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Yissum Announces a Novel Method for Swift and Robust Pattern Recognition

JERUSALEM — Yissum, the Technology Transfer Company of the Hebrew University of Jerusalem, introduced today a novel method for real time, automatic, generic and robust pattern matching. The novel algorithm, developed by Professor Michael Werman and Ofir Pele, both from the School of Computer Science and Engineering at the Hebrew University of Jerusalem, enables very rapid recognition of a particular pattern in a fraction of the time currently available. The novel algorithm can be used in computer vision software for managing images, in robotics as a simple and fast method for vision-based systems used for assembly manufacturing and inspection, as well as for face recognition and additional security applications. The findings were published in the journal IEEE Transactions on Pattern Analysis and Machine Intelligence (Pele, O. and Werman, M., August 2008, 30(8) 1427-1443).

"This novel method enables ultra-rapid pattern recognition which is highly robust and reliable," said Nava Swersky Sofer CEO of Yissum. "The algorithm can enhance various imaging and computer vision applications that are becoming an ever-growing part of everyday life. For example, it can be helpful in quick information retrieval from large visual databases. One such application can be photographing a restaurant and immediately accessing relevant reviews. In the filed of security, the algorithm can be used, among other for surveillance purposes by finding a suspected person in a video movie."

Many applications in image processing and computer vision require finding a particular pattern in an image, a process termed pattern matching. Pattern matching is typically performed by scanning the entire image, and evaluating a distance measure between the sought pattern and areas, or windows, in the image. The novel algorithm is much faster than current methods because it does not attempt to estimate the distances for non-similar windows, but only decides that these windows are non-similar. The reduction in running time is due to the fact that unnecessary information is not computed. The method is applicable to any pattern shape, even a non-contiguous one, and is automatic and robust, enabling detection of low quality patterns, rotated patterns or patterns that are partly occluded.

About Yissum

Yissum was founded in 1964 to protect the Hebrew University's intellectual property and commercialize it. $1 Billion in annual sales are generated by products based on Hebrew University technologies licensed out by Yissum. Ranked among the top technology transfer companies in the world, Yissum has registered 5500 patents covering 1600 inventions;

licensed out 480 technologies and spun out 65 companies.

Yissum's business partners span the globe and include companies such as Novartis, Microsoft, Johnson & Johnson, Merck, Intel, Teva and many more. For further information please visit www.yissum.co.il

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