Content Based Access to Digital Libraries … in particular video!

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What is a Digital Library?

DELOS defines it as: “An organization, which might be virtual, that comprehensively collects, manages and preserves for the long term rich digital content, and offers to its user communities specialized functionality on that content, of measurable quality and according to codified policies”;

So is the web a DL? Is Flickr or YouTube a DL?

The difference is not to do with user-generated content, but that a DL is to some degree curated, monitored, overseen, and not self-regulated;

But ... the techniques we develop for UGC will transfer, so they are worth looking at;
Digital Libraries

DLs should be capable of storing all kinds of digital information, and supporting effective user interaction. Ease of use and speed of response are a given.

We’re used to fast, clever support for text-based web searching, though we tolerate search failure and assume the blame;

In more traditional libraries we’re used to asking for help when we’re stuck, and this isn’t replicated in DLs;
DLs and non-text

While we tolerate bad text search support, we’re unbelievably forgiving of poor search support for other media ...
... so much so that we do all the work ourselves.

How? We tag things, manually, which gives user generated content, and user generated indexing;

Why? Because it’s the only way ... for now;

Today I will show you what will be possible, is possible now, but not on the scale we want;
Mileage from tags ...

User tagging was seen as a drag, encumbrance, prone to synonymy errors, interpretations.
Mileage from tags ...

... but it has proven to be hugely interesting ...

All time most popular tags

africa animals architecture art asia australia autumn baby band barcelona beach berlin birthday black blackandwhite blue boston bw california cameraphone camping canada canon car cat chicago china christmas church city clouds color concert cute dance day de dog england europe fall family festival film florida flower flowers food football france friends fun garden geotagged germany girl girls graffiti green halloween hawaii hiking holiday home house india ireland island italy japan july kids la lake landscape light live london macro me mexico mountain mountains museum music nature new newyork newyorkcity night nikon nyc ocean old paris park party people photo photography photos portrait red river rock rome san sanfrancisco scotland sea seattle show sky snow spain spring street summer sun sunset taiwan texas thailand tokyo toronto tour travel tree trees trip uk urban usa vacation vancouver washington water wedding white winter yellow york zoo
Mileage ..

Inadvertently, and unintentionally, it also supports tag and media browsing;

2 clicks later ...
John Nash in TCD (Trinity College Dublin)

John Nash gives the annual Hamilton Lecture for the Royal Irish Academy in Trinity College Dublin.

Comments

Randombassist says:

Hello. My favourite of all yours!

Posted 23 months ago. ( permanent link )

Randombassist says:

Hi. I'm an admin for a group called UCD Photosoc, and we'd love to have your photo added to the group.

Because you rock. see!

Posted 16 months ago. ( permanent link )

Danthehayden says:

Incredible shot Dan.

Posted 15 months ago. ( permanent link )

Dan Akers says:

From the Rate and Comment: Black and White Group, you are given a 6/10 ranking.
Mileage from tags ... 

... and even an opportunity to study sociology, world events, trends, sentiment ...
More tag mileage

One of the most useful tags is geo-location ... becoming easier, 5% to 8% Flickr photos are geo-tagged ...

... includes placenames and long/lat ...

... and even this can be used to define placenames!
Exploiting tagging ...

So tags can be used for more than they were intended;

Another bonus of UGC !

Correct interpretation of tags and co-tagging for support of user searching, is a challenge for the semantic web and they are working on ontologies and terminology normalisation.

But ... back to DL searching ...

We focus on video medium ... and the biggest video DL is YouTube, but it isn’t the only one;

Before we look at them, lets have some video basics;
The Nature of Video

Video is a collation of images presented so fast they give the illusion of motion;

A “programme” is divided into logical scenes, and a scene is composed of 1 or more camera shots;

A shot is a single motion of a camera in time and can involve camera motion like panning, zooming, tracking or booming;

Objects in a camera shot can also move;

Shots can transition using fade in/out, fade to black, wipes, or the more usual hard cut;

There’s an awful lot of video 10,000 TB = 1M hours of original TV and radio content in 2002 alone;
Problems with Video?

