



Lin Kayser in Conversation with Ross Lovegrove „A paradigm shift in Design“

//Ross Lovegrove _ Stardesigner and juror 3D Pioneers Challenge

Ross Lovegrove is a designer and visionary who's work is considered to be at the very apex of simulating a profound change in the physicality of our three dimensional world.

Inspired by the logic and beauty of nature his designs possess a trinity between technology, materials science and intelligent organic form, creating what many industrial leaders see as the new aesthetic expression for the 21st century. With his projects he is also a pioneer in the visionary world of 3D printed design.

//Lin Kayser _ CEO Hyperganic and 3DPC winner in the vertical Digital 2019

Lin Kayser is a Munich-based serial entrepreneur.

He has spent most of his life in "startup mode" and worked in diverse industries, spanning from industrial automation to image processing technologies for Hollywood.

After several years of research and development, Lin co-founded Hyperganic Technologies AG in 2017 to built a software ecosystem for the future of manufacturing.

//3DPC

3DPC - the international design competition for additive manufacturing processes is the gateway for all pioneers who are involved in new technologies and use 3D printing to advance their projects.

Since 2015 the unique **3D Pioneers Challenge** covers a range of verticals and is aimed at designers who are breaking new ground in the field of 3D printing and who understand the key trends in the industry.

Together with the Messe Erfurt, Rapid.Tech 3D, the award seeks to uncover specialists worldwide who think beyond horizons - **pushing boundaries!** outside the box.

//3DPC & Friends

The competition 3D Pioneers Challenge has become an international platform where creatives from Advanced Technologies and the industry meet. "3DPC & Friends" is the logical conclusion to connect the players of this network and thus actively live the "paradigm shift in design" together. This generates novel, groundbreaking projects in which everyone can contribute their expertise and where design is rethought. Thus, the 3DPC shows today what tomorrow will bring - **pushing boundaries.**



„A paradigm shift in Design“

Within the network of the 3D Pioneers Challenge Lin Kayser and Ross Lovegrove collaborated to create this historical record.

They got to know each other through the competition of 2019, when Hyperganic with Lin Kayser won the vertical Digital. The award was handed over by Ross Lovegrove. That's how it started.

In the following year they did design together the 3D Pioneers Challenge trophy, a joined-project between Ross Lovegrove, Hyperganic and Materialise, the international AM service provider. All happened under the roof of 3DPC & Friends, the platform that connects creative minds with the industry to push the boundaries of design.

The final step was to bring these inspiring heads together to talk about their opinion of “a paradigm shift in design”, reflecting on actual processes and evaluating former developments.

The result was published whilst the digital award ceremony of the 3D Pioneers Challenge, which could not take place at the tradefair Rapid.Tech 3D in Erfurt like usual- but had to be a virtual format cause of Covid.

Nevertheless the output was this very interesting talk by these two pioneers in their fields:

“In the past designers always have been constrained by the production process. Which was not too bad so that you don't have to start with the universe but with one part of it.”

Now with additive manufacturing every molecule that goes into the object can literally be controlled. This means a tremendous burden for the designer, to come up with something that can live up with these new capabilities. “This is going to be a tough time in the next decade for designers and engineers.”

Ross pointed out that for his own perspective he is really trying to understand what is coming next. Because design used to pretty much adapt every decade. The question is what a designer is nowadays: “Is it an engineer, a biologist?” In any case you have to have a broader knowledge and you have to have a different kind of input. It seems to him that it makes sense, that “when you are in the 21st century, especially in 2020, virus or no virus, you have to use absolute state of the art tools of your day. There will come a new aesthetic by that.” He is hoping to encourage designers and students with platforms like the 3D Pioneers Challenge as a tremendous theatre and stage.

Lin feels the challenges right now for most of the creatives, that whenever you think about engineering and design you always think about “What can I actually built?”. And what you could be built in the past is vastly different from that what you can build now with additive manufacturing. “So we are running into limitations of the imagination and not so much into limitations what you can actually built now. And that is why we need these new tools, where algorithms help to explore areas nobody can imagine.” And still- the designer has to make the selection and decide where to follow.



Entering a new age where computers can help to figure out the details – humans need to be the ones who still understand the big picture.

“Having the ability to code and to fundamentally understand the potential of computing at whatever level is a bit like the Da Vinci Code. It’s suddenly a massive advantage in modern times.” Ross Lovegrove is very fascinated by that.

The point for him is the fundamental principle of logics, which is the consequence of innovative thinking – that is part of that actual paradigm shift.

What he loves about the additive technology world, is the genuine will and interest to put a lot of things together: This is where the magic happens. It’s the ability that those pioneers have- like Hyperganic themselves.

The most important tool for them is the engagement and more openness within a platform between all these creative advanced technology zones and individual minds and thinkers – because something can come out of it.

“Usually”, Ross claims, “a designer goes from hoping that somebody calls you up to design a ‘Staubsauger’”. He keeps thinking- why? “We as designers, engineers and visionaries we should go from a PASSIVE position of reacting to enquiries from clients who don't understand the potential of Additive Technologies to being ACTIVE in the way we initiate and invent using the advanced software and technologies of our time.” Ironically a Staubsauger is a perfect candidate for reinvention because its based upon a principle go physics, the air vortex, plus particulate filtration. “Perfect in my estimation for a collaboration between advanced minds - imagine the aesthetic”.

And furthermore, “work with people who and are not after money all the time, but where the payback is at the end- that’s a network out of which everybody can profit.

They themselves met through the platform 3D Pioneers Challenge, starting this wonderful collaboration, because their interest and enthusiasm for new technologies merged perfectly.

According to Lin he misses nowadays that people come with really crazy things where you are really shocked.

“We are still a little playing in a little sandbox, but there’s an entire dessert out there that you could be playing with.”

He is sure, that the designers are just scratching the surface, about what is possible with generative manufacturing and 3D printed objects.

“Think about what computers were thought to be in 1960s- they were replacements for mechanical calculators and nobody could have imagined what would come after that. They thought about more calculations and calculating complicated things. But who imagined an entire ecosystem with the Internet and games and rockets launched from computer control, or artificial intelligence?” This is where we are at today with additive manufacturing. We are still kind of playing safe – we can do much more and the facilities make it much easier to experiment.

Ross Lovegrove is sure:

“I’ve got this feeling that something’s going to happen and that something is going to come up that is going to allow myself to articulate things that I can’t, articulate it in another world- it’s a brave new world.”



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