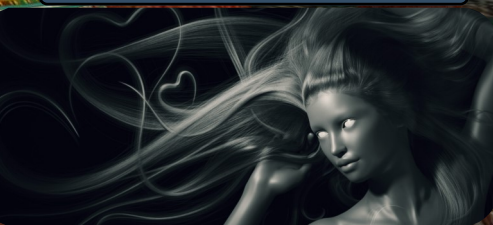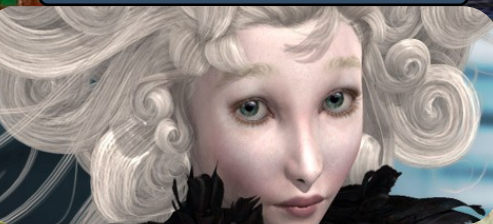HAIR & FUR

HIVEWIRE

ANDREW KRIVULYA

AprilYSH

ISSUE 53 | NOVEMBER 2020

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

"ZBrush is hard to learn because of its UI; it took me years to get over the fear for that reason"

Overwhelm is a common reason behind the fear or hesitancy when approaching ZBrush; with the multitude of options and brushes to choose from, it's understandable to feel engulfed and you wonder where to select your first footholds when climbing the ZBrush learning mountain.

Do some of these questions sound like you?

- How do I ignore all the technical stuff and just become a better organic sculptor?

- Should I start from scratch or use a base mesh?

- Which options do I use for geometry and when? Dynamesh / Sculptris Pro / Zremesher?

- There's three different re-topology methods? Arghh!

- How do I get good UV maps?

- There are so many brushes! Which do I use and when?

- Hard surface strategies : which approach should I use?

With all of these questions in mind, that's why we have created the "ZBRUSH FORGE : Live Sculpting and Solutions for ZBrush" held on a weekly basis, with other valuable learning benefits layered on top.

GET 30 DAYS OF COACHING ON ZBRUSH!
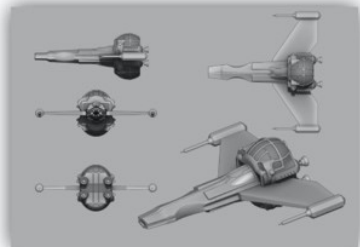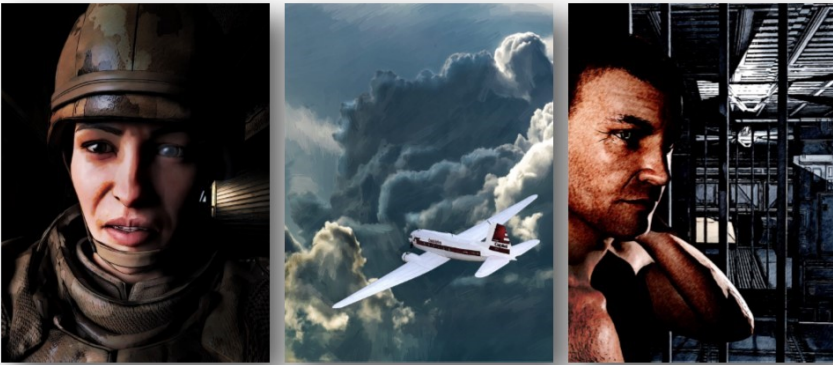
Artwork by Peter von Stackelberg (coach at the VNA)

Artwork by Drew Spence (Coach at the VNA)

Artwork by Tasos Anastasiades (coach at the VNA)

The Academy is my favorite platform …what I like about it is that the Coaches are pushing for a professional approach and attitude. That is very important, because as a Hobbyist, you easily get lost in the "if not today, then perhaps tomorrow or next year", and "Who cares if it's not that great?". But the Coaches give me a sense of "I want to deliver Quality", and "I want to treat this project as professionally as possible". It makes me want to do my very best, beyond what I would aim for."

Academy member : BeeMKay

Artwork by Artur Rosa

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https://digitalartlive.com/events/

VISNEW

We now have a monthly 'little sister' title for makers of comics: *VisNews*. This is part of our new Visual Narratives Academy for comics makers.

VisNews #1 | Aug 2019

⊙ "Treasured Stories" — your various options for making comics in 2019.

⊙ An interview with the head of the UK's leading comics degree course.

⊙ The Tookit - our survey of all the key digital comics production tools.
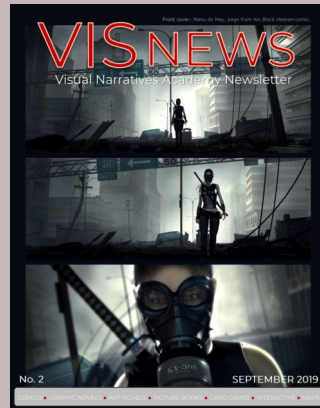
VisNews #2 | Sept 2019

⊙ "Mind the Gaps" — where are the current opportunities in indie comics in 2019?

⊙ Manu de May - interview with a leading maker of DAZ Studio comics.

⊙ Freebies - NoName Doll and Zdog.

VisNews #3 | Oct 2019

⊙ "But that's cheating!" —is using 3D to emulate 2D really 'cheating'?

⊙ Lin Welly - interview with a leading DAZ Studio comics storyteller.

⊙ Freebies - a wealth of Krita comics production add-on tools.

VisNews #4 | Nov 2019

⊙ "Every Page Counts" — our survey of the usual page-counts across various formats.

⊙ Neil Gibson - an interview with the mastermind behind Tpub Comics.

⊙ Freebies - Comic Materials for ZBrush.

VisNews #5 | Dec 2019

⊙ "Big Hair Males" - which Poser male hair looks good in Poser's Comic Book mode?

⊙ Georges Peters - we interview a leading DAZ Studio graphic novelist.

⊙ Freebies - 21 day Poser trial, free Motion files, free font.

VisNews #6 | Jan 2020

⊙ "Storyboard Software" - we survey the options for comics.

⊙ Shadow Corp. - we interview an artist doing serious planning for a Blender graphic novel.

⊙ Freebies - Everything freeware, a full Poser Pro 11 training DVD.

VisNews #7 | Feb 2020

⊙ "Dotting Hell" - we find a robust free solution to 'speckle removal' on scanned art.

⊙ Kaz Windess - a leading maker of quirky 'goth' storybooks.

⊙ Freebies — Poser Watercolour Shaders, Expressii, Desktops 2.0.
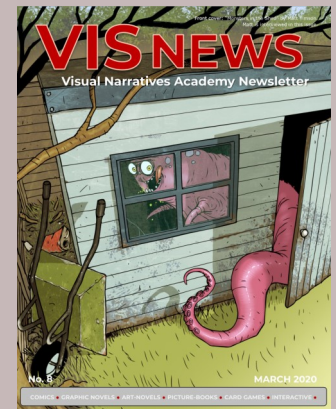
VisNews #8 | Mar 2020

⊙ "The Moebius Twist" - comics advice from Moebius, and how to emulate him in Poser.

⊙ Matt Timson - we interview an acclaimed maker of horror comics, also a spot cartoonist.

⊙ Freebies - Lightwell, MB-Lab for Blender.

VisNews #9 | May 2020

◉ Miriam Rivera — the world's leading heathcare comics artist, with a specialisation in viruses!

VisNews #10 | June 2020

◉ John Swogger — one of the world's top makers of archaeology 'outreach' comics.

Visual Narratives

Academy

Interested in making comics and telling stories with the aid of 3D software and other tools? Digital Art LIVE had created the new Visual Narratives Academy to help you develop your story ideas onto fully rendered sequential artwork. The Academy is a unique on-line group of artists sharing and refining their skills to produce rich and fulfilling narratives.

We specialise in teaching the use of 3D character software DAZ Studio and Poser and placing it at the heart of the workflow. Our professional mentor artists also coach the use of supporting applications for further postwork effects, layout and framing of your stories.

You'll be surprised at how many cost effective resources are available for your subscription! The Academy's core learning is structured around seven modules, to which you have access for six months. Members also get access to the monthly Visual Narratives webinar workshop recordings; the monthly *VisNews* newsletter edited by David Haden (see index opposite) and the main DAL magazine stack; the special monthly online Coaching group; 50 hours of video in the Tutorial Library — and there's also a special Facebook Group too!

Please try it out — there's a 30 day money-back guarantee!

Discover more online at:

https://digitalartlive.com/plans/visual-narratives-academy/

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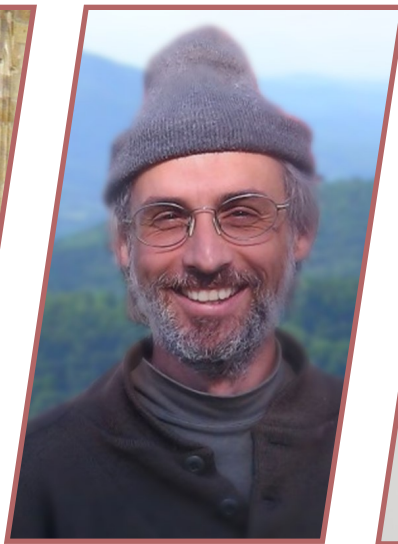
Tasos Anastasiades   John Haverkamp   Daniel Seebacher   Chris Hecker, 'Tigaer'

Just a few of the talented webinar presenters who have partnered with Digital Art Live!

Would you enjoy the opportunity of teaching other artists, in a live online setting? We are actively looking for artists or content creators 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 who work with DAZ Studio and/or Poser, Vue and other landscape software, or digital comics production.

We will also consider webinar ideas which relate to your specialist skills, or which help users to fully use a software plugin that you've developed.

Webinars are recorded, and we profit-share with our presenters on any future sales. We sell on the popular DAZ content store, which has strong traffic and sales.

Please use the link below to submit your application, and we'll be in touch!

https://digitalartlive.com/presenters

Front Cover:

Detail from "Egyptan Mau Pharoahs Chair" by Laurie Prindle (aka 'CWRW') featuring an Ancient Eygptian desert cat for the HiveWire House Cat. Added are 'Exotics #1' from the texture add-on set, and the cat's LAMH Preset #1. All items available at the HiveWire store.

THE 'HAIR & FUR' ISSUE

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INTERVIEWS

THE HIVEWIRE TEAM

We celebrate the recent launch of the superb Hivewire Tiger, with a big round-table interview with the development team.

3D FIGURE DEVELOPMENT

"I think the biggest challenge was in the Tiger's mane ruff. We needed it to follow not only movement, but facial morphs as well. It was a painstakingly slow process of adjusting the weight maps point-by-point for each of the mane ruff panels of hair."

ANDREW KRIVULYA

Andrew is a 3D hair 'lookdev' specialist, creating hair for high-end clients in advertising, TV and the movies.

3D HAIR | LOOKDEV

"Powerful PCs add comfort and have made it possible to implement interactive grooming, when — right in the viewport — we can see the result, do clumping, comb the coat or hair. It becomes easier to manage the form and control the entire process."
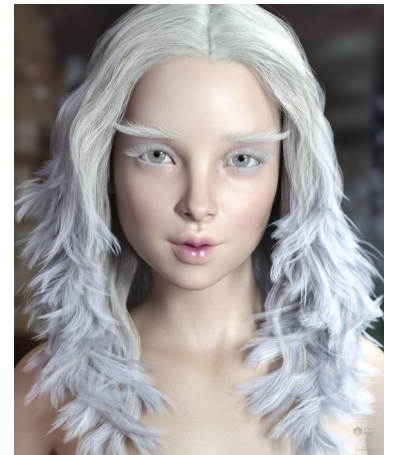
APRIL-YSH

April is a leading DAZ Store creator, specialising in making and selling a wide range of ready-made royalty-free 3D hair.

3D HAIR | DAZ STUDIO

"I'm convinced realistic contemporary hairstyles sell the best. Not overstyled but they must be attractive, if not outright sexy, as on the cover of a magazine. [But I still] hark back to my RPG roots — giant plaits, improbably long ponytails, overly cute curls."
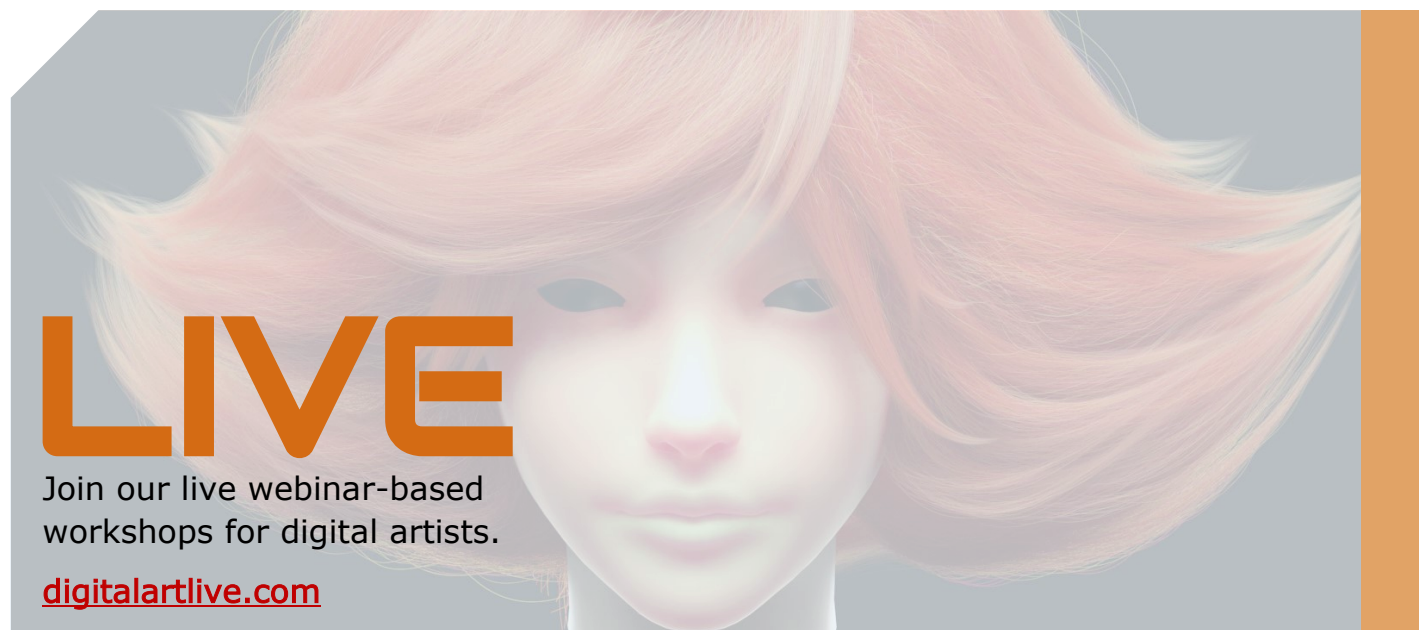
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Credits for pictures, from top left: Detail from "Soraya" with HiveWire Unicorn, by Laurie Prindle ('CWRW'); detail from the "Rievel" classic hair by AprilYSH, styled after Errol Flynn; detail from "R-1-1", styled by Andrew Krivulya.

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Please support Dave at Patreon.

WELCOME...