Many of the issues associated with video in digital form are solved!
Capture, formatting, compression, storage, transmission, rendering on fixed and mobile

Digital video is widespread and outstanding challenge(s) are managing video content;

Key catalyst in this has been compression format standards;

There are several (!) AVI, QuickTime, WMV, etc. but the ones that matter are MPEG;
Managing Video

Managing means many things
Analysis, indexing, summarising, browsing and searching;

Automatic structuring of video is necessary to make progress in managing, a.k.a. shot bound detection;

A shot in video information is a sequence of continuous images (frames) from a single camera.
A shot boundary is crossed when a new camera is used, or a recording instance ends and a new one begins.

The task of SBD or automatic video segmentation is to segment video into its constituent shots...
To allow content-based operations over video at granularity of shot units by examining every X frames / adjacent frames to look for shot cuts.
Automatic structuring of video

A video document

Shot Boundary Detection

A set of keyframes

Keyframe browser combined with other search
Video search using metadata

Metadata includes title, date, actor(s), producer(s), genre, running time, video format, reviews, ratings, ©, etc. ... and user tags ...

... most coupled with keyframe / storyboard previews
Internet Movie Archive

Welcome to the Internet Movie Archive (IMA), the world's largest library of free digital movies, films, and videos. This archive contains thousands of digital movies uploaded by Archive users which range from classic full-length films, to daily alternative news broadcasts, to cartoons and concerts. Many of these videos are available for free download.

About the Internet Archive
- Background
- Frequently Asked Questions

Rights
This collection is free and open for everyone to use.

Our goal in digitizing these movies and putting them online is to provide easy access to a rich and fascinating collection of archival films.

By providing near-unrestricted access to these films, we hope to encourage widespread use of moving images in new contexts for people who wish to explore them.

Sub-Collections
- Animation & Cartoons
- Arts & Music

Recommended Sub-Collections
- Animation & Cartoons
- Arts & Music

See recent additions - RSS
Internet Movie Archive
Internet Movie Archive
Visual information seeking using the FilmFinder

FilmFinder allows users to explore a large film database. By applying the dynamic queries approach to filtering information, a continuous starfield display of the films, and tight coupling among the components of the display, the FilmFinder environment encourages incremental and exploratory search.

Video Information

Year: 2000
Genre: Educational
Keywords: HCIL
Duration: 00:06:12
Color: Yes
Sound: Yes
UNIVERSITY COLLEGE DUBLIN  DUBLIN CITY UNIVERSITY  TYNDALL NATIONAL INSTITUTE

Friend Activity

You haven't added any friends yet.
Once you have connected with friends, this page will show you their latest uploaded videos, favorites, and video ratings.

Promoted Videos

- MUTO a wall-painted
  - 9 months ago
  - 3,738,591 views
  - noblu
  - ★★★★★

- Pajamachievements: Burnout Live
  - 5 hours ago
  - 4,621 views
  - rosterteezh
  - ★★★★★

- Warner Bros. Responds To
  - 4 hours ago
  - 3,954 views
  - comedycomedy
  - ★★★★☆

- Snow Chemistry - Periodic Table...
  - 1 day ago
  - 54,075 views
  - periodictables
  - ★★★★★

Rising Videos (view all)

- MAC's Hello Kitty Event
  - 17 hours ago
  - 23,442 views

- Supermac18 - My Life Would Suck
  - 6 days ago
  - 138,393 views

- Paramore- Decode Music Video
  - 2 weeks ago
  - 553,395 views

- Why I Love Monty Python
  - 2 weeks ago
  - 284,230 views
Similar leveraging of user tags beyond search, including recommendations, friends, popularity, ratings, rising videos, channels ...

