**SPATIAL AND TEMPORAL NAVIGATION IN THE IMAGE CLUSTERS**

<table>
<thead>
<tr>
<th>At a glance</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>huge amount of images</td>
<td>new approach for image clustering</td>
</tr>
<tr>
<td>• sorting</td>
<td>• according to spatial aspects</td>
</tr>
<tr>
<td>• structuring</td>
<td>• according to temporal aspects</td>
</tr>
<tr>
<td>• visualizing</td>
<td></td>
</tr>
</tbody>
</table>

**Application area**
Anywhere where large quantities of images need to be displayed in a clear and structured manner.

Thomas Meiers  
**Video Coding & Analytics**

phone  +49 30 31002-218  
thomas.meiers@hhi.fraunhofer.de

Fraunhofer Heinrich Hertz Institute  
Einsteinufer 37  
10587 Berlin, Germany

[Similarity graph]

www.hhi.fraunhofer.de/vca
For large quantities of images and video shots the clustering due to their visual content is a very important sorting tool. The extraction of visual characteristics and the determination of suitable descriptors form the basis of this analysis (see figure above). The number of corresponding descriptors for two images is a measure of their similarity. Similar images are grouped into cluster of motifs and sorted in the form of a similarity graph. A specially developed navigation viewer allows a spatial navigation within this similarity graph. Images combined to form an event history provide a quick overview of the chronological sequence of events. For this purpose, all the images of one and the same motif, taken form a similar perspective, are brought into a chronological order through which the user can navigate.

References

- Project „Smart Data – Disaster Management“: www.sd-kama.de
- http://s.fhg.de/sd-kama-hhi-en

Further informations

- http://s.fgh.de/imagenavigation
- HHI-Flyer “Photos and Video Clips in Disaster Management”

Visualisation