"

Welcome to the latest issue of our free magazine. In this issue we focus on hair and fur. 3D artists have always found hair to be 'a bit hairy', as we British say. Meaning it can be tricky stuff, and that popping a nice hairstyle on a figure can slow your render time to a crawl. The trend toward high-poly hair, and facial and body-hair for DAZ Studio, means hair can also gobble up precious RAM.

But now the world is seeing an unexpected benefit of the lockdowns… faster PCs, which can only be a good thing for tough 3D hair. Of course it's often assumed that 'nothing much changes for home freelancers' in a lockdown, and that we just carry on as before. But many are using generous lockdown payouts for the self-employed (recently doubled, here in the UK) to upgrade to the latest PCs. Home office PCs are being swopped for workstations. Workstations are being replaced, and the old one made into a render-box. Employers are also buying new kit for employees forced to work from home. PC sales have consequently been booming. The PC industry now expects to see 300 million new PCs sold in 2021, some 30 million more than usual. All this means that many key PCs in home offices and studios have leapt a decade ahead of where they used to be. The joy of the PC is its easy expandability, and into these whirring purring new PCs will shortly go new graphics-cards and add-in boards with advanced ray-tracing capabilities. Plugged into the new PCs will be new motion-capture and 3D capture devices, draw-on-the-screen monitors, quality HD webcams, faster external drives, and possibly fab creative gear yet to be invented — I'll take the quick-boil USB tea-maker unit!

But faster 3D isn't just about the hardware. It can also be about the code and the maths that it enables. Back in the summer *PC Gamer* magazine noted the gains still possible for 3D, simply by better coding. They pointed out that a speed increase of 60,000 times could be had, just by moving a common bit of maths from Python code to C code, and then tailoring the C code to run efficiently on the 18-core CPU.

Of course, advanced maths may in time challenge the existing ways of rendering hair. For instance, what if an AI could assist you in draping realistic 2D hair onto a 3D head, after you have made the render? You'd manually draw some simple curves into a bald head, as guidelines. The AI would then detect the render's eyes and face-tilt and the light direction, and offer up a set of thumbnails showing different possible hair-volumes the AI could 2D-render around that face, and which would more or less match your suggested curves for the desired hair draping. Such a thing is probably not going to produce a complex 'Shield-Maiden' braided female hair any time soon, but simple AI-assisted hair draping can't be very far off.

All that said, *Digital Art Live* never forgets the budget hobbyist, and our in-depth survey of fur tools in this issue digs out some old 2D software that can give you quick 3D like fur very easily — and without the need to spend $10,000 on the latest workstation PC.

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ROUND-TABLE TALK
HIVEWIRE

Following the successful release of the **HiveWire Tiger** we talk with three of the key makers of this iconic addition to the DAZ and Poser world.

Chris Creek: modeling, body morphs, and expressions.

Paul Lessard ('CG Cubed'): rigging and conversion to Poser and DAZ Studio.

Laurie Prindle ('CWRW'): texture map work and the LAMH fur preset.

DAL: Welcome to this round-table interview for the 'making of' the new HiveWire Tiger, a magnificent 3D beast, and with a large range of extras and options. You must all be very pleased to have added such a flagship 3D animal to the store?

HiveWire: Certainly, we are excited for our

HiveWIRE 3D

HIVEWIRE TEAM

USA

3D MODELLING |
RIGGING | ANIMAL
TEXTURES AND FUR

WEB

Tiger to finally be released into the wild, as we've had it in the works for some time. This animal is such a 'must have' item for us to offer. We've had *many* requests for it, and many customers wondering when it will be made available. The Tiger helps us with our goal of making available in 3D many of the more popular big cats. As long as there is a demand to fill, and the internal interest and talent available, we'll keep producing high quality animals.

DAL: Great. How did the idea come about? I know you had done the Big Cat base figure a while ago, and many follow-on variants.

Your Big Cat now includes lions, cougars etc. Was the Tiger always on the roadmap for the Big Cat, in due course?

HiveWire: We had a general roadmap when creating our base Big Cat, so that we would be able to morph it into other major breeds. We can't recall if, at that time, that a tiger was 'a must'… or more of a hopeful wish. Like suggesting we'll have to see where this Big Cat will take us, and if customer interest will follow. We do recall that Laurie Prindle had the tiger model in mind, and we wouldn't be able to carry out such a challenging endeavour without her heavy interest and talent. Saying that, though, we also couldn't achieve a proper product of this kind without Paul Lessard's rigging expertise either. It really became a 'serendipitous trifecta'.

DAL: Good. And I imagine the launch of an iconic Tiger brought a lot of new visitors to the site. What sort of purchaser feedback have you had so far?

HiveWire: Customers and loyal followers of our animal products have been eager to add any new HiveWire animal products to their collections, but our Tiger just seems to be extra special to them. I think it's a combination of the rareness of the actual tigers in the wild, their natural beauty and uniqueness, and the care we've taken to get this right. We believe people can see that. It certainly shows with this gorgeous Tiger. Users tell us it has been worth the wait, and the best tiger available in this market, and with the quality of renders we're seeing of our Tiger we tend to agree.

DAL: Yes, and a nice price-point too. Have you also had interest from wildlife conservation people, in such a faithfully made and flexible royalty-free 3D model? I'd imagine it might be popular among the Indian conservationists and educationalists, as their nation appears to be doing quite well now with tiger conservation and to have growing tiger populations. So educational outreach will be a part of sustaining that push, and I'd imagine that convincingly bringing 'a 3D tiger into the classrooms' could play a part in reaching kids and teens.

HiveWire: Wow, we love your thinking.

Wouldn't that be nice to see such organizations utilizing our Tiger for educational purposes. If it's happening, we haven't been made aware of it as of yet. With the accessibility to quality software that is free or at a very low cost, coupled with relatively low-priced 3D content in this market we could see the kids in the classrooms teaching the instructors a thing or two. They could start their own conservation rendering contest featuring our HiveWire Tiger that we'd be happy to sponsor.

DAL: Great idea. What's the most impressive or interesting use of it that you're seen, so far?

HiveWire: Well, of course what we see the most of are beautiful renders created by a community of artists that produce some exquisite imagery. It's actually inspiring and invigorating to view artwork using our Tiger. Laurie Prindle has a new stunning Tiger image she calls "Shere Khan". Flint Hawk has created multiple Tiger images including Ken Gilliland's birds and insects, and Lisa Buckalew's botanicals.

DAL: Ah yes, we interviewed Lisa a while back, and will hope to interview Ken G. in a future issue.

HiveWire: But we certainly can't leave out a favourite image by Daniel Hicks called "Perils of the Sea" using our new Tiger and female figure Dawn.

DAL: Super. Ok, thanks. Well, now let's turn to each of the Tiger makers in turn. I know there are three makers here today. Chris Creek who did the modeling, body morphs, and expressions; Paul Lessard who did the rigging and also the conversion to Poser and DAZ Studio, and Laurie Prindle who made the texture map work and also the LAMH fur preset.

Chris, let's start at the beginning with you and the start of the process. You're a highly experienced and well-respected figure maker for Poser and DAZ, but I'd imagine that even so making a Tiger was still something of a challenge. It's a very iconic creature. How much research did you do before you began, and what did it consist of?

"The Tiger was definitely a challenge for me, and striped and spotted coats always are! Overall I spent about a year and a half, off and on, working on him and my add-on White Tiger texture set." — Laurie Prindle.

Pictures: top, Poser 11 Pro Superfly render; bottom, Daz Studio iRay render with White Tigers texture add-on. Both renders by Laurie Prindle, no postwork on either.

Chris Creek: Hey, thanks for the compliment. Fact finding is an essential part of this type of creation for sure. The beginning process actually started back when making the base shape for our Big Cat model. I read several articles about the size and shape of the leopard which is the base shape we were looking for. We felt the leopard would be a great starting point for the larger cat breeds which we would morph to, as well as a great starting point for the smaller cats, and even house cat breeds.

I believe it also helped, with my background as a medical illustrator, that I took the approach of considering the underlying structures beneath the skin. I looked at skeletal and muscular photo references to understand the origin and insertion points of the skeletal muscles and their shapes. I also collected reference photos of big cat teeth, inner mouth, eyes, ears, tail, feet, paws, claws, body profiles and so on. Once I modelled our base Big Cat — which was indeed 'no easy feat' — we had the

"My favorites are 'mouth growl' and 'mouth yawn'. They are such extreme morphs, from the base default mouth and snout shape. They were very challenging to create, and fun to see the results." — Chris Creek.

Picture: DAZ Studio iRay render by Laurie Prindle aka CWRW featuring the HW Tiger and CWRW HW Tiger LAMH Preset 1. Straight render. Plants are from Lisa's Botanicals.

base geometry needed to be able to morph it to other breeds whether they be bigger or smaller. Our Big Cat now morphs from our House Cat up to our Tiger and various breeds in between, and even some outside the cats such as our Big Dog, and many other dog breeds now in the works. Once our base Big Cat geometry and mesh flow was established it was a matter of comparing differences from the leopard to the tiger, and gathering written and visual resources for our base Tiger shape.

DAL: Thanks. And when you then started modelling, did you make real-life tactile models in *papier-mâché,* clay etc, or did you go straight to 3D? And what is your 3D toolset and how does it work together?

Chris Creek: I have been modelling since the early 90's, and I've seen a lot of 3D modelling software packages come and go. I have also changed my process over the years, to something that is efficient and effective for me.

Many years ago, when I created my first big cat model, I purchased a quality kids' toy, then drew a grid on that, and using Hyperspace software I digitized it, then brought it into Wavefront software [Lightwave] and further modelled it from there. Still other times I would sculpt a clay reference and then digitize that, yes.

Now today, I'm not at all against producing clay models to work from, I just know that over my years of modelling there are 'several ways to skin a cat' as they say. The way I prefer to work now is bringing a collage of reference images into the Modo software and use them as a template to match my new 3D model against. If I have a previous 3D mesh I can work from and push and pull around a bit to get a good start then I'll do that. Other times I'll begin modelling from a primitive cube or sphere. Our Tiger model is a pure morph from our Big Cat base, and the origin of our Big Cat actually started as a morph from our HiveWire Horse I created, although the geometry of the Big Cat was then reworked from nose to tail. Furthermore, our horse geometry started from our Dawn female figure mesh which I modelled from primitive cubes and spheres.

DAL: Wow, so the cats are actually... Dawn. What was the most interesting part of the modelling, for you? Or, what did you discover about tiger anatomy you didn't know before?

Chris Creek: It was the face and feet which were the most interesting to model, and required the most attention. Not only did I have to come up with a general base shape, but I also had to consider how the toes might best be modelled to accept a rig, and contemplate what morphs might be needed for the feet or the face and how to best layout the topology flow. I mean a tiger's snout and mouth make some extreme shapes that I had to take into account, as I'm still developing the base forms. What I found out, in my skeletal and muscle research of the tiger, is that they share the same structures from the house cat to the mighty tiger. It's a matter of difference in density, scale, and size with added differences in bone lengths, and skull shaping from breed to breed.

So, the possibility of creating believable morphs from such extreme breeds was exciting to recognize, and to know this was going to be a very do-able project.

DAL: I see. How long did the modelling process take, and especially for the face which will be the focus of most renders?

Chris Creek: Oh my, that's difficult to recall as I didn't log the time dedicated to the modelling task. It's fair to say that it took several months of a full-time effort. Considering the creation of the base shaping, then adding the needed body morphs, face and head morphs, inner mouth morphs, and then adding in the expression morphs, one can understand that this became a labour of love, and came from a desire to strive to get things right.

DAL: Right. And then you came back in later in the development process and added body morphs and expressions. That must have been very pleasing, to come back to what had been a model and to add 'the finishing touches' like that, and know it was nearly done and would soon be in the store?

Chris Creek: Creating the needed additive morphs are always rewarding for me. I might be a little strange anyway because I thoroughly enjoy pushing points around on a mesh. I find it a relaxing exercise when my head can crawl into a modelling project, the rest of the world's concerns seem to melt away for a time.

I also enjoy seeing what the mesh will give me, and discovering just how far I can stretch the morphs. It's fun to add in all the requested morphs from our community, as people chime in on our forums and add in their desires and wishes. This process helps us immensely in rounding out the needed shaping morphs. Creating isolated body and feature morphs that can be 'dialled up' by the user and added together to create unique looks are so rewarding to later see in community renders.

DAL: What are the native morphs that come with the Tiger? I'm sure some of our readers will be wondering if it would be possible to make a sci-fi 'alien planet' tiger, or a fantasy 'storybook battle-tiger', or suchlike?

Chris Creek: Our HiveWire Tiger requires the user to have our base HiveWire Big Cat. Once a user has the Big Cat they will have access to 309 morphs and control dials at their fingertips that can be applied to our Tiger. I did create though a handful of specific morphs for the Tiger, some for the variations you would see on a mature tiger with the belly and neck fur hanging down, and a few others that can be used in combination for the Tiger's mane ruff for length and shaping based on breed or wind effects.

> "… we were able to use automated rigging tools in both Poser and DAZ Studio. This allowed us to automatically reposition the joints based on the Tiger's shape."

I've created a ton of usable morphs on the HiveWire Big Cat for a myriad of shaping combinations. Though the shaping morphs are primarily for a variety of cat breeds, I'm confident that an artist looking to make a tiger that is out-of-this-world will be surprised what can be achieved by pushing past dial limits, or perhaps changing the hue of the textures, or even adding on their own armour perhaps. I've seen some inspiring Tiger renders out there.

DAL: Yes, and think there's some armour that could be adapted. I'm sure I've seen Poser cat-armour somewhere, and Joe Pingleton does that sort of thing too. Do you have a favourite Tiger expression that you crafted?

Chris Creek: Oh yes, well… a couple really. Those being 'mouth growl' and 'mouth yawn'. They are such extreme morphs from the base default mouth and snout shape. They were very challenging to create and fun to see the results. I think it's cool to see the eyes and nose change, watch the snout curl up on the growl, and the tongue curl up and the teeth exposed on the yawn. I'm very satisfied when I see people using those morphs in their renders.

DAL: Ok, thanks. Let's turn to Paul Lessard now. Paul, welcome. First let's talk about the rigging. How many hours of tiger videos did you watch, to get a sense of how they move?

Paul Lessard: Thanks for having me. Tiger videos… I'd guess about 5 to 6 hours, plus *hundreds* of reference photos. For me it was about specific poses and actions, how a tiger walks, runs, jumps, crouches, etc. I would focus on one of them to look up a few videos, and pull up lots of photos. I think the photos help out more than one would think, because you can get many stills of multiple angles, and you can truly see range of motion and muscle flexion.

DAL: I see. And then once you started in on the task, what were the challenges and how did you overcome these? I'd imagine getting the sheer 'fluidity of movement' was a challenge?

Paul Lessard: Yes, there were a few challenges for sure. While we start with the base HiveWire Big Cat rig, the size and muscle volume was a real challenge once the Tiger shape was established. We used joint placement and conditional joint and morph-controlled morphs to overcome them. This helped with the 'fluidity of movement'. I think the biggest challenge was in the Tiger's mane ruff. We needed it to follow not only movement, but facial morphs as well. It was a painstakingly slow process of adjusting the weight maps point-by-point for each of the mane ruff panels of hair.

DAL: Fascinating. A lot of hand crafting. But did any semi-automatic rigging assistants aid the job, or were they just not suited to a tiger?

