

## 2<sup>nd</sup> International Conference on **Computer Graphics & Animation**

September 21-22, 2015 San Antonio, USA

### Computational manga and anime

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Traditional manga (comic) and anime (cartoon) creation are painstaking processes. Even computers are utilized during the production; they are mainly utilized as a naive digital canvas. With the increasing computing power and decreasing cost of CPU & GPU, more computing resource can be exploited cost-effectively for intelligent and semi-automatic creation of aesthetics content. In this talk, we present our recent works on computational manga and anime, in which we aim at facilitating various production steps with the advanced computer technologies. Manga artists usually draw the backgrounds based on real photographs. Such background preparation is tedious and time-consuming. Some artists already make use of simple computer techniques, such as halftoning, to convert a given color photograph into B/W manga. However, the resultant mangas are so inconsistent in style and monotonous in pattern due to the single halftone screen. I will present a way to turn a color photograph into manga while preserving the color distinguishability in the original photo, just like what traditional manga artists do. On the other hand, there is a trend of migrating manga publishing from the traditional paper medium to the digital domain via the screen of portable devices. There are companies doing colorization for B/W mangas (of course, in a painstaking manual fashion) to allow users to read color manga on the portable devices. I will present a computer-assisted method to colorize an originally B/W manga into a color version by simply scribbling on the B/W version. Lastly, I will present our latest work on automatically conversion of 2D hand-drawn cel animations to stereoscopic ones. As it is infeasible to ask cel animators to draw stereo-frames, there is a rare number of stereo cel animation produced so far. I will present a method to exploit the scarce amount of depth cue left in the hand-drawn animation, in order to synthesize the temporal-consistent and visually plausible stereoscopic cel animation.

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### The game layer: The UX and UI of a disruptive fantasy sport start-up

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Online fantasy sports competition constitutes a nearly \$4 billion market in the US with NFL fantasy play exceeding \$1.6 billion in annual revenues. Yet, the international football/soccer has performed poorly by comparison. The author, part of the founding team for a startup company—English Fantasy Football—describes how an innovative new model of play capitalized on new approaches to design. The platform is undergoing a successful alpha test currently, with beta expected to be active at the start of the 2015/16 Barclays Premier League football season in England. The presentation will not only reveal the rich interface, but more importantly focus on how unmet user needs drove an integrated platform-based solution. The result creates an entirely new model of fantasy competition for the world's most popular sport.

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