... but nothing on actual content, i.e. the video frame itself, the visuals, the things in the frame, the camera or object motion, the audio ...
Content based video navigation

- Use text from speech - ASR/CC/in-video OCR
- Match keyframes vs. query images
- Use semantic video features
- Use video/image objects as queries
Using Text Dialogue

Spoken dialogue can be of assistance in video navigation, and it may not be, it depends;

Spoken dialogue can come from automatic speech recognition (ASR), or closed captions, or video OCR;

For certain genres of video, this can be sufficient

Físchlar-News is a good example
An MPEG-1 encoded daily 9 o’clock news program (30 min)

Shot Boundary Detection

Shot segmented program

Advertisement Detection

Shot segmented, advert detected program

SVM (Support Vector Machine) with:
- Spoken dialogue indexing
- Speech vs. music discrimination
- Anchorperson detection
- Speaker segmentation & matching

News story linkage analysis

Story segmented program

News story database

User profile

Web application
Health Minister Michael Martin has rejected criticisms that the Government is delaying its health reform programme by failing to appoint key independent personnel.

But the next general election could be three years away. Benchmarking could by then be a forgotten political issue. Health Minister Michael Martin has rejected criticisms that the Government is delaying its health reform programme by failing to appoint key independent personnel. Earlier Professor Niamh Brennan, the author of one of three reports showing the changes, said she was alarmed that the staff members aren't yet in place. Three months ago the Government launched its health reform programme. It promised to abolish health boards and end fragmentation in decision-making. And greater financial controls. Michael Martin said the reforms would begin as quickly as possible.

The Minister for Finance said hospital reform - Chapter 11 of the report said - reforms should begin as soon as possible, and progress reports should be every three months, and an independent person employed. Niamh Brennan said she was concerned about the lack of progress.

And concerned about momentum being lost. The Minister has rejected criticism of the delays. I was surprised when I heard her comments. As it was always understood that a three-month consultation phase would be implemented to help to clear the air. Then we'd move on to the interim HSE board. Niamh Brennan believes that health reform can take two years. The Department of Health believes it will take 10 years. There's little indication of urgency. But it's not just Ms Brennan who believes that until an independent commission is involved, there will be little progress.
Health Minister Michael Martin has rejected criticisms that the Government is delaying its health reform programme by failing to appoint key independent personnel.

But the next general election could be three years away. Health Minister Michael Martin has rejected criticisms by failing to appoint key independent personnel - reports showing the changes, said she was alarmed that the Government launched its health reform programme decision-making. And greater financial controls.

The Minister for Finance said: "It's possible - and progress reports should be every week. Mr. Brennan said she was concerned about the lack of momentum being lost. The Government, as always, needs to help to ease the situation. Then we move on to the implementation of the recommendations."

And concerned about momentum being lost. The Minister for Finance said: "It's not just Mr. Brennan who - believes that until a comprehensive health reform strategy is introduced, the Department of Health will continue to be responsible for the delivery of health services."

News Story 3 (duration: 00:01:44)
**Health Minister Michael Martin has rejected criticisms that the Government is delaying its health reform programme by failing to appoint key independent personnel.**

But the next general election could be three years away - Benchmarking could by then be a forgotten political issue. Health Minister Michael Martin has rejected criticisms that the Government is delaying its health reform programme by failing to appoint key independent personnel - Earlier Professor Niamh Brennan, the author of one of three reports studying the changes, said she was alarmed that the staff members aren't yet in place. - Three months ago the Government launched its health reform programme. It promised to abolish health boards and end fragmentation in decision-making. And greater financial controls - Michael Martin said the reforms would begin as quickly as possible. - The Minister for Finance said hospital reform - Chapter 11 of the report said - reforms should begin as soon as possible, and progress reports should be every three months, and an independent person employed. - Niamh Brennan said she was concerned about the lack of progress.

