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SCIENCE FICTION ARTIST IN-DEPTH INTERVIEWS

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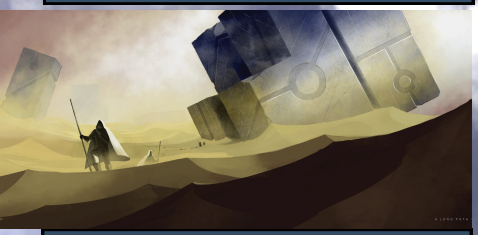
'SPACEWRECKS' ISSUE

VIKRAM MULLIGAN



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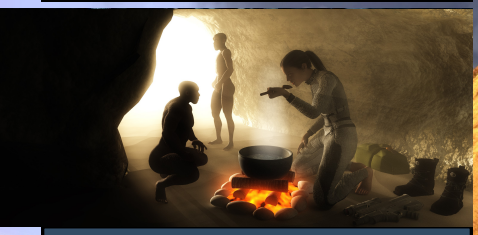

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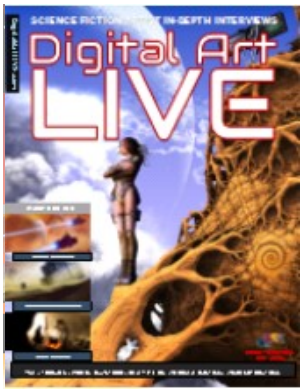

Front Cover : Premonition" by Artifex

'SPACEWRECKS' ISSUE

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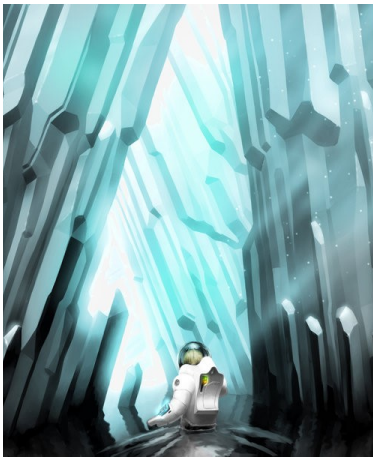

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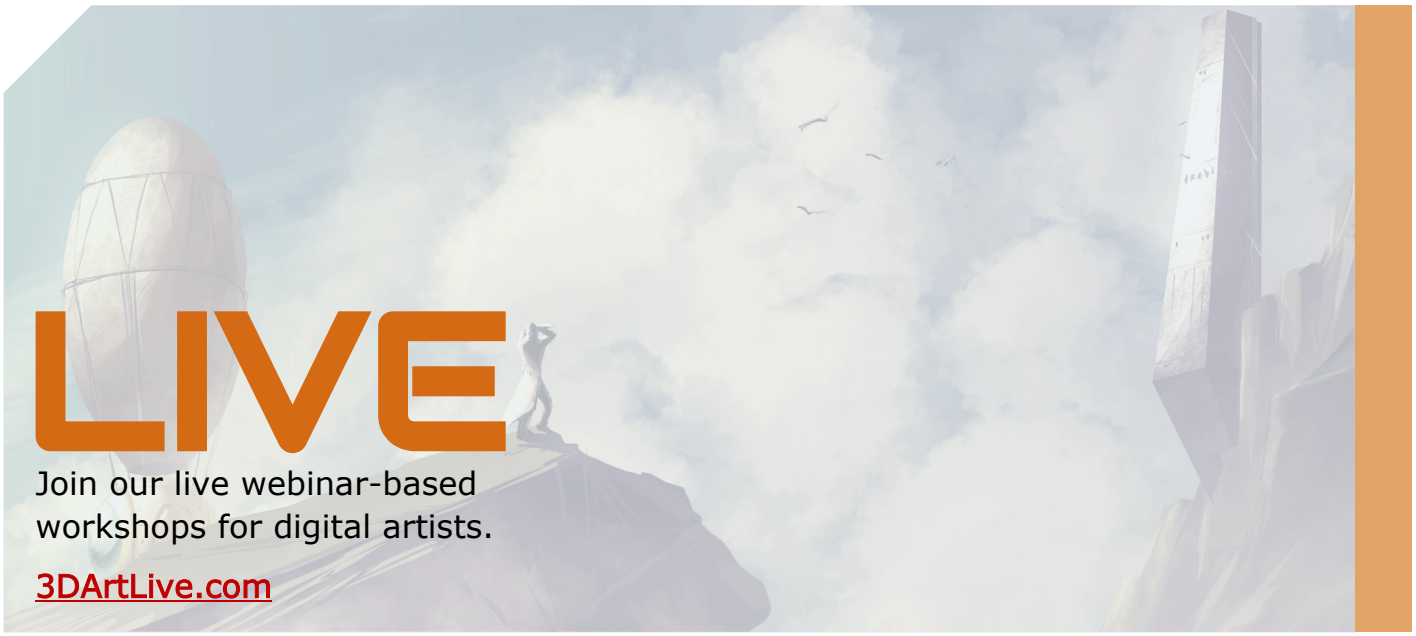

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Credits for pictures, from top left: detail from "Among the Moons" by Vikram Mulligan; detail from "Docking Bay 10" by Vikram Mulligan; "Traveller" by Xistenceimaginations.

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EDITOR'S LETTER

WELCOME...

An early inspiration for spaceship art for me came from a collection of large illustrated science fiction books called the "Terran Trade Authority" (TTA) series. These were published in the late 1970s and written by Stewart Cowley. They described a future history of mankind's expansion into our galaxy and were written in the pretext of a future trade organisation cataloguing various spacecraft. The artwork was bright, imaginative and adventurous.

The books were wonderful collections of some of the best sci-fi spaceship book cover art at the time, with illustrators such as Chris Foss and Peter Elson featured. A great by-product of these books is that the sci-fi illustrators at the time had their work promoted and concentrated into these volumes. It was a great way to discover sci-fi art.

One of the books in the TTA series "SpaceWreck : Ghost Ships and Derelicts of Space", served as the inspiration and theme for this magazine issue. It sets down a history of future space disasters, with some logging of mysterious happenings in a series of unrelated short stories.

One of the challenges of digital art is to "dirty down" a model and there is an extra level of work to "un-perfect" a 3D model and make it looked crashed, broken, dirty and dusty in a scene. The artists we have found for this collection of work shows some great examples of getting that "dirtied down" look right.

One method is to begin spacecraft texturing with bump maps. Bump maps usually define panelling, and these panels will give visual cues of how the vehicle is constructed. Any wear and tear on the panels will indicate how the ship will be weathered and dirtied.

Once the bump maps have been built, the tonal greyscale information they provide can also be used to add a panelling pattern to the colour maps. Going on from there a diffuse map can be generated from the bump map, and this will give a base for dirt and weathering.

Take it as a challenge to try and create your own sci-fi "disaster" scene, see how you can create your own corner of chaos and get that "dirtied down" look, taking some

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VIKRAM MULLIGAN

Digital Art Live talks with **Vikram Mulligan** about 3d science modelling, creativity in science, Blender, Wings 3D, the TTA series, *Star Wars*, superpowered goats, and more.

DAL: Vikram, welcome to this interview with *Digital Art Live* magazine.

VKM: Thank you!

DAL: How did you start your interest in 3D art? I see fractals in your gallery? Was it fractal art, or something else?

VKM: No, not fractals. I'd say that my interest in computer graphics came out of an interest in film visual effects. When I was a kid, I was really inspired by the visuals in the *Star Trek* movies, *2001: A Space Odyssey*, *Blade Runner*, *Alien*, *Dune*, and others in that vein. I had a lot of curiosity about how those were done, and I read a fair bit about the clever ways in which effects artists create the worlds they depict. It inspired me to build model kits and to play with simple visual effects with a video camera, but there was only so much that one could do at home, at that time, with limited analogue tools. When I was a teenager, films were moving more and more towards digital effects, and home computers and software tools were starting to be powerful enough to allow a hobbyist to try to reproduce those sorts of visuals without studio equipment. So I started out making little animations of spaceships from *Star Trek*, *Star Wars*, or *2001* for my own amusement, and eventually progressed to original designs. Fractals weren't really a focus for me until later on. Like many digital artists, I eventually found that realism and aesthetic appeal often depend on having a certain level of visual complexity.

VIKRAM MULLIGAN

SEATTLE, USA

BLENDER | WINGS 3D | ZBRUSH |

WEB

Picture: "Docking Manoeuvres".

The fractals patterns and fractal geometry provide a way of adding that visual complexity to an image without having to place each tiny detail by hand. They also seem to provide a type of detail that the eye finds natural and is willing to accept as realistic. In my 20s I also spent a while playing a bit with the mathematics behind fractals. But my first inspirations were definitely in the science-fiction realm.

DAL: I see, thanks. And I must say… awesome spaceships! When and when did your interest in spaceships develop? Did you receive a Chris Foss art book, one birthday?

VKM: Well, I've always been interested in space exploration and in the manned NASA and Soviet missions. This blended naturally into a love for science fiction – particularly for films like *2001: A Space Odyssey*, which depicts space travel with both incredible realism and with a sort of eerily beautiful aesthetic. As I recall, I stumbled across a collection of science-fiction art, which included Chris Foss illustrations, on my father's bookshelf at some point. It was the first in the TTA series and was called *Spacecraft 2000 to 2100 AD*. There, too, I was really struck by the aesthetic. The TTA books were a big inspiration. I don't remember how young I was when I encountered *Spacecraft 2000 to 2100 AD*, but I definitely sought out some of the others in the series (*Spacewrecks* and so forth) later on, in my teens and 20s. Usually, you see that sort of artwork in the context of a movie poster or the cover of a novel or anthology. I think the TTA books started me thinking about science-fiction artwork as a medium that can stand on its own, independent of a medium that it's supporting (like a film or a novel). This discovery decided me to try my hand at simply illustrating fictional spacecraft of my own design, without needing to place them in a broader context.

I also have an *Omni* magazine issue from October of 1992 that I've kept, largely for the cover illustration by John Berkey. The mixture of organic and mechanical shapes in his spacecraft, and the fine detail that faded into painterly suggestions of detail, appealed to me very much.

DAL: So what's your background in terms of your wider interest in science fiction? What influences your current art? Films? *Star Wars*, I imagine?

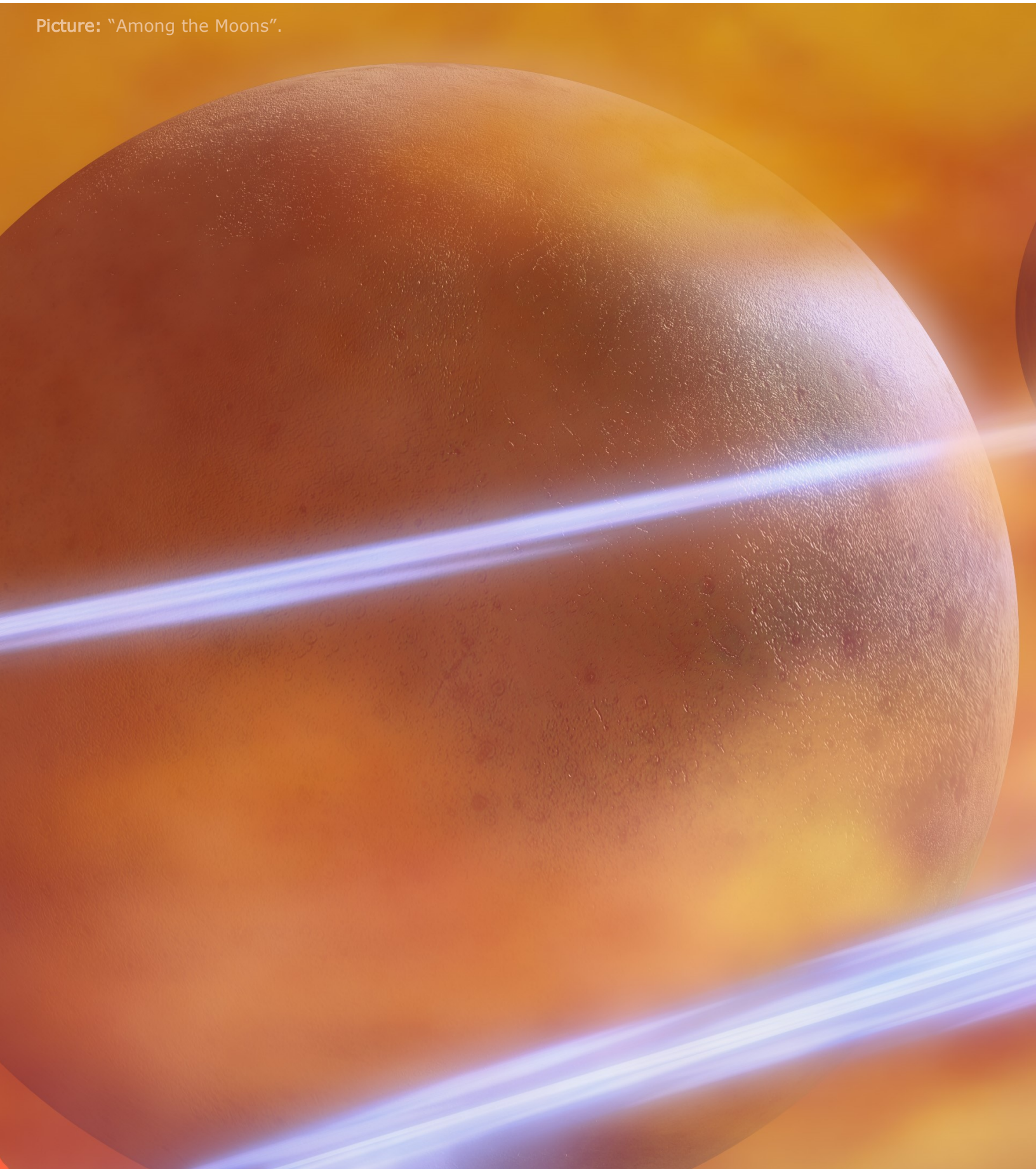
VKM: Oh, *Star Wars* of course – though there, the ships are treated less like characters and more like backdrop for the sword-and-sorcery fantasy story. *Star Trek* tended to be a bigger draw for me, as far as science fiction was concerned, and *2001* was a mild obsession – it's an incredibly idea-rich film that's also very beautiful to look at. I also loved the works of Isaac Asimov, Arthur C. Clarke, Ray Bradbury, Frederick Pohl, and many other classic sci-fi authors. I have a very visual imagination, so I associated a very definite 'look' with each story. Clarke's *Rama* books spring to mind as a source of some very visual ideas, as do some of Asimov's short stories – "Marooned off Vesta", "C-chute", etc. Some, like Tom Godwin's "The Cold Equations", have such a strong visual style embedded in the descriptions and the atmosphere that it's possible I'm remembering my visualization of the story better than the story itself.

DAL: You also make very cool art from 3D folding proteins, which as you say on your DeviantArt profile is what you do in your day job as a molecular biochemist. "Digoxigenin" for instance. They look superbly surreal to a non-chemist, but no doubt you can visually 'read' all sorts of things from the structures. Do you find that your professional grasp of such 3D shapes and shape-making informs your other creative 3D work? For instance, are your spaceships more organic, or otherwise differently-looking that they might be?

VKM: Hmm. I'd say that there's more influence in the *other* direction, though I would never have anticipated that would be the case. When I first started playing with digital art, I didn't think it would be anything more than a hobby. In the course of teaching myself the technical side of computer graphics, though, I picked up bits and pieces about the mathematics and algorithms underlying computer graphics software, and of course a lot of skill in manipulating 3D shapes.

Picture: “Entering the Docking Bay”.

In my professional career as a biochemist, although I started out spending most of my time in the wet lab, I've also moved in a computational direction. I currently design molecules called peptides (which are smaller versions of proteins) that can "fold" into three-dimensional shapes that confer unique functions. While a big part of this is wet-lab work, another big part is developing and using the peptide design software (which we call Rosetta) that



Picture: "Among the Moons".

makes this work possible. Many things that I learnt as a digital artist carry over to the problems that I have to solve now in order to build the Rosetta software and to apply it to the peptide design problem.

DAL: Fascinating. I love that term 'wet lab', it evokes all sorts of goo-ey sci-fi visions! Are there any interesting sci-art interfaces going on in your field at present? Every some often I see one of those grant programmes that brings

artists together with scientists to do funky project that blends science and art in innovative ways.

VKM: I don't know about formal efforts to unite science and art, but informally, having some experience with art can be of benefit to a scientist. One of the big challenges as a scientist is explaining one's work to audiences — particularly to lay audiences. There, a picture is worth a thousand words. The challenge, though, is that objects on the molecular scale often doesn't look like any macro-scale objects. If anything, a protein looks like a bowl of spaghetti: a tangled mess that's not very visually informative to anyone who isn't already a protein biochemist. Making a protein aesthetically appealing, and somewhat visually meaningful, is a big challenge, so having some experience in digital art definitely helps there. Our lab now has a number of my illustrations on posters that greet visitors, and these illustrations frequently make their way into talks and press releases, too. Hopefully, they make the science a bit more accessible.

DAL: Sounds great. Have you ever thought of making a really *wild* alien spaceship, informed by the protein shapes? Or perhaps some planetary surface explorer / crashed spaceship scene which uses them?

VKM: Interesting! I hadn't really thought about it until now, to be honest. As I said, proteins tend to look like spaghetti, so I often spend more time trying to make them look *less* like themselves and *more* like recognizable objects. It hadn't occurred to me to make a recognizable object look like a protein!

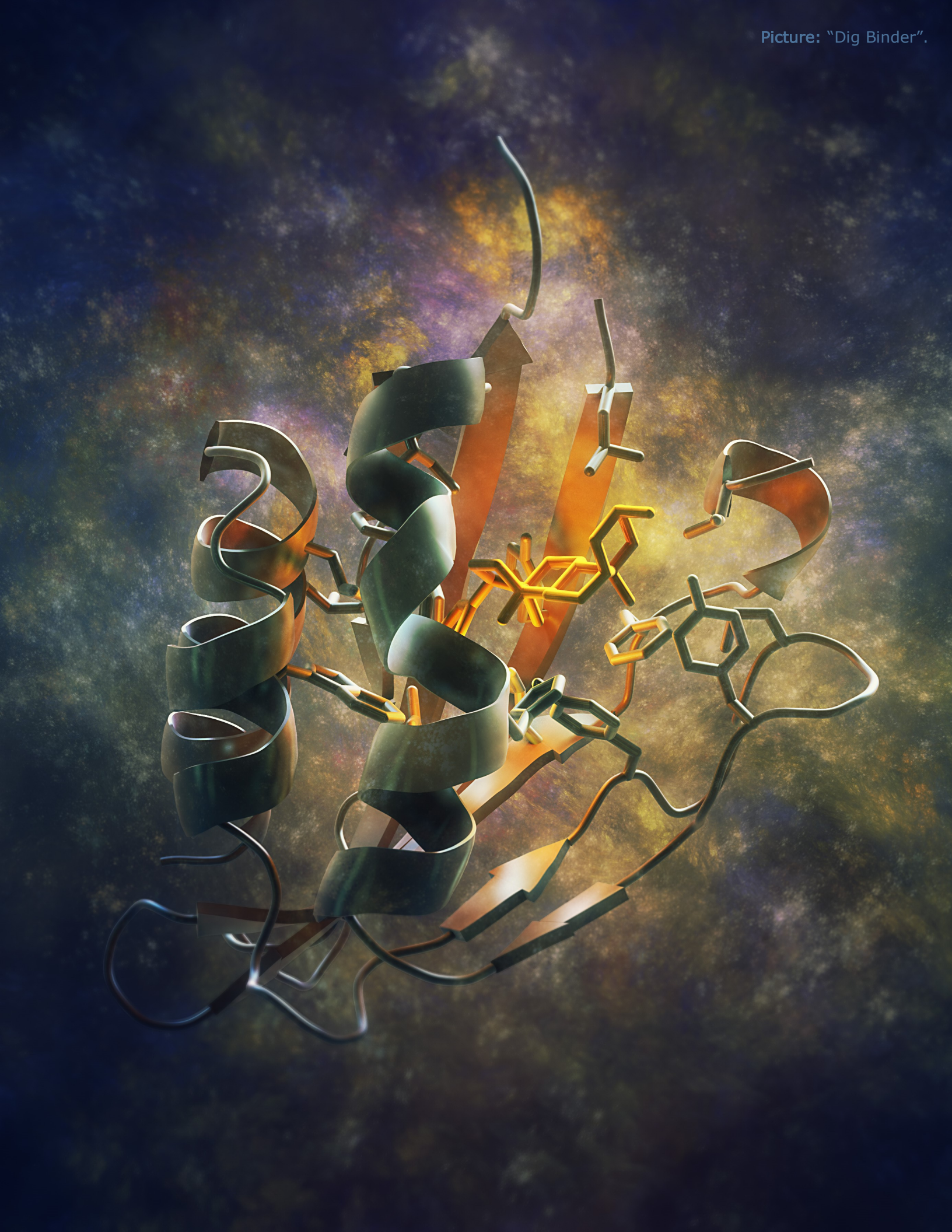
Often nowadays, I find that science-fiction art provides a nice escape for me. It's a chance to turn off the scientific part of my brain, and to let my imagination go in directions unrelated to my work for a while (which helps me when I need to start thinking about proteins and peptides again). So if I drift back in a protein-related direction when working on sci-fi artwork, my instinct is usually to pull away from that.

DAL: I see. It's often said that such work in labs can often be highly creative. I hear more and more people in technical jobs and scholars talking about how they see their jobs as creative. I wonder what your thoughts on that, both in your own work, and as a wider trend?

VKM: It's absolutely true. Science is a fundamentally creative profession, much like visual art, literature, music, or any other profession that one typically associates with creativity. Each day brings new problems to solve, and one's success in solving these problems is typically determined by one's ability to assemble bits and pieces of one's knowledge and expertise in new and previously-unseen combinations. The most creative scientists are often the ones who have the greatest impact.

