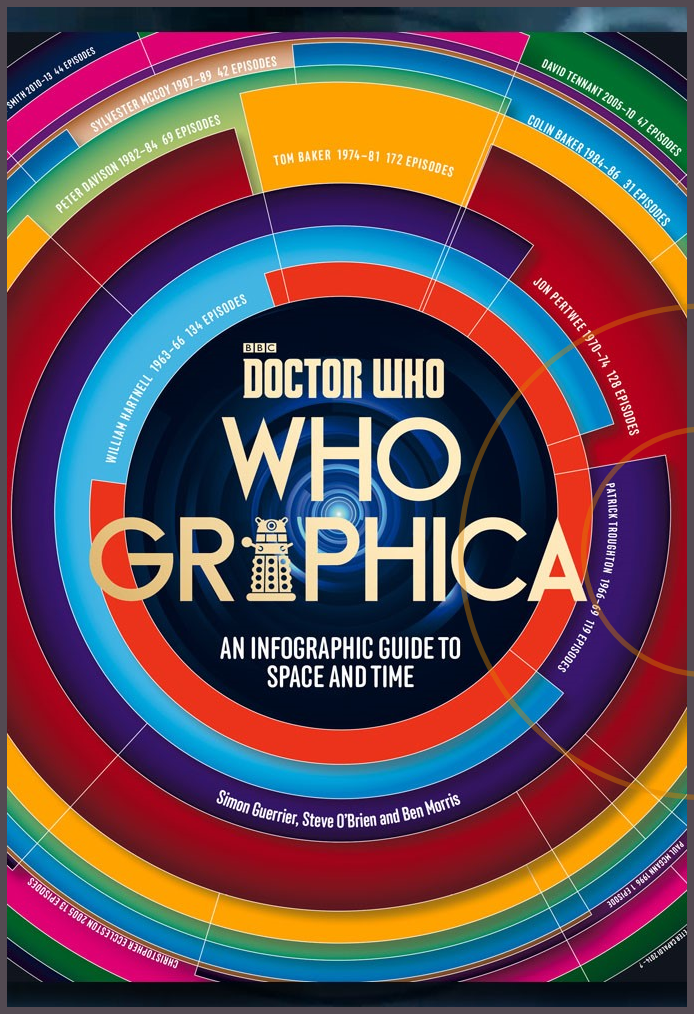
Many older fans are growing tired of all the 'teen-friendly' superhero movies. But Marvel's new *Doctor Strange* movie (4th November 2016) holds out the promise of something a little more intellectual than teenage angst and squeaky-tight spandex. Strange has always had a certain *cosmic* fascination, ever since the great Steve Ditko got hold of him in the 1960s, and the magician has more or less kept his allure over the years. It's promising that this major new movie has two top actors as leads, Benedict Cumberbatch and Tilda Swinton. Mads Mikkelsen supports as the villain Kaecilius (aka the Totally Unpronounceable One). Supernatural comic-book movies have not always seen great box-office success, but we're hoping this one will be somewhere between: the location-based clue-hunting of *National Treasure;* one of Ditko's classic inter-dimensional issues of *Doctor Strange*; and a good weird H.P. Lovecraft story.

IMAGIN

Our pick of the most inspirational art and science. Make your imagination LIVE!

ARIUM

Main picture: courtesy of Marvel Studios / Walt Disney.



Book: WhoGraphica

More fun than a Dalek in the dark, this colourful new Penguin book gives the famous British TV series *Doctor Who* the infographics and maps treatment. The authors explore the rich and eccentric history of *Doctor Who* through charts, maps, timelines and infographics that have more transdimensional 'tronics in them than a troublesome TARDIS. Follow the tangled threads of the Doctor's family tree. Discover the secrets of Dalek evolution. Trace the histories of some of TV's most imaginative sci-fi monsters and maniacs. Learn where and when to find the Doctor's home planet of Gallifrey. A perfect Christmas present to tuck under the tree, for the budding Who-vian scholar — just be sure that it *is* a tree, and not a visiting Treesicorr alien from the Planet EXmass!

https://www.penguin.co.uk/books/1111234/whographica/

Audio: Luther Arkwright audiobook

David Tennant (*Doctor Who*) plays Luther Arkwright. Who needs to know more, after such an intro? Well, *The Adventures Of Luther Arkwright* is a complete full-cast audiobook adaptation of the classic British underground comic by Bryan Talbot. *Luther Arkwright* (1978) was the first British graphic novel worthy of the name, and it still packs a punch today. It helps that it was solid steampunk before there even was such a thing as steampunk, although Talbot did owe quite a big debt to the 1970s *Jerry Cornelius* novels of Michael Moorcock. The audiobook's running time is three hours and it is currently (Sept 2016) available as a digital download from Big Finish at the bargain price of £5 (roughly $7.50). The TV and movie rights are also currently available, if anyone wants to make it into a TV mini-series!