Paul Lessard: Actually yes, we were able to use automated rigging tools in both Poser and DAZ Studio. This allowed us to automatically reposition the joints based on the Tiger's shape. Chris' ability to morph shapes, while retaining relative vertex positions, helped these tools get really close to a final joint setup.

DAL: More widely, what's your general view of the range of options in 'assisted rigging', at the present moment?

Paul Lessard: I think they have come a long way since I started on my rigging journey.

In those early days we had to do everything manually, learn complex coding and use third-party programs specific to certain editing functions. I think the 'assisted rigging tools' were born from the necessity to be more efficient, with a lot less repetition. Can you imagine cutting and pasting small snippets of code to create JCMs for every bone in a figure? That's how we did it before these tools. That said, I do look forward to the progression of the tools we currently have, as well as new ones, in an effort to make rigging a more streamlined process.

DAL: JCMs… actually, that makes me think… here's a question our readers might be interested in. What *is* rigging these days? We all use it, but what does it *look like* underneath, at the level of the connectors and presumably code? Is there Python or similar code moving those joints and calculating the IK and talking to the digital muscles and sending maths to all the other bits of the rig?

Paul Lessard: That is a great question. Simply put, I would say rigging is a complex system of controls created to simplify the user's experience of posing and animating a digital model. We do the hard part behind the scenes, to make the user experience fun. As for what it *looks like*… Spline objects like bones, with start-and-end points to establish rotation. Morphs connected in complicated ways, to only work when certain conditions are met. Complex math and formulas that are calculated in multiple formats. And everything working together seamlessly for the user. We do this for two programs, Poser and DAZ Studio. Each uses its own code base, Poser with Python, and DAZ with JSON.

DAL: I see, thanks. And yes, you also did the conversion to DAZ Studio and Poser 11 formats. I'd imagine there may have been some future-proofing in that, with Poser 12 and the Python 3 upgrade and other changes re: the materials room, just around the corner. Or was the approach that of 'make it for now, and update as and when needed'?

Paul Lessard: Well, it is very hard to predict all the future developments for these programs.

We do try to use the latest technologies, but our goal is to have the same experience with our figures, regardless of which program you use. To that end, we tend to make it with the now in mind. While both programs do maintain some sense of backward compatibility, Poser has excelled at this. Poser 4 figures still work in Poser 11, even with all the new updated tools and code, and I'd imagine they will keep this going for the future.

DAZ: Yes, and Renderosity are saying backwards compatibility will be maintained with Poser 12. Which should be out any day now.

Paul Lessard: Backwards compatibility means that customers get a good long life from their figures, which they spend good money on. As a user myself, I think that is the smart thing to do.

DAL: Yes, it's great for old content. The geometry is still there, and the Poser 11 Comic Book Mode — for instance — can still ink the geometry nicely to become lineart, most of the time. Of course the old textures can be fuzzy, but now we have the amazing Gigapixel AI for up-rezzing and crisping/detailing of old textures. It can't do miracles but that will probably get better over time, as their AI gets specifically trained on CG textures. But… back to the Tiger. What stays roughly the same when you bifurcate a product for DAZ Studio and Poser 11, and what are the sharp differences that need careful handling?

Paul Lessard: The conversion process does take a certain level of planning. The way in which the rigging works is different from DAZ and Poser. The bones and joints port over the same, as do the morphs. Some code clean-up is required from one program to another, but the real trick is in the weight maps for the joints. They do not behave in the same way and may take a little extra adjustment if you don't plan accordingly. This mostly applies to figures with parts that curl or have a long straight series of bones. The Tiger's tail is a good example. In order to prevent any excess adjustment, we simply followed the rules of the most restrictive weight mapping, so the conversion would be as seamless as possible.

This makes it possible for us to maintain that user experience in both Poser and DAZ.

DAL: Great. OK Paul, thanks. Turning now to Laurie Prindle, welcome Laurie. You did the texture map artistry and also groomed and tested the LAMH fur preset. Fabulous work on that. What was your favourite part of the work?

Laurie Prindle: Thank you! Definitely the most exciting part for me was to finally get the quality of 3D tiger to use in my own personal and commercial artwork! The 3D world is my 'second job', where I am better known as 'CWRW'. My main career these days is as a commercial artist / illustrator / licensing artist with a focus on horses and animals and some fantasy animal work. I also do really enjoy creating the LAMH presets, as well as creating all the promo/product imagery. That is also my responsibility for the HiveWire Animals products I am a team member on.

DAL: Did you actually get to handle a tiger skin? Did you seek out one in a museum or an old rug, or due to the lockdowns was it all from picture and video research?

Laurie Prindle: While I have not actually handled a tiger skin, I spent time at the Wild Animal Sanctuary in Keenesberg, CO. They have what they call "The Tiger House", where rescued tigers being brought to the Sanctuary spend their first days in. First, to treat any injuries, starvation issues, etc, and second to acclimate them to their new home and see which tigers they get along with well before they are introduced to their "wild" home.

DAL: Wow, so you were up close and could even hear the purring. Or the growling...

Laurie Prindle: Yes, there one can be pretty close to the tigers without disturbing them and I have photographed many of them there, so those were my main photo references.
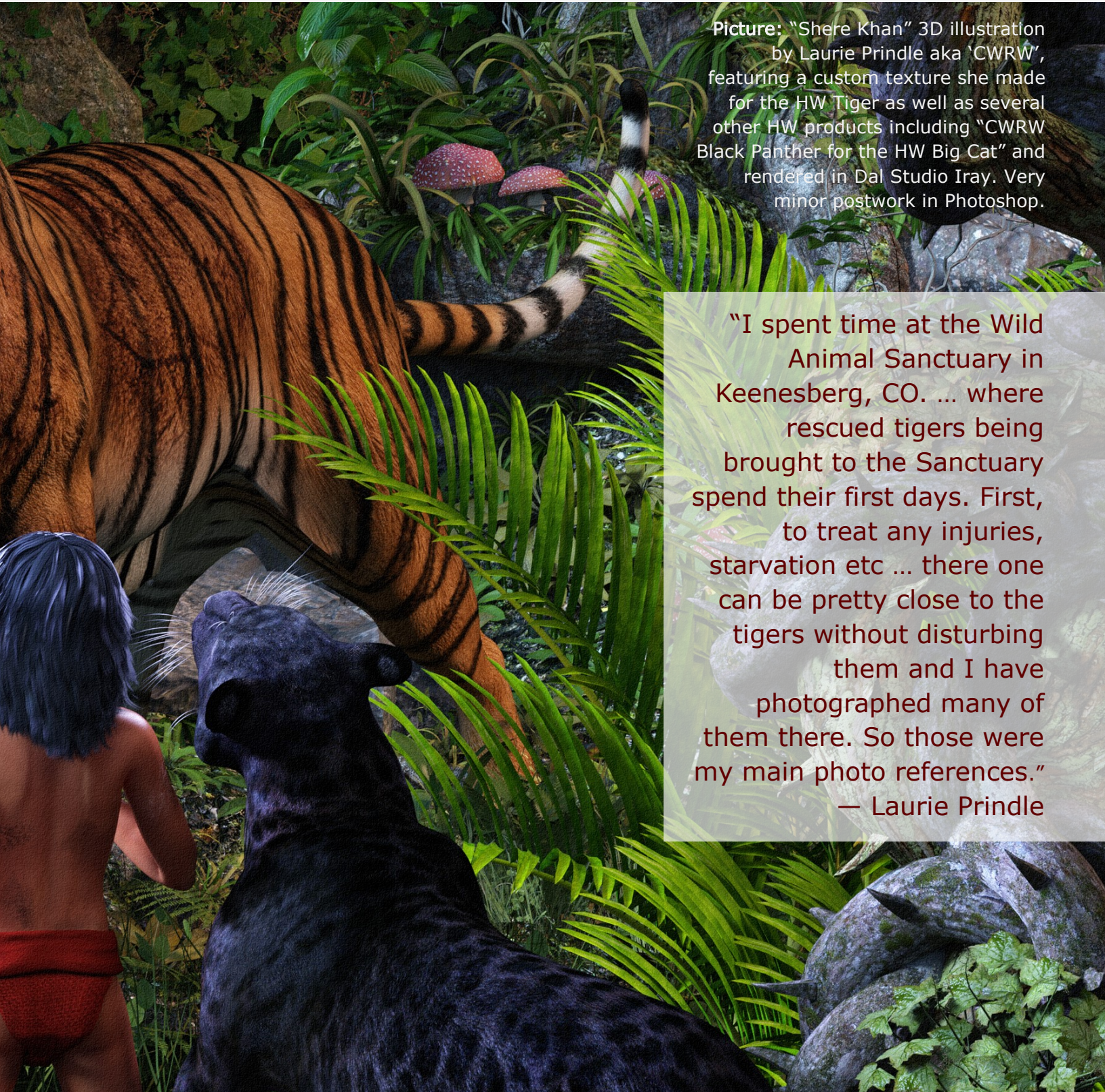
Picture: "Shere Khan" 3D illustration by Laurie Prindle aka 'CWRW', featuring a custom texture she made for the HW Tiger as well as several other HW products including "CWRW Black Panther for the HW Big Cat" and rendered in Dal Studio Iray. Very minor postwork in Photoshop.

"I spent time at the Wild Animal Sanctuary in Keenesberg, CO. … where rescued tigers being brought to the Sanctuary spend their first days. First, to treat any injuries, starvation etc … there one can be pretty close to the tigers without disturbing them and I have photographed many of them there. So those were my main photo references."
— Laurie Prindle

In general, I tend to do my own photography as much as possible for use in my work. Obviously, that is not always possible with wild animals! Also, I have been a long time admirer of the 'big cats' in general since I was a child, as well as a long time watcher of and fan of PBS's *Nature* TV program, where they often feature the big cats. So getting to be part of the team to bring our HiveWire Big Cats to vibrant life has been a longtime goal of my 3d 'life' which started in 2004.

DAL: Great. During your research, where you impressed by what had been done with texturing on any earlier budget CG representations of tigers? Or is what HiveWire has done actually fairly unique in terms of a convincing CG tiger that doesn't need a supercomputer and a Disney crew to run it?

Laurie Prindle: I've longed for good 3D big cats since I got involved in 3D. While I did use some early 3D big cat models in my own personal artwork, I found them very frustrating and ended up using them only as a base to digitally paint over. For instance, my "Lord of the Himalayas" was done in 2006, posed in Poser 5 and then imported into and rendered in Bryce 5, and then digitally overpainted using a Wacom Intuos 3 tablet in Photoshop. One of the most frustrating parts back then was the lack of detail in the faces, as I like doing a lot of close up images of big cats.

I did attempt my own texturing of them but the UVs had a lot of stretching, especially in the head area, which I found very hard to overcome. Chris, as well as doing our HW modeling, does the UV work for our models and he has really outdone himself in making such quality UVs for all of our 3d animals. That sure makes my job a lot easier! I spend the most time on the faces, making sure they meet my own desire for *a lot of detail* there. Also, the details of the additional morphs we've included add a lot to the realism of the HiveWire animal models. One of the great things about our animals is also that they are not computer resource intensive without LAMH, yet have a high level of realism with no 3D fur added. LAMH is just the frosting on a really, really good cake.

DAL: Yes, and the LAMH fur renders fairly quickly in 3Delight. OK, so... you'd done the initial research, and then you set to work. What tools did you use for the texturing, and how do these all fit together into a workflow for you?

Laurie Prindle: I mainly work in Photoshop CS6 for any texturing I do, along with a Wacom Intuos 3 tablet. One of the absolute best things for me working in Photoshop is the ability to use sometimes up to 100 or more layers and groupings on any given "coat", and doing that gives me so much control over so many small details and my ability to modify them easily. As I go along, I do test rendering of the WIP texture in DAZ iRay and Poser Superfly as I go, especially now since I established a base shader back on the HiveWire Big Cat for all the Big Cats, and the House Cat as well. Then I go back and make changes in Photoshop, and so back and forth until I am happy with the results.

I also do my WIP rendering using several different types of 'base' lighting setups I've used or made over the years to see how different lighting affects my WIP MATs. One of the challenges these days is making maps and MATs that work really well for the 2 DAZ Studio render engines (3Delight and iRay), and the two Poser render engines (Firefly and Superfly) and in many different types of different light set ups, as it is HiveWire's goal to make our products work natively in both programs and all four render engines.

Once I have the base maps work done, I use Blacksmith3D Pro, which I won in a Renderosity contest, for other details and seam work. I have used the 3D painting tools in Photoshop CC some, but am more comfortable with my 'old school' workflow. I would love to try Substance Painter, but that will have to wait until I get a newer computer.

DAL: Thanks. How did the tiger texturing compare to other 3D animals you'd textured before?

Laurie Prindle: The Tiger was definitely a challenge for me, and striped and spotted coats always are! Overall I spent about a year and a half, off and on, working on him and my add-on

White Tiger texture set. The trickiest part was making the transition natural-looking between the base model and the modeled 'mane ruff', as well as the 'mane ruff' itself. I can't remember how many different diffuse and transparency maps I drew to get the look I wanted, but it was a lot! I am most known for my 3D horse textures and that is how I first started as a vendor in the 3D world as 'CWRW' at Renderosity in 2008, and then later DAZ, and then finally at HiveWire in 2013, so doing the first base Big Cat was a big challenge for me especially as he is a leopard. I then moved on to the House Cat so now I feel pretty comfortable working on most other 'furred' animals besides horses.

DAL: Great results. And you also did the LAMH preset for the Tiger. How did you find LAMH? It makes lovely hair, but I think it's no secret that it's not the most stable plugin in the world. Are there any stability workarounds or tips you can give LAMH users, that you've learned from using it as a production tool? Especially those who might like to groom a currently hairless creature to create a preset for it.

Laurie Prindle: I started messing with LAMH around early 2018 for my own personal and commercial artwork. I watched lots of AM's videos on YouTube, referenced the included LAMH PDF manual many times, and experimented a lot. Once I got a handle on how the various tools work, I actually find LAMH to have a very good, quite intuitive interface and a quite quick workflow. I feel LAMH is the hair program most geared to doing fur as opposed to human hair, though of course one can also do that as well. Like most things in 3D, practice, practice, practice! These days most of the LAMH presets I make take only a few days; not weeks or more like in the Poser Hair Room which I am still striving with to get desirable results.I can't speak to stability issues on PCs/Windows as I have never owned/used a PC with Windows. My main 3D machine is actually a custom refurbished 2010 Mac Pro Tower (2 x 2.66 8-core Intel Xeon) with only an ATM Radeon HD 5770 video card and 32 G RAM, running OS 10.11. I actually have very little issue with LAMH crashing.

DAZ: Interesting, so it may be the Windows side of things LAMH doesn't like.

Laurie Prindle: I have discovered a few 'tricks' that keep it from crashing on my Mac anyway, whether using the free LAMH player to use presets, or using the full program to make new presets:

 1. If possible, only have DAZ open when using DAZ and LAMH. In other words, don't have a lot of other programs open using up your live memory, even though the Unix base underlying Mac OS10+ knows how to allocate memory.