And concerned about momentum being lost. The Minister has rejected criticism of the delays - I was surprised when I heard her comments - as it was always understood that a three-month consultation phase would be implemented to help to clear the way - then we'd move on to the interim HSE board. The Brennan Commission believe that health reform can take two years. - The Department of Health believes it will take 10 years - There's little indication of urgency. But it's not just Ms Brennan who - believes that until an independent commission is involved - there will be little progress.
Search Result: 56 stories

**News Story** (duration: 00:00:19)  
22 Aug 2003  
Dublin Fire Brigade say last night's fire on Howth Head in North Dublin is now well under control...  
(PLAY THIS STORY)

**News Story** (duration: 00:01:32)  
12 Jun 2003  
The two-year-old girl who died in a house fire in Killarney today has been named as Rebekah O'Leane-Bawden. The toddler's mother and her partner were rescued from the house...  
(PLAY THIS STORY)

**News Story** (duration: 00:01:48)  
7 May 2003  
The country senior fire chief called for a nationwide drive to reduce the number of elderly people who die in house fires and for the allocation of more resources to enforce fire-safety...  
(PLAY THIS STORY)

**News Story** (duration: 00:00:13)  
7 Jul 2003  
A section of one of Cork's most historic buildings, the former Good Shepherd Convent in Sunday's Well, was destroyed in an early morning fire...  
(PLAY THIS STORY)

**News Story** (duration: 00:01:27)  
8 Jul 2003  
St Finbarr's Maternity Hospital in Cork had to be evacuated today after a fire broke out in a bathroom. 20 expectant and new mothers, as well as 16 newborn babies, had to be transferred to another maternity hospital in the city...  
(PLAY THIS STORY)
News Story 8 (duration: 00:01:40)

The country senior fire chief called for a nationwide drive to reduce the number of elderly people who die in house fires and for the allocation of more resources to enforce fire safety...

Another was a criminal judge. They all were strongly of KTH have called for a nationwide drive to reducing B of elderly people who die in house fires and for the allocation of more resources to enforce fire safety regulations in public venues.

...to sanction and Ndo a Fire av 4 ton hourly Massive, out of control fires like the most serious challenge to the country's firefighters.

But it's oftentimes small fires in the homes of elderly people which result in the greatest loss of life. We do have a problem here in Ireland. The O uA h the fire service have a role. And we have to work together to There were also concerns over the shortage of personnel and resources to enforce fire regulations in Ireland's hotspots. You wouldn't expect Gardaí to be able to manage a whole county. So I would argue that similarly from a policing point of view.
UN secretary general Kofi Annan has named the human rights commissioner Sergio Vieira de Mello as his special representative for Iraq.

The death toll there is 270 - that's over a third of fatalities worldwide. Guangdong has also been removed from the travel warning list. But three more deaths were recorded in China today, with 20 new cases. The WHO's main worry is Taiwan. 65 new cases were recorded there today. An American doctor was flown out after showing symptoms of the virus. Kofi Annan has named human rights commissioner Sergio Vieira de Mello as his special representative for Iraq, clearing the way for the UN to begin flushing out its role - in the reconstruction of Iraq.

Earlier the US civil administrator in Iraq ordered the disbandment of the Iraqi armed forces - along with the dissolution of the defence and information ministries. The headlines in the papers - The sanctions imposed by the UN have finally been lifted. Already on the streets, goods which haven't been sold openly for 13 years are making their way onto the stalls.

Airline traffic is resuming, some flights with humanitarian aid.
Keyframe Matching

ASR based video retrieval is not visual;

Keyframes extracted as shot representatives can be used for retrieval;

Requires user to locate images/other keyframes, from browsing, or other search;

**Video navigation by matching keyframes is:**
Sufficient if the query is very visually distinctive

Físchlár-TRECVid2004 is a good example;
Search found 69 matching shots. Following is the ranked list of the search result. Click an image to play the segment, click "save" button to add to your answers, or click "go back" button to improve subsequent query.

RESULT PAGE: 1 2 3 4 5

1: CNN News (26 Oct 1998)

- **More matches in this broadcast**

   Powerful rockets that in nineteen sixty one launched during the government the first person in space this all u.s. launch rockets had failed repeatedly and publicity and there're tests pressure was building devoted american investments.


