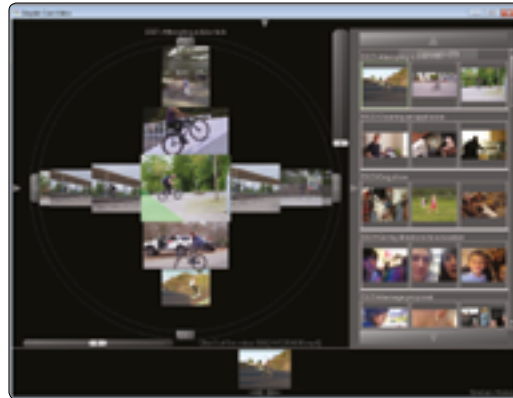


14. MediaMill Semantic Video Search Engine

The demo shows the MediaMill semantic video search engine, a system facilitating access to the content of large collections of video streams. The system is based on a large lexicon of visual concept detectors, complex event detectors and an interactive video browser learned from example video material. MediaMill provides access to the content of videos without the need to label each and every video. The old way was to let someone tell you what is in the video, like is the common practice in YouTube. In order to make progress the power of the human eye to tell in words what is seen needs to be reproduced. MediaMill has found a way to do that by machine learned image recognition technology translating the pixels of an unknown video into a descriptive text.



ICT science question

The world is full of digital videos and images. In this deluge of visual information, the grand challenge for computer vision is to unlock its content directly by understanding what is in the image.

Application

Digital images containing 'busses', 'beaches' or 'babies', or any other concept for which a visual representation can be made like 'kitchen, even as abstract as 'wedding' are being identified. The latest addition to recognize video fragments on the basis of events like 'making a purchase', 'doing a magic trick', or 'rock climbing'. None of the recognition is perfect, and this will not be for some time to come, but the techniques are helpful in many interactive applications.



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COMMIT/ project
SEALINCMedia Socially-enriched access to linked cultural media

Alternative Application

As digital images are everywhere, access to the content of images is broadly needed. The MediaMill video search engine can be applied for automated moderation of social media, interactive search in forensics, home video handling, image sorting for real-estate brokers and other professionals, industry product maintenance, media publishers, and more where there are lots of digital images or videos.

Nice to know

The software has been transferred to Euvision Technologies, a University of Amsterdam spin-off.

Quote

The University of Amsterdam has landed in the top-three of the open-innovation TRECvid international competition run by the US-bureau for standards NIST on image and video search for 10 years in a row, amidst fierce competition from international universities and companies.

In addition, Cees Snoek receives Netherlands Prize for ICT Research 2012 NWO, 24 juli 2012 and Video search engine matures, NWO, September 2013.



The world is nowadays full of digital images - industry, video, web, professional, business or monitor. The computer will sort what is going on.



In the world-wide open-innovation competition of 50 image sort engines - with IBM, Oxford and CMU - this product has been in the top 3 for the last 10 years.



A camera plus automatic categorization learned from example images is efficient in many applications: social media, trend, monitoring, mobile, photo-memory.



The dominant human sensor, the eye, was weakly developed for computers. Naming things, actions, and states in the picture is a huge cognitive step.