 2. I always do a clean restart of DAZ before using LAMH and the other thing I do is quit it after doing an LAMH render and restart it *twice* before using DAZ again for either an LAMH or non-LAMH scene. For some reason DAZ Studio on Mac when using LAMH, it seems to "hang on" to my memory if I don't do those restarts and can cause DS to crash.

DAL: Very interesting, thanks. So mostly memory, by the sound of it. I'll test that.

Laurie Prindle: As to making your own LAMH fur, my feeling is that a lot of system memory makes a real difference.

DAL: Ok, let's turn to grooming. How did LAMH grooming a tiger differ from a house cat? Are they really just 'big cats'?

Laurie Prindle: The Tiger and House Cat when doing more sleek fur aren't vastly different. Longer coats, much more so. I am still working on my Siberian Tiger LAMH preset. The longer the hair the trickier it is, at least for me. Also, domestic cat hair has much more distinctive, longer "guard hairs", and finer hair in general.

DAL: What's the best learning resource, would you say, for 3D fur grooming? It's quite a skilled Hollywood-level art. Have you found there's a Guild of Digital Groomers or suchlike?

Laurie Prindle: I am no expert, as all I have used is LAMH and the Poser Hair Room somewhat. I have messed with the newer DAZ Studio Strand Based Hair (based on the Garibaldi Hair product) and have not gotten results I've been happy with, so I decided to stick with LAMH for now.

DAL: Yes, it's curious that there are no animal and monster fur presets using the native DAZ Studio Strand Based Hair. You'd think there would be several dozen by now.

Laurie Prindle: LAMH is so much more intuitive to me. As to learning LAMH for making presets, watch AM's YouTube videos, especially to learn the tools; have a sense of humor and a certain amount of patience. Start simple to learn the tools, like just a round ball or some simple organic shape. As to understanding how fur lays on an animal, the hair texture of the fur, rough or sleek and shiny and so on, and its possible layers of fur, etc… do research, study close-up photos and watch good quality animal videos. I've been studying and drawing/painting animals since I was a child, so I do have a decent 'feel' for how fur 'lays' on them. If it is animal I am not as familiar with, I research as I just described. As to a 'Guild', LOL! I am not aware of one.

Picture: DAZ Studio iRay render by Laurie Prindle aka 'CWRW' featuring the HiveWire Unicorn and Willow Creek setting. "A straight render to show off the HiveWire Unicorn."

DAL: Right. I was just thinking that if there was such a thing, then the Tiger would probably get you into it. Laurie, thanks. One last general question: where next for HiveWire?

HiveWire: We're excited to announce that we will be adding more of our content to be made available within Poser 12. Users will have to wait to see what that will be, closer to the Poser 12 release date. We are grateful for our relationship with Renderosity and Poser.

We are also getting closer to finishing up our new Dawn 2 female figure, with a new quad mesh and the content we're creating for her release. Her extensive morphs are complete, her high-quality texture maps and materials have been created and set up for DAZ Studio and Poser rendering engines by the talented Virtual World, and Paul Lessard / CGCubed is once again applying his skilful and magic touch with his rigging work.

Also Ken Gilliland ('Songbird ReMix') has always got new surprises coming. The same is true for Laurie Prindle, she has more coming for our house cat breeds, our horse and more.

DAL: Great, more kitties. A nice big British Blue, perhaps, that would be good, with tight LAMH fur. Or the Cheshire Cat from Alice in Wonderland, as a really faithful reproduction. And of course you already have Lisa's cool 'vampire cat' and the big 'Grimalkin' cat.

Ok, well, I think we can wrap it up there. Many thanks to you all for making such a fine addition to the DAZ / Poser line-up. Thanks also to those of our readers who purchased the tiger from HiveWire and made it such a success, or who are about to do so. How far the Poser and DAZ community has come in just 15 years or so, in terms of available high-quality 3D animals, and the tiger is yet another crowning glory for that range.

HiveWire: We thank *Digital Art Live* for taking time with us, and bringing more attention to our HiveWire Tiger product. We are grateful to you, the readership here, and those that have supported us over these many years.

HiveWire 3D is online, with store, freebies and forums, at: https://hivewire3d.com/

At the HiveWire Store you will find the product pages for the new HiveWire Tiger, with full technical speficications. Also the Tiger's add-on items such as the vital Look AT My Hair (LAMH) preset, and of course the required base figure of the HiveWire Big Cat.

HiveWire also has a fabulous range of other animals, including horses and a great many realistic birds in the 'Songbird Remix' series from the great Ken Gilliland.

Picture: "Egyptan Mau desert cat in the Pharoah's Chair". DAZ Studio iRay render by Laurie Prindle (aka 'CWRW') featuring CWRW Exotics 1 for the HW House Cat texture add-on set and CWRW HW House Cat LAMH Preset 1 — especially made for use with the Exotics 1 and with CWRW Calicos. All available at HiveWire. Straight render, no postwork.

CONTESTS

Here we offer our readers a small selection of recently announced contests and competitions, for your consideration.
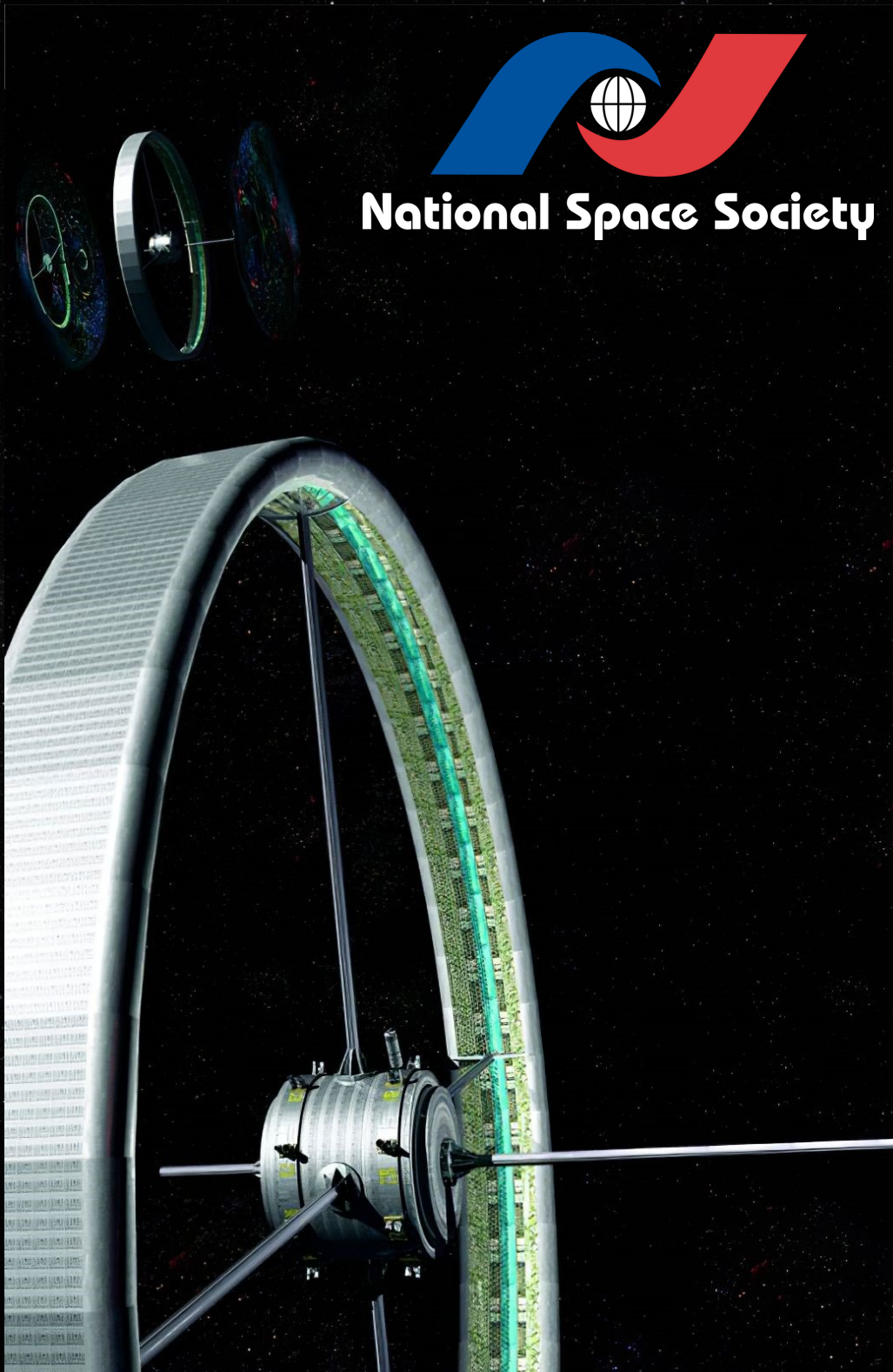
NATIONAL SPACE SOCIETY— SPACE SETTLEMEMT CONTEST 2021

This is an annual U.S. contest for all students at up to 12th grade, and entrants can be from anywhere in the world. In most nations "12th grade" means students under the age of 18. The contest seeks original art relating to **free space settlements** (i.e. not on a planet or moon), and must be permanent orbital or free colony-type homes and not temporary work platforms. Support systems in outer space, such as space mining and solar arrays, can also be depicted in your art.

Entry costs $15, and small teams may enter. They say "Contestants will be invited to the 2021 International Space Development Conference" run by the National Space Society (NSS).

Opens: December 2020.

https://space.nss.org/

Picture: "Vademecum" a 2006 student entry by Dan Roam. Similar in design and interior to the famous Stanford Torus, but with a more efficient overall shape.

ARTstreet Monthly Illustration Contest

September Theme
Furry

Excellence Award
50,000 yen

until
2020
11.4
(wed)

FURRY

The current Illustration Contest at the Japanese website for the MediBang Paint software, ART Street, is themed as **"Furry"**. The contest is aimed largely at artists in furry fandoms, using software such as MediBang Paint (similar to Clip Studio), but is open to all.

The Japanese organisers say... "We want to see those fluffy tails!" and so we assume that cute tailed creatures will be very welcome. There are cash prizes, about $500 equivalent. Deadline: 4th November 2020.

https://medibang.com/

PRETTY MYSTICAL / RENDEROSITY

Renderosity, now owners of the Poser software, have partnered with PrettyMystical.com to run a **Fantasy Art Contest**. Free entry and there is a $1,000 Grand Prize.

In the first instance, submit your digital art entry by email (only) to PrettyMystical, as a small 1000px version suitable for email. Accepted email entries will then be uploaded to the Fantasy Art Contest Facebook gallery. They say that... "brand-new art or any existing art is welcomed."

Winning versions will need to be available in 'print ready' form — at least 4000px and at 300dpi.

Deadline: 7th November 2020.

https://renderositymagazine.com/

RENDEROSITY FANTASY ART CONTEST

ART: "THE FAIRIES GUARD" BY RICK MERRIMAN

Pretty Mystical.com

ANY STYLE
$1,000.00 PRIZE
ANY SOFTWARE

Art by Rick Merriman

ANDREW KRIVULYA

We talk with leading commercial hair maker and 'Lookdev' **Andrew Krivulya**, who uses high-end tools to create for clients in advertising, TV and movies.

DAL: Andrew, welcome. We're very pleased to have an accomplished professional 3D hair and fur grooming specialist here, who has worked on projects for major clients in games and advertising. Firstly, you describe yourself as a "Groom TD/Lookdev" specialist on your ArtStation page. For the benefit of readers who may not be familiar that that industry title, would you explain what it is, and what you do, please?

AK: Hi. Sure. As a Groom TD (Groom Technical Director) I create hair & fur for characters in videogames, films, and commercials. Why I also wrote 'Lookdev'? That's because I often met groomers who *only* do hair, but who do not create shading and do renderings for the client. I added 'LookDev' because I completely prepare the asset, ready not only for animation but also for rendering. I preset the shaders and show how the hair looks with them on, in the render. That means that the client only needs to insert this asset into the scene, make the hair 'dynamics' and press the render button!

DAL: I see. Great, that's a very clear explanation. Thanks. And I see that, earlier in your career, you had a lot of experience in 'developing a look' of another sort, as you worked on several 'hidden object games'. That was doing modelling and texturing of places and rooms for other artists to 'work over' in 2D digital paint.

ANDREW KRIVULYA

UKRAINE

3D HAIR | GROOM TD | HAIR LOOKDEV

WEB

What then caused you to switch over to hair developing?

AK: Yes, you are right. Previously, I worked as a 3D Environment Artist, 3D Render Artist, and after that as a 3D Generalist on different projects. I also created spaceships and characters for the game *Polaris Sector*. My acquaintance with grooming began with a hedgehog, that can be seen at my ArtStation.

DAL: Right. Probably a good place to start.

AK: Back then he was not so beautiful as he is now. It all started with a question from a friend, "how to make a hedgehog's hair". I first tried Fibermesh and recorded a free public lesson on this, and put it on YouTube.

Then the specialist software called Ornatrix fell into my hands, and I created the final version. And from then on I just wanted to do full-fledged hairstyles for the characters. And after a week of experimenting, I created a hairstyle in 3 hours. Yes, it was not perfect, but the editors of *3D Artist* liked it so much that they added it to one of the issues.

DAL: Great, so that was your breakthrough…

AK: And also, I enjoyed working with the plugin so much that I started recording lessons, and then I got my first paid order and that's how my career began.

DAL: Had you previously trained as a groomer of real hair, perhaps as a hairdresser or a dog groomer in real-life?

AK: No, this is not interesting for me in real life. I started my creative life with 3D in 2009 and I studied as a 3D generalist. 3D is interesting for me because you can create something impossible in real life, and so there are no boundaries for creativity. You can experiment and create. Magic is happening on the screen. In life, it's not as interesting as doing it on a computer.

DAL: Yes, it would be more like… slobbery badly-trained dogs, or standing up all day in a noisy salon…

AK: Yes, a hairdresser is a separate profession in real life, which is not as interesting as being a 3D groomer. After all, you can create different creatures with unusual fur, different characters with interesting hairstyles.

DAL: And the hair you make now is very complex, very realistic. Very convincing. Does that mean that there has to be a very powerful PC to create it? If so, what is your current workstation system like?

AK: Yes, recently I updated my PC. Because earlier I had an old GPU, a 1030 with 2Gb Vram and this is not enough for viewport hair and not a powerful CPU either, a core i7 4770. This prevented me from fully performing required tasks, since IPR was very slow, and Viewport simply did not allow me to display 100% of the hair. This slowed down my work a lot.

DAL: So you invested in an upgrade…

DAL: I currently have a Core i9 9900K, GPU as 2 x 2080Ti and 64GB Ram. This allows you to display 100K-300K hairs in the Viewport and render them quickly than before.

DAL: And your key tools there are Maya, 3DS Max, and the plugins Xgen and Ornatrix, I believe? Ornatrix being perhaps the leader there, from what I hear. How are these used in sequence in the general workflow for you, when you develop a hair-look?

AK: I came to Xgen recently because the customers just wanted it. Before that, starting in 2016, I worked with Ornatrix. Therefore, I work both there and there. I prefer to improve my skills in both directions. And I look a little towards Houdini. For example, I was very impressed with this toolkit.

DAL: Do you practice making 'drafts' by using real hair, draping and styling with some old synthetic wigs, or is it an all-digital workflow for you?