I sometimes worry that we don't do a good enough job of teaching students to think about science as a creative field. In any field, there's necessarily some tedium near the beginning as one learns the basics – a visual artist needs to understand the colour wheel, the use of brushes and pencils and so forth, the mechanics of perspective, the rules of composition, etc. This memorization is obviously not what art is all about, and no one imagines otherwise, I think. I fear that science students, though, confronted with the tedious bits – the memorization, the discussions of basic principles — one can easily fall into the trap of thinking that all there is to science is memorization and regurgitation of dry facts. In reality, it's all about creative problem-solving, not about the tedium.

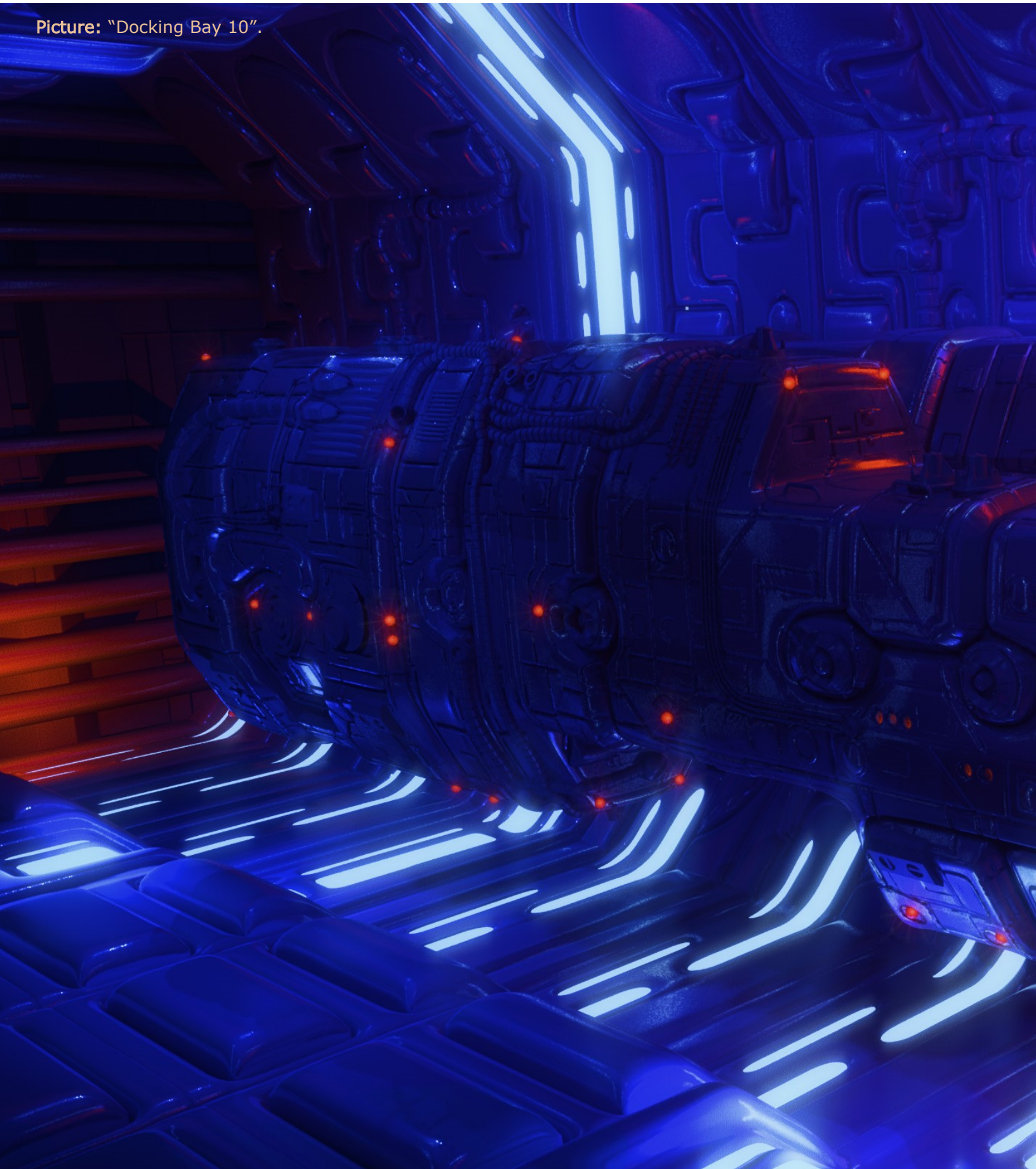
The importance of creativity to science and art also highlights something else that we need to improve, in both fields: diversity. Creative professions benefit when the people working in them are diverse. But both science and art suffer from underrepresentation from women, people of colour, and other groups that have long been excluded. I'm glad to see that, in the 21st century, we're finally starting to remedy this – I'm seeing more diversity among my scientific colleagues, and more diversity among the current generation of science fiction authors and artists. This in turn promotes more diverse, more creative problem-solving in science, and more diversity of ideas in art. But we still have a long way to go.



Picture: "Dig Binder".

DAL: Great. Now, you have a lot of good photography on your website. I imagine that also feeds into your 3D creative work?

VKM: Oh, definitely. It's funny, too, how photography affects the way in which one works and the things that one tries. When I was making pictures with film, I tended to "degrade" my digital pieces more – adding quite a lot of grain, blur, chromatic aberration, etc. to conceal that "computer-generated" look. Now that I've



Picture: "Docking Bay 10".

gone digital (and the quality of lenses, sensors, and photographic images has improved so much), I'm much more willing to accept the output of my renderer as a photorealistic image (if I'm trying for photorealism), and to put the time into adding visual complexity to the image through detail (created by hand or by fractal algorithms) instead of hiding the lack of detail in added "camera" imperfections. The ease with which one can make a photorealistic image with

a digital camera has also encouraged me to move away from strict photorealism, and to try my hand at abstraction more frequently, or to emulate the painterly style of the classic sci-fi artists more often.

DAL: What were some of the "breakthrough" images that started to get you more attention?

VKM: My "Nighmare I" illustration was the first that earned me a Daily Deviation (a feature) on DeviantArt back in 2011. It was actually a background that I had created for another piece (which didn't turn out so well in the end), but in hindsight, it worked much better as an abstract, stand-alone piece. With the Daily Deviation, there came a lot more attention from other artists on DeviantArt.

DAL: Could you tell us about the 3D tools your use, please? I suspect that, for instance, Wings 3D may be a little unfamiliar to make readers.

VKM: I use a pretty wide range of tools, and I generally like to use the best tool for a particular part of a project rather than one tool for the whole thing. Wings 3D is a very nice, open-source, easy-to-use low-polygon modelling program that I like to employ for the early stages of creating a model. Its feature set is rich enough and its interface is streamlined enough to let me create fairly complicated shapes without too many mouse clicks. Usually, I favour the Wings to Zbrush pipeline, using Wings to define the basic shape and Zbrush for the fine details. For scene setup, I tend to use Blender more and more, since it has gotten more and more powerful and user-friendly in recent years. I sometimes render in Blender, or sometimes use other renderers like Aqsis.

DAL: How would you improve Blender, if they gave you three magic wishes? Or ZBrush, if you prefer.

VKM: I'd like to see more features and options added to the default Blender renderer. The new Cycles renderer in Blender is a very powerful tool for achieving photorealism, through physically realistic simulation of light behaviour. While this is terrific, if this is what you want, the goal of photorealism ideal for every artistic piece. The same is true of the method of computationally-expensive physical simulation. The classic Blender renderer shared the philosophy of many earlier renderers, like Pixar's Renderman: that the artist should be able to achieve whatever look is required, and should have many options to try to "fake" this in the least computationally-expensive way possible. So for this reason, I'd like to see more active development of this renderer alongside the development that's supporting the Cycles renderer. Beyond this, I suppose I'd like to see progress continue in the major directions in which Blender has already been making strides.

I'd like to see the interface become easier to use and easier to learn — and to the developers' credit, the usability of Blender has increased tremendously in the last several years. I'd like to see continuing work for greater interoperability with other tools, such Zbrush, molecular modelling software, and third-party renderers (e.g. Pixar's Renderman).

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

VKM: Hmm… I suppose I'd be interested in software that can use machine learning to help me to automate tasks that I do repeatedly. If a program could watch me make a few greebles, and then 'figure out' how to make a diverse set of greebles that all conform to the aesthetic of my first few, that would be really neat!

DAL: Yes, Kai Krause (Bryce, Kai's Power Tools, etc) had that sort of idea in his ground-breaking early software for MetaCreations. Iterative sort-of semi-procedural work-rooms in the software.

VKM: I'd also like software that could watch me sculpt some hull panelling that matches the contours of one part of a ship, and could then figure out how to continue that pattern of panelling all around *the entire body* of the ship, paying attention to the contours that it is panelling, that would be useful.

Of course, that's the great thing about being an artist in the 21st century: I have no doubt that

Picture: "The Wreck".

all sorts of neat, surprising technical innovations like this are in store.

DAL: Yes... it's such a vigorous market, though. I think the best thing is not to try to track it constantly, but just to go back three times a year and do an intensive 'scout around' for what's new and changed. You said just now that you design and model all your own spaceships. That's very impressive. Could you walk us through the stages and workflow of making and rendering a spaceship? Perhaps the one in "Entering the Docking Bay", seen near the start of this interview?

VKM: "Entering the Docking Bay" was a number of years ago, so I wouldn't have had all of the options available to me that I have now. Typically, for sci-fi artwork, my workflow starts with a few sketches, either on paper or in a drawing program. I next move to Wings 3D, in which I build rough, low-polygon shapes which can be subdivided to give organic curves (or hard surfaces with tight bevels if that's what I'm going for). I might also model a few small "greebles" — meaningless mechanical details that can be used for detailing – in Wings as well.

Next, I move into Zbrush, finely sculpting the surface and painting on pipes and "greebles". I texture the model with a mix of Zbrush and Photoshop, relying on Zapplink to let me paint texture maps in the perspective view. At this point, I'll often do specular and dirt maps, too. Then I export texture and displacement maps, and move into a 3D program (often Blender, these days) for final scene setup. Here, I'll build suitable surface shaders and set up appropriate lighting for the mood that I want, and I'll think about scene composition.

My choice of renderer depends on the look that I want and the detail of the model. For fine subdivisions, I've tended to rely on Renderman-compliant renderers like Aqsis in the past, though the displacement capabilities of Blender's renderers continue to improve. I render in layers (various diffuse passes with different subsets of my lights, specular passes, ambient occlusion passes, etc.), then combine these in

Pictures: "Prospectors" and "Hephaestus 2".

Photoshop. At this stage, I'll often add subtle gradients to draw the eye to a particular focus, and will sometimes blend in subtle fractal flames generated in Apophysis.

Usually there's some manual painting and touch-up here, too. In the particular case of "Entering the Docking Bay", I remember that I subtracted a contrast-enhanced version of the red channel from the blue and green channels, and a contrast-enhanced version of the blue and green from the red, to really exaggerate the contrast of the colours in the final image and to give it a slightly comic-book-like appearance. I often play with tricks like that.

Another common trick that I play is to use Photoshop's "curves" tool to alter the ramping of the blue channel and sometimes the green channel in the dark tones, giving shadows a bit of a greenish or brownish edge to set certain moods. I also like to add a little bit of bloom around bright highlights, though as camera lenses improve, this looks less and less natural, so I'm starting to get away from it.

DAL: Yes, a little bloom from the highlights can work wonders. I recently found an old Photoshop plugin that does that very nicely, Diffuse Glow by Richard Rosenman. The interface is old and clunky, but is easy enough to use and it only hits the highlights and is nice and subtle. What's your own personal favourite image from your portfolio and why?

VKM: I'd go with "Prospectors". It's not a particularly technically challenging image or anything – I just like something about its aesthetic. I was trying to evoke some of the emotions of the more upbeat, optimistic, adventurous pieces of classic sci-fi art, and I think (or I hope) that "Prospectors" succeeded in that respect.

DAL: I see H.P. Lovecraft's Cthulhu in your gallery to, as a digital sculpt work-in-progress? From a few years ago now, 2012? Did that progress?

VKM: Yes, I was reading a Lovecraft collection at the time. I didn't take those sketches much further than that, but Lovecraft led me to

William Hope Hodgson, who could have been one of Lovecraft's inspirations, and who had some *very* imaginative, very visual ideas in his works. Hopefully sometime I'll have the time to do a few Hodgson-inspired pieces — particularly of the world that he describes in his novel *The Night Land*.

DAL: Yes, such a pity that Lovecraft only first encountered Hodgson in 1934, a little more than two years before Lovecraft died, and when he'd written nearly all of his famous stories. Lovecraft was urged by one of his British fans, I think, to read this obscure old writer, and he reluctantly did so and then he was like: "Wow, how did I not know about this guy Hodgson!". That was the way of it, in those pre-Internet days, I guess — even great writers went unregarded after their death, if they had no estate or fan-base to champion them.

Picture: "Nightmare 1".

I also noticed that you had also a goat sculpt in your gallery? Was the intention to sacrifice the goat to Cthulhu? /*laughter*/

VKM: Ah… that came out of a very silly conversation at my previous lab. Some of my lab mates and I were joking about the efforts that were in the news a few years back to engineer goats that produce spider-silk proteins, and we were picturing a mutant goat with powers like Spider-man. We even crudely planned out a short comedy/horror film about the creature. Which, of course, would use its superpowers to do the mundane sorts of things that goats would care about – descending from the ceiling to steal food and whatnot – terrifying everyone in the process. It was one of those late-night conversations that's never nearly as funny when you tell it to someone else later, but it did provoke a few digital sketches of what the creature might look like. But we never had time to make the film, sadly. We did end up making another fun, silly film called "Macroprions", which is still floating around on the Internet somewhere. That one had a giraffe and a hamster in it, but no goat.

DAL: Sounds like fun! So no goat sacrifice in your neighbourhood. Am I right in thinking you're based in Seattle? What's the creative scene like there? Or are you someone who mainly meets like-minded people online?

VKM: Seattle is kind of a funny city. It's full of young, working professionals who are at an early stage of their career, many of whom are *very* busy as a result, and many of whom plan to 'move on' after a few years. So it's a difficult city in which to form intimate friendships. There's a well-known phenomenon here called the 'Seattle freeze' that comes out of this: people tend to be very friendly superficially, but have little interest in forming close connections. I've only come to know one or two artists here, and they're working in very different media — one's a singer, another is a musician. Most of the visual artists that I know are people whom I've met online.

DAL: Fascinating, that's a very interesting social dynamic, and one that many cities would envy. Not so good when you're stuck in the middle of it. I've always found that musicians and singers are a very different breed, though, compared to artists and digital creatives — maybe linking with the music scene could be more productive for people in such situations, as you seem to have found. Of course, a music scene is always eager for free posters and record art, and suchlike. What are you working on at the moment?

VKM: A friend's son is a big *Star Trek* fan, and he sketched out a design for a *Star Trek*-style starship a while back. In my free time, I've been slowly turning it into a detailed illustration that he can hang up as a poster for his room. I won't pretend that I'm not getting a big kick out of working on a piece of *Star Trek* art again!

DAL: Brilliant. If you were given $100m to make a sci-fi movie, possibly *Star Trek*, what would it be like?

VKM: I don't know that I'd actually need a full $100 million dollar budget. A smaller budget often forces a director to focus on the storytelling, and can result in a better film. Some of the films that I've liked the best have been more pensive and more dialogue-driven, and have used visual effects only in support of the story. At the extreme end, you have films like *Primer*, which is a terrific sci-fi film with only one minor visual effects shot, made on a shoestring budget. Even *2001: A Space Odyssey*, which did have a very large budget for the time to support its groundbreaking effects, is quite a slow, thoughtful film. That's the sort of film that I'd like to see, and which I'd like to make, if I were a professional filmmaker. I'd want there to be no 'villain' and none of the Hollywood clichés – just realistic characters dealing with realistic problems that one might encounter in future spaceflight, and lots of interesting ideas.

If the rights were available, Tom Godwin's "The Cold Equations" might make an excellent, character-driven, idea-rich film of that sort – provided it weren't given the Hollywood treatment with unnecessary action sequences or whatnot.

DAL: Yes, the Hollywood formula does get in the way of a lot of good sci-fi — "Right, into the sci-fi equivalent of the car chase… now we bring the movie to a grinding halt for the boring 'love interest'… now the creepy aliens in the dark… now we have the bit were a USB memory stick or some magic gumball saves the planet…" it all gets a little wearing when we've seen it all before.

Anyway, what's your advice to newcomers to digital art for overcoming creative block?

VKM: A writer friend of mine once described creativity like the faucet up at the holiday cottage. You have to turn it on and let all of the brown water flow out for a while, before you get the good, clear stuff. It has always seemed like good advice: when you need to do something creative, sit down and do *something*. It doesn't matter what it is; it doesn't matter if anyone ever sees it. If you need to make an image and you don't know what to make, then doodle. My hard disk is full of half-finished, largely abandoned 3D models that went nowhere. No one judges you on the projects that you don't finish; if you make enough starts, something will click and something will pay off.

On the other hand, one does have to make the effort to complete *something* eventually!

DAL: Good advice. What are two of your favourite on-line resources related with digital art? Be it a forum, on-line galleries, model sites or other resources?

VKM: I tend to be quite fond of DeviantArt. It's great to see so many artists displaying such diverse work, without any filter arbitrarily selecting for work that conforms to some authority's set of expectations. It gets back to the faucet analogy: it's a place where artists can be uninhibited about 'letting some brown water flow', and where others can help them to get to the clear water.

For the more technical side, the CGSociety website and forums tend to be great places to browse. CGSociety contests are also a wonderful way to find motivation to *complete* a piece that I've started!

DAL: Super, well… thanks very much for your time on this in-depth interview. It's been great.

VKM: Thank you, too!

Vikram Mulligan is online at:

http://vmulligan.deviantart.com/

Picture: “Black Holes”.

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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.*

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

https://digitalartlive.com/

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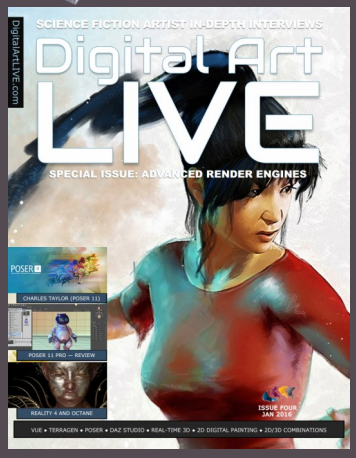

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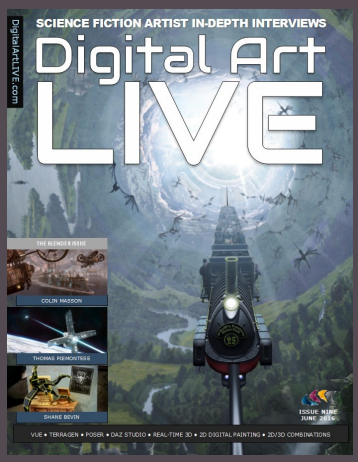

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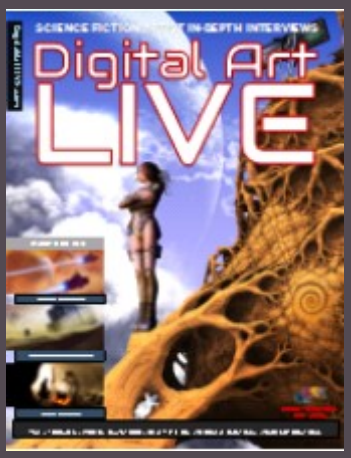

YOUR ART HERE?

YOUR ART HERE?

YOUR ART HERE?

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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!

paul@digitalartlive.com

NATIONAL SPACE SOCIETY

International Student Art Contest 2017

"Roadmap to Space Settlement":

1. People Living and Working in Space Settlements.

OR

2. Medicine and Medical Manufacturing in Space.

http://www.nss.org/settlement/calendar/

The U.S. National Space Society (NSS) is looking for student artists to create original illustrations for the NSS "Roadmap to Space Settlement". Submitted artwork should realistically illustrate one of this year's two themes. Realistic means 'as accurate as possible', both in science and engineering. Also 'as closely as as possible' to what a real space settlement would actually look like, within our own solar system. All full-time students at any grade level between the ages of 13 and 25 are eligible. Entry deadline: **16th March 2017.** Picture by Andrew-Graphics.