https://www.bigfinish.com/releases/v/the-adventures-of-luther-arkwright-618

Documentary: Building *Star Trek*

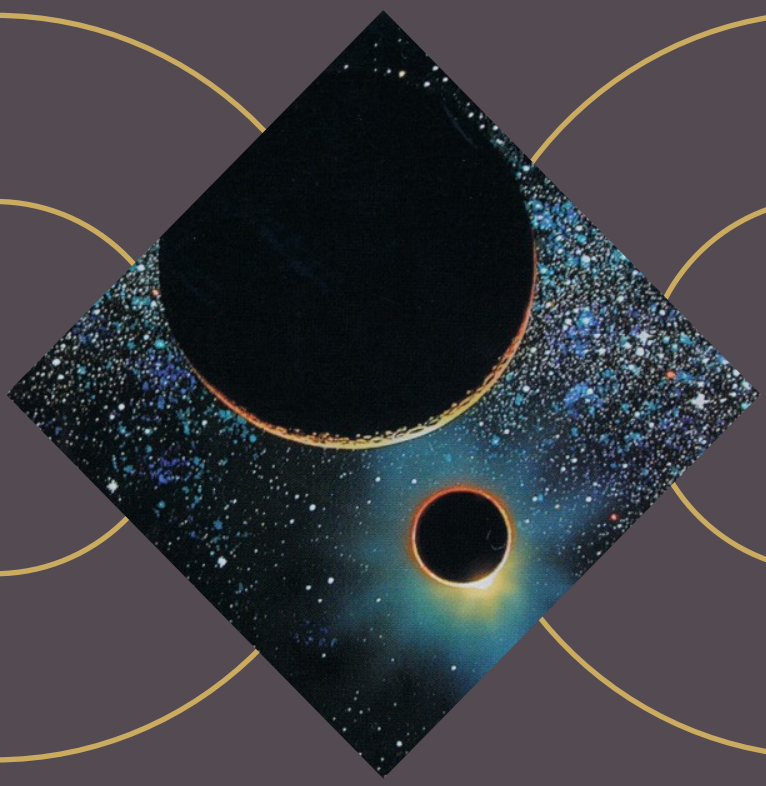
A new two-hour TV documentary on the Smithsonian Channel gives an inside view of the efforts to save the *U.S.S. Enterprise* from certain death. The documentary shows museum curators fighting against decades of damage to fix the 11-foot long *Star Trek* model, used in filming the original series, before putting the restored ship back on display. *Building Star Trek* also shows the construction of a new *Star Trek* exhibit, featuring props used in the original series. Also profiled are a new generation of engineers and scientists making the visionary *Star Trek* technology real, with inventions first shown on the TV screen: warp drives, medical tricorders, cloaking devices, real-time translators, tractor beams and more.

http://www.smithsonianchannel.com/shows/building-star-trek/0/3436402
(Warning: website uses Flash for video)

Graphic novel: Meteor Men

Nominated for a prestigious Eisner Award (a comic-book Oscar) in 2015, the five-part comic-book series *Meteor Men* has now been collected as a 128-page graphic novel from Oni Press, available in paper or download. Veteran comics writer Jeff Parker tells a rare 'pure science fiction' story about an unusual alien 'invasion' of Earth, which follows one of the biggest meteor showers of modern times. This event firms up into an interesting coming-of-age story about making difficult decisions amid a changing world. Artist Sandy Jarrell provides briskly brushed art which takes a little getting used to and which doesn't work well alongside the comic's very stiff lettering — the overall effect reminds one of the hastily-made British weekly comic pages of the 1970s. But Parker's 'human boy meets aliens' story carries the reader along and has some good twists in it.

https://oni-press.myshopify.com/products/meteor-men-v1



Lifeforms: Michael Westmore

Until 4th December 2016, USA.

Lifeforms: The Makeup Art of Michael Westmore is a retrospective of the career of one of the most accomplished sci-fi makeup artists. This is the first exhibition to display the designs of Oscar and Emmy award-winner Michael Westmore, whose work has helped in the development of some of science fiction's most iconic characters, including Data, Worf and the Borg species. The show will be at the Art, Design & Architecture Museum, Santa Barbara, California, USA.

http://www.news.ucsb.edu/events/lifeforms-makeup-art-michael-westmore

Pictures, from left, across double-page spread:

Michael Westmore, courtesy ADA Museum, USC.

Detail from original *Dark Side of the Moon* album cover art proposal, by David Hardy.

Detail from the *Avatar* exhibition poster. Courtesy of Lightstorm Entertainment/GES.