- **More matches in this broadcast**

   That manages about we've got high to be in an head discovery yesterday to launch would have looked like this when is in the middle of this picture are shuttle launch can be built in wrestling but it was far gentler than fees at least one we've that the astronauts back in space again that was quite different than a ride i got before of course back a long time ago.

3: ABC News (26 Oct 1998)

- **More matches in this broadcast**

   On wasn't whether one shot mission will been a permanent presence on mars because a mars vehicle would be too heavy to launch from earth it'd be assembled place by place in each orbit half a dozen astronauts would then take six months to rocket the thirty four million miles to mars they'd spend the next year and a half exploring and conducting experiments that had all mission times two and a half years py is really going to be the place where humans will
QUERY PANEL

Search found 169 matching shots. Following is the ranked list of the search result. Click an image to play the segment, click "SAVE" button to add to your answers, or click "QUIT" button to improve subsequent query.

RESULT PAGE : 1 2 3 4 5

1: CNN News (26 Oct 1998)

Powerful rockets that in nineteen sixty one launched during the government the first person in space this all u. s. launch rockets had failed repeatedly and publicly and there's tests pressure was building devoted american investments.


That manages about we've got big he'd be in an heard discovery yesterday to launch would have looked like this when is in the middle of this picture are shuttle launch can be built in wrestling but it was far gentler than lying at least one we've that the astronauts back in space again that was quite different than a ride i got before of course back a long time ago.

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On wasn't whether one shot mission will be a permanent presence on Mars because a Mars vehicle would be too heavy to launch from earth it'd be assembled piece by piece in each orbit half a dozen astronauts would then take six months to rocket the thirty four million miles to Mars they'd spend the next year and a half exploring and conducting experiments that had all mission time two and a half years mars is really going to be the place where humans will
Search found 169 matching shots. Following is the ranked list of the search result. Click an image to play the segment, click "Save" button to add to your answers, or click "Launch" button to improve subsequent query.

result page: 1 2 3 4 5

1: CNN News (26 Oct 1998)

"rocket launch" powerful rockets that in nineteen sixty one launched during the "launch" the first person in space this all u.s. launch rockets had failed repeatedly and pressure was building devoted american investments


"launch" that manages about we've got big lead in an board discovery yesterday to launch would have looked like this when is in the middle of this picture are shuttle launch can be built in wrestling but it was far gentler than lees at least one we've that the astronauts back in space again that was quite different than a ride i got before of course back a long time ago

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Search found 169 matching shots. Following is the ranked list of the search result. Click an image to play the segment, click "Next" button to add to your answers, or click "Submit" button to improve subsequent query.

RESULT PAGE: 1 2 3 4 5

1: CNN News (26 Oct 1998)

Powerful rockets that in nineteen sixty one launched during the week that the first person in space this all u.s. launch rockets had failed repeatedly and people were building devoted american investments.


That manages about we've got big use in it. He heard discovery yesterday to launch would have looked like this when is in the middle of this picture are shuttle launch can be built in wrestling but it was far gentler than fees at least one we've that the astronauts back in space again that was quite different than a ride I got before of course back a long time ago.

3: ABC News (26 Oct 1998)

On wasn't whether one shot mission will be a permanent presence on mars because a mars vehicle would be too heavy to launch from earth. It'd be assembled piece by piece in each orbit half a dozen astronauts would then take six months to rocket the thirty-four million miles to mars. They'd spend the next year and a half exploring and conducting experiments that had all mission time two and a half years mas is really going to be the place where humans will
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Search found 169 matching shots. Following is the ranked list of the search result. Click an image to play the segment, click "SKIP" button to add to your answers, or click "RETRIEVE" button to improve subsequent query.