NASA ART CONTEST

National Aeronautics and Space Administration

CELEBRATING 100 YEARS

NASA Langley Research Center 1917-2017

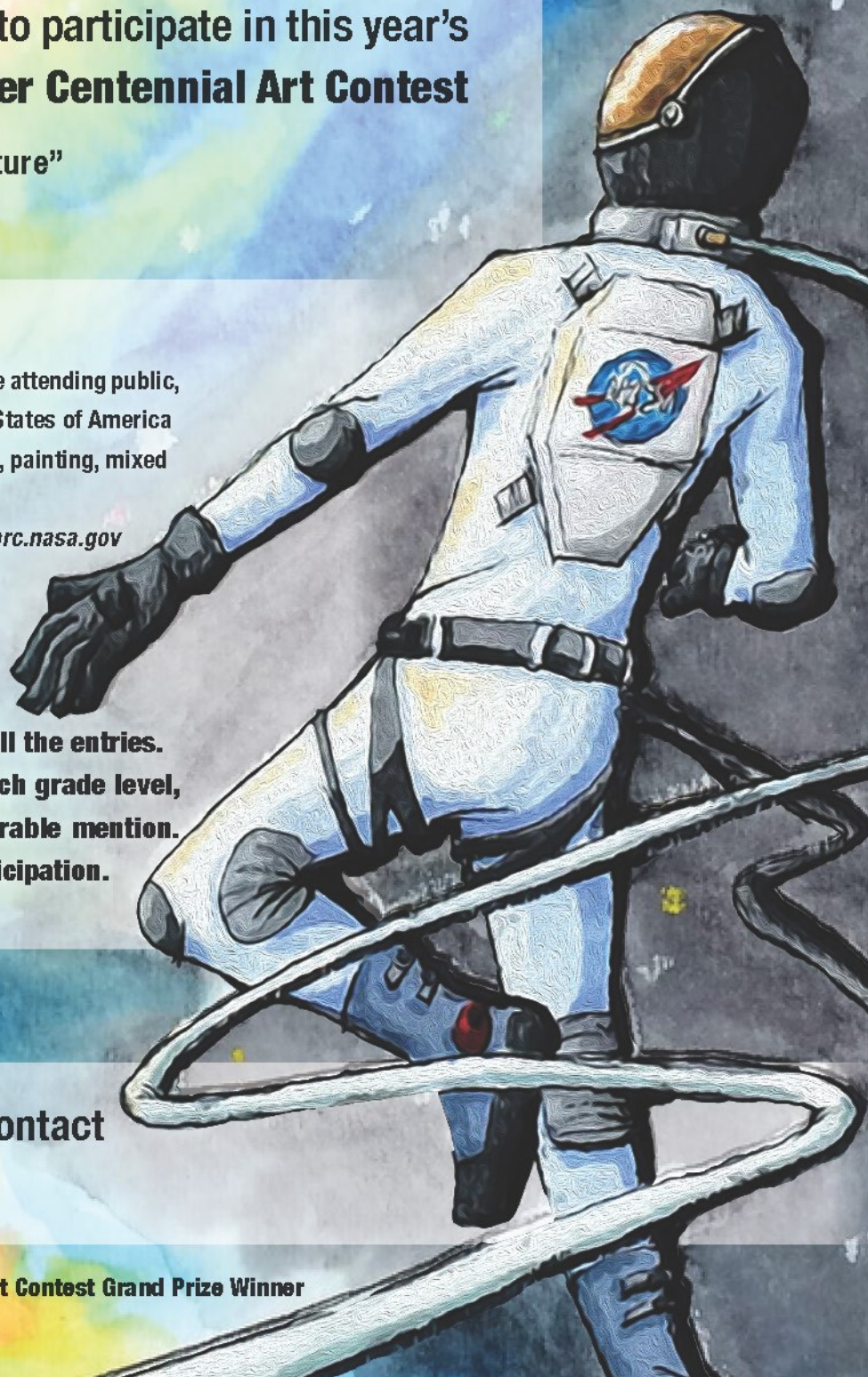
CALLING ALL ARTISTS, GRADES K–12!

We would like to welcome you to participate in this year's

NASA Langley Research Center Centennial Art Contest

Theme: "A Storied Legacy, A Soaring Future"

artcontest.larc.nasa.gov



Requirements:

- Contest is open to all children grades K – 12 who are attending public, private, parochial and homeschools in the United States of America
- Art can represent the following mediums: drawing, painting, mixed media, and digital creations.
- Art work must be submitted online at *artcontest.larc.nasa.gov*

Entries must be received by midnight, EST on December 31, 2016

A Grand Prize winner will be chosen from all the entries. A 1st place winner will be chosen from each grade level, as well as 2nd place, 3rd place, and honorable mention. Each entry will receive a certificate of participation.

For more contest information, contact

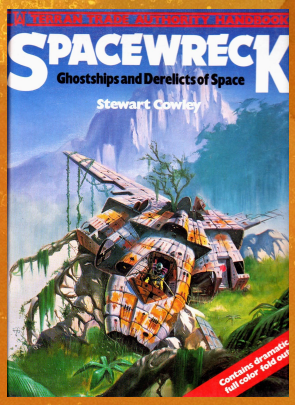
artcontest.larc.nasa.gov

Artwork by 11th grader **Rachel Pike - 2014 NASA Art Contest Grand Prize Winner**

TTA

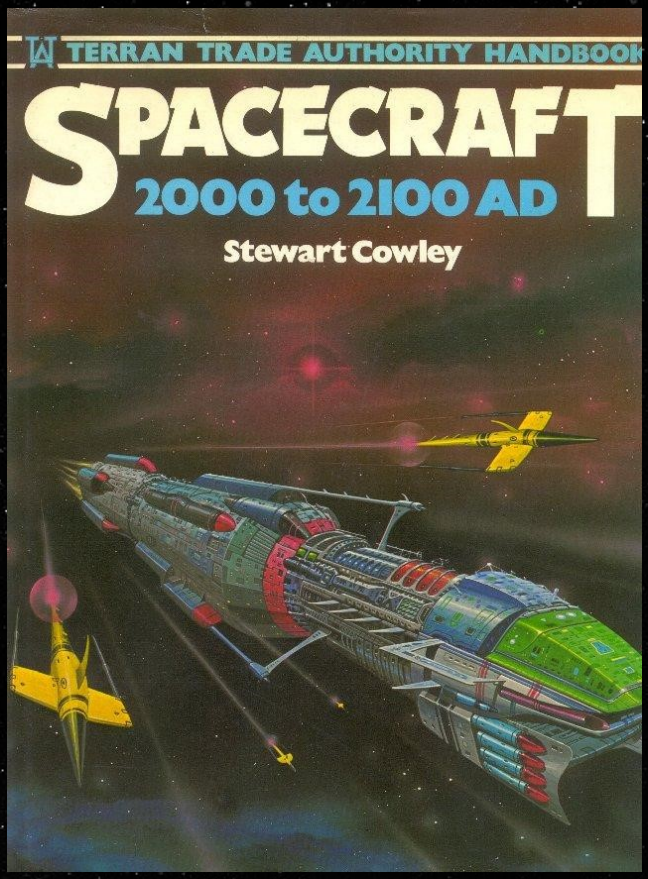
Our Spacewrecks issue is a celebration of the famous **Terran Trade Authority** book *SpaceWreck.* The TTA series took classic sci-fi paperback cover art of the 1970s, and around these wove a galaxy-spanning scenario of war and peace. Here we present a short introduction to the TTA books. We follow with a look at two scale-models from the TTA stable.

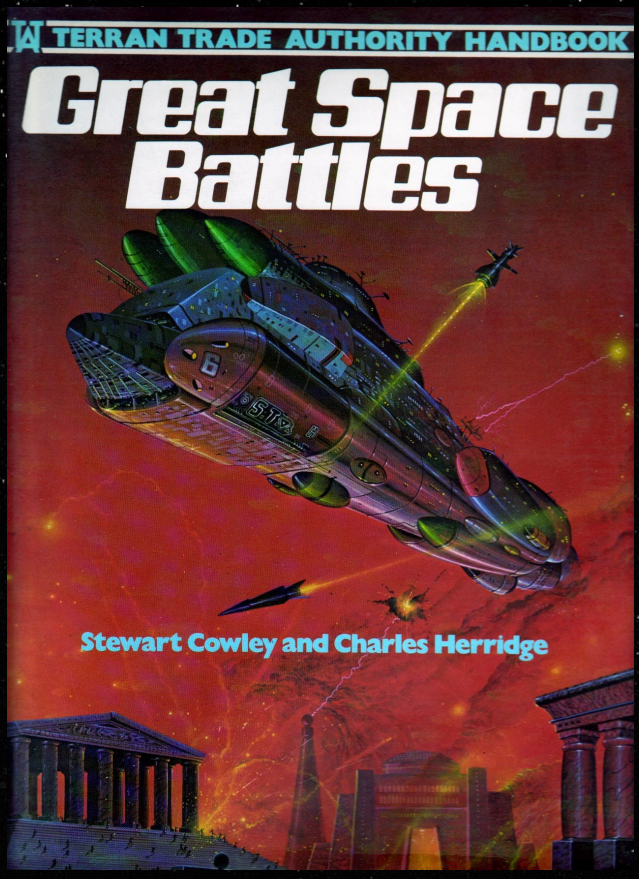
Picture: "Sulphur Fields II" by tk769.



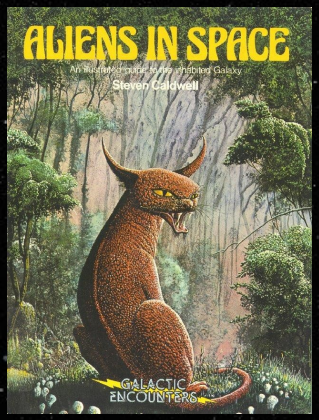
The large format book *SpaceWreck: Ghostships and Derelicts of Space* was published in 1979 by the Exeter Books division of publishing giant Hamlyn. It wove detailed back-stories about space disasters and crash landings, all based around some of the best of the 1960s and 70s paperback cover art. The book followed hot on the heels of the huge success of the similar earlier books *Spacecraft 2000-2100 AD* (1978), and *Great Space Battles* (1979), which told of the space wars that created the spacewrecks.

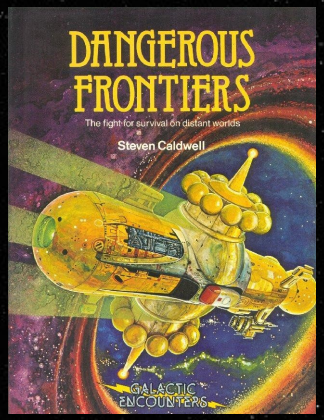
AMG 2016

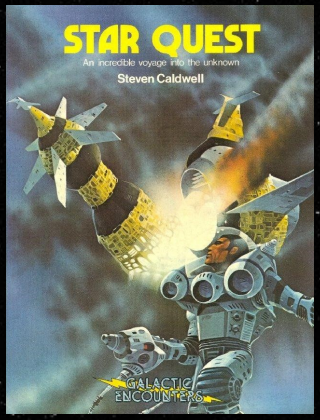




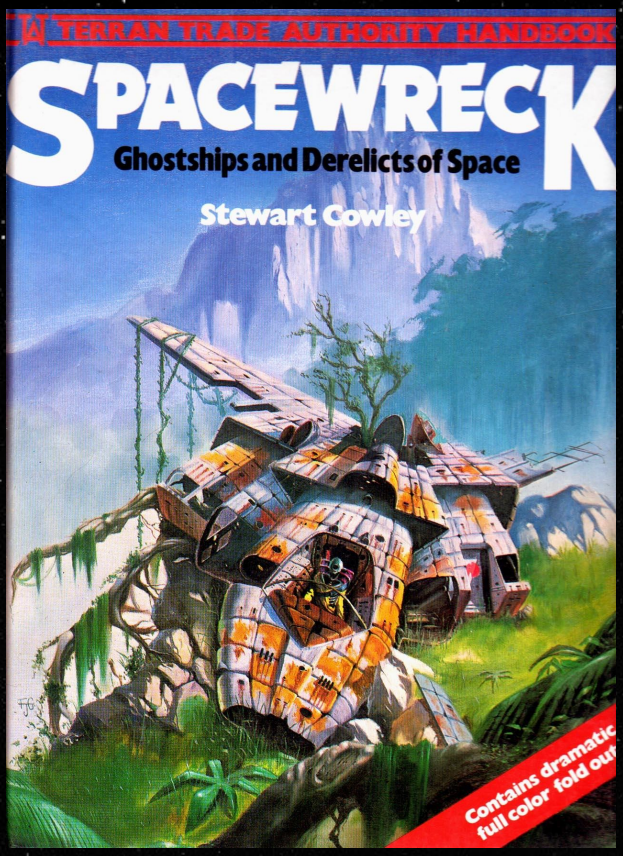
The Terran Trade Authority books were a series of four that were issued from 1978 to 1980, telling the story of a great war, the spacewrecks that resulted, and the great starliners that were built in the colonising peace that followed. The series was the brainchild of British illustrator Stewart Cowley, and *Spacecraft 2000-2100 AD* was the first book he had ever written. Its huge success, selling over 800,000 copies, "changed my life" as he later told an interviewer. The 'Galactic Encounters' books were a slightly later series of six books, again compiled from covers and written by Stewart Cowley under the pen-name "Steven Caldwell".

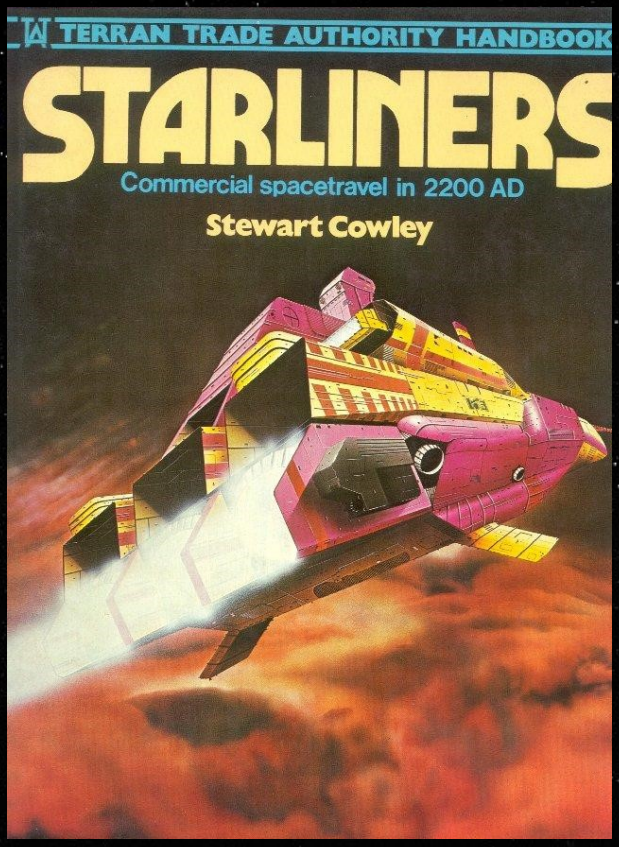




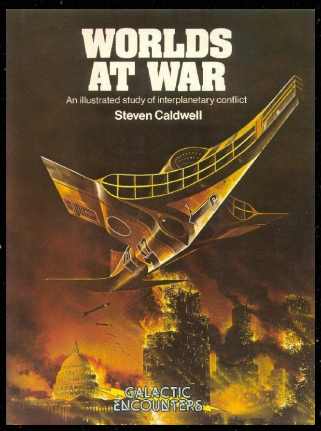


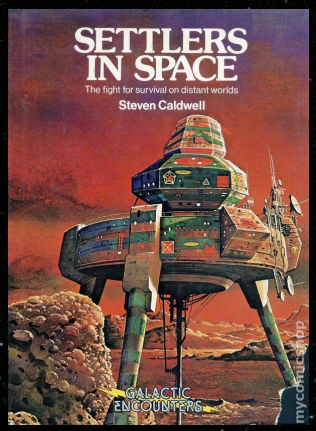
Since most of the books were produced in very large print-runs, some of them can still be found for sale on eBay and Amazon at reasonable prices.

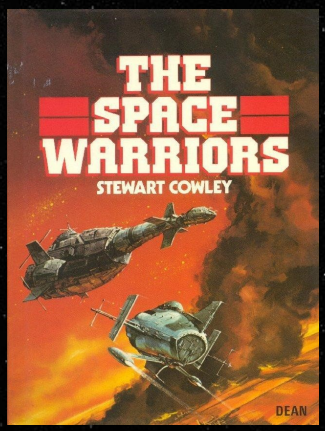


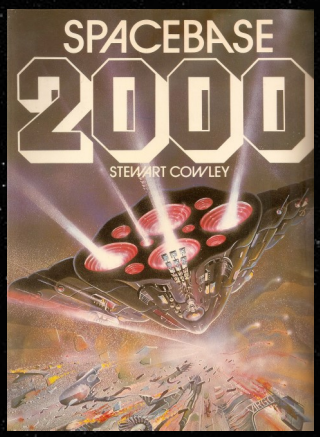


'Galactic Encounters' appeared under the imprint of Intercontinental, licenced in the USA by Crescent Books. All the 'Galactic Encounters' series appeared 1979-1980 and were made more quickly than most TTA books. Both series greatly benefited from the success of the original *Star Wars* trilogy. Cowley's standalone book *Space Warriors* was targeted at young middle-school readers. His *Spacebase 2000* book appeared later in 1984 — essentially a combination reprint of *Spacecraft 2000-2100 AD* and *Great Space Battles.*

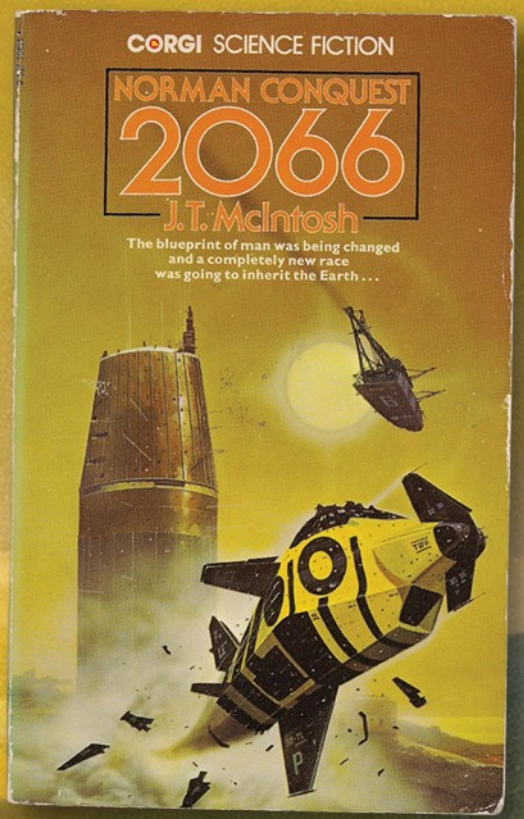




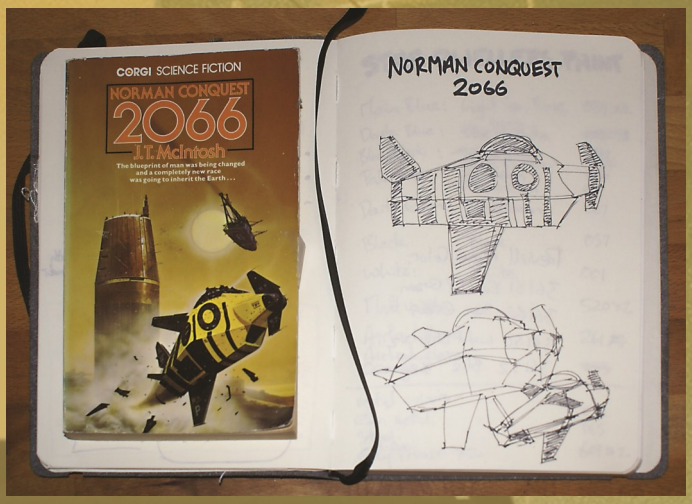




The rights to the books reverted to Stewart Cowley in 1990. The official TTA website is currently at http://www.greatspacebattles.com/

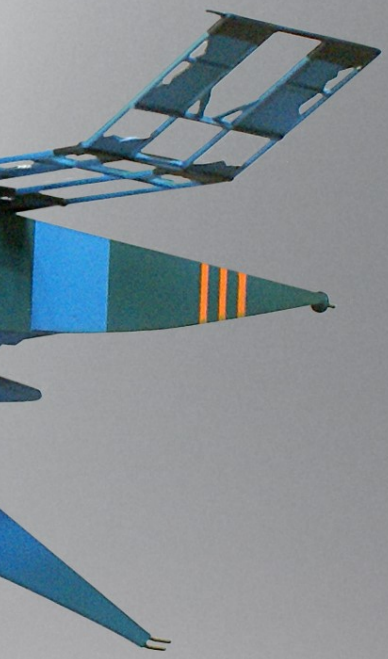


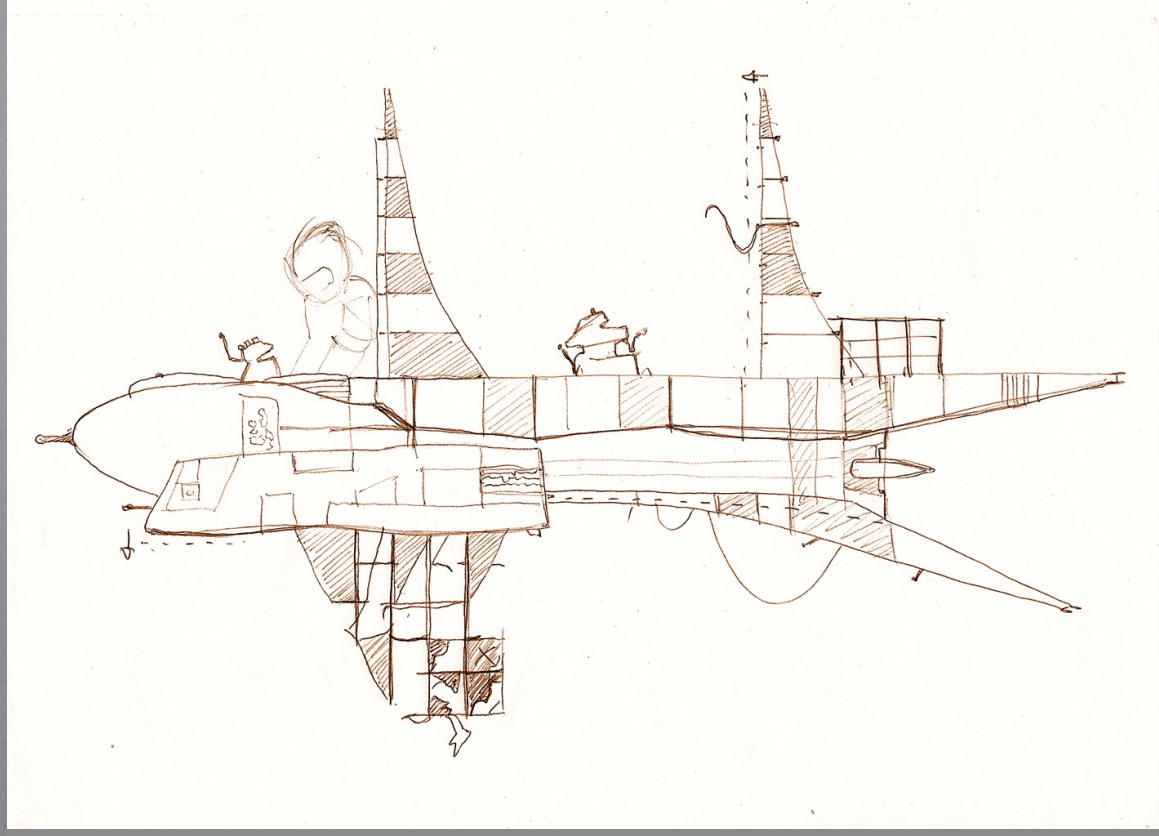
"What at first looked like a relatively simple build, at times turned into an M.C. Escher nightmare of impossible angles and confusing shadowy shapes." — Grant Louden, TTA scale-model maker.



