

Using animation to make sense of big data

Big data is the name that has been given to the data management phenomenon that is changing the way we live and work. As a species, we produce a staggering amount of information. For example, a modern airliner carries more lines of code than it has parts, the European Organisation for Nuclear Research (CERN) produces forty TB of data per second, and even loyalty schemes run by large retailers can generate astounding quantities of data.

 By Glenn Gillis 7 Mar 2014



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Big data is any piece or cluster of information that is so large it pushes the boundaries of the technology that we have to utilise it, and so it becomes difficult to store, manage and share.

In its smallest sense, it is when a file is too large to send in an email. On a larger scale, it's how sellers track and anticipate buying behaviour at a national or international level. Amazon.com is a great example of this, setting the standard in identifying customers' needs by using Amazon's legendary artificial intelligence engine.

Why does big data matter?

Big data matters because it's there! And because it's increasingly accessible to companies in a way they can use. Large databases have got to the point where they can talk to each other with relative ease. Smart devices know where we are and what we're doing, sometimes with our permission, and sometimes less so. And these are just two feeders into the phenomena.

So given that connecting the dots is technically possible, and more cost effective than ever, if retailers and vendors don't do something with it, their competitors certainly will. Consequently, customers are getting increasingly used to their ecommerce experiences becoming more and more customised (interesting word, isn't it?).

In some sense, retailing is coming full cycle. Just as it was when the corner grocer knew your name, and preferences. You felt recognised and that your loyalty was being rewarded. For these old style buyers, they had a real feel for not only what would sell, but to who, and critically why it would appeal to some customer and not to others.

Harnessing the power of big data involves cutting through the noise to access instant and insightful information that will allow businesses to reach their customers, and satisfy their needs, in a way that is more relevant and profitable, and before anyone else.

So how do we make sense of it all?

There are a number of specialists who all contribute to analysing and interpreting big data. This ranges from actuaries, who have always owned this territory, to digital marketers and, of course, the many buyers and marketers who scrutinise and analyse data daily, to drive profitability and build their brands.

We'd like to add a less obvious specialisation into the mix, namely animation and gaming.

Animation in the digital era is the creation of large volumes of visual assets. We use moving pictures to tell stories and communicate messages and the result is a massive database of visual content. Libraries of characters, walk cycles, facial expressions, backgrounds, logos, to name but a few, all tagged and organised.

When we create a TV series, as our team did for the likes of Disney, it is typically 13 broadcast hours in length. That's 25 frames per second x 60 seconds x 60 minutes x 13 hours, or just under 1.2m frames. Each of which has a number of characters, backgrounds, props and so on. This means literally thousands and thousands of digital assets, that need to be used and re-used, and which all need to be presented in a coherent story, to the most unforgiving of all audiences, 4 to 6 year-olds!

In gaming it gets even more interesting. We have similar volumes of digital assets, and now these need to be accessed and rendered out in real-time, to create a smooth and engaging user experience.

So what does this mean for big data?

The visual assets and technologies used in animation and gaming provides us with the tools to create and customise stimulating visual experiences. Critically, they allow us to extract and interpret information, and present these back to both sellers, and consumers, in visually compelling and engaging ways.

Ultimately, the best analysts use stories to weave together deep insights into something the human mind can interpret. Unless you are one of the lucky few who can see numbers falling, like in the Matrix, the rest of us rely on visuals, narrative and a host of other techniques to make abstract ideas real. Using the animation and gaming experience, we can represent insights in real time, and critically, present these back to customers in useful, engaging and nuanced ways.

Creating personalised communications to the masses

Big data creates an opportunity for companies to generate personalised communications to the masses - but opportunities are useless without the tools to mine them. Animation provides a novel and practical way to take advantage of this opportunity.

With big data providing the insight, animation and gaming technologies can follow through in meeting the customer where they are, igniting their imagination, and instantly providing them with what they were looking for in a way that speaks to them as individuals.

Avatars can be customised to reflect age, gender and family make-up. Backgrounds can be made to represent the customer's location, the weather, and time of day. And all of it can be presented in an engaging narrative that subtly encourages and rewards the customer to buy products and engage with the brand.

In this digital age, many of us have a collection of smart devices that are never more than a few meters away from us. We demand interactive, relevant, interesting communication to spend our precious attention on.

Despite our technological dependency we are still human. We need to be recognised as individuals. We want personalised messages from the companies that sell us things.

Animation and games represent an important new strategic tool in creating value for both the buyer and the seller.

ABOUT GLENN GILLIS

Glenn Gillis is the managing director of Sea Monster Entertainment, one of South Africa's pre-eminent animation, gaming and augmented reality companies. He has a Business Science degree from UCT and has been an entrepreneur, hired gun, and consultant with growing, knowledge-intensive businesses around the world for over 25 years. [View my profile and articles...](#)

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