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By: Marius Oiaga, Technology News Editor

AutoCollage 2008
Microsoft

[Introducing Microsoft AutoCollage 2008](#)

A research project

While Photosynth has been released to web in August, ending the Technology Preview incubation at Microsoft Live Labs, there are additional projects at the software giant designed to deliver new experiences when it comes down to the digital photographs. One illustrative example in this context is [AutoCollage](#) (also referred to as tapestry), a project developed by Microsoft Research Cambridge. According to the Redmond company, AutoCollage is an automatic procedure designed to produce a collage out of a number of different images. "Researchers from all disciplines and the Cambridge Incubation team worked together, building Digital Tapestry and AutoCollage research into a new product. Face detection, saliency filters, and other Microsoft research identifies interesting parts of pictures. Advanced object selection and blending technologies seamlessly combine these pieces into a beautiful new AutoCollage," revealed Miel Van Opstal, Microsoft Evangelist. While a photo collage might seem nothing short of mundane, Microsoft Research indicated that the image processing technologies behind the tool manage to recognize specific object classes and maintain a common theme for the end product. In the end, the collage will not only offer an overall focus on the main elements in the collection of images stitched together, but also a seamless integration of the photographs via graph-cut and Poisson blending of alpha-masks tasks. "This work makes several new contributions. Firstly, it shows how energy terms can be included that: encourage the selection of a representative set of images; that are sensitive to particular object classes; that encourage a spatially efficient and seamless layout. Secondly the resulting optimization poses a search problem that, on the face of it, is computationally infeasible. Rather than attempt an expensive, integrated optimization procedure, a sequence of optimization steps has been developed, from static ranking of images, through region of interest optimization, optimal packing by constraint satisfaction, and lastly graph-cut alpha-expansion," Van Opstal added.