Grant Louden builds accurate physical scale-models of TTA-inspired spaceships, and he has kindly shared two of his model ships with us for this issue. Seen here is his model of a Chris Foss designed and painted ship. The ship was shown on the cover of the British Corgi edition of *Norman Conquest 2066* (1976). Grant's authorised recreation of Foss's ship is mounted on an aluminium stand and an MDF base, and is around two feet in length. The picture to the left shows the 2ft model carefully overlaid onto the original painting's background.

"I was fascinated by the mystery of the dead spacemen, and the nature of the small scout craft … I also love the awkward angularity, which posed an interesting challenge in recreating it." — Grant Louden, TTA scale-model maker.





Grant Louden has also made a scale model recreation of the wrecked spacewship of this wonderful picture, which he first encountered in Stewart Cowley's TTA *Spacewreck* book in the late 1970's. The art was by Colin Hay, and had been used for the cover of Sphere's British paperback edition of James Blish's novel *The Star Dwellers* (1978). Louden's finished *Star Dwellers* ship replica is around two feet in length, and the making of it benefited from considerable input and encouragement from Colin Hay himself.

Grant has a website, where those interested in the full build details can find much more information and tips on creating and painting such large scale models:

http://betelgeuse.org.uk/spaceships.html

XISTENCE IMAGINATIONS

Digital Art Live talks with Germany's **Xistenceimaginations**, about making sci-fi art with Smith Micro's Clip Studio Paint, brush-stroke smoothing, Cintiqs, and the best way to learn digital art.

DAL: Xistence, welcome to *Digital Art Live* magazine, and our special 'Spacewrecks' issue.

XI: Thanks a lot, it is a great compliment for me to get interviewed by you.

DAL: What first sparked your interest in sci-fi?

XI: When I was young I watched several films like *Logan's Run* or *Tron*, but I also read a lot of books like *Neuromancer* from William Gibson, *Dune* from Frank Herbert or *The World of Tiers* from Phillip Jose Farmer. I always like to read or experience stories about new or different worlds, about exploring what lies beyond all borders.

DAL: And you have a special interest in crashed astronauts? Whas there anything specific which sparked that interest?

XISTENCE IMAGINATIONS

GERMANY

CLIP STUDIO | SKETCHUP | BLENDER

WEB

XI: I like this aspect of science-fiction, as the idea this means you have to explore to survive. You're in a complete unknown place or space and you're on your own. As you don't have the warmth and shelter of your home, but you have to get known with the world surrounding you. These days people seem to be stuck in the home, or within their 'walled garden' of their smartphones or computers. I like to go outside and to explore even the 'normal' things in a new, different way.

DAL: That's good advice. There's a whole new micro-trend, to have sort of mini five-hour urban adventures. Maybe camp out overnight on the spur of the moment, take a sudden hike to somewhere you're not been before, or just

get to the top of some unfamiliar building and see what you can see.

DAL: Being crashed somewhere in space would be like the 'hardcore' way of doing this. But in the end this is sometimes a very romantic way to think about this, in reality this would appear completely differently and more rougher.

DAL: Yes, but we would have 23rd century technology, or beyond. That would make things a lot easier. It would be the difference between being a 17th century Robinson Crusoe on his island with two sticks and a goat, and 21st century castaway with solar panels and water filtration, a Swiss Army knife, a pop-up tent and an Internet uplink to a stratospheric relay.

Your art has a marvellous sense of composition, colour and light, is that a result of art-school training?

XI: Well, thanks a lot. I can actually say that everything I can do in art is self-taught. As I'm a very autodidactic person. I tried a lot, really *a lot*, by repeating tasks again and again, until I was getting the sort of results that I felt were suitable for me. Along the way I picked up some tips and tricks, here and there. But it was important for me to understand why things in nature look as they look, so I did a lot of so called 'master studies' to get on my current level, and I'm still not done with them.

DAL: How did you first start digital painting? What were those initial barriers as you started out with the learning curve in digital art? How did you overcome these difficulties, beyond doing the master studies?

XI: Well, I was about 14 years old when I had first contact with a graphic program on a C64, after that I had my hands on a lot of programs and I also started to do more and more digital stuff. At some point I started to do digital design, layouts and Web and interactive interface design. So my digital art started in form of illustrations and concepts, and that was something that I started about seven or eight years ago now. The initial barriers for me were the learning curve for all the different programs, and that's as it would be for the most of us. But also understanding the difference between doing art with a digital program and doing traditional drawing. I was able to overcome this, though, as I never gave up and just continued trying, but also by 'studying' the art from others or by nature.

DAL: What specific resources were useful for you in learning digital painting?

XI: Art books, the Internet, many good videos like on YouTube and sites that are good social networks for artists. These days there a tons of tutorials and webinars, and I wish I would had these already in the past!

DAL: Yes, they're still somewhat variable though. The trick is to find the one that's pitched to your level, and which is delivered in an engaging and clearly-spoken manner. So many of the pre-recorded ones just send me to sleep after an hour. Do you use a tablet for your art? Or a paint-on-the-screen monitor, an Ugee or perhaps even one of the high-end Cintiq units?

XI: I used a lot of different tablets through the years, but the last years I worked with a Wacom Cintiq Companion. I use that with Windows, and that's great for me as I'm a developer as well. This Wacom device made it possible for me to be completely mobile, as I can carry it with me whenever I need. At home I still have a proper PC and I use that with a Wacom Bamboo tablet.

DAL: What are you views on specialist digital paint software — Painter, Sketchbook, etc. vs. Photoshop — as painting tools?

XI: Photoshop is of course one of the most known programs and one of the best for sure. But in the past I worked extensively with Corel Photopaint, and then during the last two years with Clip Studio Pro.

DAL: Ah, Now, most readers will know that software as Manga Studio. Clip Studio is the name in its home nation of Japan, and I hear that Smith Micro have just reverted their Manga Studio version back to the name Clip Studio. Their Web site currently has it as "Clip Studio Paint Pro (Manga Studio)". I guess we'll get used to the name change eventually!

Picture: “Fortress”.

XI: Personally I would favour Clip Studio over Photoshop. Both programs have a lot in common, but it's about the differences where I came to the point that Clip Studio is more suitable for me. Things like perspective supported drawing, options to separated content in frames, a strong brush engine, etc. I also tried other programs like Krita, Sai, CorelPainter and more. You cannot really say which is good or bad, it is a question of your personal taste and work flow.

DAL: Yes, it's certainly cheaper too. Just $50 on Smith Micro, at present. I see there's also a Clip Studio Paint Ex, which is the $200 version. Ex adds the ability to work on multiple pages, and converts 3D objects to "2D line and tones", which may interest some readers. Though Poser 11's excellent new comic-book mode is probably superior in that respect. Manga Studio has always had excellent inking brushes and automatic brush smoothing. Do you use brush-stroke smoothing much? I recently learned about Lazy Nezumi Pro, for instance, a Photoshop plugin that smooths out jittery brush and pen strokes, and am thinking of getting a digital tablet monitor, so I'm interested in such things.

XI: Depends. Both Photoshop and Clip Studio have both a real powerful brush engine. Understanding how to deal with these settings is time consuming but also one of the keys to get to a good work flow for drawing. But I use smoothing only in rare situation so, as said, it depends. Fortunately this is a built-in feature in Clip Studio, so no plugin is needed there.

Picture: "Trade Post".

DAL: Do you make use of 3D software at all, as a means of getting the perspective correct or as a time-saving layer? I'd imagine it might be helpful in terms of providing a base-layer for speed-painting?

XI: For correct perspective, correct drawing, I used what I learned in my traditional painting exercises. I can 'construct' a lot from scratch, becuase I understand how perspective, as seen by the eye, works. But Clip Studio does have a useful supporting feature, which lets artists draw directly into a 'perspective view'. Which is great. Another program that can do this is Corel Painter.

But I do also use 3D programs sometimes like Blender or SketchUp, but only to speed up my work flow. The deal is not to build everything in detail, instead just create a raw scene, then import it into my 2D program and work over it with brushes.

DAL: Looking at your Gallery, I see that you appear to place stress on getting the tiny 'thumbnailing' sketches right, before you start a picture. Is that a workflow that you follow or recommend?

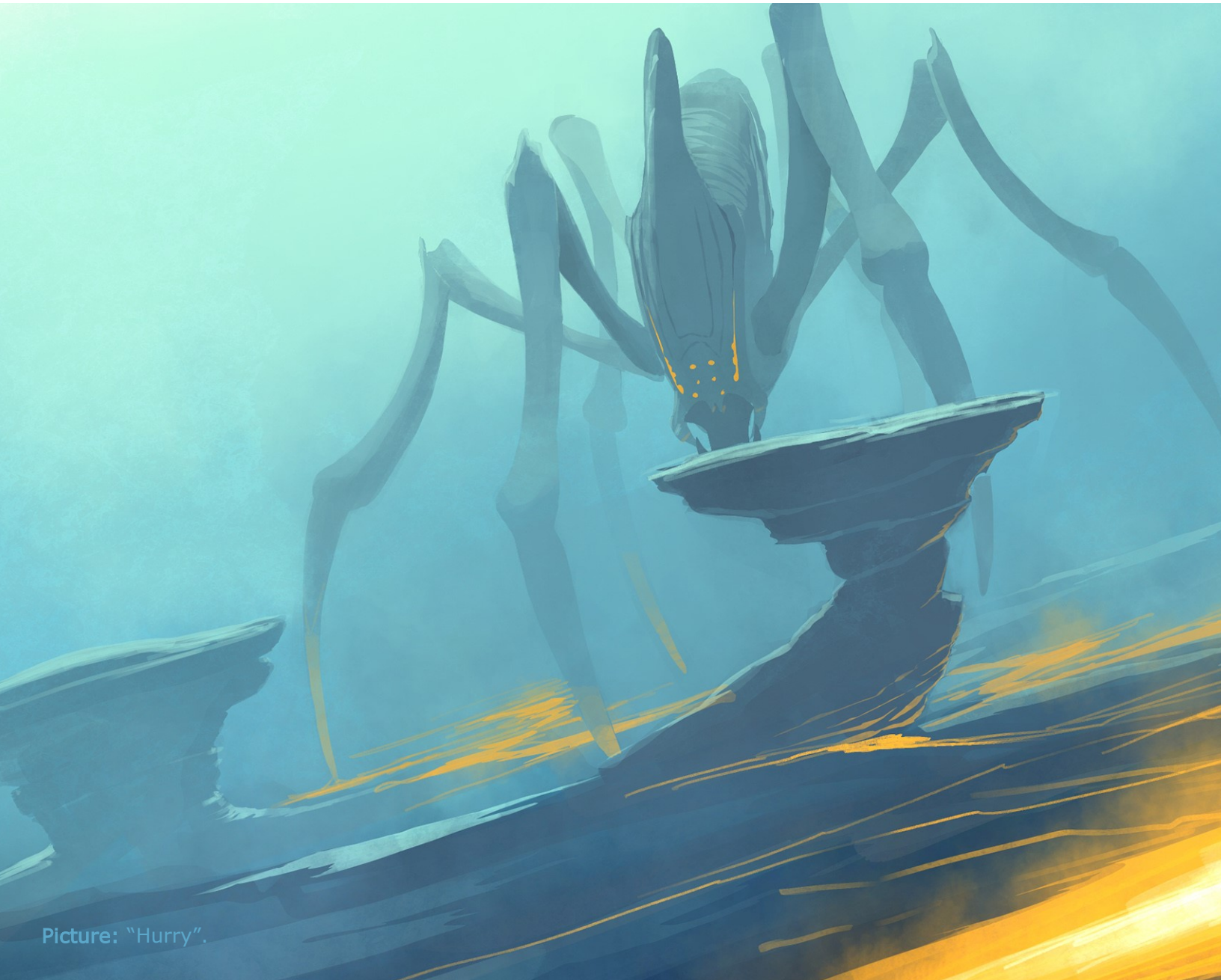
XI: This is not really the case to be honest, although it might seem that way. Sometimes I do thumbnailing if I really have *no idea* and need to be inspired. But in most cases I have the scene 'ready to be drawn', already in my head. Then I go through the different steps in my work flow, in my imagination, before I starting painting. Then when I am ready I just draw it directly, using only a rough sketch in the front.

But I can recommend the thumbnailing way, it works for many people and it can save time. In the end it is about one's personal taste. But as said: I personally use it just to get inspired by myself and/or to catch up with some new ideas. It also helps to not get stuck with the same ideas again and again.

DAL: Could you talk use through the 'making of' your "Fortress" picture, please? It's a very striking picture, and also includes significant character-design and architectural elements.

XI: I was outside one day when I saw a scene in front of me. That gave me the initial idea. It was a rainy day, a bit darker, an open place, a large building. The rest came to me while I was working on the image. I started with a rough sketch, just to find the right composition and atmosphere. Then I laid out some structures with using the lasso/auto-fill tool in Clip Studio, like the rock shapes or the ground with the puddles. Then I set the values to create the depths and I started to add some textures. Here I sometimes used texture from resources such as personal photos, or pages like textures.com or similar, or I used specific brush settings.

The next step was to doodle in the characters. I had no real idea here, so I just started a bit randomly drawing humanoid shapes — until I saw something in the doodle and I worked this out. For some effects — like the reflection in the puddles — I worked with a copy of the scene and masking parts of it. Finally I used some gradients — for light effects — and other effects to finalize the image.



Picture: "Hurry".

DAL: Which three pictures are your personal favourites?

XI: These are three titles, from among my personal favourites: "Hurry" (seen below); "Hunting"; and "Alien Planet". These each represent a moment where I felt that I made a step forward, in developing my style.

DAL: Thanks. What aspect of your artwork would you like to improve upon next?

XI: Definitely my character/creature design. It is Ok when drawing a person based on photos and stuff, but creating a person or creature right from out of your imaginations is tough. To do that you need to know a lot about anatomy, bones and much more.

DAL: Do you get any inspiration from the landscape in your part of Germany? What is the view like from your digital workstation?

XI: I live on the seventh floor and have a good view over a lot of nature. But this doesn't really inspire me any more, because I see it every day. For the rest I just do a lot of walking, making photos or just by having a look on great pages like fotocommunity or similar to get inspired.

But as child I lived in an area with a lot of nature, forest and mountains, and such a childhood still influences me and my art that's for sure.

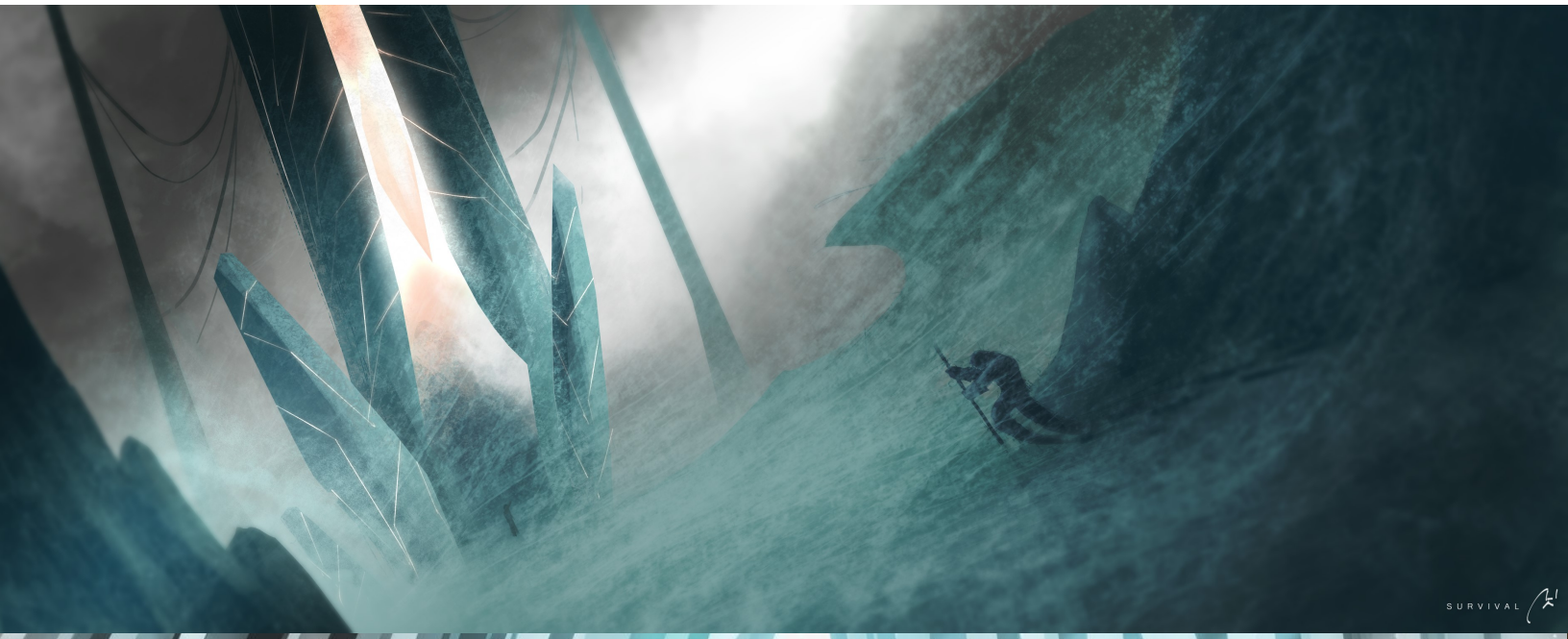
DAL: What's the digital art scene like in Germany? Do you connect much locally, or is most of your networking and socialising done online?

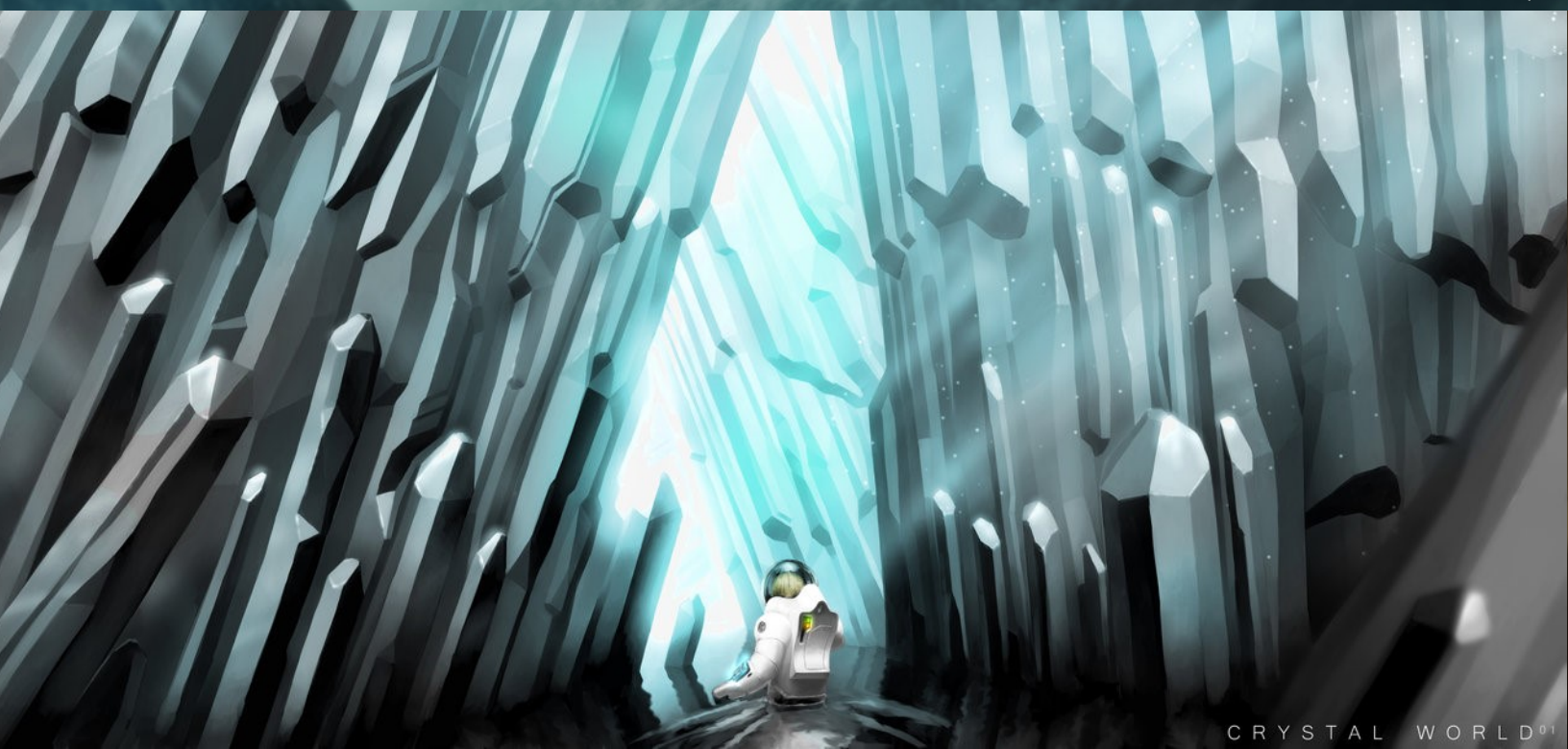
XI: Not really locally, I'm mostly connected via Internet networks. You have such a great range of interests and people there. Also, it is nice to meet people with different cultural backgrounds and perspectives from other countries.