AK: For me, this is a completely digital workflow. Most of the time clients provide 'sculpting sketches' in Zbrush format, so I don't need to do my own sketches. For personal projects… I first create a rough sketch in the form of meshes — in Ornatrix or Xgen you can convert guides to meshes — and only then start creating a full hairstyle.

DAL: I see. And how big is a typical finished hair, when you send it to the clients? Are there efficient compression methods that mean it can be sent in a fairly small format by email, or do you perhaps need to postal-mail them a *huge* 2tb hard-drive with one hair-file hair on it?

Pictures: These show Andrew's groomed version of the "Bear rider" model which was sculpted by 3D character artist Maria Panfilova. As you can see, we have a Stone Age girl and her tame bear.

Maria gave Andrew her finished model and he made all the grooming for hair, fur, and feathers with Ornatrix Maya. and also did the 'lookdev' and lighting and render work for it.

The completed scene was then lit with an HDRi from hdrihaven.

The pictures were then rendered with the then new V-ray Next beta for Maya on a "very fast" Vray.Cloud.

Andrew adds… "For the bear body and bear head I created many guides, because it is more comfortable for me in this type of work. But for simulation, of course, I recommend 2000-3000 or a smaller setting.

Pictures: "Grooming for dog" (2019), created with Ornatrix. The dog is meant to be a cross-breed mix between of Labrador and a Golden Retriever. The Zbrush software was used for dog sculpting, starting from the 'dog' sample. Substance Painter and 3D-Coat were used for textures and materials. Ornatrix in Maya made the fur guides.

RizomUV was used for the UDIM unwrapping. 3DS Max and V-ray Next were used for rendering. **Fur detail, background picture:** Fur detail was made in Redshift and Ornatix, part of a tutorial Andrew put on YouTube. You can also buy this dog fur base on Andrew's Artstation store.

AK: The final file I send is usually no more than 5GB. So I never have to think about compression methods and I shared the project files via Google Drive or my personal FTP client.

DAL: How do they then use the look you've developed for them? How is it fitted into and developed within their workflow?

AK: So I send the finished asset for animation and rendering. And then, usually it's the animator who's seated inside their studio, they do the dynamics of the hair, the rest of the command animates and renders. Then all this is collected as part of a full-fledged cartoon, advertisement, cinematic or a film. I never really delved into the rest of the workflow, since my own tasks consume all my time.

DAL: Fascinating. You've worked for some very major clients. Who has been your favourite or most exciting so far?

AK: Honestly I like all projects in which I participate. Since I am very interested in the process of creation itself. I cannot single out someone in particular, since everyone is doing interesting projects. I never take uninteresting projects!

DAL: That's a nice position to be in. You also work on personal and showcase projects, such as your superb Labrador dog seen on the previous pages, and others. Which is your favourite personal project, and why?

AK: Every time I 'give it my all' and completely dive into the process and 'put my heart into it'. Therefore, I have no favourites, even among the personal work. Because I am constantly enjoying the very process of creation. There is a type of person who likes to 'dig deep', look for an idea or meaning in everything. For me, the main thing is to get high from the process! If I get it, I feel good, even if there is no deep sense in it.

DAL: I see. So almost more like sport, perhaps what an athlete would feel. But what is your favourite part of the process of making digital hair? Surely you must have a favourite bit?

AK: In creating hair, I really like everything. And so I finally found myself and completely enjoy the whole process. Earlier, when I was a 3D Generalist, I really didn't like the process of retopology or skinning. These were the most disliked parts of my work. But in grooming, really... I'm a fan of everything.

DAL: Super. Looking more widely then, how has 3D hair developed over the last ten years, in general? I imagine it had changed quite a bit, not least because of more powerful PCs and various new plugin assistants?
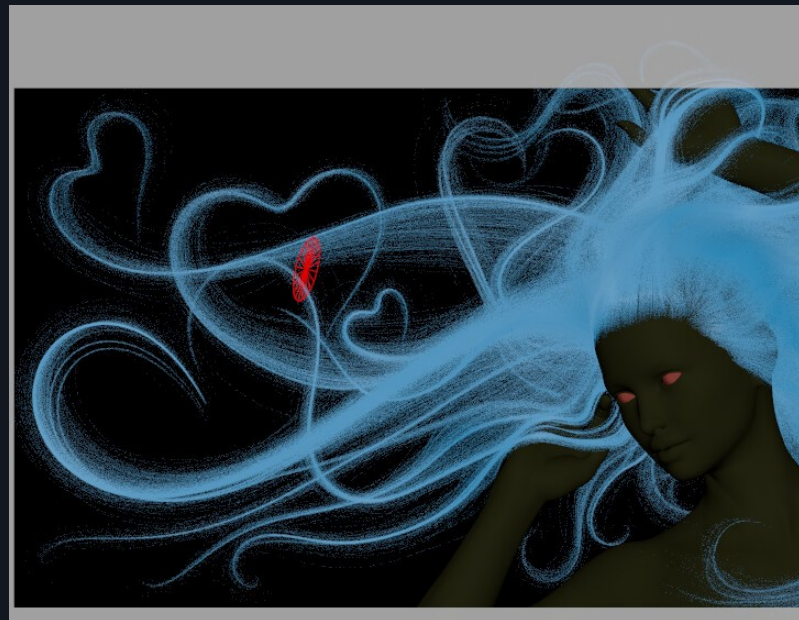
AK: Powerful PCs add comfort to work and speed up rendering. And have made it possible to implement interactive grooming, when — right in the viewport — we can see the result, do clumping, comb the coat or hair. It became easier to manage the form and control the entire process. For example, it is much easier to set the direction of 'the coat' now than it used to be. We just indicate the direction with special 'sinks' and the plugin automatically calculates the result. Previously, you had to comb everything by hand.

DAL: What has been your most favourite time-saver plugin, recentyly found?

AK: BraidMaker, a GumRoad [$40] plugin for Maya that simplifies the process of creating the braids. And Coiffure [$100+] for Maya, also on GumRoad and which I consider revolutionary.

Coiffure makes it very easy to create a realtime hair for gamedev.

DAL: Thanks. And what do you wish a plugin maker would make but hasn't yet made? What needs to be automated?

AK: I would very much like each creator to look more towards realtime hair, because until now many studios prefer manual alignment rather than using plugins. The Coiffure developer is moving in this direction. But I would like others to simplify many processes.
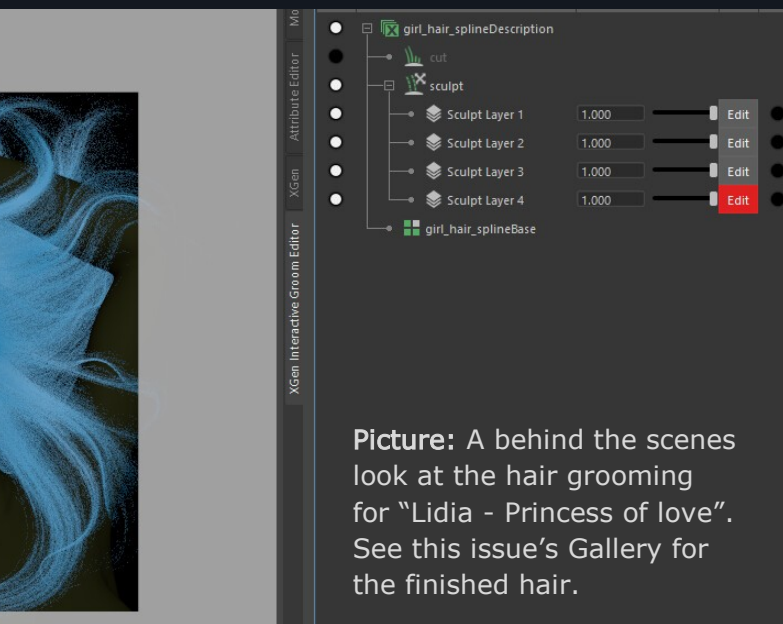
Picture: A behind the scenes look at the hair grooming for "Lidia - Princess of love". See this issue's Gallery for the finished hair.

Right now, with the Ornatrix team, I am working on this and at the same time doing lessons in which I show new possibilities.

DAL: That sounds an ideal position to be in. You also sell some of your hair files on the ArtStation Store? In fact, I think most of the Maya hair there is yours. Do they sell well?

AK: Yes, the best and best-selling real-time hair. For example, one of the latest hair works there was included in 'Trending', 'Best Selling' and 'Top Rated'! Because now everything professional is moving towards real-time.

DAL: And many hobbyists too. Either we brute force real-time with a powerful graphics card and iRay in the viewport or some go to iClone, and others such as myself have also dived into Poser for the real-time Comic-Book Mode.

AK: Yes, many people are already tired of classic rendering and want to see the result right away, without rendering.

DAL: Yes, though at the hobbyist level real-time hair often lacks something. You can definitely see the difference between hair in DAZ or Poser and real-time hair in iClone. Some of the real-time hair iClone had in the early days was very strange, but... perhaps I'm behind the times there. Talking of strange hair, what was the strangest hair you ever made?

AK: In my entire career, I have not yet received such offers!

DAL: Ah, I see. No-one came along yet and said "we need futurist hair for a sci-fi pop group from the planet Popmyhair"? But if you *could* choose your own big paying project involving hair or fur, what would you like to work on?

AK: Probably, I would choose some game project, there are often a lot of characters with various, non-standard hairstyles and fur.

DAL: Ok, let's hope you 'get the call'. Well, we realise you're a busy person so that seems a good place to leave it. Andrew, many thanks for this very insightful interview, which gives us a look at a part of the 3D industry that not so many people know about.

AK: I hope so too. And thank you for the opportunity to talk about my favourite topic. Yes, you are right, not everyone knows about this aspect of the industry, and therefore I have created a Youtube-channel to educate newcomers, where I give you the details and reveal more about the creation process.

DAL: Ok, so readers, if you're interested in that then check out the links on Andrew's sites.

Andrew Krivulya is online at:

https://www.artstation.com/artofcharly

https://www.youtube.com/AndrewKrivulya

https://www.instagram.com/akcharly_art/

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HAVE you missed out on an issue of our free magazine? Please enjoy this new handy double-page index of our past issues, and check if any are missing from your collection. Our 15,000 readers are also able to access back-issues of our previous title *3D Art Direct.*

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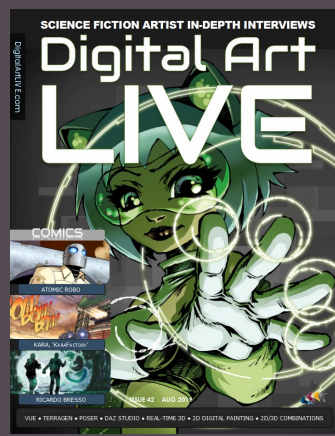
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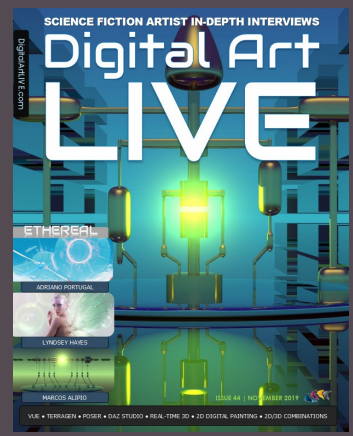- Lyndsey Hayes
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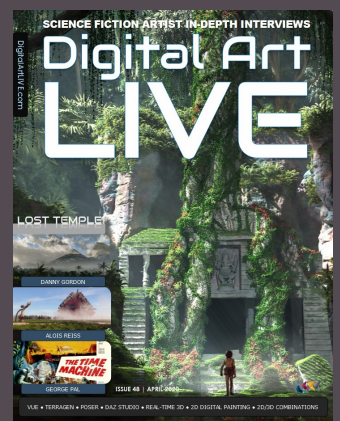
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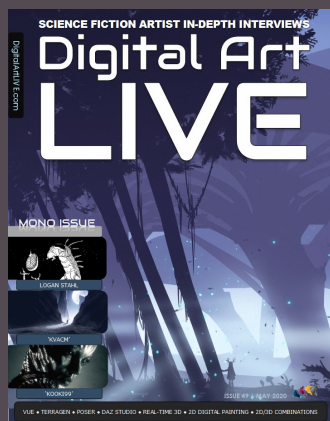- Imaginarium

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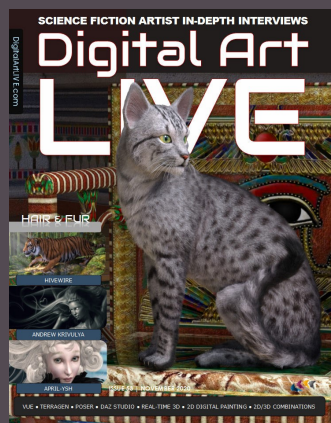
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Are you interested in being interviewed in a future issue of the magazine? Or presenting a webinar for our series? Please send the Web address of your gallery or store, and we'll visit!

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LET'S GET FURRY!

We present a short survey on the various options for creating believable or stylised fur, with method ranging from 3D rendering to graphics filters.

With recent big-budget movies such as *Dolittle* and *Call of the Wild* and *The Lion King* CG remake, Hollywood has shown that it has furry creatures nailed down. Or rather, no longer nailed down to be operated with wires — Hollywood's animals are now effortlessly leaping about and fighting, with styled fur flowing gracefully in the CG winds, often while also singing a very memorable show-tune.

But what about hobbyists, who don't have an elite team of Hollywood-level 3D hair stylists on call and a 256-blade render-farm to spin up? Many of us will have had our expectations dampened on 3D hair, and for quite a few decades now. It's almost never been ideal. First there was the dreaded 'helmet hair' in the early Poser. Then came the many years in which finding convincing trans-mapped 3D human hair too often meant a long tedious search through the stores and freebies, way too much expense and testing, and even then some tricky postwork fixes in Photoshop.

But increasingly such things belong in the past. Today we have an amazing range of 3D hair available 'off the shelf', all royalty-free, at places such as the DAZ Store and Renderosity and HiveWire. Hair with many tints and much pose-ability, plus 're-fits' to fit the scalps of the different base figures. True, it is still often easier to pop a sci-fi helmet on a character or have a bald alien — especially for animation or graphic novels. But, as graphics-cards and render-engines become faster, hair rendering will also become easier even for such media.

Hobbyists also have a growing, but rather confusing, range of free or budget-priced 'grow your own" fur features. Which is why this short survey article exists. That such features are not still locked away in the vaults of Hollywood, and can be done by anyone with $50-$150 to spend, is something of a miracle.

In the survey that follows we look briefly at the furry foibles of both DAZ and Poser (see opposite), and in following pages we offer some shorter suggestions about what's available for other non-subscription software. We also check out some of the options, such as 'fur' plugins for 2D graphics software and a few of the brush-packs for postwork.

Two key budget-price players in 3D hair are of course Poser and DAZ Studio, and fur can now look great in either and render quickly. DAZ Studio has its native Strand-based Hair, and also the 'Look At My Hair' plugin. Poser has the Hair Room, which its had since Poser 4, and which also makes efficient strand-based hair. It's possible the forthcoming Poser 12 will have some new Hair features, but at time of writing it has not yet been released.

