Technology for license

Efficient Segmentation of Video Images

The Computer Vision Research Group at Oxford Brookes University, under the leadership of Prof. Philip Torr has developed a novel method for the efficient segmentation of video images. Whilst there are many existing approaches to video segmentation, this new approach allows very fast real time operation, allowing images to be efficiently segmented over video streams with a complex background. This technique is protected by a patent application, and we are now seeking commercialisation partners who wish to incorporate it into their products or solutions.

Applications	Benefits
Practical applications include: • Video and Computer Games • Video/Film Post Production • Motion Capture • Security Surveillance • 3D Content Generation	**Significant advantages over existing solutions:** • Fast real-time operation • Segmentation of video with a complex background

This technology has applications in many different market sectors including the general computing, games and film industries. Applications include video post production, games development, motion capture, security surveillance and 3D content generation. These are all large rapidly developing markets, and licensees of this technology could expect to have a major competitive advantage.

The new technique, which is based on solving dynamic Markov Random Fields using Graph cuts, constitutes a major technological advance over currently available solutions. In particular it allows **fast real-time analysis of streaming video with complex backgrounds**.

Applications go beyond traditional computer graphics, games and film production to encompass other areas such as intelligent video surveillance, motion capture and generating content for 3D displays.

The pictures shown below demonstrate how a video image can be segmented from a complex background and then pasted into new images. This has many potential applications, including film making. Often in film making an actor is filmed in front of a blue screen in order to insert him into a virtual world, or other environment. This involves a technique called rotoscoping, often done by hand with someone outlining the actor in each image of the film. This new technique could be incorporated into a product for high end post production that could potentially save tens of thousands of man hours.

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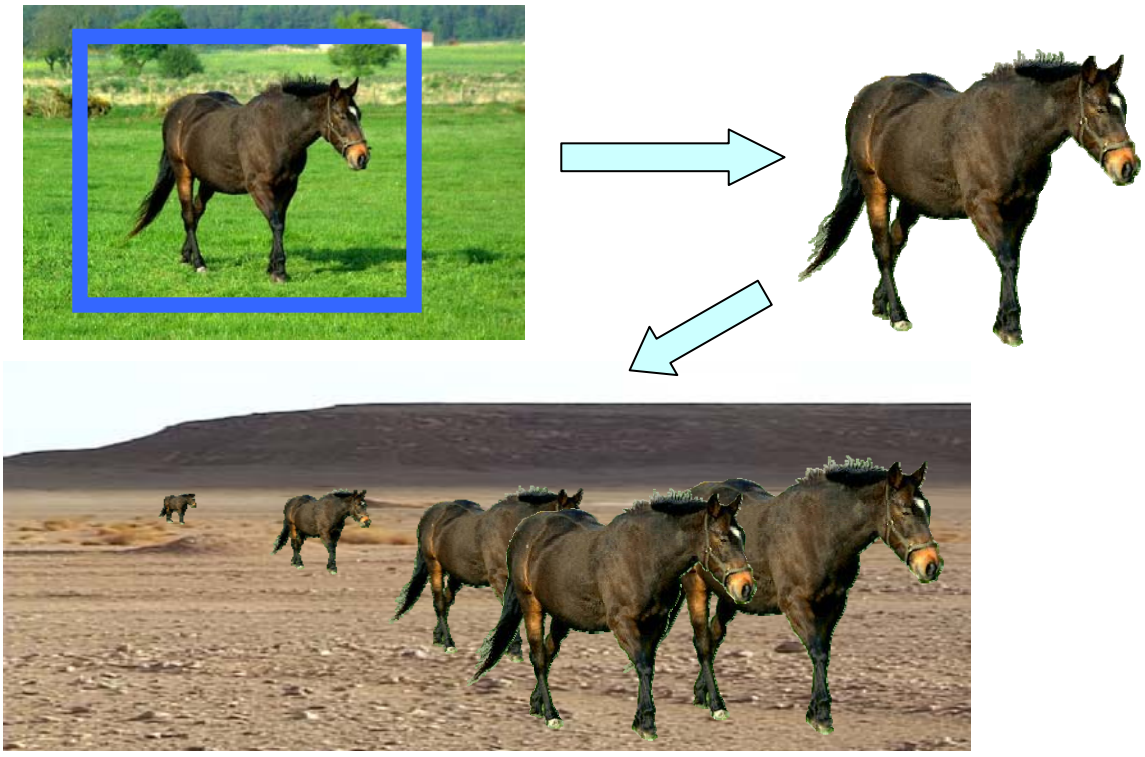

Example of an object being extracted from a complex background, and then pasted into a new background. The extraction/segmentation can be done in real time over video streams.

Further Information

If you would like further information, or if you wish to incorporate this technology into your products or solutions, please contact me to discuss the options available for licensing.

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