DAL: What three tips would you give to someone who wanted to start to do digital paintings, but who was unsure of how to go about it?

XI: First: don't demand too much from yourself in the beginning. You'll fail, as we all did or do, so did I. Just try to have fun with painting, nothing else. Also, you you should *want* to do this and you shouldn't force yourself into this and that, because you have been told 'it's the right way to do it'. The best way to stick with it, and the best way to do that is by having fun, even if at first you fail. If you feel that it's turning into tough going, then have a pause, take a step back. Don't get wrapped up in that feeling you get where you can't find a solution for a problem how to draw some stuff. Sometimes it helps to get a clear head, before you get to the point where "you can't see the forest because of all the trees". You need to build up some patience, too, and for some people that habit needs some time to develop.

Second: try out different things, so you can find what suits you. Maybe you like to draw characters, or vehicles, drones, landscapes or





something abstract. Whatever it is, you should try to find it. But be aware that this won't happen instantly, it'll take some time and you should invest this time. And by trying out different things that tends to keep you inspired and increases your 'view' on things.

Third: Try to study the art that you like the most. The more you do this, then the better you understand how to achieve to create such art. Studying could mean to copy, but you shouldn't copy things slavishly. Instead try to understand *how* it was done, so you can create it on your own and you build up your own style.

DAL: Thanks. That's good advice. What's your vision of our long-term off-planet future, are you an optimist?

XI: I'm more a realist. As I also like to write stories, I'm a bit more straight about the future of mankind — as many authors are.

I can imagine that we might build outer colonies, but I'm aware that there is currently a difference between the romantic imaginations and the reality. It won't happen soon, in a big leap, it will happen in small steps. But in the end we can't even really say what will be in, let's say, 50 years.

DAL: Yes, though I think things are now looking more promising that they did ten years ago.

Pictures: "Survival"; "A Long Path to Go"; "Crystal World"; and "Stranded".

Plans for space projects which would have only raised only a sceptical look and a shrug, before, those things are now seriously on the agenda, and some plans are even getting to the '...and so, what the budget needed for this'? stage. Talking of projects, what projects or ideas are you currently working on, or planning?

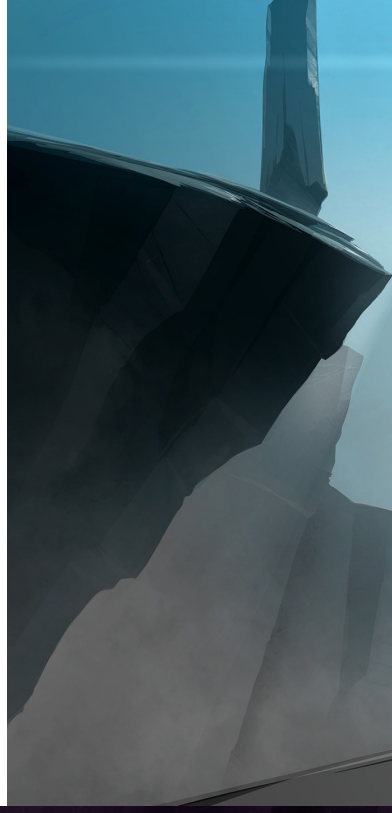
XI: I have several personal projects like "Kenauer" or "The Digital Messiah", but I am also doing working as concept artist for other projects like "Galaxy in Turmoil". I plan to do more commissions as well.

DAL: Fascinating. Well, thanks very much for this interview, we wish you well.

XI: Thanks a lot for this interview as well, it was really interesting. And I wish you the best for your magazine!

Xistenceimaginations is online at DeviantArt at:

http://xistenceimaginations.deviantart.com/

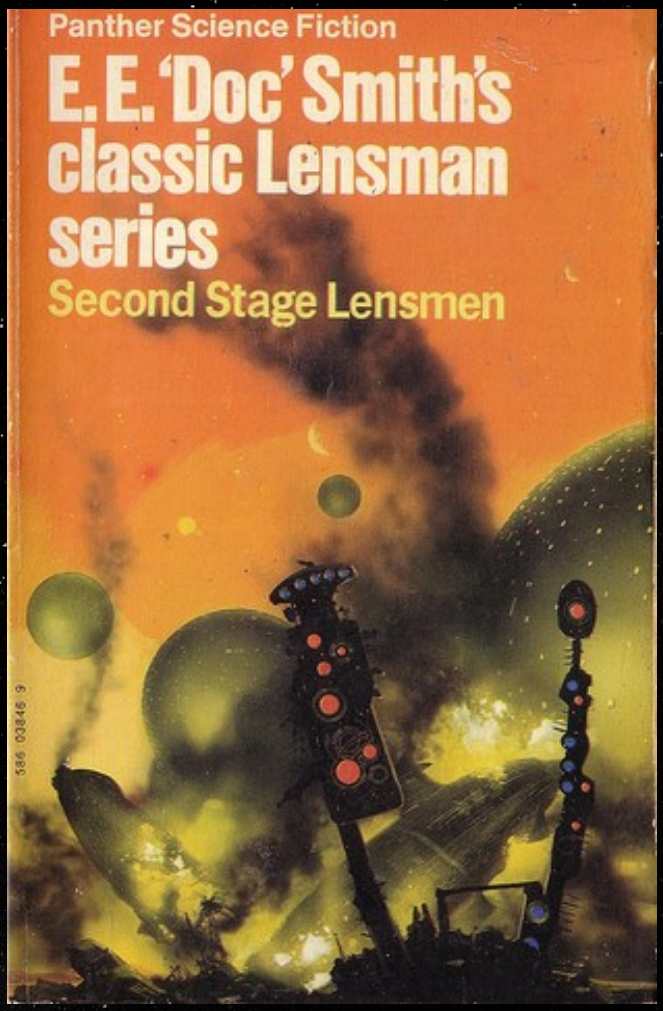


Pictures: "Crash"; "Contact on Xist 36".


CONTACT


CRASH

CREATIVE IDEA: multiple layers of depth, silhouettes.



CREATIVE IDEA: shadow of unseen alien over the castaway.

SPACEWRECKS IN SCI-FI PULPS

Second Stage Lensmen

Panther paperback (UK) 1973.

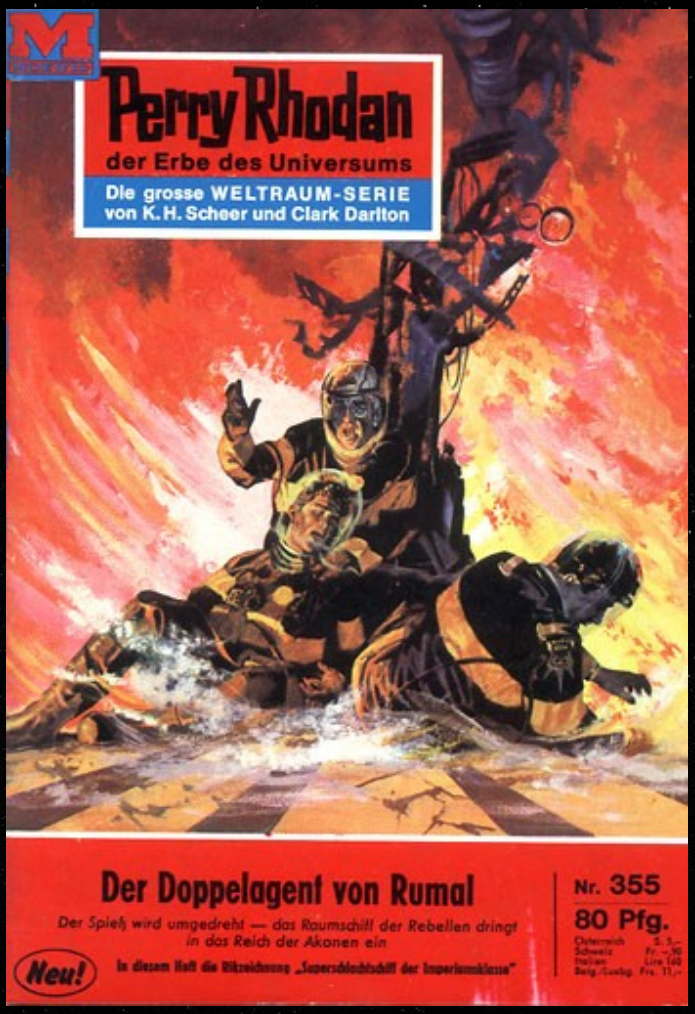
While the 1930s and early 1940s Lensman space opera series is somewhat of an acquired taste today, Panther gave this old book a cracking cover by the great **Chris Foss** for its early 1970s British paperback reprint. One glimpses 'the 1930s' in the decade's famous airship crashes — which are evoked by the middle-distance elements. But these are set between foreground and background layers that offer dramatically different types of enigmatic science-fiction structures. In the foreground these are thin, dark, technical. In the background they are soft and round, organic and softly glowing. The overall tension between elements makes the reader curious about the book's contents.

Amazing Science Fiction Stories

November 1959.

There is an old approach to science fiction, in which one takes a classic story — such as 'Robinson Crusoe' — and slightly adapts it so it works in outer space and on alien planets. It works with early medieval epic romance (*Star Wars*), 18th century naval warfare (*Battlestar Galactica*) and many more. The cover by **Leo Summers** is a straight take on the Robinson Crusoe concept, but the twist is a shadow is looming over our hero, and there is a bird shadow in the background. Was the hero shooting at the bird, but now finds that he has attracted a much bigger beast? Summers began his career in the early 1950s, as an artist for the sci-fi reprint digests, then worked in comics in the 1960s, first for Tower and then with Warren for their famous *Creepy* title.

CREATIVE IDEA: dramatic 'last stand', ship wreckage.

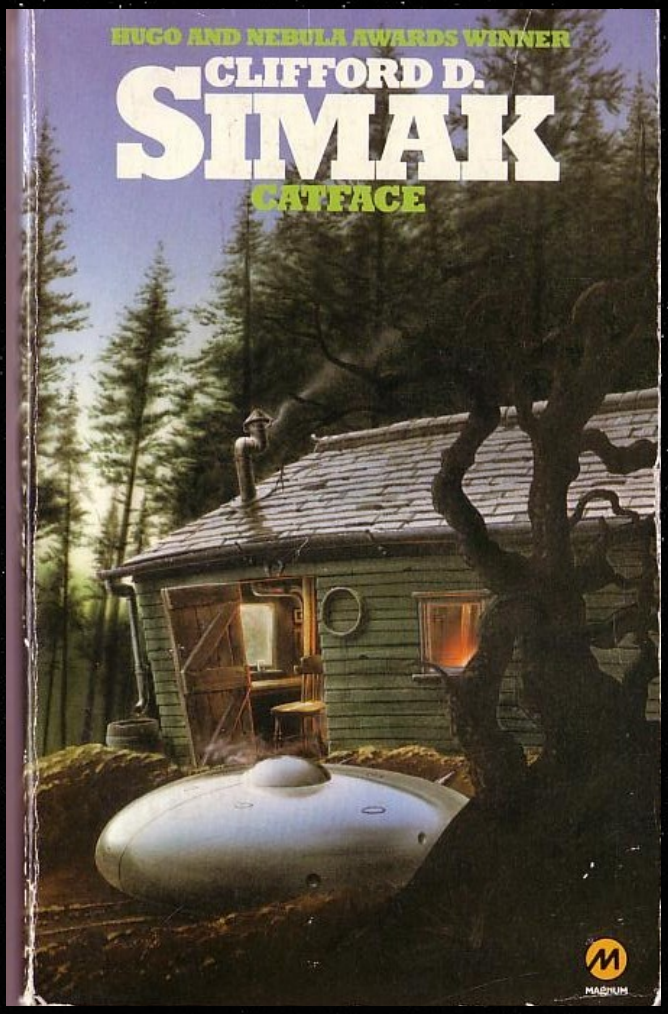


Perry Rhodan #355

1968.

Perry Rhodan is one of the most recognisable German science fiction heroes, appearing as the hero in a vast series of over 2,500 paperback booklets from 1961 onwards. Although Rhodan's potboiler space opera and political intrigues are not to the taste of many in the English-speaking world, among German speakers the series has had terrific and sustained success. First aimed as a teenaged market, the title then managed to carry its audience with it as they became older. The multi-author work was probably at its best during its first decade, briskly telling the sort of how Rhodan builds his New Power band into a Solar Empire and forces the rest of the Galaxy to acknowledge him. The cover artist for #355 is unknown.

CREATIVE IDEA: UFO halts before the most unlikely...

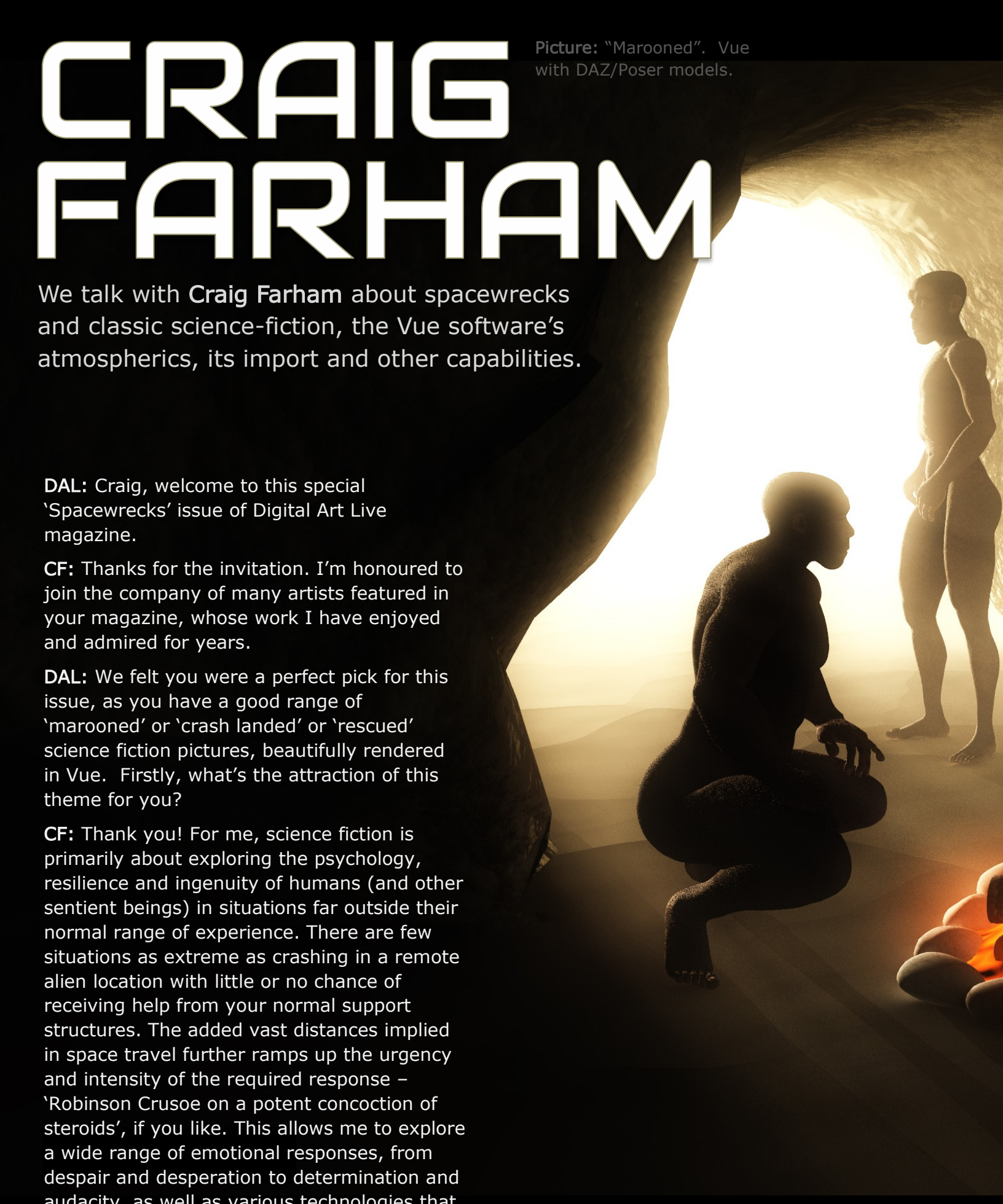


Clifford D. Simak's Catface

Magnum paperback reprint, UK, 1980.

One of the great science fiction writers, though now somewhat overlooked, Clifford Simak (1904–1988) was active in the 1950s and 60s. His work was always scientifically accurate, but also tapped deep human urges for friendship, pets and a rural life. His aliens are intelligent and never boring, and they often encounter humble people who at first seem less than heroic. The cover artist **Chris Moore** is a British artist whose created covers for Isaac Asimov, Philip K. Dick and many more. Moore studied 1969-1972 at the Royal College of Art in London. Like many he left the London scene for the countryside in the early 1970s, as the city's alternative culture turned sour. After album cover commissions (Fleetwood Mac and others), from 1974 he began his long career in painting science-fiction book covers.

CRAIG FARHAM



Picture: "Marooned". Vue with DAZ/Poser models.

We talk with **Craig Farham** about spacewrecks and classic science-fiction, the Vue software's atmospherics, its import and other capabilities.

DAL: Craig, welcome to this special 'Spacewrecks' issue of Digital Art Live magazine.

CF: Thanks for the invitation. I'm honoured to join the company of many artists featured in your magazine, whose work I have enjoyed and admired for years.

DAL: We felt you were a perfect pick for this issue, as you have a good range of 'marooned' or 'crash landed' or 'rescued' science fiction pictures, beautifully rendered in Vue. Firstly, what's the attraction of this theme for you?

CF: Thank you! For me, science fiction is primarily about exploring the psychology, resilience and ingenuity of humans (and other sentient beings) in situations far outside their normal range of experience. There are few situations as extreme as crashing in a remote alien location with little or no chance of receiving help from your normal support structures. The added vast distances implied in space travel further ramps up the urgency and intensity of the required response – 'Robinson Crusoe on a potent concoction of steroids', if you like. This allows me to explore a wide range of emotional responses, from despair and desperation to determination and audacity, as well as various technologies that can either complicate or provide solutions to the situation.

CRAIG FARHAM

SOUTH AFRICA

VUE | PHOTOSHOP

WEB

DAL: And you create small back-stories, and have even chained the pictures to tell a sequential story, for instance in your 'White Desert' series. Tell us about the role story plays in creating your art, please?

CF: Stories have become a very important part of my creative work. When I first started posting my images in the Daz3D and Renderosity galleries, I was fascinated by the self-contained story snippets written by some of the artists – text that expanded on the images and told a complete little story in two or three lines. At that stage I was only producing landscape images, but I soon started buying models and experimenting with posing characters to tell a story. After about a year in the galleries, once I had become more comfortable with my visual vocabulary and grammar, I resurrected my dusty old quill and inkpot and started writing short observations about my images – thoughts about the finished picture, or about what had inspired me to attempt a particular subject, or some short comment that either put me into the image or described the thoughts of the character(s), or simply random cogitations from my unruly mind.

The story-telling aspect of my art really came alive in 2011 when I put up an image on Renderosity and, not having a back-story in mind, posted a throwaway comment asking the gallery members what they thought the image was about. One of my online friends, Tara Kalima, replied with a beautifully written response that not only perfectly captured the essence of the image, but also fired my imagination to continue with the story. Thus began a collaboration where each of us alternately wrote another piece of the story, and I illustrated each story segment. As Tara said when we finished the story, it would be almost impossible to tell where each of our ideas started and the other left off. It was a wonderful experience that left us both invigorated. This story, "Predators", set the precedent, and has been the source of a number of subsequent images and story lines for me, including the 'White Desert' series. I actually have an expanded story outline based on "Predators" that I hope to someday flesh out into a full-length novel or illustrated book.

The process of creating my images and/or stories is not fixed. Some images grow out of a piece of storyline, some grow organically with no particular back-story, and sometimes the back-story comes to me after I've completed the image. I still occasionally create pure landscapes, but when I include any characters, human, robotic, android or animal, I try to create some sort of tension that implicitly or explicitly suggests a story. Writing doesn't come

Picture: "White Desert II"; "Crows".

as easily to me as creating images, but I do enjoy combining the two art forms whenever possible.

DAL: How did you first come to science fiction? Was there a particular set of strong influences in your youth?

CF: I've been an avid reader of fantasy and science fiction since I was in high school. I read *The Lord of the Rings* for the first time when I was about 15, and around the same time a friend recommended Ursula Le Guin's fabulous *Earthsea* trilogy, as it was then. That led me to le Guin's science-fiction stories, particularly the Hainish Cycle, which resonated really strongly for me.

I also read many of the classic sci-fi writers – Asimov, Robert Heinlein, Brian Aldiss, Robert Silverberg, Arthur C. Clarke and Ray Bradbury to name a few – but the four sci-fi works, besides le Guin's, that really spoke to me were *The Twilight of Briarius* by Richard Cowper, *Gateway* by Frederik Pohl, *Slaughterhouse Five* by Kurt Vonnegut, and of course Frank Herbert's *Dune*.

Twilight of Briarius was particularly satisfying for me – the story was totally captivating and scientifically plausible, the characters were all so real, and the prose is just so beautifully written. It's also unusual in that the (human) baddies are almost inconsequential. The aliens are far from inconsequential, but are also ultimately not at all threatening. This is still one of my all-time favourite books.

