

Bat Wars: The Four Awaken

Sunday 28 February 2016 | 1800 | Theatre 1, Levinsky Building, Plymouth University

Have you always wanted to write a movie script but just can't get round to it? What if you could write one using just your brain, or by jamming music? This is the dream of composer and filmmaker Alexis Kirke who is building a system Zenman.

"Zenman is named after two people who have inspired me," says Kirke, "Iannis Xenakis (pronounced Zen-a-kiss) the ground-breaking algorithmic composer, and iconic screenwriter William Goldman. "I could watch 'All the Presidents' men (Goldman's Oscar winning film) again and again," says Alexis.

However, "algorithmic writing follows behind algorithmic music by a couple of decades," Kirke explains. "This is because musical notes are much more freeform than words. You can play a few random white notes on a piano with a nice rhythm and then if you repeat it, you have a tune!" But not so with words. "Written language is far more complex, put a few nice words together and it will often mean nothing."

On top of that, for screenwriting it's not just the way you construct individual sentences, but how to put them together to make a story, and characters. "The truth is, we're not as good at doing this as we are at using computers to write music. And this has put many researchers off. However, unless we begin to take steps in this direction, how will we ever make progress?"

This is what drove Kirke to create Zenman. You can feed it a number of scripts and then create characters by using or combining the characters in the scripts. Then you click a button, and Zenman tries to generate dialog. "I've incorporated emotions into the artificial characters," explains Kirke. "Depending on what is said to them by other characters, it changes how they feel. And what they say next depends partly on how they feel. So if they're feeling happy they'll tend to say happier things. If they're feeling sad, the dialog will tend to be more sad."

Designed into Zenman are novel ways to manipulate the characters while the script ideas are being generated. "You can wear an EEG headset, and the level of relaxation in your brainwaves affects the level of relaxation in the characters. You can also play music to the characters and their emotions are effected by how fast, loud or high pitched the music is." During this process the writer can see the script ideas being generated at the same time in front of them.

So how well does it work? "I'd rate it as being like the early algorithmic composition systems," says Kirke, "not great, but it can give me screenwriting ideas, to help me out of a rut. I can feed in my own partially-completed scripts and mix them up with ones I like, which may help in completing them." Though Alexis has found another use for it: "it's a lot of fun too! Experimenting with loading in different scripts, and then 'jamming' with the generative behaviours using a musical instrument. Some of the interactions between my favourite characters can be a little bizarre."

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In this spirit of fun, and to demonstrate the system and get feedback, Kirke - who is a composer as well as a filmmaker - is creating the performance 'Batwars: The Four Awaken': "I've taken four of my favourite movie characters: Batman, Superman, Luke Skywalker and Darth Vader, and fed them into Zenman. I'm writing a score for violinist Pierre Pierre-Emmanuel Largeron and Pianist Marcello Gimenes - two of the most talented musicians I know. At the performance the music they play will be fed into Zenman, while it tries to generate script ideas using these four characters. These will be projected on the stage. So the music will change how the characters feel. Also I'll wear the EEG (brainwave) headset, and so the characters emotions will be influenced by how relaxed or tense I am at different parts of the performance!"

Kirke has also included an audience participation element in the 15 minute performance: "The audience can tweet to the characters during the music and they will appear in the script on-stage (using the hashtag "#bwfa"). I thought people might have fun talking to these famous characters, though I can't guarantee a coherent conversation!"

'Batwars: The Four Awaken' was developed at the Interdisciplinary Centre for Computer Music Research at Plymouth University, and commissioned by Peninsula Arts Contemporary Music Festival..

Alexis Kirke is a composer who has been called "the Phillip K. Dick of contemporary music". He is a Senior Research Fellow of Plymouth University's Interdisciplinary Centre for Computer Music Research (ICCMR), and is composer-in-residence for the Plymouth Marine Institute. Alexis has completed two PhDs and has performed or given talks on his work at venues including the California Academy of Sciences, Royal Institution of Great Britain, BBC Research and Development and the Victoria and Albert Museum. Alexis' work is regularly featured in national and international media.

Pierre-Emmanuel Largeron is a violinist and composer. Pierre gave his first solo performance at 5 years old, playing with the concertmaster of the Japan Philharmonic Orchestra. He graduated with highest distinction from Paris' Conservatoire and London's Royal Academy of Music. Pierre has collaborated worldwide with artists such as Vladimir Ashkenazy, Bruno Mantovani, Charles Hazlewood, Masayuki Kino, Lukas Klansky, Sumiko Kurata, Ivry Gitlis. He is pursuing doctorate research in electronic music at the ICCMR. He plays on a Fabien Gram violin.

Marcello Gimenes: Pianist and composer Marcelo Gimenes' career includes a comprehensive array of activities in different settings and styles, from classical to contemporary music and jazz improvisation. He is particularly interested in exploring music as an interactive medium through which people communicate and interconnect. Marcelo is currently at Plymouth University developing computer music systems and mobile device apps that incorporate unique intelligent generative tools. His research interests include music cognition, evolution and machine musicianship.