

A Different Generation Requires A Different Approach

Martin Stevens, CEO, A1 Technologies



In the previous column in this series I talked about the importance of educating youngsters about advanced 3D digital technologies. Getting them hands-on with these technologies at the earliest opportunity within their school careers to draw larger numbers of students and graduates into the engineering sector because it is an advanced and exciting place to work; plus it pays well.

This got me to thinking about the other end of the spectrum and the work that is to be done there. Namely designers, engineers, and model makers that are in the twilight years of their profession, who are experienced, possess great skill, and are often still extremely keen to innovate; but who have never been introduced to the advantages of 3D digital technology.

I have said it before and I will say it again, the message about the advantages of 3D digital technologies needs to go further, wider and much, much deeper. Now I am not, particularly in this case, trying to say that these technologies are always better than traditional design + make technologies. However, they do offer a new approach to the way things are done that can — and often do — bring advantages and benefits that have previously been overlooked.

Furthermore, rather than being viewed as a tool that can replace existing tools, they can be used to complement and improve existing ways of working. The fact that so many people are unaware of the existence of 3D digital technologies — whether within the engineering community or the population at large — is simply as the result of a lack of education and awareness.

When considering the “twilight” generation, there is a set of different barriers that must be taken into consideration, addressed and overcome. Indeed there are

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numerous clichés that can be used to exemplify these barriers; for example, you can't teach an old dog new tricks; a leopard doesn't change its spots; and, if it isn't broken, why fix it? Okay, that might be a cliché too far, but let's take a look at what each one represents.

“You can't teach an old dog new tricks”: the assumption being that as people get older they will resist any changes to the way that they do things. As with most clichés, there is an element of truth embedded in it, and let's face it, most people, regardless of their age tend to resist change.

However, if it can be demonstrably proven that the change is for the better, people adapt to change and then wonder how they ever managed before. My innumerable experiences of bringing advanced 3D digital technologies to new user groups has taught me that this is invariably the case. It nearly always ends with smiles.

“A leopard doesn't change its spots”: This is actually similar to the previous cliché, but with a much heavier emphasis on the reluctance to change based on a belief pattern and how they operate. Showing people how adapting to 3D digital technologies can enhance their design + make process is always the best approach. Telling them works up to a point, but it only gets us so far and meets greater resistance.

The last cliché in the list is perhaps the hardest one. If it isn't broken, why fix it? Once again, it is to do with changing perceptions and how we work. With the advent of 3D digital technologies, centuries of best practice for designing, engineering and manufacturing are being challenged. But we just need to look around us to see how perceptions can be changed for the better. Computers, mobile phones, and communications have all become fundamental to the way that we work. I firmly believe that 3D digital technologies will too.

Coincidentally, only last week I was invited to speak at a meeting of the Bristol Society of Model and Experimental Engineers (BSMEE). This association brings together a group of people from a range of trades, professions and backgrounds with a common interest in model engineering. To get the lay of the land, I took a quick straw poll of the attendees — all male, and predominantly 50+ in age. I was not at all surprised by the results.

About a third of the attendees were aware of 3D CAD and 3D scanning. Fewer still were acquainted with 3D printing. Despite the simplicity of the poll, I do not think it would be inaccurate to state here that these statistics are reflected across many industries and professions involved with engineering time and time again.

Following a presentation that expounded the value of 3D digital technologies, the industry that has sprung up around them and how they can be applied, the audience members rolled up their sleeves to try out the full A1 Technologies product range for themselves. This resulted in many questions and lively debate across the rest of the evening, with on-site feedback that all of the products would be of great interest and very useful to members (and many other people like them) for their endeavours.

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The crux of the matter is that education and awareness are as vital for this sub-set of potential users of 3D digital technology as it is for the school generation. Only the approach is slightly different. Here it is much more about planting the seed of possibility and allowing that seed to germinate on the fertile ground of experience. But — and this is the vital point — millions of seeds still need to be planted.

And so, I will leave you with one final cliché as food for thought: “build a better mousetrap and the world will beat a path to your door.”

About the Author

Martin Stevens is the CEO of [A1 Technologies](#) [1], an advanced technology company, which he set up jointly with Trupti Patel in early 2009 to bring low cost 3D technologies to as broad a market as possible. These cutting edge products are sold globally into education, industry and to individuals, with the dedicated remit of changing the way that people think about designing and making in 3D. Their products meet the needs of education, industry, creatives and hobbyists.

Outside 3D technologies, Martin's expertise relates primarily to the SME sector, particularly in the fields of manufacturing and education, and his external activities are fully aligned with his professional role. Martin is the Chairman of Made in London, an organisation that supports the needs of the 20,000 manufacturers based in London. He is also currently a Board member of The Mayor's London Skills and Employment Board and an Employer Champion for the UK Engineering Diploma. For more information visit www.a1-tech.co.uk [2].

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