DAL: Yes, Richard Cowper was one of my favourite writers in the 1980s. Especially the "Piper at the Gates of Dawn" story, which then inspired his beautiful book trilogy *The White Bird of Kinship*. His books were sometimes poorly reviewed at the time, but apparently we now know that there was some politics going on around that. He's certainly well regarded today.

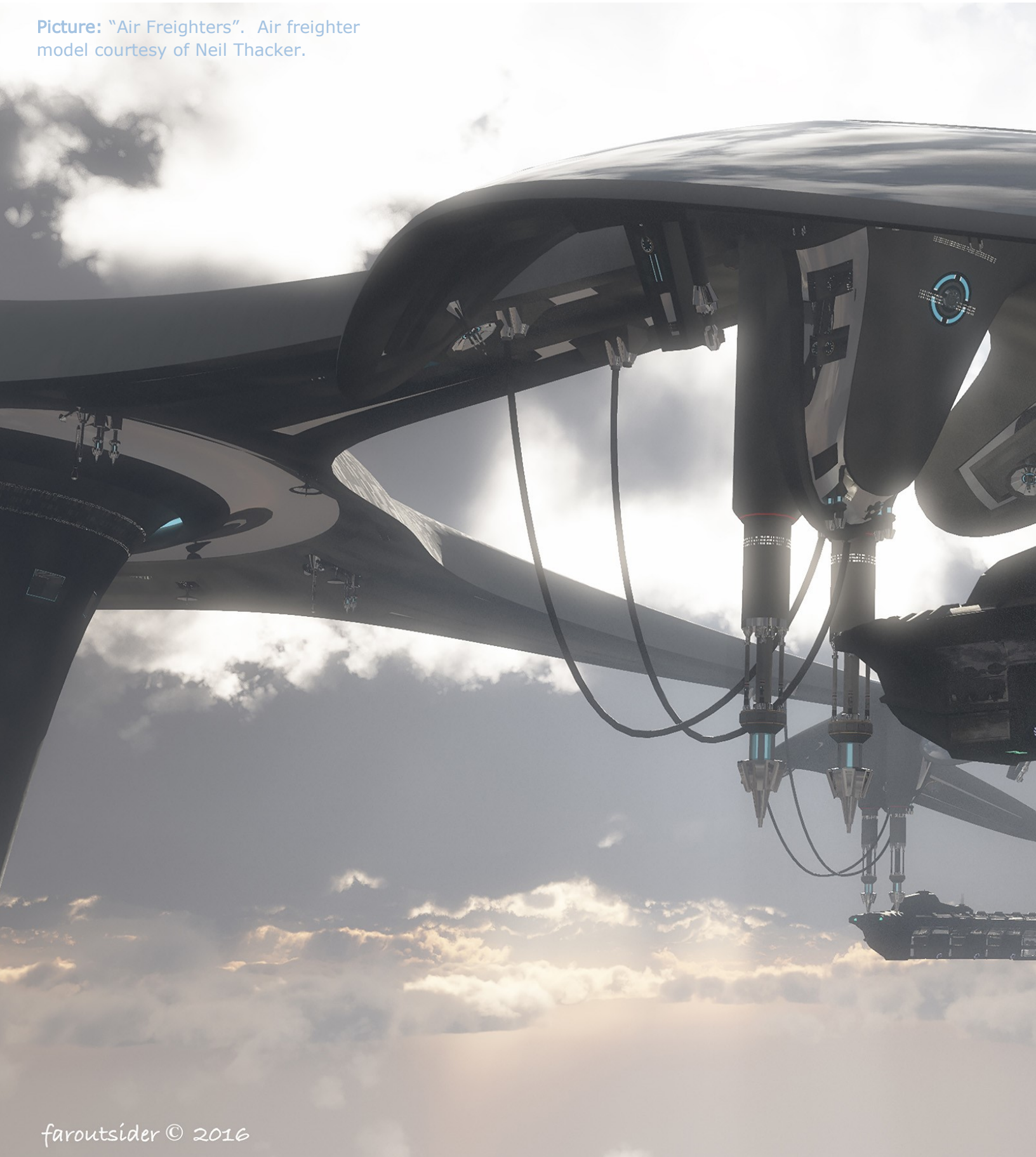
CF: Yes, many preferred Kurt Vonnegut's highly irreverent writing style, with his biting social commentary and astute observations of the many absurdities in everyday life. He was hugely influential for me. His ability to make the reader laugh and cry, sometimes in the same sentence, was sheer genius. Another thing that I really appreciate in his writing is his succinctness – unlike many modern authors, he could tell a complex, complete story with a few well-chosen words. Some stories *can* be told in under 3,000 pages.

DAL: Yes indeed. Modern 'doorstopper' book publishers, take note!

CF: I also liked Pohl's *Gateway* characters, they were completely wacky. One of the two main protagonists made a fortune with an incredibly lucky find of alien technology, but had a dark

secret that left him psychologically unstable, while the other main character was his (very expensive) artificial intelligence psychiatrist. This book sparked my life-long fascination with the concept of artificial intelligence, and the implementation and philosophical implications of sentient machines. And what can I say about Dune that hasn't already been said? It has huge scope, huge ideas and huge characters – a true epic with enough exotic technology and superhuman weirdness to tick every sci-fi box for me. Brilliant book.

Picture: "Air Freighters". Air freighter model courtesy of Neil Thacker.



DAL: What about artists?

CF: Well, in the visual arts, the two artists who influenced me the most at that time were Roger Dean and Frank Frazetta. Roger Dean's otherworldly album covers not only stirred my visual cortex like few stimuli have ever done, but also led me to explore the complex music of some of the bands he worked with — particularly progressive or symphonic rock epitomised by groups such as Yes, Gentle Giant and Greenslade. His architecture and furniture

designs are also incredible — far more futuristic that just about anything I've seen. Frazetta's genius, on the other hand, was in the dynamism he imparted to his characters. Every one of his images, from simple line doodles to fully-fledged paintings, had incredible movement and tension. I also love the way he injected humour into many of his pictures.

I was very much into fantasy when I was growing up, and loved the illustrations of artists such as Brian Froud and Alan Lee. The bizarre and surreal also appealed to me, and I devoured the artwork of Patrick Woodroffe, Salvador Dali and M.C. Escher.

DAL: Where did you grow up? Was it easy to get such works in those days?

CF: In South Africa. Television was only introduced in South Africa in the mid-seventies, so I was not exposed to shows such as *Star Trek* until much later. That's actually a good thing – I find it very difficult to watch the original *Star Trek* series as I'm not a fan of 60s and early 70s style of television and cinema, with their stilted acting and poor effects and sets. However, I love *Star Trek – The Next Generation*, despite its occasional very cheesy moments.

The science-fiction movie that made the biggest impact on me in my youth was *2001: A Space Odyssey*. Many people dismissed this film as being too slow and too obscure, but I think the pacing is perfect as the film works its way under your skin, and the final sequence is deeply thought provoking. And apart from the dated 'futuristic' business suits in the second act, the film has aged incredibly well in all respects – story, acting, special effects, originality and scientific authenticity… a true classic.

DAL: Yes, it's not so much the business wear that threw me, more the dated communication method with earth that's used just after that encounter. Leonard Rossiter as the Russian takes a bit of getting used to, as well, after decades of seeing him as a grad-grind comedy landlord on British TV.

Anyway, how did you first encounter the Vue software? Or was there a 3D programme that you started on, and then switched to Vue?

CF: My first ventures into 3D art were to produce landscapes using Bryce. It's fun software to use, but I became increasingly frustrated by the poor quality of trees and foliage that were available for the program at the time, which severely limited the types of environment I could create. When I expressed this frustration on one of the online galleries, a friend mentioned Vue had a great range of plants and atmospheric effects. I bought the cheapest version available, Vue Esprit (there was no free version in those days), but soon realised that most of the Vue's power came from the additional modules, so I upgraded to the Pro. Vue was a revelation – suddenly, from the comfort of my office chair, I could create any environment, from desert to lush forest, on- or off-world. Which I could explore to my heart's content and still pop into the kitchen for a cup of tea whenever I got thirsty. And soon I found a number of Poser and Daz characters to keep me company on my virtual travels.

DAL: What were some of your initial challenges in creating digital art and how did you overcome these challenges?

CF: I am a scientist, and although I came from a very artistic family, I had no training in art. I learned a lot about perspective and light from my father, who was an architect and a superb photographer, and about composition from my mother, who painted beautiful botanical watercolours. And both my brothers are model builders — one builds physical 3D architectural and engineering models, and the other is a CAD wizard.

I experimented with photography long before I ventured into 3D art, and I still regard myself primarily as a photographer – only now I work in virtual 3D space. As I said earlier, I can now visit anywhere my imagination takes me, and take snapshots to bring back to the real world (whatever that is). I'm useless at making 3D models, partly because I haven't put in the time to learn, but there are thousands of people creating stunning models that can help me create those imaginary worlds. Another

advantage is that the models have infinite patience: I can return to scenes I created years ago and the actors and props will be exactly as I left them, and I don't have to worry about them complaining to their trades unions.

My two biggest problems when I first started creating digital art were the lack of power of the hardware and software available to reproduce my imaginary worlds, and a lack of confidence in my ability to express myself creatively. When I first graduated and started having time explore digital art, one literally needed a supercomputer. Even a colour monitor, 640 x 480-pixel resolution, was a luxury item. The lack of efficient compression algorithms meant that digital images required enormous storage media, and manipulation and editing them was completely out of reach of normal mortals. However, the technology matured, and the rest is history.

> "… I had no training in art. [But] I learned a lot about perspective and light from my father, who was an architect and a superb photographer, and about composition from my mother, who painted beautiful botanical watercolours. And both my brothers are model builders …"

The issue of confidence was a bigger challenge. I loved playing with Bryce, limited as it was, and over the years produced a few images and short videos that I can look back on with some nostalgic fondness. However, my art never really improved – I was a bit like Kurt Wallander's father, producing variations of pretty much the same scene over and over. Unlike Wallander Senior, the colour and composition of my images did vary, and I certainly explored the vagaries of digital light in some depth. However, the subject matter – different geological formations with various amounts of sparse vegetation – tended to get somewhat boring, even if there was an occasional spaceship to add some kind of focal interest.

All that changed when I tentatively posted a few of my images on the Daz galleries and started getting feedback. I invited criticism of my efforts, and some of the wonderful artists on the site were very happy to share their insights and offer suggestions for improving my work. I also learned a huge amount from seeing what people were doing with the new generation of 3D software. So I downloaded a few models and started to experiment. With Vue and the continued help from my online friends, my confidence grew in leaps and bounds. My work is still very much hit and miss – some of my images definitely work better than others.

I guess the bottom line is that it's very difficult to improve at anything if you're doing it in isolation. My scientific training makes me very open to criticism – science demands that you put ideas out there in order to have them shot down, so only the most robust concepts survive. The same applies to my art – the more feedback I get, the more I learn and the more confident I feel to experiment. To fear criticism is to back away from valuable opportunities to grow.

DAL: What version of Vue to you use? Are you happy with it? Do you find it fits well with your current setup, in terms of interfacing with Poser and the render speeds, etc.?

CF: I've now been using Vue Infinite for a number of years. I know I'm not utilizing it to the full, mainly because of the limited time I have available to experiment and explore the depths of this huge and complex program, but on the whole I'm very happy with it. There are some problems with importing Poser and DAZ figures, and render speeds are problematic, but these are more than offset by the versatility of the program, particularly the atmospherics and lighting. There are certain types of scenes that other programs such as Poser and Daz Studio are better suited, for example, close-ups of people. This has a lot to do with how these

programs handle skin textures – that's definitely an area where Vue could improve. However, it's important to remember that Vue was designed primarily to create realistic outdoor environments, which it does exceptionally well.

DAL: Your picture 'Marooned' has a lot of human interest to it. What's the back-story on that one, please, and also how did you come to be inspired to make it?

CF: Here's the story: 'It was three months since

Picture: "Air Freighter: Condemned". Air freighter model courtesy of Neil Thacker.

the crash, and she had given up all hope of rescue. The proto-hominids who had pulled her out of the wreckage were learning a few rudimentary words to compliment the sophisticated sign language they used to hunt, and they were no longer afraid of her cooking fire…'

This is one of my personal favourites – the finished image looks almost exactly as I originally envisaged, which is actually quite rare.

It was my entry to a competition on a Vue social media group, which was won by Neil Thacker (who appeared in an earlier edition of your magazine), and I got a placing on the podium.

Having previously done a couple of images based at a crash site, I wanted to do something different, showing a marooned survivor learning to cope with vastly changed circumstances sometime after the event – hence the idea of a highly sophisticated, technologically advanced character living in a cave. I also wanted to add an element of time travel to the story, so I had the main character rescued by members of Homo erectus species, which places the story in Africa about 1.5 million years ago. The vast gulf between the characters is emphasized by the juxtaposition of the space traveller's futuristic clothing, equipment and body shape with the small, rugged and naked (in a totally unthreatening way) cave dwellers. At the same time, all the characters' poses imply a sense of growing trust and teamwork.

DAL: Could you talk us through the detail of your DAZ/Poser, Vue, Photoshop workflow, please, in relation to 'Marooned'?

CF: This particular picture had no Photoshop post-work at all, apart from the added signature. All of the lighting, the glow of the fire and the steam rising from the pot are exactly how they were rendered. I was particularly happy with the lighting effects that I achieved in this image. I started with a cave I had downloaded from the web (I can't remember where, unfortunately). The 'cave' consists of three terrains, two rocky terrains positioned vertically to form the walls, and a sandy terrain for the floor. I positioned the camera to get the approximate framing I wanted, and then placed the main (sun) light outside the cave to get the light pouring into the scene.

The next step was to go to DAZ Studio to pose the characters. I had a very good idea of what I wanted the characters to be doing, so this was a relatively easy task. I had a set of witches' poses that I had bought for an earlier project, which had the basics of the character kneeling next to the pot on the fire. As with all preset poses, I needed to tweak it quite a bit to get exactly what I wanted. I also tweaked the woman's features, to get away from the standard cookie-cutter default. The *Homo erectus* characters were easier to pose, again using standard poses as the base.

Once I was happy with the overall poses, I exported each character individually to .vob files for import into Vue. It's important to have separate figures so they can be more easily placed and, if necessary, further tweaked as the scene is composed in Vue. Tweaking the characters is done in DAZ Studio, and the object file is then re-saved using the same name as before. Vue then detects that the model has changed, and updates it in the scene. So at his stage, I was constantly switching between DAZ Studio and Vue until I was happy with the characters' poses.

Back in Vue, I then adjusted each individual figure's position to get exactly the composition I wanted. Some of the materials also needed adjustment in Vue, particularly the fire, which was the centre-point of the composition. I was able to isolate the coals in the imported model and add a bright glowing material, which Vue does especially well. I then added a series of spheres above the pot with a volumetric fog material to represent the rising steam, and finally I added the boots, backpack and weapon.

I always do a number of small, low-resolution renders while setting up the scene, and when I'm satisfied with the all elements of the picture – composition, materials, lighting, etc. – I set the render definition to a much higher resolution, hit the render button and wait. And wait some more… Often I notice small details on the high-resolution render that aren't quite right, so I go back, adjust them and re-render. It's not unheard of for me to do a dozen or so high-resolution renders before I decide enough is enough, and move on. I think I only did three of these 'final' renders for 'Marooned'.

DAL: If Vue could be improved for the setup of large scenes, and/or the importation of Poser/ DAZ models, how would you improve the software?

CF: The results of the import process from Poser and Daz Studio are patchy, at best. Sometimes the import works perfectly, with all materials transferring as expected, but other imports using the same parameters fail to bring any of the textures across at all. There are also sometimes problems with bump mapping – in particular, human skin needs to be adjusted to prevent craters appearing, especially in close-ups. And Collada, the supposed industry standard for model interchange, gives me the worst results of all.

DAL: Yes, I've never had a great deal of success with it.

CF: It's not just a problem for e-on to solve – I would love to see all the major 3D program developers working really hard to facilitate effective model interchange, with proper standards that everyone can use to get consistent results.

One of my biggest problems with Vue for Mac is memory management. I have quite a powerful machine with 32 GB RAM, and *still* run out of application memory every now and then. I haven't done any systematic investigations of the problem so I don't know what causes this to happen, but it's very frustrating and has sometimes resulted in my losing hours of work. I do understand that Vue is often manipulating billions of polygons – perhaps the developers need to look at ways of using more paging memory on the disk…?

My other major gripe is render speed, and the fact that rendering gobbles nearly all of my computer's RAM and CPU processing.

DAL: Yes, Blender is the same. DAZ iRay too. Poser Pro 11 seems to have solved that problem, though.

CF: I'm not sure when the render engine in Vue was last overhauled, but it seems to me that other programs, particularly some of the game developing environments, are catching up or surpassing Vue with their render speed and power. Again, I understand that ray tracing gives spectacular results, but I think that Vue is going to have to up its game to compete with these new programs in the future. Fortunately, I'm not interested in producing animations (life's too short, and my pocket does not stretch to setting up a render farm at home), but I would appreciate it if I could produce results more quickly, and allow my computer to multitask more efficiently while rendering.

DAL: I especially like your picture "The Astrogator" (overleaf). It's quite austere at first glance and yet lush at the same time, once one starts to look into all its details, so there's an interesting tension in the picture. There's also a tension in terms of 'what happens next'!? Could you tell the readers more about this picture, please?

CF: This is a very good example of an image that grew organically, with no preconceived notion of what I wanted to achieve when I began working on it. It took on a life of its own, and the final image looks completely different from the early drafts that I made.

The starting point for the image was the mountain lake, which I bought from the exceptional team of artists at D&D Creations, based in the Netherlands. This is a huge set that comes with a number of preset atmospheres. When I bought the set, I 'flew' around it for quite a while, just marvelling at the realism of the geological formations, vegetation and lake. I also played with the various atmospheres, exploring the different moods each one created. The small island was an obvious focal point, but I wanted a character as the primary focus of the image, with the island and mountains forming a spectacular backdrop.

I chose one of the more exotic models in my runtime, Amisi by chevybabe25, which I posed in an attitude of joy and worship of her surroundings. I explored a number of different camera angles and low light atmospheres, but these early drafts just didn't have the impact I was trying to achieve. Eventually I settled on the final camera angle, deliberately cutting off her feet so the viewer was unsure if she was standing on land or in the water (or even on or above the water!). I then fiddled for ages with my own atmosphere settings to get the light

Picture: "The Astrogator".

falling at just the right angle to illuminate the haze, but still show the mountains and lakeshore behind.

This made a relatively interesting image, but it still lacked something. I decided to add some mystique to the character by adding glowing lights to her eyes, and introduced some high-tech display graphics in Photoshop, which suddenly transformed 'the worship pose' into something completely different. The graphics display also completed the composition, closing the triangle with the tree and the woman. Finally, once the image was complete, I added the title, 'The Astrogator', and the caption, 'To travel to the stars without a spaceship…', which further ramped up the mystery of the image.

I can't tell you what happens next – that is part of the mystery. Are the graphics displays in her imagination? If are they real, how are they generated? Does she physically travel, and if so, how? Can she transport others? Is she human or android? What is her back-story? If I did share my interpretation, it would collapse the quantum waveform and destroy the myriad possibilities in favour of a linear singularity…

DAL: So true. */Laughter/* I get the sense that you like to 'explore the wilds'. Do you do that in real life? You are based in South Africa, so I imagine that there may well be some quite interesting places nearby to explore?

CF: Absolutely! I have lived in some fabulous wild places such as Zambia, and I also get to rural Scotland in the UK and to Labrador in Canada. I currently live in a small semi-rural enclave in Cape Town, close to the beach and at the foot of a beautiful mountain. Cape Town is a city of more than three million people, but it is dominated by a mountain range running down the length of the peninsula, which provides ample opportunities to explore the wilds, both on foot and on a bicycle, and I do so at every opportunity. It's possible to cycle or hike for half an hour and get to locations on the mountain or peninsula where you cannot see any sign of the city. There are also hosts of other wild places within an hour or two drive of the city centre.

It's no coincidence that I live close to the wilds. I actively seek them out, and have been lucky enough to be able to choose to live in places where the wilds are easily accessible.

DAL: I see. You also create many very fine 'lush woodland' scenes with Vue, of which we can only show one here. Is the lushness any kind of response to the arid climate and landscape of South Africa?

CF: Not really. There may be an element of that, but it's more about world building and the opportunities that woodlands provide to explore light and shade. Woodland locations can be very mysterious, and I've used them to present stark juxtapositions between the natural world and technology such as robots or androids. I also just love the realism that can be achieved in Vue, with a bit – or a lot – of hard work.

DAL: Do you play videogames? I get a '*Fallout* feel' from some of a couple of your pictures? Am I right in that?

CF: Actually, I don't play video games at all, and I've never experienced *Fallout*. The only time I have ever slipped over to the dark side was about 15 years ago. I was asked to review *EA Sports FIFA Football Manager*. I reluctantly took on the task, but got completely hooked on the game for a few months. Eventually I joined Football Managers Anonymous and managed to shake the monkey off my back. I've never been tempted to play computer games again… it would take up too much of the precious little time I have to create my own visual or written stories. I quite often get comments on Deviant Art that my images look like some videogame. Having seen the quality of art in some of the games, I usually take those comments as compliments. So, thank you, commenters!

DAL: One of the reasons for this 'Spacewrecks' issue is because there was a famous book of sci-fi book cover art of the same name, part of the Terran Trade Authority series? Were/are you a fan of that series?

CF: I'd not heard of it until now. I wouldn't mind being marooned in some of Roger Dean's exotic

Picture: "Discovered" and "White Desert I: Fallen".

"I currently live in a small semi-rural enclave in Cape Town, close to the beach and at the foot of a beautiful mountain. ... It's possible to cycle or hike for half an hour and get to locations on the mountain or peninsula where you cannot see any sign of the city."