It's possible that 3D renders will, in future, be augmented in 2D by AI-driven 'hair-draping'. We've seen working demos which look at a photo and identify the hair parting, how the hair falls, and where. The AI builds a 'hair volume' from the data, to be wrapped around a 3D head and filled with strands which spring from the parting and follow the volume.

POSER 12

Price: $129 upgrade, hair & fur integrated.

The **Hair Room** has long been integrated into Poser, offering free strand-based hair and fur that look much nicer than transparency-mapped fur. We assume that the Hair Room will operate in the same way in Poser 12. For simple fur the Hair Room is not difficult to operate, after you watch a short tutorial. It works fine for quickly 'painting and draping' fur and beards, and its fur renders quickly in Firefly. However complex styling can be difficult, and the 'erase' function for removing painted-on hair was very badly-designed.

Cliff Bowman was developing a 'TrueHair' helper pack for the Hair Room, and has demo'd this, but it has not yet been released. Until then Poser has a free script to Copy Dynamic Hair Room Settings which effectively enables the user to create a presets library. In combination with existing freebies such as 'Fur Caps for M4' and 'Dynamic Fur Capelet for M4' (above), this Python script can give you a quickstart on making your own set of presets.

Can it render in SuperFly? Yes. Released in October 2020, the free "All Purpose Strand" is a universal shader for use with Hair Room strand-hair and the Cycles-based SuperFly render engine. This can be freely adapted.
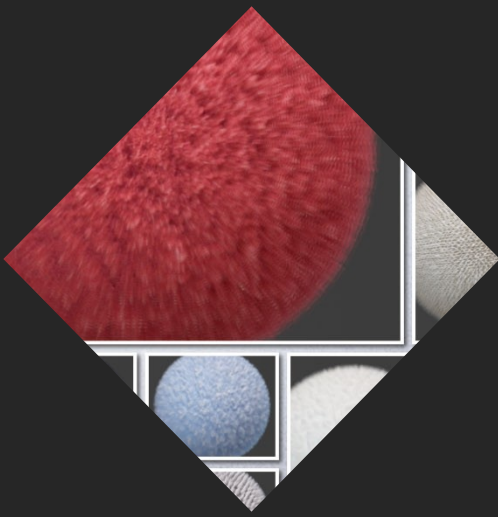
DAZ STUDIO 4.x

Price: Free, hair & fur integrated + $50 LAMH

DAZ's native **Strand-based Hair Editor** is based on the Garibaldi plugin. In summer 2019 this was intregrated for free and made to work with G3 and G8 human figures. Its Strand Hair allows hair/fur to be added to any body part of a figure, simply by painting it on the mesh, setting distribution and density features, and then using the 'virtual comb' and other tools to style the 'grown' guide-hairs. The workflow is neatly tabbed, and is very similar to how you do it in Poser. Ready made strand-based figures such as 'Plushies 2.0: Scamp The Fox' are available, and a few creatures such as the DAZ House Cat come with dForce Strand-based Hair. But ready-made presets remain curiously unavailable for 'base' DAZ/Poser animals.

The best option for animal artists is then the $50 plugin **Look at My Hair**, known as 'LAMH'. This has many specialist-produced presets that can be applied to realistically 'fur' a wide variety of animals. The fur produced is very realistic, comparable in quality to that of Poser's Hair Room, and it renders just as fast in simple lighting. Since version 1.5 fur can export to Vue or .OBJ. LAMH is crash-prone but, if you're working a lot with an animal that has a LAMH preset, it's still vital to have.

UHD FUZZY CLOTH for DAZ STUDIO

Price: $23

Fuzzy Cloth is a shader pack for DAZ Studio… "a set of special scripted shaders which mimic real world 'fuzz' without heavy-hitting displacement or fiber mesh." 34 varieties for 3D use, each with three levels of fuzz, and with an end-result suitable for medium-range views. Requires lots of hard-drive space.

DAZ CARRARA 8.5

Price: $150, many free plugins and scripts.

DAZ Carrara can easily create strand based **Dynamic Hair** and fur, and has good tools for grooming the created hair. There's also an excellent tutorial based on the DAZ Millenium Cat. Carrara has the great advantage that it can easily load Poser content and the early DAZ and DAZ Genesis 1 content.
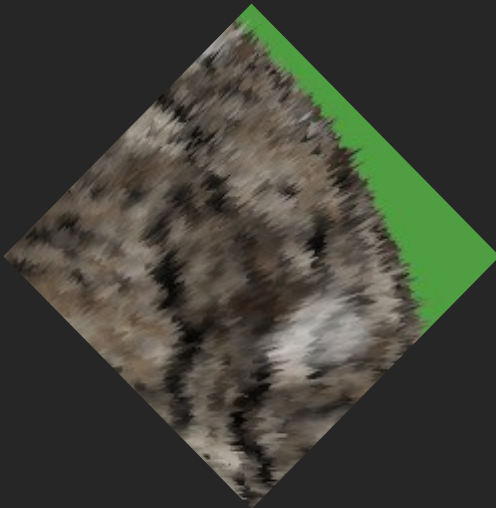
FURIFY SHADERS for POSER

Price: No longer sold.

Marieah's Furify shader pack, 41 in total, which until recently were available at the DAZ Store. They use displacement and thus require displacement turned on in your Firefly render, and each fur's displacement level can be easily increased in the Materials Room. The result is fairly fast to render, and can be used as a base for 2D postwork with brushes or filters (see overleaf). Does not work in SuperFly.

BLENDER

Price: Free, paid add-ons and plugins.

"Working with fur in Blender is always so hard" and "fur kept turning out poorly" seem to be representative opinions. The 2019 video "Grooming Fur in Blender 2.80" is the best one to look at to see how it is done in Cycles. There are also hair plugins for Blender, such as the $30 **HairTG** and the $38 **Hair Tool for Blender** — both are card-based. The Particle System can also be used for fur, but it is not ideal.

CINEMA 4D

Price: $3,495 + $599 for Ornatrix for C4D.

The pro top-of-the range in non-subscription software, when used with the leading Ornatrix plugin. Complex, and you'll need a lot more training than for Keyshot. **Ornatrix for C4D** can apparently work with C4D back to R19, which theoretically means... a version of C4D that can import Poser scenes via PoserFusion.

KEYSHOT 9 PRO

Price: $2,000.

Fuzz is a Geometry Shader in the new KeyShot 9 Pro. It gives randomized, hair-like short growth from the surface of any material. It can be used for things like hairy tennis-balls, earphone pads, towels and the like, or even a toothbrush or hairbrush. Keyshot has the great advantage that it quite easy to use, and fast.
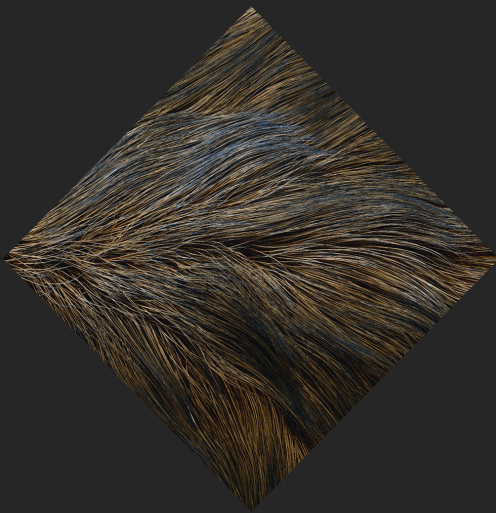

ZBRUSH

Price: $895

The full ZBrush (not the Core version) offers FiberMesh and related tools, with which... "you can generate totally different shapes for fibers, hair, fur and ... thanks to these fibers being a real geometry, you then have the ability to sculpt your hairs with ZBrush's powerful feature set." There is also a handy $15 **FiberMesh Grooming Kit** of tools, available from a third-party seller.

LIGHTWAVE 2020

Price: $995, or $195 educational.

FiberFX is LightWave's native hair and fur system. Lightwave 2020 added two new hair shaders for this, to be used for blending colours (see example above), and also "a simple artist-friendly shading option" which is said to make controlling and styling the strands easier. Note that earlier versions of Lightwave supported Poser Pro figure/scene import via the PoserFusion plugins.
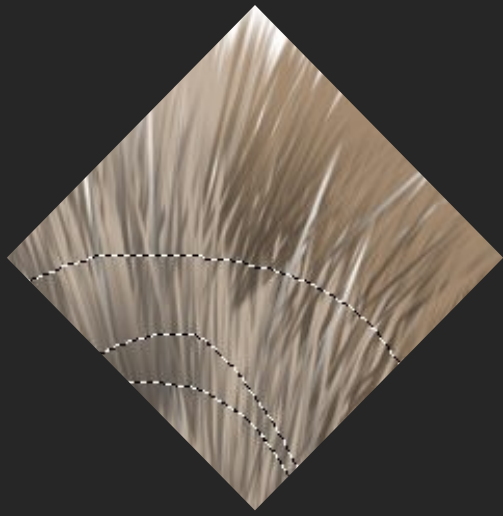
ALIEN SKIN EYE CANDY 7

Price: $90 + cost of Photoshop

Alien Skin's Eye Candy 7 is still a fun set of Photoshop filters. One module is **Animal Fur**, which emulates 3D in a painterly 2D. Use is much like KPT's FiberOptix (see below) — you make a Lasso Selection, then launch the plugin, then start tweaking length, colours, direction of fur. Real-time preview and fast.
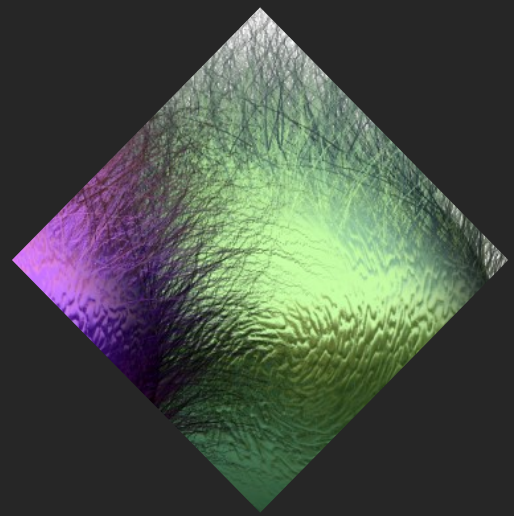
FURBLUR

Price: free, for the free paint.NET

FurBlur is a free 2014 plugin for the free and easy-to-use paint.NET software, and is found in the RedOchre plugin pack. The maker calls it "a versatile blur/trail effect. Useful for fur, false beards and grass textures". Flexible, easy to apply and quick to render on quite small images. Much slower on large images, though.
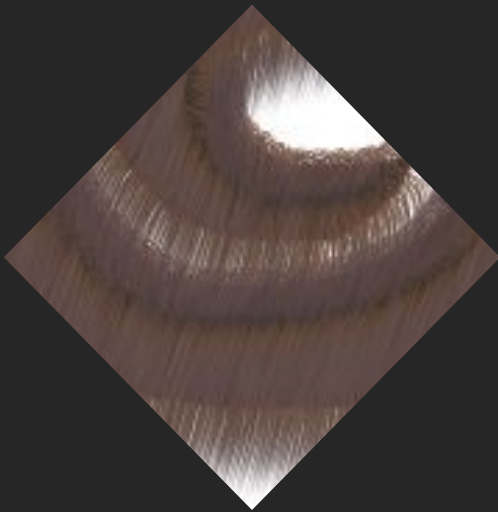
KAI'S POWER TOOLS 5

Price: $25 for LaunchBox to run it

KPT 5 had **FiberOptix** for positioning, colouring, drooping and rendering fine fur into and around a Lasso Selection. We still run KPT5 on Windows 8.1.x, with PhotoLine and the $25 LaunchBox for 32-bit plugins. Works best when built up in layers, and can combine with thicker Eye Candy fur. See the manual "Metacreations Kais Power Tools 5 User Manual" on Archive.org. Real-time preview, and fast.

AKVIS DECORATOR 8

Price: $54, plus cost of Photoshop

Not a fur generator, but a unique Photoshop resurfacing plugin. Decorator resurfaces the 2D selection with a new material, while keeping the underlying topography. So, for instance, a base fur-like texture can be added across an elephant, to prepare it to be furred into a mammoth by applying fur emulation tools such as Eye Candy, KPT5 or FurBlur, or Photoshop brushes. 8.0 is now much faster than it was.

PHOTOSHOP ACTIONS

Price: Various costs, can be expensive in total.

Photoshop's ability to record and replay complex Actions has led to a cottage industry in selling such things. Most can automatically apply a pleasing fur emulation effect to lettering, though usually the length of the fur is short. The other limitations are the lack of a "try before you buy" option, and lack of speed.
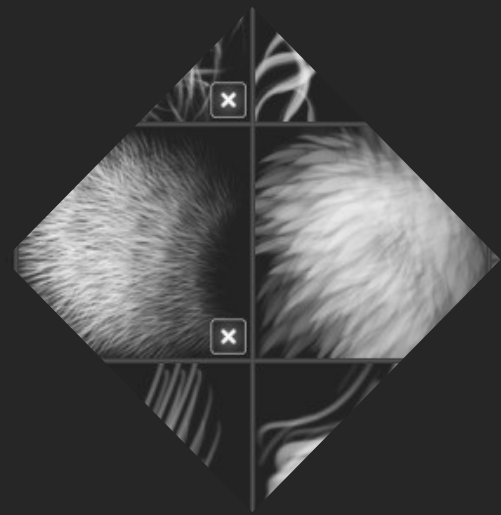
BRUSH SETS for PAINT SOFTWARE

Price: Various costs, can be expensive in total.

As with Photoshop Actions, there are a range of fur brush sets for Photoshop once you go looking, though few are free. For Krita 4.x, there are now free fur and hair brushes in the "FizzyFlower's "ESSENTIAL" 180+ Brush set for Krita" (summer 2020). Also look at the trials for Flame Painter and Corel's ParticleShop.

PRE-PAINTED PACKS

Price: Various costs, can be expensive in total.

Some people sell pre-painted packs of hair as PNGs with transparency. Sometimes these are hair sections that can be creatively re-combined, sometimes they are complete hairstyles which assume you have a human head angled to match them. While most are created for human females, some can also be edited into DIY 'fur kits'. As with Photoshop Actions, there is no "try before you buy".

DIY

Price: Free.

Some people grab their nearest kitty, place it on a flatbed scanner, and press the button! We don't recommend that, but a suitably furry pet and a proper camera that does macro photos could be a useful combination — if you're skilled with compositing. Alternatively, it's not difficult to learn to paint basic fur, even without a set of special 'fur brushes' — there are plenty of tutorials available on this skill.

APRIL YSH

In Western Australia **AprilYSH** produces superb affordable 3D hair for the DAZ Store, ranging from ordinary styles all the way to futuristic and manga hair.

DAL: April, welcome to the "Hair" themed edition of the free *Digital Art Live* magazine. As a long-standing maker and seller of creative 3D hair, we think you're a great choice for this issue. To start with — have you always had an interest in hair? Were you smuggling 'the sharp scissors' out of the house and styling your little friends when you were a child, for instance? Or did you train in hair styling at a college, or was there a different career path before the 3D hair?

