MVP: An Automatic Music Video Producer

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Abstract

A common format for newly released music, music videos can be created manually using readily available software such as iMovie or Adobe Premiere. The shift from linear to non-linear media has increased the desire to build models for generative media. For the music video in particular, images should align to the audio to enhance its acoustical aesthetic. However, manually creating a large number of assets is expensive and time-consuming. Therefore, automatic generation can increase the efficiency in the production of such media. We present Automatic Music Video Producer (MVP), a computationally generative audio-visual system for music videos. We outline the design of MVP, shown in Figure 1, which automatically generates a music video for a given target audio track. A specific application of this system would be the fusion of Eastern and Western culture to generate a new form.

System

Automatic Music Video Producer (MVP) is a computationally generative audio-visual system for the genre of Music Video. The overall aesthetic is that of an audio-visual experience in the spirit of "cultural exchange" – Eastern culture and Western culture can be fused together to generate a new form. Music videos generated by MVP can be played in multicultural cities such as Hong Kong and New York, attracting people from various cultural backgrounds. Asian people might be happy to see their favorite music accompanied by Western dancers and singers. Westerner might want to add Asian music video images into a Western-style song. The system performs segmentation for the given target song based on audio onset detection. Next, according to audio similarity analysis and heuristic selection methods, we obtain generated video segments. Then, they are truncated to match the length of audio segments and are concatenated as the final music video.
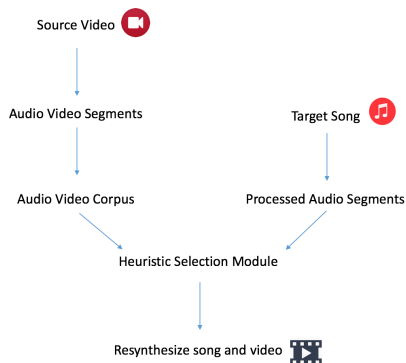

Fig 1. *Overview of MVP*

A demonstration of our system has shown that the audience is receptive to this novel presentation of music videos and are interested in future developments. Many audiences believe the system would be useful to artists. For future work, we plan to expand the genre of music in our database and improving our indexing algorithms and heuristic selection methods.