

Current News

CeBIT: New HPI Algorithm Transforms Videos into Artistic Comics

CeBIT 2015

Potsdam/Hanover. Researchers at the Potsdam Hasso Plattner Institute have developed an innovative and highly efficient algorithm for creating comics. With the help of this algorithm, videos and photos can easily be transformed into life-like comics, caricatures and cartoon pictures. The developers have packed their research results into an app based on iOS for the iPhone and iPad. At CeBIT (Hall 9, booth D44), visitors can put the newest application "Pic2Comic" to the test.

"There are already several solutions on the market that recognize differences via brightness and color and then draw edges or combine color nuances," said the project manager at HPI, Sebastian Pasewaldt. But these pictures often don't meet the expectations of users who anticipate something along the lines of an artist's drawing.

"Our HPI solution not only analyzes differences in color and brightness, but also takes into account the image flow information," added the HPI PhD student. In this way the focus is greatly expanded and allows for life-like illustrations in a comic style.

"The algorithm is so efficient that it reads and analyzes all the image information. Users are subsequently offered a set of proposals on how the app can automatically combine colors and draw edges," said Pasewaldt. Besides individual pictures, videos can also be automatically processed and then appear as coherent presentations – in other words, no flickering.

Whether a face, building or landscape, with the easy to use app, everything immediately takes on the impression of an artistic drawing – the app user becomes a digital pictorial artist. It's also possible to protect private visual information with the comic filter from Pic2Comic. In this way pictures can be shielded from machine evaluation, such as the facial recognition used in Facebook.

Behind this technology lies a great deal of mathematics and a clever streaming concept for the fast processing of mass data.

Hasso Plattner Institute (HPI) is among the largest CeBIT exhibitors in the subject area of "Research and Innovation" at this year's fair. The HPI

computer scientists are presenting the results of their latest research and development in the world of “Big Data” for the “d!conomy” – the word coined for the “digital economy,” which describes the transformation leading to a fully networked economy. At its booth area, encompassing more than 380 square meters, HPI shows, for example, how corporate decision-makers can draw on innovative data support during their meetings. A new financial simulation software is also being presented that enables lightning-fast profit analysis. Further, HPI demonstrates the innovative possibilities for Big Data analysis not only in soccer but also in disease containment on a global scale. Among the other topics that will be presented are new solutions on how to increase IT security and free online courses on information technology topics, which are open to everyone.

Note to the editors:

You can find detailed material (texts, photos, videos) at our CeBIT website: www.hpi.de/cebit.

For the duration of the fair you can also find interviews with prominent CeBIT guest on the topic of Germany as an IT location at www.it-gipfelblog.de.

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