A-YSH: Thanks for the invite. My job post university was in software development, first in defence and then in finance industries. The day job was simply unrelated to digital art apart from being on the computer. I actually had no more interest in hair modelling than the next person… until I wanted to render my RPG character and was faced with the travesty of a wig collection in Poser, circa 1999. I vaguely recall there were many free morphs for Posette (aka P4 Nude Woman) and some very nice armour available, but there seemed to only be two or three wigs to choose from. In my memory Poser was the fount of bald ladies in arabesque [i.e. head-wreaths or ornamental leaves and tendrils].

APRIL-YSH

AUSTRALIA

DAZ STUDIO | 3D
HAIR DESIGN

WEB

DAL: Yes, those were the long-lost days of 'helmet hair' and overpainting of the render. Or else they were crowned with a wreath of foliage, as you say. I see, so it was RPGs that got you interested in 3D hair. What were your first steps like?

A-YSH: I enjoyed AD&D 2nd Edition [i.e. the divergent tournament variant of *Dungeons & Dragons*, 1977-2000] back in the day, and my half-elf Cleric character required a sensible bob haircut. Fortuitously at about the time I was noodling around in my dad's new toy, which was a copy of Poser 4. Nothing else would do but learn to make the hair myself. DIY was all part of the fun.

DAL: Great. What skills were the most challenging to acquire in those early years?

A-YSH: Modelling hair is tedious but easy, in terms of shaping. So are UV-mapping, texturing, and morphing. The challenge was the rigging for Poser 4. Working on joint angles, static, dynamic, bulges, and MatSpheres — thankfully just a hazy memory now. I truly enjoy rigging in DAZ Studio these days. I like long bone chains and the twisty poses that ERC sliders enable. Long plaits are where they're at!

DAL: Brilliant. What were you first successful 'breakthrough' hairs, that really brought you to people's attention, and which sold well?

A-YSH: There may only have been two or three people silly enough to make hair when I started, which meant it was no extra work to get noticed. I had low expectations, so any sale was exciting.

My best-selling in the early days was "Spiral Curls" which I first made in 2002 and reworked in 2005. Most available hairs were straight, so when I made curls I got many questions asking 'how to model spirals'. That highlights how few formally taught modellers were on the scene then. Most of us were self taught and we learned on the job.

DAL: Super, and to dive a bit more into the technical bits… what new technologies have come along to make 3D hair behave much better than before? And why is it so useful?

A-YSH: Relative to other software platforms, DAZ Studio was a bit behind in developing dynamics. They were a relatively small company catering to quite a niche of users, so to me it's understandable. Hence we only got a dynamic cloth engine, aka 'dForce Cloth' in 2017. A handful of people started applying cloth dynamics to their transmapped polygonal hair and this is still a favourite for many users.

At about the same time, DAZ let us content makers know that they intended to make a specific engine for dynamic hair, aka 'dForce Hair'' and that was finally introduced in 2019. Both dForce systems help hairs drape along with the figure poses much better, so they are definitely worth a look for people who haven't tried yet.

DAL: Indeed. dForce is great. Yes, I think we're now at a nice place, in terms of the Poser / DAZ world's position. Although we still get a lot of 'sniffiness' in the 3D industry, one of our great benefits is that our characters have a huge range of hair to choose from, ready-made and royalty-free. Plus we have the relatively low prices, which is also nice to have. So, to keep us ahead of the pack like that … what new technologies would you like to see added to DAZ or even to Poser 12 or 13, to make us stand out even more in terms of hair and fur?

A-YSH: I'm unashamedly stuck in DAZ Studio and don't really know what else is out there, in terms of hair tools. I have seen some nice Blender hair particle renders, i.e. poly hairs made for DAZ Studio converted and rendered in Blender, and would wish for the same result in DAZ Studio. But I don't know what that entails.

DAL: Yes, we have a survey of the fur options in this issue of the magazine. From that it appears that Blender isn't ideal for animal-type fur, but it might be better for hair. Its sculpting and plugins are both progressing very fast.

A-YSH: DAZ are also currently pushing pretty hard with their Bridges plugins project to make our DAZ Studio assets convert and work better in other software, so I suppose I will have to crawl out from under the DAZ Studio rock and take a look around soon.

DAL: Right, you'll probably want to read the interview with a Maya + Ornatrix expert, which we also have in this issue. As for DAZ, one interesting item many people don't know is that the latest iRay handles 'strand hair' rendering much faster, and that version is already in the latest DAZ Studio. Talking of strand fur, have you tried the "Look At My Hair" (LAMH) plugin for DAZ Studio?

A-YSH: I used LAMH a few times before, to produce transmapped poly hair for humans. It is an elegant tool, simple to use with great results. The hair guides editing tools in LAMH are nicely done and I wish the DAZ Studio Strand Based editor had similar controls. However I also don't want LAMH to become redundant and disappear. Having different tools can only be positive for developers.

DAL: Indeed. Have you thought of using LAMH to make fantasy creatures?

A-YSH: I have considered making fantasy creatures many times in the past and yet… I can't move away from my wishlist of human hairstyles. I still get requests from users to add to my own list of hairs to do, so it's unlikely that I will be getting furry soon. I'm also convinced realistic contemporary hairstyles sell the best. Not overstyled but they must be attractive, if not outright sexy, as you might find on the cover of a magazine. Despite knowing this, I persist with my own wishlist of styles that hark back to my RPG roots. So you'll still see giant plaits, improbably long ponytails, and overly cute curls from me.

DAL: Great. Apparently the recent Shield Maiden on the DAZ Store was a bestseller, as part of their recent Nordic push, so there's obviously demand for that. What's your general workflow when you start to make a new hair?

A-YSH: I've kept a folder of my sketches and reference hair photos since 2000. I routinely dip in there to choose the next style to work on. I also receive reference photos from DAZ when they commission a 'character hair'. The workflow then moves onto picking a name for this hair which can lead to quite a rabbit hole of baby-name websites, Wikipedia, and online liquor stores — not necessarily in that order.

I still prefer to make polygonal strips to model hairs and use alpha / transparency maps to approximate individual hair strands. After all these years this process has remained tedious. One standout development for me was when the Modo software developers added the UV Mapping Rectangle tool. It meant I no longer had to worry about manually flattening and making regular rectangles of the UVs *while* I modelled, that can all be done automatically at the end of modelling.

DAL: Super, and it's led to the great range you have now, and it's all extremely useful for many artists. And there's also some great classic male hair in your range, which is always nice to see. Congratulations on such a great store, and we urge our readers to go take a look.

Turning now to Australia… you're based in Western Australia, which sounds like a very interesting place. I think you're on the coast at Perth, which is where most people in the west live, is that right? What's that city like, these days?

A-YSH: With respect to 2020, Perth has been the standout winner as the place to live. Suffice to say we have not had Covid-19 community transmission for over six months and have had eased restrictions within the state of Western Australia since May, so life is relatively normal apart from not travelling interstate or internationally. We are taking for granted going to the gym, beach, movies, restaurants, and simply hugging friends and family.

DAL: And the digital side?

A-YSH: Digital arts in Perth is still in 'quiet progression'. Most of the energy is in education, many people are studying digital art but there are no obvious digital art industries yet. Employment is more likely to be found as part of a conventional business, in their visual marketing and media departments. Fortunately digital entertainment, games industries, and art exhibits are accessible online, so we may be isolated here but by no means cut off.

Picture: April's freebies include the 'dForce Furry Tail' and some rare old M3 male hair suitable for sci-fi ('Warkanan' and 'FauxHawk').

DAL: And do you travel out of the city to enjoy the wilder bits of Australia? Is there much to see out in the Goldfields region around Perth?

A-YSH: Yes, my family have travelled a fair part of the west coast of Australia and also interstate. I have not seen much of the interior or the "outback" as some would call it. In Western Australia we have some lovely wine country and tall tree forests down in the south west, endless beaches, quite a few interesting tourist towns dotted all along the coast, all the way up north to the more internationally famous spots of the Coral Coast World Heritage Ningaloo Reef, Broome, and the Bungle Bungles. The west coast is over 6,200 miles long so there is a lot to see, though unfortunately a long drive to get between places.

DAL: Sounds exciting. And at home, what's the view from your work studio like?

A-YSH: What's that famous saying, "a picture will save me typing?" See pictures!

DAL: That looks nice. Warm and tropical, but without the risk of savage beasts and dysentry. Congratulations. What are you working on at present in 3D? Or what trends are you seeing?

A-YSH: I actually had to finish my DAZ PA 'Christmas Freebie' this weekend — spoiler alert, Christmas is coming! It seems to do so every year. Jokes aside, there has been a no-longer new trend that I've been trying to include in a hair model for a while but haven't yet — pearl hair barrettes [a hair-clip, but lined with small pearls]. Why are they so popular in real life? It took me a while to even notice, and since I have noticed by now I suppose that means they are 'on the way out'. I am unfashionable and I don't apologise — it just explains why it's more fun for me to reference fantasy RPG games where fashion is less specific.

DAL: Right. Yes, there's not really fantasy RPG equivalent. I guess a sci-fi cyber-neon 'pearl hair barrette' might work, though. Ok, I think that about wraps it up. April, many thanks for your time on this interview — we realise you're very busy at the moment — and we wish you well in the future.

A-YSH: I realise my contribution may be less technical than your usual interviews. But I'm happy to take part, thank you for having me.

DAL: Our pleasure.

April YSH is online at:

https://www.daz3d.com/aprilysh

http://aprilsvanity.com/index.html

At the latter site, April's freebies include the 'dForce Furry Tail' and some rare M3 male hair suitable for sci-fi ('Warkanan' and 'FauxHawk').
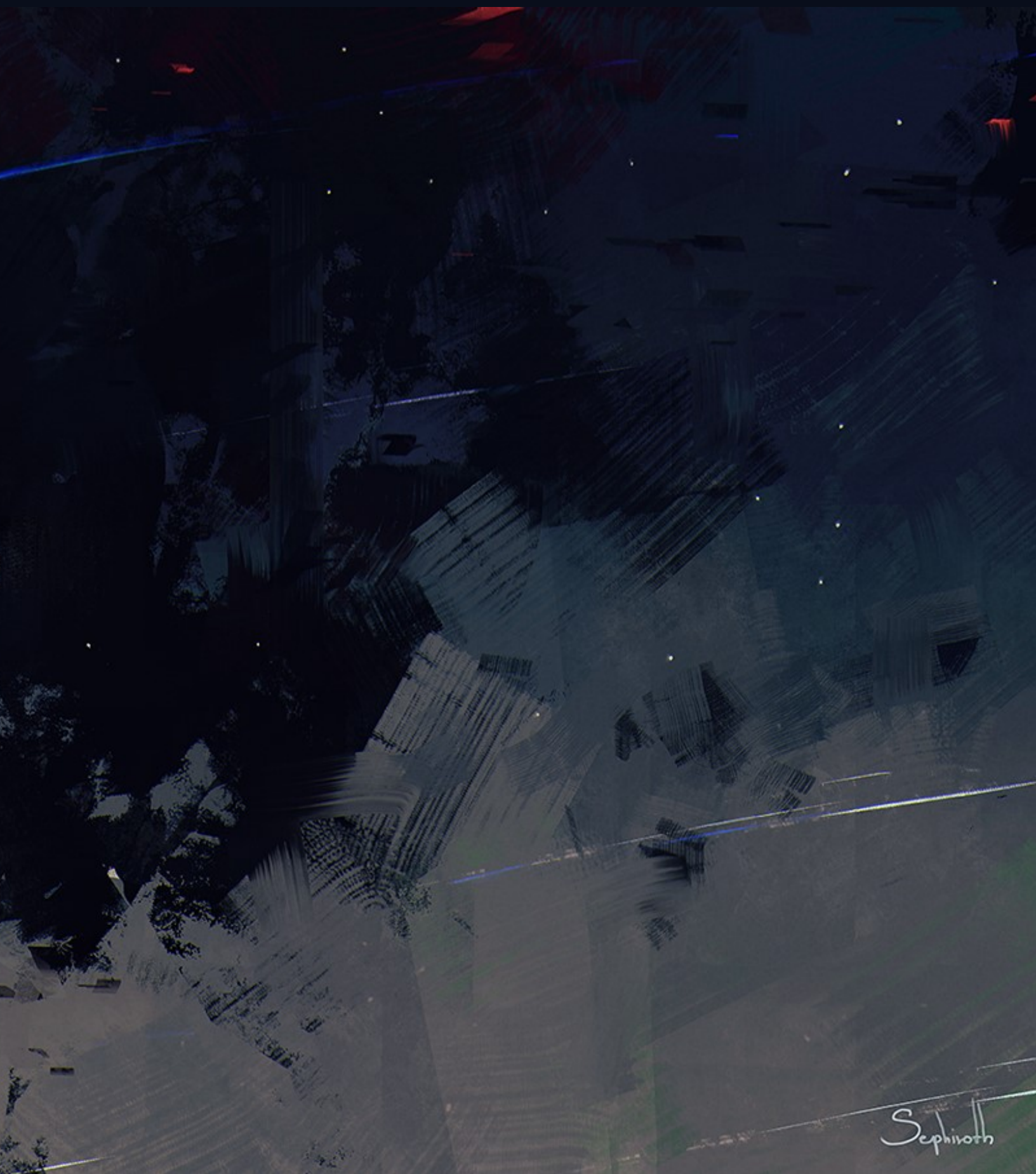
I had the book that told the hidden way
Across the void and through the space-hung screens
that hold the undimensioned worlds at bay
— H.P. Lovecraft, from "The Key", part of *Fungi from Yuggoth* .
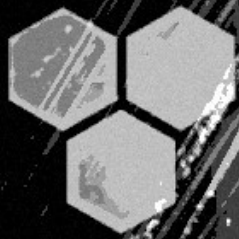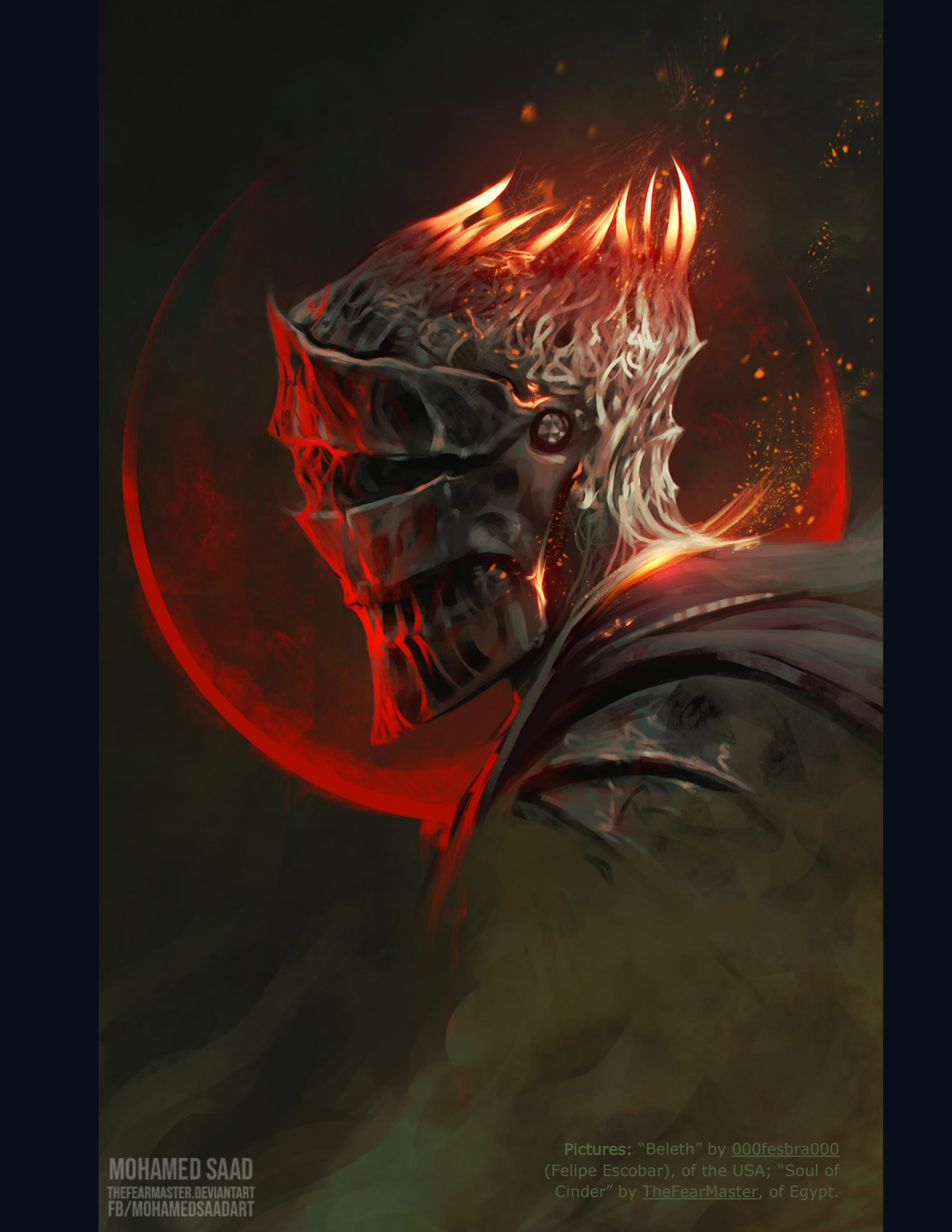
Pictures: "Beleth" by 000fesbra000 (Felipe Escobar), of the USA; "Soul of Cinder" by TheFearMaster, of Egypt.