Picture: “Forest Stream”.

locations, but I can't recall any of them featuring spacewrecks. Charles Foss is another favourite artist of mine, and quite a few of his works feature crashed spaceships. However, most of his wreck scenes tend to emphasize the technology, whereas I'm more interested in the survivors of the crash. Not that I would dare to compare my art to either of these artists!

DAL: I see. To return to Vue… I like your depth fogging in many of your pictures. Could you tell readers, who may be unfamiliar with Vue, about the atmospheres in Vue and how you work with them to make a picture?

CF: The quality of the atmospheres is probably the main reason I took such a liking to Vue. I learned from my early photographic excursions that light is probably the most important aspect of any successful picture. I try to think of lights as having motivation – i.e. each light should have a story that adds to the overall composition depicted by the characters and environment.

Vue excels in producing high quality indoor and outdoor lighting. The sheer variety of lights and their controls makes it possible to achieve just about any lighting conditions. There are also a wide variety of cloud shapes available for the sky, which can be adjusted with great flexibility. Unlike programs such as DAZ Studio or Poser, where the clouds are 'painted' in 2D onto a 'sky-dome', the volumetric clouds in Vue are represented in true 3D-space, which makes them far more convincing. This also means that the clouds can interact with other elements in the scene, further adding to their authenticity. The other area where Vue excels is its ability to simulate haze and fog. These effects are essential to add depth and realism to any image. There are always dust or water particles in the air, and the interplay of light with these particles contributes greatly to the mood of any scene.

Many of my images are located in outdoor locations, and for those I usually like to work with a single light source – the sun or moon. Without haze and fog, the vast majority of those images would be flat and uninteresting. Haze and fog also add mystery – there's that word again – what's out there that I can't see, or can only vaguely see, and how does it stir my imagination…?

My picture "Preparing for the dawn patrol" is instructive, in that it combines both indoor and outdoor lighting. Indoors I used soft point lights that radiate in all directions, judiciously positioned at the junction between the walls and ceiling to provide enough light to give emphasis to the character and create some interesting shadows in the dwelling. This part of the scene also shows the setting sun in the window in the background, which ties the indoor and outdoor images together. The outdoor lighting is provided exclusively by the sun, which is realistically represented as a deep red ball, as it would be that close to the horizon. The clouds are also deep red, as illuminated from below, and the thick haze on the horizon obscures the lower part of the sun. The finishing touch to the atmosphere in this image was the addition of the low puffy clouds at ground level, which covered the relatively uninteresting desert floor and added greater interest to the scene.

"Discovered" is quite unusual for me in that it's an outdoor scene that uses more than one light source. I experimented with a number of different daytime atmospheres, each containing various amounts of fog and haze, before settling on the unusual colouring depicted. The deep fog is essential to the composition, effectively wrapping the whole scene in a self-contained cocoon. I then used a volumetric spotlight to simulate the shaft of sunlight shining down on the figure, making her stand out, while at the same time hiding her face to give her a somewhat sinister aspect.

"We need to go…" uses more obvious lighting effects that illustrate the power and versatility of Vue's atmospheric effects. The whole scene is bathed in just enough backlight from the sun to make out the detail of the landscape and citadel in the background, and the air is thick with particles to replicate an impending dust storm. Again, I've used volumetric spotlights to focus attention on the characters, this time in a more conventional way with simulated headlights.

DAL: Do you have any 'workarounds' that you find are useful in Vue? If so, could you share them with readers? I imagine that tips to reduce render times would be welcomed by all Vue users.

CF: I am not an expert Vue user. I would refer readers to Andrea Horvath's excellent summary of some of the issues involved in getting faster, high quality renders in Vue. She has an article on optimizing render settings for different types of scenes, going into detail about anti-aliasing, quality boost settings, and tips to reduce render times in scenes with complex ecosystems. Andrea is one of the top Vue artists today, and what she doesn't know about optimizing rendering is probably not worth knowing.

DAL: How extensive is your Photoshop post work, and what does that tend to involve?

CF: Until about a year ago, I used to do very little in the way of post work in Photoshop. That's not because I'm a purist – it's simply that I was usually very satisfied by the way Vue rendered my images. That hasn't changed – I've just started to experiment with the possibilities that post work in Photoshop can offer.

The most basic form of post work that I do involves correction of colour, exposure and/or brightness and contrast. Occasionally I add some artistic filters, for example the pencil drawing effect that I used to add graininess to the sky and background in "Crows", and in a few of my images I've added motion blur, which involves duplicating layers, masking and adding blur to one layer while leaving the masked area intact. Some of my more elaborate 'story' images are comprised of a number of superimposed renders, which takes a lot of planning of the individual images comprising the final scene.

One of the features of Vue is that you can render a scene, and then change the intensity of individual lights, lens blur, etc. to give different effects without re-rendering. Recently I have been experimenting with outputting a number of different images from the same render using this 're-lighting' feature, then layering them in Photoshop using different blend modes. This sometimes produces images with very interesting end-results that are dramatically different from the original render.

DAL: What are your favourite on-line resources related with digital art? Be it a forum, on-line galleries, model sites or other resources?

CF: For on-line artwork, DeviantArt must be my favourite. It's huge! Of course, with huge comes a lot of dross and plenty that doesn't interest me at all, but there is so much superb art on the site that I couldn't hope to explore all the galleries that do interest me, let alone its outer reaches. I used to be very active on Renderosity, and made a number of very good online friends in the community, but in recent years my participation there has tailed off somewhat, mainly due to work pressure (I do have a day job…). I've also picked up some extremely high quality models for Poser and DAZ Studio from the Renderosity stores, and highly recommend their marketplace. I get most of my figure and prop models from Daz3D, and many atmosphere presets and complete, detailed environments from Cornucopia 3D. The range of products available on both sites is huge, and the quality is generally extremely high. Both sites also have galleries with some superb artists producing exceptionally high quality work.

Finally, there is a very active Facebook group, "VUE Galleries", which has nearly 2,500 members including some of the best Vue artists currently active. These artists are extremely willing to share their expertise, give constructive criticism of posted images, divulge tips and workarounds, alert members to sales or free models available on other sites, and show the results of their experiments with Vue, which are sometimes absolutely mind-blowing. Most of these artists are also active on other sites such as Deviant Art and Renderosity. As a dedicated Vue forum, this is an invaluable resource for all levels of Vue artists.

DAL: Thanks. What recent science fiction has inspired you?

CF: The remake of *Battlestar Galactica* is one of my favourite TV series in any genre – excellent story telling (most of the time), superb acting, great characters and outstanding effects.

I also loved *Farscape*, *Firefly* and more recently, *Ascension*. *The Expanse* had its moments and I'm intrigued to see how it progresses, even though I decided not to continue with the books after the first in the series.

DAL: Yes, the TV series of the *The Expanse* was excellent in its first season. The second season is underway soon, I think? *Firefly* is a fun space series that everyone should see. What about movies?

CF: There have been a number of good sci-fi movies recently. I enjoy movies that make me think, such as *Interstellar* or *The Martian*, and I'm not a fan of the over-effects-laden smash-em-up style typified by *Transformers* or any of the superheroes movies. However, I must admit that I really enjoyed *Guardians of the Galaxy*.

As for sci-fi books, there is so much good reading out there that I could rattle on for hours. To list a few of my favourite modern authors: Iain M. Banks, Alastair Reynolds, Peter F. Hamilton, Neal Stephenson, Ken Macleod, David Brin, Anne Leckie, Kim Stanley Robinson, Hannu Rajaniemi, Ian McDonald, Mary Gentle, Stephen Baxter. I think I've read just about everything written by Neal Asher, and one of my all-time favourite books is *Hyperion* by Dan Simmons.

DAL: Stephenson's *Snow Crash* and *Anathem* and most of Baxter's Xeelee series are excellent. What are you working on at the moment, or planning for the future?

CF: My day job doesn't allow me much time for digital art at the moment, but I try to squeeze in a few hours in the Vue-niverse whenever possible. I would like to continue the 'White Desert' series — I left the story on a cliffhanger, and it's been nudging me to return and attempt to come to some sort of resolution. I also have some half-baked ideas for other ad-hoc images, which may be easier to slot into my work schedule.

DAL: Super, well, many thanks for this in-depth interview.

CF: It's been a great pleasure. Thanks again for featuring me in your magazine.

Pictures: "Preparing for Dawn Patrol" and "We Need to Go".

Craig Farham is online at:

http://faroutsider.deviantart.com/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HELP!

When your spaceship crashes on Planet X... “who you gonna call?” **NASA** is already working on that, as they have a handy advanced rescue-bot in the labs. We take a look at their bold new **R5 Valkyrie** humanoid robot.

NASA’s R5 Valkyrie is designed to be a robust, rugged, entirely electric humanoid robot, capable of operating in degraded or damaged environments. Made over 15 months at the Johnson Space Center, the robot implements advanced electronics, actuators and sensing capability, all building on earlier generations of NASA's advanced humanoid robots.

The 300-pound man-sized design then underwent real-world trials at the recent DARPA Robotics Challenge, and was modified and improved, increasing reliability and durability. The R5’s perception capabilities were also boosted, and advanced walking algorithms from the Florida Institute (IHMC) were added in preparation for later NASA Challenge programs.

The robot can currently operate on its own battery power for about an hour. Future developments, such as in batteries and fabrics that can generate solar-power, may mean that an advanced battery could be developed to enable the robot to be autonomous.

Pictures: Courtesy of NASA/Johnson Space Centre.


NASA

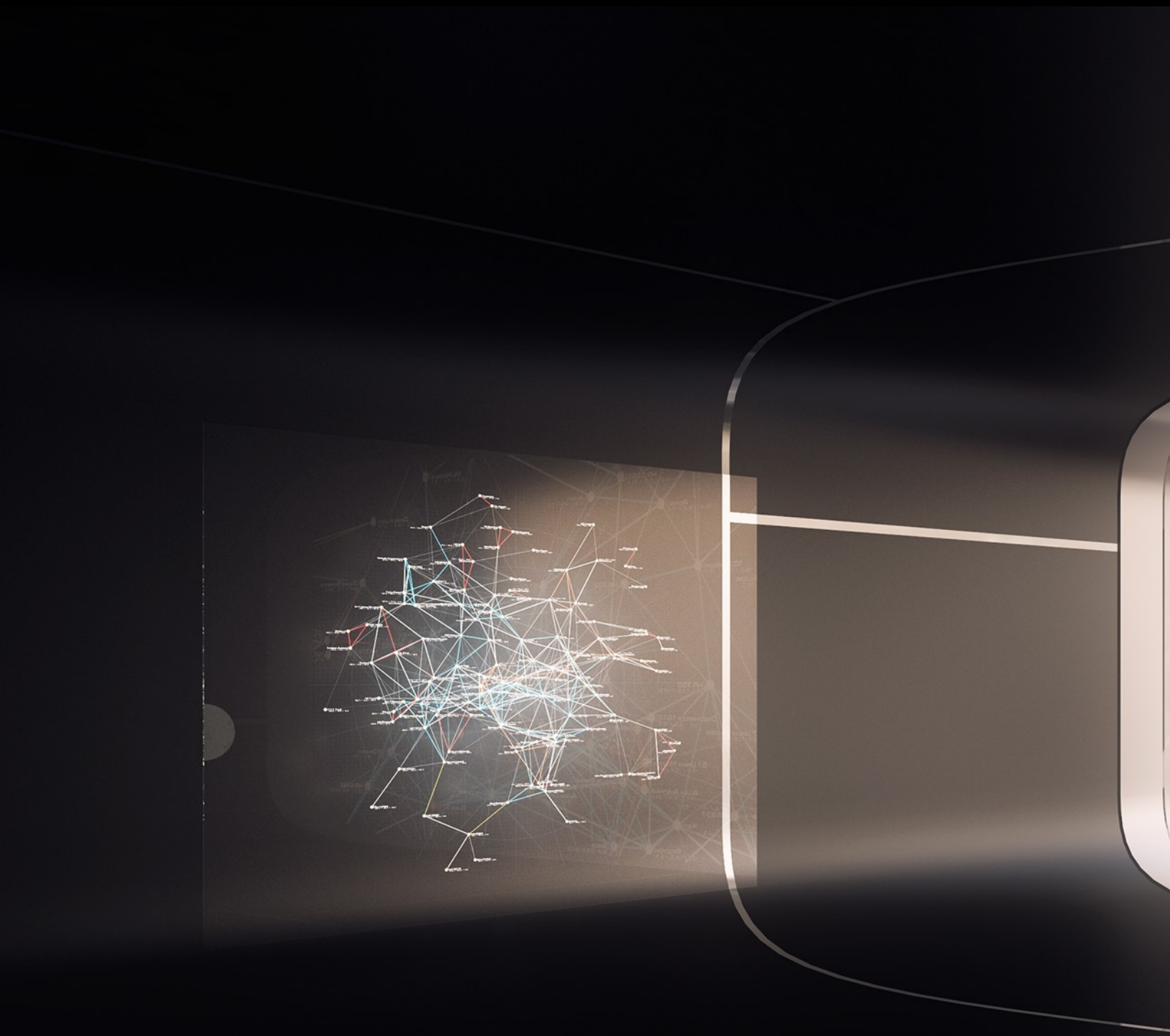
Pictures: Courtesy of NASA/Johnson Space Centre. Middle picture, side: our composite of the R5 with NASA Mars pictures.

GALLERY

This issue's gallery surveys the various ways in which a science fiction artist can use **the spacewreck theme**, from: giant fields of ship-debris; to marooned pilots; through to the discovery of ancient alien wrecks on distant planets.

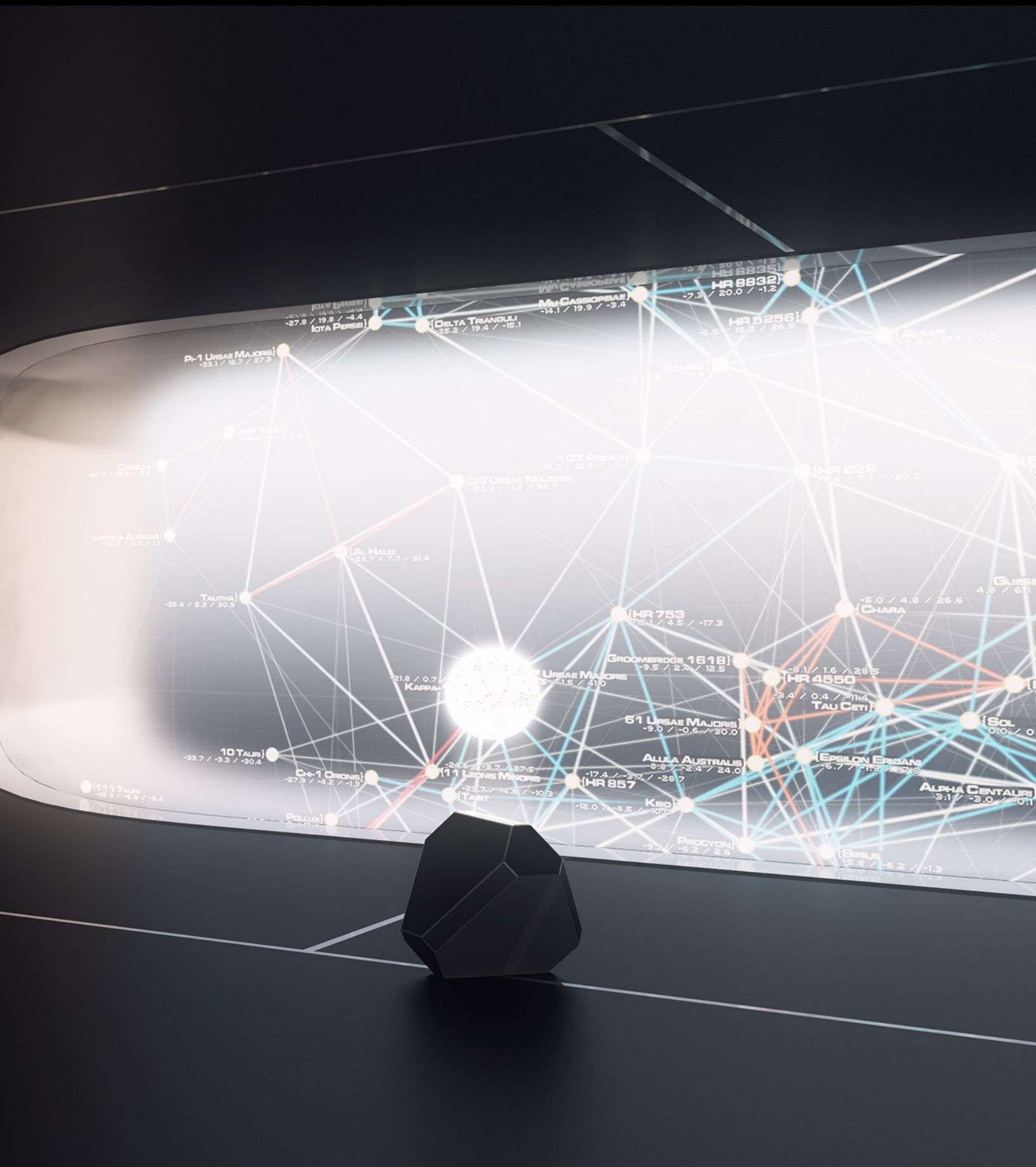
Picture: "Debris, interior shot" by Pipboy3000.

In a future age of automous systems and self-replicating robots, even damaged space hulks may be somewhat operational. Perhaps long after they have been forever turned from their intended course — due to war or some other deflection. Will the ship A.I. of the future be evolved enough to then decide on new mission objectives? Will we allow it that right? Perhaps



Picture: "Dreamscapes 03: spaceship" by Fldo3d

such a drifting space hulk will be programmed simply to observe the stars as it drifts ever onwards, gathering data and observations in the hope that one day some far-future version of humanity will be able to recover the useful information. In this picture we like to think we see such a drifting A.I.-ship, pondering the details of the universe as it slips past the stars.



Pictures: “Marooned IV: Salvagers” by tk769; "White Noise" by Sanskarans.

Humans marooned on a planet may bring their own dangers with them. Strange psychological maladies may lie in wait for us on distant planets. This is suggested by life on our current Antarctic bases. 'Polar T3 syndrome', for instance, is a condition found in polar scientists, caused by a reduction in levels of the thyroid hormone T3. Think also of the 'mirage visions' seen by travellers in vast deserts. Does the above picture then show a real 'cloud creature', or is it just a hallucination that the marooned astonauts are mentally projecting onto a sudden drifting of cloud seen in the moonlight?

Of course, the vision might be both at once — real and imagined. We can perhaps assume that mimicry will develop on other planets in the same way as it does on Earth. What might be seen in this picture is then a hive-mind organism, which lives *inside* a drifting cloud. It has developed the ability to protect itself from predators. Sensing the astronauts, this cloud-organism re-arranges its form, so as to mimic the appearance of one of the planet's fiercest animals.

The opposite may also be true. Just as Earth's carnivourous stick-insects disguises themselves as a leaf and twig, so on alien planets the most delightful plant or rock may turn out to be a nasty beastie in disguise. Until the ecosystem is mapped, the levels of paranoia among the marooned astronauts will thus necessarily be very high, leading to further pressure on their mental perceptions of the unknown environment.

However, this assumes that a spacefaring humanity's remote sensing drones will not already have mapped out the terrain and the ecosystem, identified the main dangers and devised strategies to deal with them. Such a 'planetary investigation A.I.' will have installed 'lifeboat drones' to circle the planet, in case of a future downed spacecraft. After a crash landing, all an ejected astronaut will have to do is wait a hour for the survival pod to arrive from orbit, a pod which will be fully geared up to automatically defend against the specific planetary environment.

Picture: “Untitled II: 2015” by tk769.

AMG

2015

Pictures: "The Unnamable" by Sanskarans; “Visitors by Accident” by Rob Wildenberg; "Where the f_ck have I crashed?" by Designspartan; “Refreshment” by Rob Wildenberg.


Rob Wildenburg
3D Landscape Artist

Pictures: Main: "Crash Site" by Ergrassa. Top: "Kolossus" by Xistenceimaginations; "Big Red" by Midscrawl; "Astronaut speedpaint" by BastaMarcin.

Picture: "Waiting to be known" by JoshEiten.

Pictures: "Premonition" by Artifex; "Towers of Fortune" by Crazypalette (opposite).

Pictures: "The Founder" (making sure to salvage his cloning kit, so he can populate the planet) by Midscrawl. "Spacewreck!!!" by Dave Haden.

