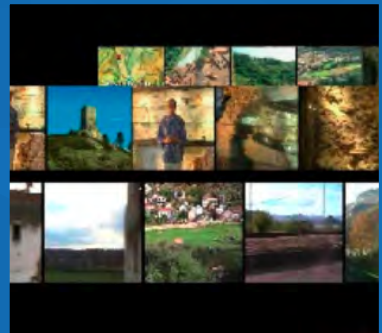


Video is becoming vital to society and economy. It plays a key role in information distribution and access, and it will soon be the natural form of communication on the internet and via mobile devices. With the fast growing rate of digital audio-visual information, both consumer

and professional users will certainly need advanced search technologies for the management of large-scale video assets. Current search engines, however, mostly rely on keyword-based access, and do not allow content-based search of images or videos.

The VID-Video project integrates and develops state of the art components in the field of machine learning, audio event detection, video processing, human-computer interaction and visualization into a fully implemented audio-visual search engine. The implemented data structure combines a large number of categories, exploits the interclass similarities and uses information from different sources: metadata, keywords annotation, audio-visual data, speech and explicit knowledge.



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Broadcaster:
Title: Willem Wever, 08/11/1999
Timepoint: 16:28
Duration: 00:57

Broadcaster:
Title: Het Klokhuis, 26/10/2000
Timepoint: 13:38
Duration: 00:55

Broadcaster:
Title: Het Klokhuis, 12/12/1999
Timepoint: 13:56
Duration: 00:53

Broadcaster:
Title: Willem Wever, 01/11/2000
Timepoint: 01:51
Duration: 00:51

next

sirio GUI based search Natural language search Google like search

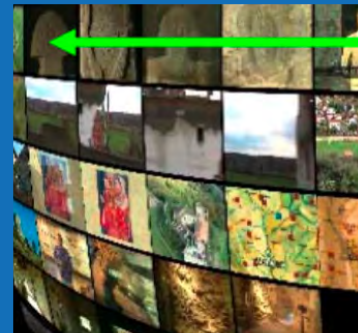
Select ontology...

Metadata: Search

Start time: Search

End time: Search

Only here displays their ontology



Willem Wever, 29/11/2002

duration: 23:58
width: 352 px
height: 288 px
fps: 25

start: 01:38
end: 03:04
duration: 01:25

01:43

Meta data

Broadcaster: Search

Title: Search

Start time: 0 : 0

End time: 12 : 0

Term: child specialization near

Term: barrier specialization and

Term: paintin specialization

time

vehicle

airbag

airplane

airplane_alley

airplane_debris

biplane

ambulance

balloon

bicycles

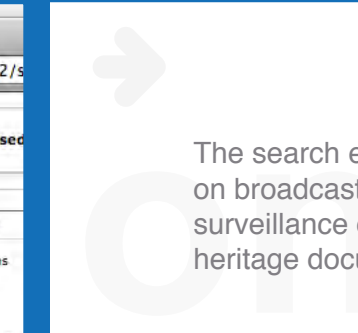
Search

http://172.16.200.132/s

sirio GUI based

find all videos with people near lizards

Specializations WordNet synonyms



The search engine will be evaluated on broadcast news, video surveillance data, and cultural heritage documentaries.

The outcome of the project is an audio-visual search engine, composed of two parts:

- a learning part, that runs off-line, where detectors for more than 1000 semantic concepts are developed and collected in a thesaurus
- a run-time system, where users can pose queries in terms of the semantic content of the audio-visual material through an ontology-based interface. The ontology identifies the most appropriate concepts from the thesaurus and the system returns a ranked list of relevant audio-visual segments.

Cataloging of video now largely depends on manual annotations, and is thus costly.

The **VIDI-Video project** will realize a sophisticated set of software tools for **video annotation and retrieval**, that will have a positive impact on cataloging and search practices currently employed in the **broadcasting** and **cultural heritage** domain.

There will be also an impact in **surveillance** domain, in which the project is developing a pilot application.

Project Partners

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Institute for Systems and Computer Engineering, *Portugal*
University of Surrey, *UK*
Università Degli Studi di Firenze, *Italy*
Computer Vision Center, *Spain*
Nederlands Instituut voor Beeld en Geluid, *Netherlands*
Fondazione Rinascimento Digitale, *Italy*
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