

Chapter 1

Introduction



Distributed Algorithms for Image and Video Processing

Definition: Image and video analysis

- Objective: automatic semantic analysis of images and videos
- Relevant semantic content should be automatically extracted in
 - images,
 - shots (continuous camera recordings),
 - video segments,
 - audio segments, and
 - full videos.

Video elements



- Frame (single picture)
- Shot
- Scene (semantic similarity)
- Video
 - Pixel
 - Color values

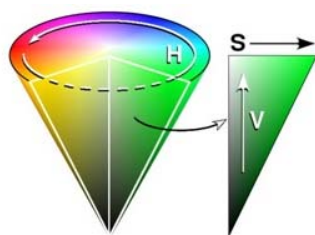
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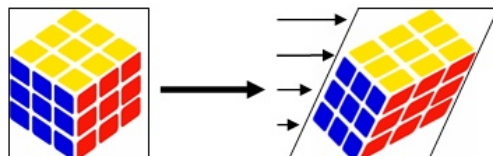
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Colors and
color space representation

Image
transformations



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Edge
detection



Panoramic images and color depth reduction

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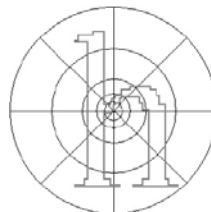
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High Dynamic
Range (HDR)

Optical Character
Recognition (OCR)



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Source: robocup.org

RoboCup Soccer

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Source: darpa.mil/grandchallenge05/

Grand Challenge

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Source: heute.de



Video summaries / adaptation

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Questions ?

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