"Songs are like hugs that mouths give to ears!"
Mabel Pines: S:1

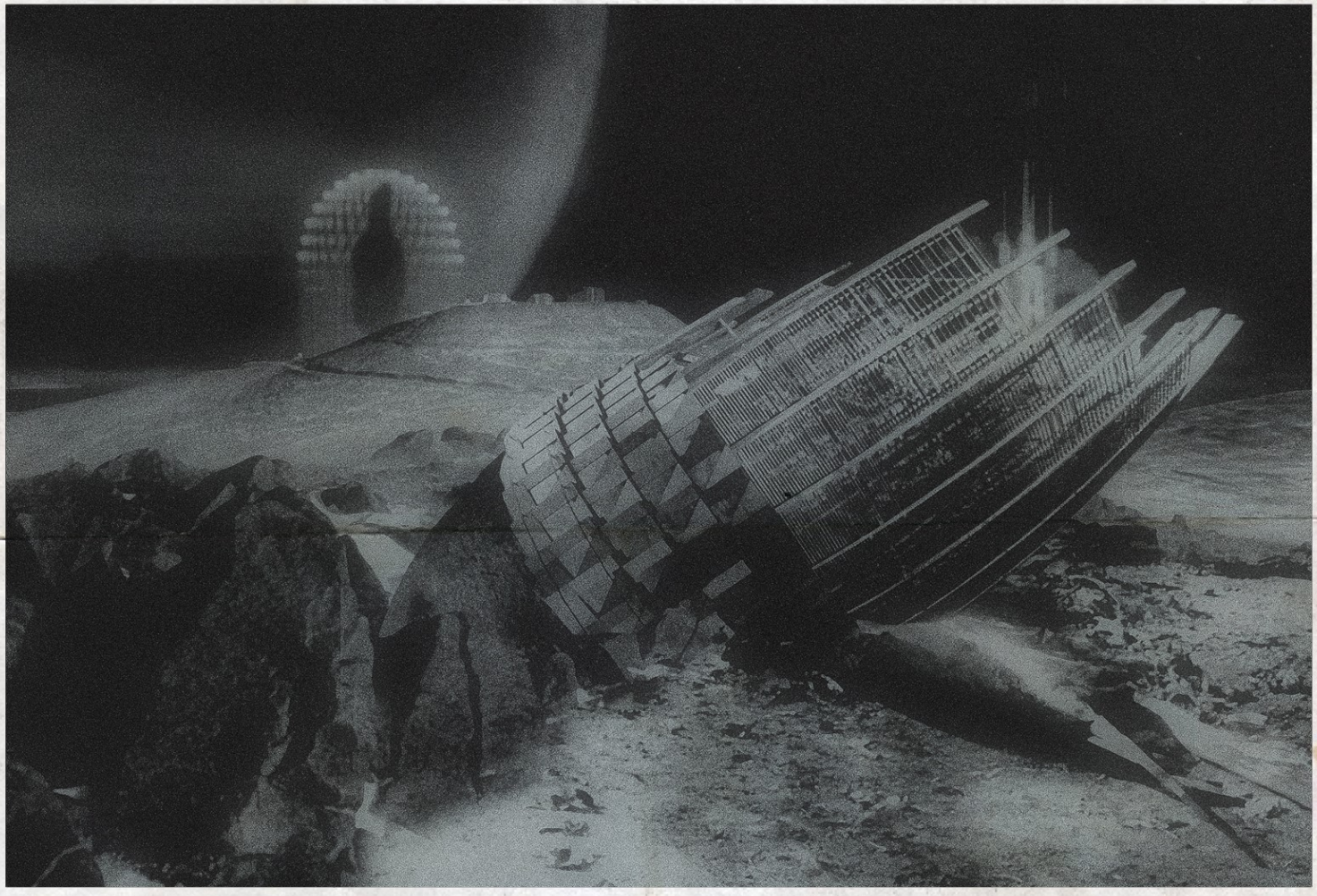
THE FUTURIAN TIMES

WEATHER
Gravity Falls: Slight chance of UFO sighting from Mabel's Tree-house; large moonstones likely to fall on Gallivant Lake. Small hob-thrush sightings are 10% possible in town.

June 1936 | A publication of the Forrest J Ackerman Corp. | THE FUTURE'S NEWS TODAY | *TIME-TRAVELER EDITION*

SPACEWRECK!!!

2035 - PROF. SLINGBURG SMASHES SIDEREAL SUPERCRAFT

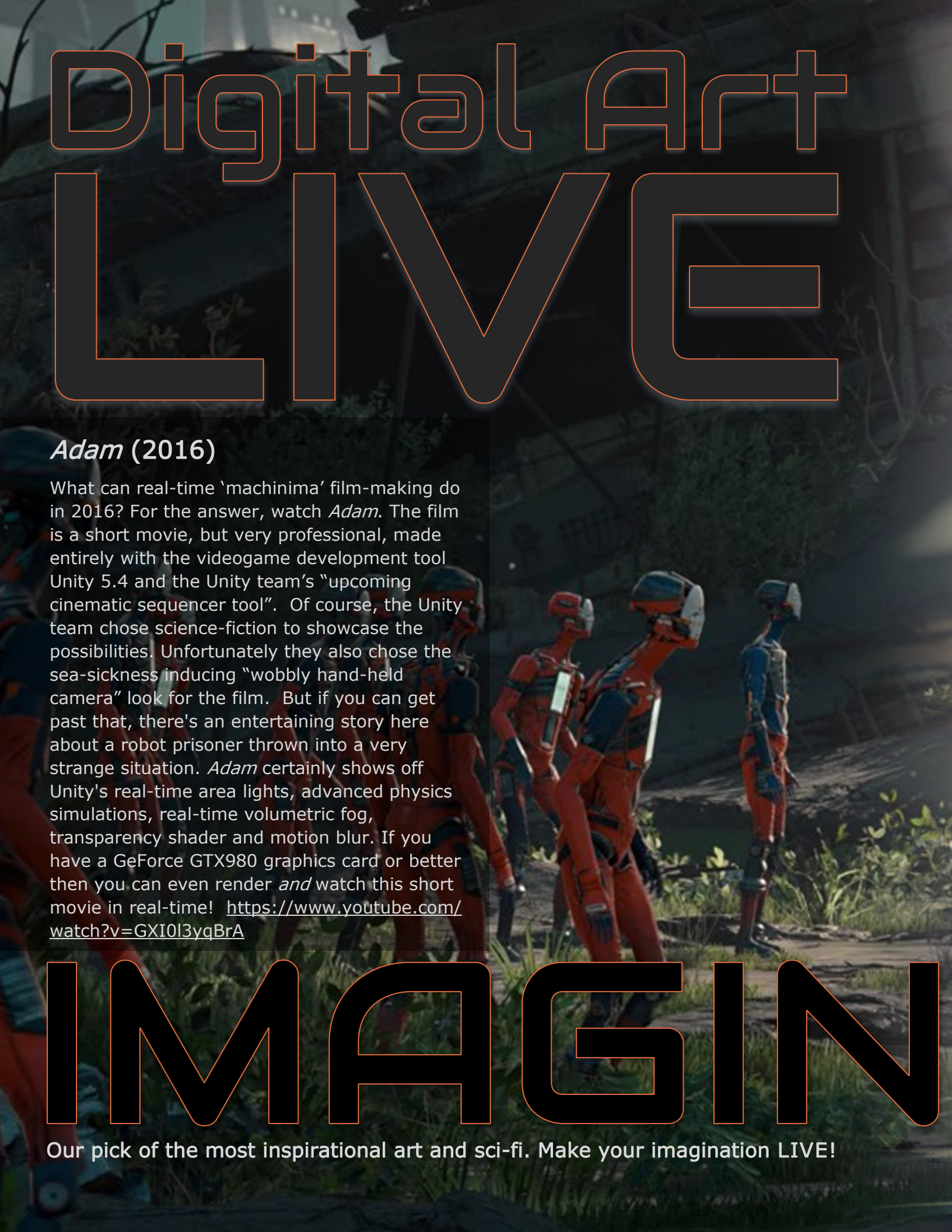


EXCLUSIVE PICTURE: THE CRASH SITE

DAVE SPACEDUST · CLANGER BASE, MOON

The Futurian Times has just learned of a time-shuddering crash near Clanger Base, on the Moon in 2035. The Sidereal Supercraft of Professor Slingburg calamitously catapulted into the Moon's crumbly crust after takeoff, as witnessed by our intrepid time-travelling reporter Dave Spacedust. Professor Slingburg was unharmed, having warped sideways into a time-sling pod just seconds before impact. The Professor's ship's new sidereal time-drive malfunctioned, and emploded in impact, leaving the Red Zone near Clanger Base forever stuck in the year 1972. Our brave reporter Dave Spacedust is at the site, thanks to our wonderful news-gathering time machine. He reports the area is now infested with strange small wooly 'hooting and whistling' extraterrestrials, who are expecting the imminent arrival of a creature they call the 'Soup Dragon' — expected to eat the very metal of the craft! 1972 is surely a very curious place! Return to us safely, Mr. Dave Spacedust!

Digital Art LIVE



Adam (2016)

What can real-time 'machinima' film-making do in 2016? For the answer, watch *Adam*. The film is a short movie, but very professional, made entirely with the videogame development tool Unity 5.4 and the Unity team's "upcoming cinematic sequencer tool". Of course, the Unity team chose science-fiction to showcase the possibilities. Unfortunately they also chose the sea-sickness inducing "wobbly hand-held camera" look for the film. But if you can get past that, there's an entertaining story here about a robot prisoner thrown into a very strange situation. *Adam* certainly shows off Unity's real-time area lights, advanced physics simulations, real-time volumetric fog, transparency shader and motion blur. If you have a GeForce GTX980 graphics card or better then you can even render *and* watch this short movie in real-time! https://www.youtube.com/watch?v=GXI0l3yqBrA

IMAGIN

Our pick of the most inspirational art and sci-fi. Make your imagination LIVE!

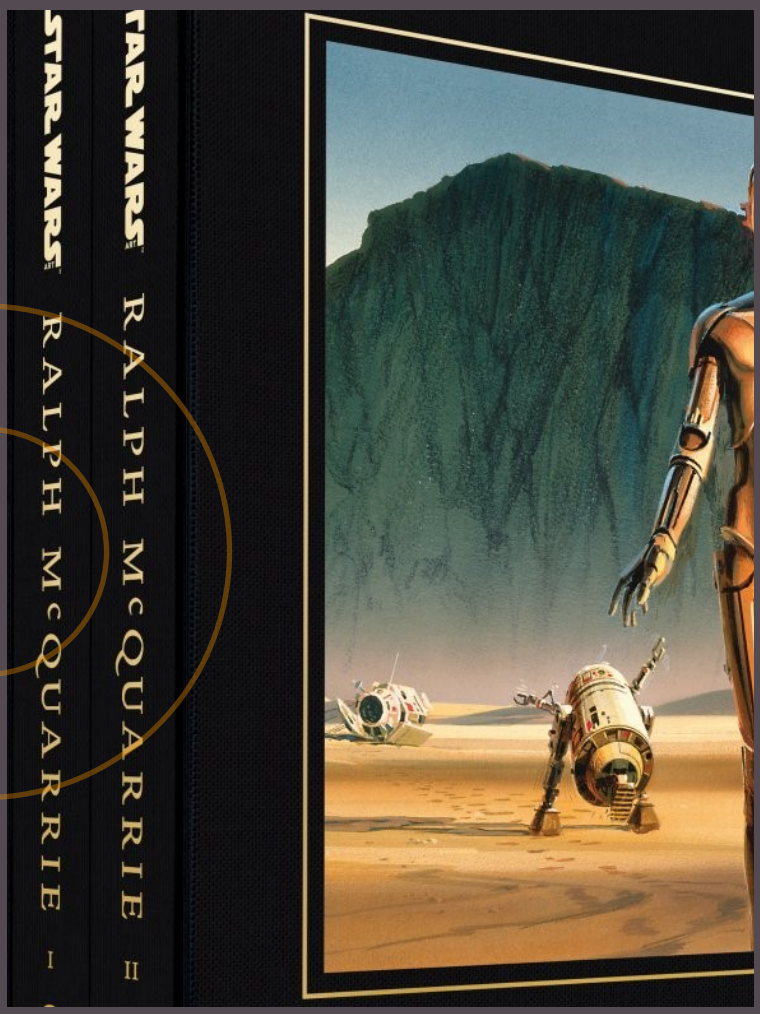
Main picture: blend of a still from *Adam* (left) with concept illustration (right). **Inset:** *Adam* character turnaround seen without textures.

ARIUM

Book: Made With CC

The makers of *Made with Creative Commons* have recently completed a successful Kickstarter campaign and raised $60,000. They're now creating a major ebook on open business models that use Creative Commons software and licences. Contributing to the book the Blender Foundation in the Netherlands, makers of the free Blender software and various famous open movies such as *Big Buck Bunny*. The book will give an in-depth profile of the Blender Foundation, how it works and makes movies, videogames and more around the free Blender software. The book will be a must-read for anyone interested in open source, Creative Commons, and the future of content in an open and growing world. **Picture:** David Revoy preproduction concept for the open movie *Tears of Steel* (Blender Foundation).

https://goo.gl/f9r10I



Book: Star Wars: Ralph McQuarrie

Ralph McQuarrie is one of the key artists who worked with George Lucas to shape the look of the original *Star Wars* trilogy. Now his work has the showcase it has long deserved, in the form of a beautifully bound new set of slipcase books titled *Star Wars Art: Ralph McQuarrie* (Oct 2016). The two volumes handsomely showcase all McQuarrie's concept art and designs. Weighing in at 800 pages, 2,000 pictures and 30 pounds in weight, this new book is not cheap. But for $250 the reader gets an in-depth look behind the scenes of the original trilogy, as *Star Wars* was originally envisaged — not just the famous matte paintings but also vehicles, worlds, posters and the designs for Darth Vader, C-3PO and R2-D2. All of McQuarrie's work has been expertly re-photographed for clarity and colour, and the book includes 400 new images never seen before! **Picture:** Abrams Books.

Available now at all good booksellers.

Documentary: (Not) Making *Dune*

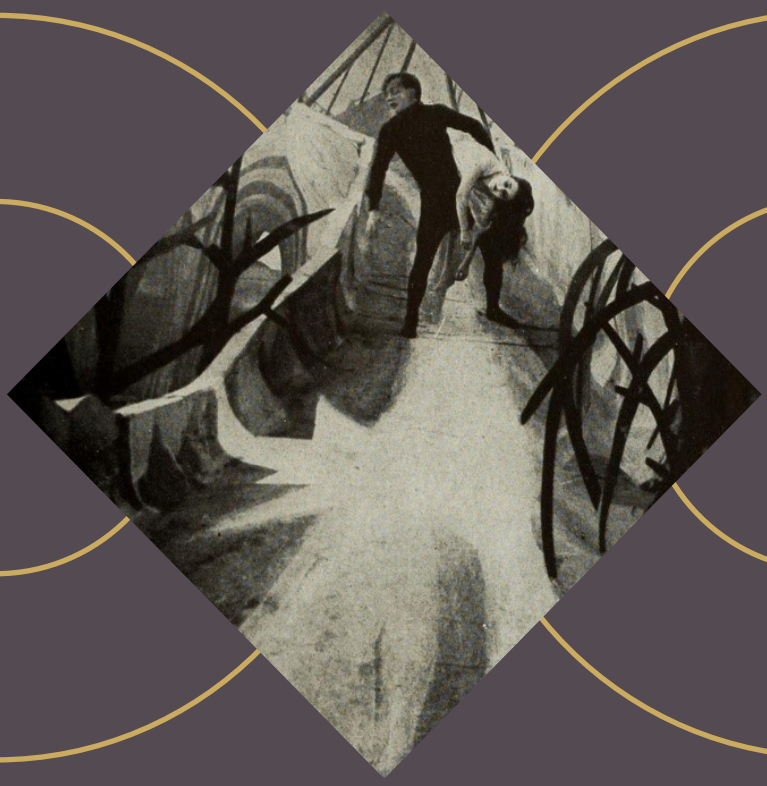
Jodorowsky's Dune (2014) is an amazing documentary that explores a legendary 1970s attempt to adapt the famous science fiction novel *Dune*. With pre-production backed by the UK company Virgin Records, the *Dune* movie was to feature music by the likes of Mike Oldfield and Pink Floyd; spaceship designs by Chris Foss and Moebius; and cameos from Salvador Dali, Orson Welles and David Carradine. The film was completely storyboarded by Moebius. Ultimately the film was never made, but this documentary surveys the best of the 3,000 mind-blowing concept designs, and interviews the film's director and designers. This documentary has had critical acclaim — *Variety* called it a "mind-blowing cult movie", and it made many people's "Best Movies of 2014" lists. **Note:** not suitable for under-16s.

http://www.jodorowskysdune.com/

Freebie: Beyond Good and Evil (PC)

The long-awaited game *Beyond Good and Evil 2* has been green-lit for pre-production as the flagship game for the Nintendo NX in 2018. For this reason Ubisoft is now giving away the beautiful original videogame *Beyond Good and Evil* (2003) for free. The original game has lovable characters, strange-but-fun sci-fi, a superb storyline and beautiful stylised graphics which still hold up well in 2016. The game, unlike so many games of the time, actually had fairly user-friendly mechanics and was thus accessible even to videogaming newbies. Did we mention it has one of the coolest futuristic female characters of the 2000s, and that it leavens the fun wham-bam action with photography? Oh, and there's a talking pig, and he has great dialogue. The freebie only lasts **until the end of October** on Ubisoft's UPlay system, so grab it quick! **Picture:** a detail from our genuine 1920px in-game screenshot.

https://club.ubisoft.com/en-us/ubi30



Things to Come

Until 22nd April 2017, Berlin.

The Deutsche Kinemathek Film Museum, at the Sony Center Berlin in Berlin, is currently staging a major science-fiction exhibition. On show are over 300 exhibits covering film sets, costumes and compilations of film scenes across three floors. There are many props and costumes from the likes of *Star Wars*, *The Fifth Element*, *Star Trek* and *2001.* Alongside these are also many exhibits of German film and TV material which is little-known in the English-speaking world, such as *Space Patrol Orion*.

https://www.deutsche-kinemathek.de/en

Pictures, from left, across double-page spread:

Cover of the Deutsche Kinemathek Film Museum's catalogue book for *Things to Come*.

Detail from a still from *The Cabinet Of Dr. Calgari* (1919), recently restored.

Detail from one of the *Cat People* science-fantasy tarot cards set made by Karen Kuykendall.

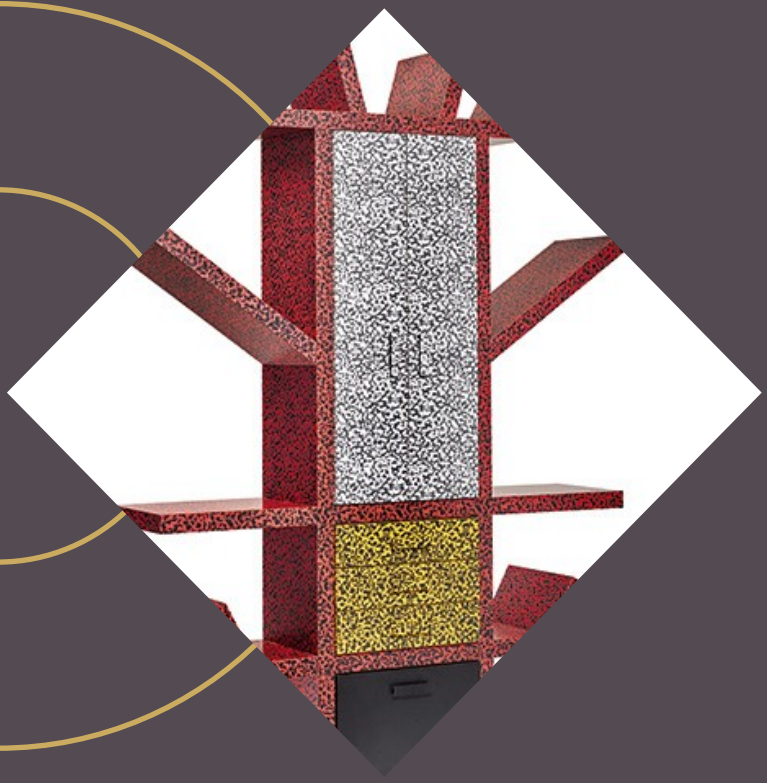
Ettore Sottsass, futuristic "Sideboard" furniture, 1981. David Bowie Collection.

Haunted Screens

Until 22nd January 2017, Chicago.

The Milwaukee Art Museum offers East Coast Americans a recent major imaginative art exhibition, specially shipped over from France. *Haunted Screens: German Cinema in the 1920s* surveys the macabre imagination that haunted urban Germany during the 1920s 'Weimar period'. The exhibition has more than 150 objects, including set design drawings, concept art, photos, posters, cameras and pristine clips from more than twenty movies. Also on display is a life-size reproduction of the robot from *Metropolis* (1927). Filmmakers of the time developed a host of new stylistic techniques to tell stories built around monsters, the perils of technology, fear of the future and of the 'strange' sexualities then boldly emerging in Berlin. This groundbreaking cultural movement was dispersed by the rise of Hitler in the early 1930s, and thus it seeded Hollywood studios and British art schools. Almost a century later, Weimar cinema continues to influence artists and film-makers.

https://mam.org/



Cat People of the Outer Regions

Until December 2016, Arizona.

In the substantial exhibition *'Cat People of the Outer Regions: The Art of Karen Kuykendall'*, the Mesa Historical Museum takes an unprecedented look at a mostly never-before-seen collection of art, artifacts and costumes. Karen Kuykendall (1937–2007) was a pioneer in the popularization of science fiction art, but for herself and her friends she created this whimsical and imaginative collection of alien pets and science-fiction cats. Her cat art was only partially seen in the artist's rare cat-themed set of tarot cards, and in her self-published art book *Cosmicats: The feline fantasy art of Karen Kuykendall* (1989, now an unobtainable collector's item). The exhibition surveys the complete collection and includes Kuykendall's cat people sculpture, jewellery and costumes. On show at the Mesa Historical Museum, in Arizona, until December 2016. Researchers interested in the artist will find that the Karen Kuykendall Papers are now at the University of Texas.

http://www.valleyhistoryinc.com/about/

David Bowie's Art Collection

November 2016, London.

David Bowie has stepped off the stage, but his visual spirit lives on in his art collection, which goes to auction in London in November 2016. The auctioneer Sotheby's has kindly placed online a free 200-page catalogue for the £10m collection (see Web link, below). The Bowie art collection was both backward and forward looking, seeking to glean useful influences from the past, while also envisioning the future, as part of Bowie's creative process. He collected much of the work himself, even attending the bidding rooms in person to make sure that he got what he wanted. Often he sought out work and artists who were then thought to be unfashionable, following the British art school dictum that: 'one should always tend toward the *opposite* of what is temporarily fashionable'. The art ranges from decorative 'apartment wall' works, through curious furniture and designer objects, to Japanese works. Take a look at the free catalogue...

http://sothebys.com/pdf/2016/L16142/index.html

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CYBERTRONIC!

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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Back cover:
"Neon" by Zerj19.