"Carter knew at last that the old village folk were right when they made low guesses about the cryptical realms which are known only to cats, and to which the elders among cats repair by stealth nocturnally, springing from high housetops. Verily, it is to the moon's dark side that they go to leap and gambol on the hills and converse with ancient shadows ...

[Carter dream-travels to the dark-side of the moon. On arrival, in company with the cats of Ulthar, Carter looks]

... upon a strange scene. The great shining disc of the earth, thirteen times greater than that of the moon as we see it, had risen with floods of weird light over the lunar landscape; and across all those leagues of wild plateau and ragged crest there squatted one endless sea of cats in orderly array. Carter now spoke with the leaders in the soft language of cats ..."

— H.P. Lovecraft, from "The Dream-quest of Unknown Kadath".

Digital Art
LIVE

NOVEL: PIRANESI

Any new novel by the author of *Jonathan Strange & Mr Norrell* is an event, and especially if — after a gap of sixteen years — it turns out to be another fantasy-adventure. One that also languorously evokes Nabokov, Borges, and *Gormenhast* via Narnia. Mr. Piranesi's vast house is a fantastical building, with infinite halls, and endless corridors. Yet the ingenuous Piranesi finds strange ways to confine its overwhelming fascination, by his carefully chronicling of "The Year the Albatross Came to the South-Western Halls", in his mapping of parts of the labyrinthine structure, and his cataloguing the thousands of curiously different statues. Mr. Piranesi is quite content being alone there... until the arrival of one who seeks secret knowledge...

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IMAGIN

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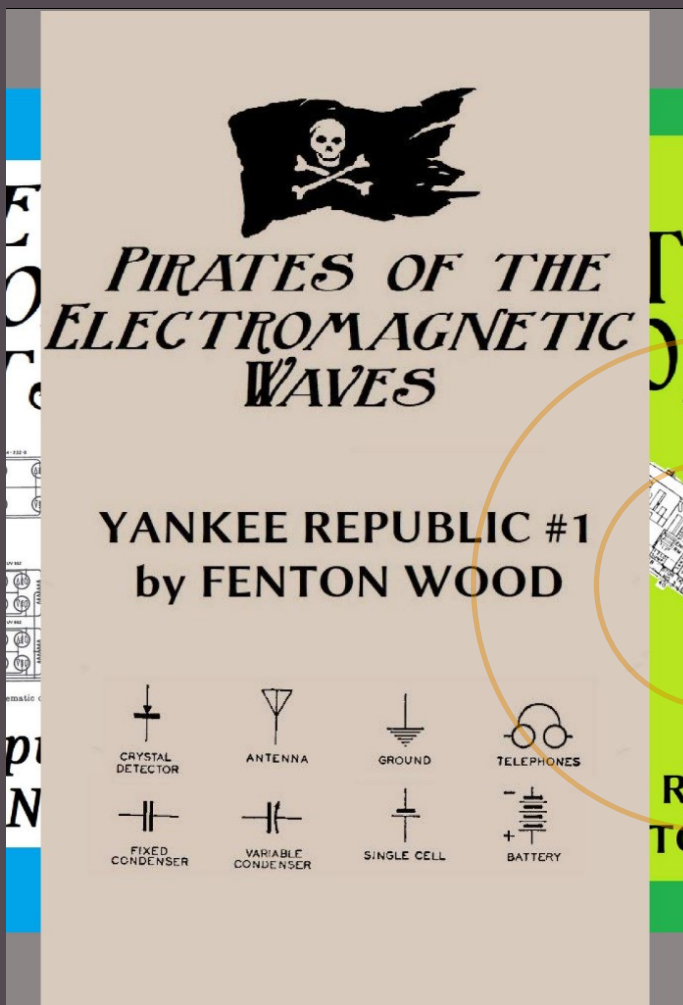JONATHAN STRANGE & MR NORRELL

SUSANNA CLARKE

PIRANESI

BLOOMSBURY

Novel series: Pirates of the Electromagnetic Waves (complete)

If you've been aware of Fenton Wood's acclaimed series, but have a hankering for completed tales, then now's the time to read this underground best-seller. Because the new *The Earth a Machine to Speak* is the final short novel of the five-novel ebook series which began with *Pirates of the Electromagnetic Waves.* The series tells a timeless but fresh story of youthful ingenuity and engaging adventure, set in an alternate history science-fiction world of nature and community. Here the process of discovery is a cherished wonder, and discovery a spur to success through diligent work. Such discoveries lead to an epic journey through a mythic America 'that might have been'.

"This is the kind of book that having read it makes you feel like you have a fun, exciting secret..." (*Neo-Victorian*).

Available from the Amazon Kindle store.

Movie: Love and Monsters

Love and Monsters (Oct 2020) is a fun action-adventure movie. A recent asteroid impact has allowed all the cold-blooded creatures to quickly mutate. Of course, they all suddenly grow to a large size, and develop a ravening appetite for human flesh! Thus in the near-future all humans must hunker down underground. Such human bunkers are few and far between, but one day hapless bunker-guy Joel finds his high-school sweetheart is living in another bunker just 80 miles away. He decides to open the scary escape-hatch and brave the Monsterpocalypse...

Love and Monsters is basically Ray Bradbury's story "The Silent Towns" meets H.P. Lovecraft's unwritten 1950s atomic-age monster-movie scripts. With a touch of the *Pirates of the Electromagnetic Waves* novel series that we told *Digital Art Live* readers about a few years ago (see left). But all very enjoyable and imaginative and *human*, in welcome contrast to the axe-grinding gloom of other post-apocalyptic sci-fi. Available now for streaming (USA only).
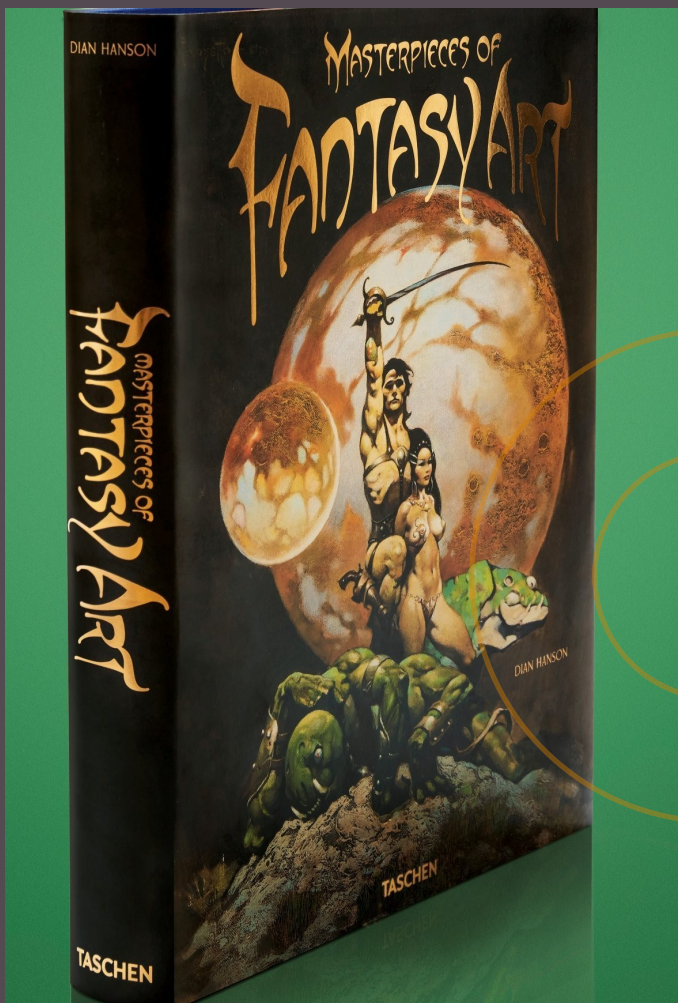
Book: Masterpeices of Fantasy Art

Tashen's new 532-page oversize hardback was released at the end of August 2020. It collects and lavishly prints a wealth of classic fantasy art from 100 artists, while also offering contextual sketches and drafts, and artist biographies. The first 100 pages are art history, which is followed by long sections on the likes of Frazetta, Rodney Matthews, Boris Vallejo, Michael Whelan, Giger, Moebius, Druillet and others. At the end we get a survey covering 60 other fantasy artists. The extremely large format is good to see for a book of this length, but be aware that you may need Conan-like steel wristbands and mighty-thewed barbarian arms to even lift this immense 16lb book! While certainly nice to browse if you know little about the fantasy art field, consider that your £150 could instead buy the discerning collector six large artbooks on your favorite artists. Perhaps even more, if you buy the books used and shop around.

Restored TV series: Day of the Triffids

1970s and early 80s British TV productions are not everyone's cup of tea, but at least many of them were quite faithful to their sources. One such is John Wyndham's classic British sci-fi *The Day of the Triffids* (1951), here presented as the very watchable and intelligent 1981 BBC TV adaptation written by Douglas Livingstone and part funded by the Rockerfeller Centre in the USA. Completely faithful to the novel, the famous disaster plot — a blinded humanity vs. giant sentient plants — unfolds briskly in 6 x 25 minute episodes. The BBC was on top-form in this period and Steve Drewett's pre-digital VFX and 12ft high venomous plants are creepy and revolting. The casting and acting is what you'd expect from the BBC in its prime. What of the disc? The series has been a carefully cleaned and restored for this first-time Blu-ray edition. Purists may quibble at the new title fonts and other changes, although those buying just for entertainment and the quality drama won't notice such things.

Miyazaki

Due April 2021 / Los Angeles, USA

The long-delayed Academy Museum of Motion Pictures in California now has details of its inaugural blockbuster exhibition. Titled "Hayao Miyazaki", the Museum will host the first major North American museum retrospective dedicated to the famous Japanese animator and storyteller. The show is set to open on 30th April 2021, offering more than 300 key items and immersive recreations of iconic scenes from the films.

Website URL live, but site not yet working.

Pictures, from left, across double-page:

Miyazaki as seen in the four-part documentary *10 Years with Hayao Miyazaki*, available free online.

Detail from the main promo image for the Afropolitan Comics website. We searched for an artist credit for this, but couldn't find one.

A detail from the poster to promote the Autumn/Fall Milo Manara show "Nel Segno di Manara", near Naples, Italy.

Detail from a painting by Walt Kuhn, "Chico in Top Hat", 1948. Possibly shows Chico Marx.

Afropolitan Comics

Until July 2021 / Africa & online

Afropolitan Comics is part of the French "Year of the Comic" programme. This brought South African comic makers into contact with comics artists from other African nations — such as Ivory Coast, Nigeria, Senegal, and several from Cameroon (which seems to be a centre of comics making). 16 comics makers are thus showcased to the world on this public website, with work organised around three themes of 'Autobiography', 'Heroes and History' and 'Folklore and Future'. The site's title of '-politan' does not imply politics, and indeed African comics artists are keen to get away from the idea that they only "make fun of local politicians". Instead the title combines 'Africa' and 'cosmopolitan', and is meant to reflect the modernity and sophistication emerging across a lively young continent that is now mostly free of war and famine. Such sentiment is backed up by the very large African Youth Survey 2020, which found "a rising Afro-Optimism" driven by a strong sense of individual responsibility and entrepreneurship.

https://www.afropolitancomics.com/

Milo Minara retrospective

Until 29th Nov 2021 / Naples, Italy

A large retrospective exhibition of the work of Milo Manara is on now in Italy. The location of Benevento is a short drive up into the hills from Naples, Italy. Produced with Manara co-operation, the *Under the Signature of Manara* exhibition has about 70 carefully selected works exemplifying aspects of his 50 year career. The show is arranged in seven sections, surveying not only his famous comics work but also his commercial work as as illustrator and in the worlds of advertising and film.

This Manara exhibition is accompanied by a substantial catalogue-book and this includes "an exhaustive annotated bibliography and a full chronology of the numerous exhibitions dedicated to Manara".

Manara is well known for the eroticism of his comics and for his brave anti-censorship stance, and this has encouraged a follow-on exhibition of Italian comics in December — to be titled "Italian adolescence: youthful lives and desires in comics."

https://www.milomanara.it/

Masks

Until 10th Jan 2021 / Malaga, Spain

This large exhibition, on the beautiful Spanish tourist coastline of Malaga, considers the use of the mask in art as a means of transforming the human figure. Masks first have an animistic/shamanic use arising from the need arouse bravery and bring success in wild animal hunting. Later masks had a traditional festive use, and in large towns became associated with the carnival and fancy dress. In the late 19th century macabre and decadent artists and writers began to be associate masks with the grotesque and death. By the early 20th century the modernists had developed this decadent notion and combined it with their own fascination with primitive masks. Masks — or simplified, flat features and empty eye sockets — were then everywhere to be found in early modernist movements such as Cubism, Dadaism and Surrealism. Hair was an integral part of expressing the remaining 'humanity behind the mask'. A 208 page catalogue, *Masks: Metamorphosis of Modern Identity*, is available for this large exhibition.

https://www.carmenthyssenmalaga.org/en/exposicion-actual

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