Real-time Query-by-Image Video Search System
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Image-based Search of Videos

Image query

Video database

✓ News videos: search event footage using photos
✓ Online education: search lectures using slides
✓ Brand monitoring: search TV/YouTube using product or logo images

Contribution:
Real-time online system that searches large database of videos using image queries

User Interaction

Image querying

Video database matches

Playing from matching keyframe

Statistics

1M
Keyframes indexed
7”
Average query latency

System Architecture

Previous work
(Daneshi et al, 2013)

Story Segmentation

News Videos Recording

Video clips

Extract Key Frames

Generate SURF Features

Generate REVV Signatures

Index Video Clips

Discover Trending Images

Find Frame Matches

Sort by Popularity

Video Index

Query Database

Generate SURF Features

Generate REVV Signatures

Fast REVV comparisons + RANSAC

Statistics

59
TV + YouTube channels

500
Video clips per day

3’
Average clip duration

Display Results

Play from beginning of video

Play from matching keyframe