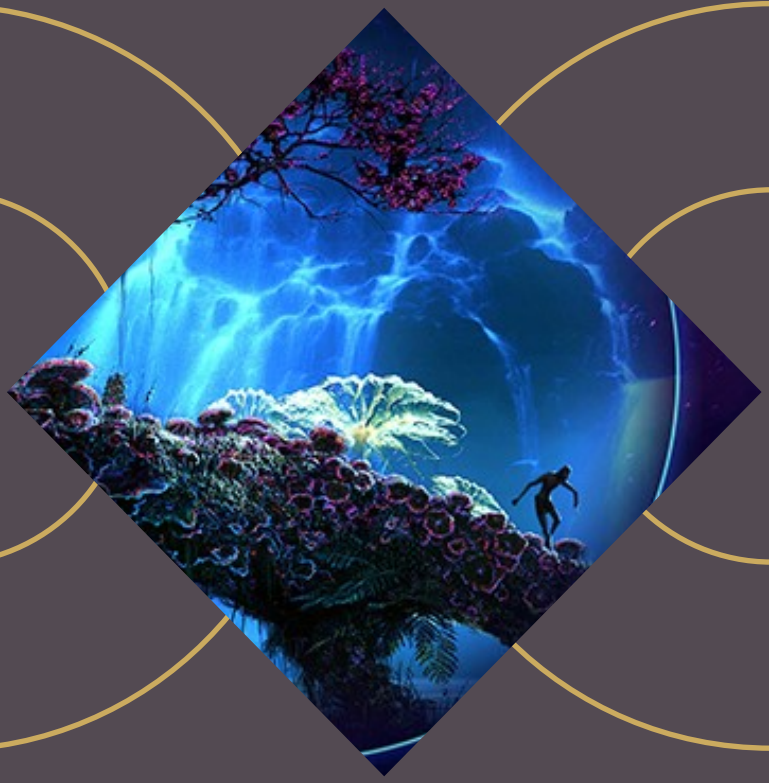
Detail from the cover of the *Black Dog* (2016) graphic novel by Dave McKean.

Pink Floyd: V&A retrospective

Opens 13th May 2017, London.

A major retrospective tribute to the original psychedelic space-rock band, at the prestigious Victoria & Albert Museum in London. *The Pink Floyd Exhibition: Their Mortal Remains* is billed as "an immersive, multi-sensory and theatrical journey through Pink Floyd's extraordinary world". Pink Floyd's remaining members have contributed over 350 artefacts including instruments, music technology, original designs, architectural drawings, handwritten lyrics and psychedelic prints and posters. The exhibition will also feature never-before-seen material and set and construction pieces from stage performances including *The Dark Side Of The Moon.* The early and arguably the best incarnation of the band — in and around the Syd Barrett years — often dipped into science-fiction with space rock tracks such as "Interstellar Overdrive" and "Set The Controls for the Heart of the Sun", while the later version of the band often explored various types of political dystopia.

http://www.vam.ac.uk/exhibitions/pink-floyd



Avatar: Discover Pandora

December 2016. Taiwan.

Presented in a massive 12,000 square feet of space, *Avatar: Discover Pandora* is going to be a whopper of a high-tech interactive exhibition, celebrating James Cameron's 2009 sci-fi movie. It will launch its worldwide tour in Taiwan on 7th December 2016. 9-foot blue Na'vi will welcome visitors to exhibition stages showing the Hallelujah Mountains, the Tree of Souls, sci-fi wildlife parks featuring banshees, direhorses, viperwolves, and a science lab showing space travel, AMP suits and future technology. After three months in Taiwan the huge exhibition will depart for... an as-yet undisclosed nation, as its starts its travels around the world.

The show is a commercial partnership between Twentieth Century Fox, Cameron's Lightstorm Entertainment, and the events company GES. Cameron has recently announced no less than four follow-ups "epic" sequels to the original movie.

http://www.dailymail.co.uk/wires/ap/article-3797591/New-exhibit-invites-Avatar-fans-visit-Pandora-person.html

Black Dog: Dreams of Paul Nash

13th November, London

Influential comics artist Dave McKean (Gaiman's *Sandman*, *Arkham Asylum*, *Luna*) presents his new multimedia performance, *Black Dog: The Dreams of Paul Nash*. A live-staging of his new graphic novel of the same name, this full concert performance features projections, animated illustrations, live music and narration exploring the imagination and dreams of the British neo-romantic modernist artist Paul Nash. The performance will be followed by a talk discussing Paul Nash's use of symbolism and dreams to create a personal mythology of the British landscape, with Dave McKean and the Curator of Modern British Art at Tate Britain.

Visitors can also see a major exhibition of art by Paul Nash, featuring "a lifetime's work from his earliest drawings through to his iconic Second World War paintings", though this is likely to be crowded and should be booked well in advance.

http://www.tate.org.uk/whats-on/tate-britain/special-event/paul-nash/black-dog-dreams-paul-nash

NEXT ISSUE: OCTOBER 2016

SPACEWRECK!

Are you interested in being interviewed in a future issue of the magazine? Or presenting a webinar for our series? Please send the Web address of your gallery or store, and we'll visit!

paul@digitalartlive.com

Back cover:
"Premonition"
by Artifex.