RESULT PAGE: 1 2 3 4 5

1: CNN News (26 Oct 1998)

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1: CNN News (26 Oct 1998)

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that manages about we've got big he'd be in an on board discovery yesterday to launch would have looked like this when is in the middle of this picture are shuttle launch can be built in wrestling but it was far gentler than theirs at least one we've that the astronauts back in space again that was quite different than a ride i got before of course back a long time ago

3: ABC News (26 Oct 1998)

on wasn't whether one shot mission will been a permanent presence on mars because a mars vehicle would be too heavy to launch from earth it'd be assembled place by place in each orbit half a dozen astronauts would then take six months to rocket the thirty four million miles to mars they'd spend the next year and a half exploring and conducting experiments that had all mission time two and a half years is really going to be the place where humans will
Search found 169 matching shots. Following is the ranked list of the search result. Click on an image to play the segment, click ADD button to add to your answers, or click DELETE button to improve subsequent query.

RESULT PAGE: 1 2 3 4 5

1: CNN News (26 Oct 1998)

- powerful rockets that in nineteen sixty one launched during the government the first person in space this all u.s. launch rockets had failed repeatedly and publicly and there were tests pressure was building devoted american investments.


- that manages about we've got big he'd be in an aboard discovery yesterday to launch would have looked like this when is in the middle of this picture are shuttle launch can be built in wrestling but it was far gentler than fees at least one we've that the astronauts back in space again that was quite different than a ride i got before of course back a long time ago.

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that manages about we've got he'd he'd be in an board discovery yesterday to launch would have looked like this when is in the middle of this picture are shuttle launch can be built in wrestling but it was far gentler than looks at least one we've that the atmosphere back in space again that was quite different than a ride I got before course back a long time ago.

those were the costliest years of the cold war the soviet military arsenal included powerful rockets that in nineteen sixty one launched during the government the first person in space this all u.s. launch rockets
Search found 250 matching shots. Following is the ranked list of the search result. Click an image to play the segment, click "SAVE" button to add to your answers, or click "SUBMIT" button to improve subsequent query.

RESULT PAGE: 1 2 3 4 5

1: ABC News (30 Oct 1998)

that manages about what we've got big he'd be in on but recovery yesterday to launch would have looked like this when is in the middle of this picture shuttle launch can be built in wrestling but it was far greater than been at least one we've that the automates back in space again that was quite different than a ride i got before of course back a long time ago.


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the government the first person in space this all u.s. launch rockets had failed repeatedly and publicly and there's tests pressure was building devoted american investments these are the past there have been.
Search found 250 matching shots. Following is the ranked list of the search result. Click on an image to play the segment, click "SAVE" button to add to your answers, or click "DELETE" button to improve subsequent query.

RESULT PAGE: 1 2 3 4 5

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that matters about we've got big he'd be in on board discovery yesterday to launch would have looked like this when in the middle of this picture are shuttle launch can be built in wrestling but it was far gentler than feels least one we've that the automatic back in space again that was quite different than a ride I got before of course back a long time ago.


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the government the first person in space this all us launch rockets had failed repeatedly and publicly and there're tests pressure was building devoted american investments these are the past there have been.
Search found 250 matching shots. Following is the ranked list of the search result. Click on an image to play the segment, click "SAVE" button to add to your answers, or click "SHARE" button to improve subsequent query.

RESULT PAGE: 1 2 3 4 5

1: ABC News (30 Oct 1998)

had failed repeatedly and publicly and there have been... REMOVE X

powerful rockets that in nineteen sixty one launched during... REMOVE X

are shuttle launch can be built in wrestling but... REMOVE X

that manages about we've got big he'd be in an board discovery yesterday to launch would have looked like this when is in the middle of this picture are shuttle launch can be built in wrestling but it was far gentler than less at least one we've that the automatic back in space again that was quite different than a ride i got before of course back a long time ago.


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the government the first person in space this all us launch rockets had failed repeatedly and publicly and there have been investments these are the past there have been... REMOVE X

4: CNN News (26 Oct 1998)
Semantic features for retrieval

Based upon pre-processing video or keyframes to detect features;

Features normally from an ontology and thus related;

TRECVid supports benchmarking feature identification
Useful in retrieval, and as a challenge itself;
TRECVid Features

- People walking/running: segment contains video of more than one person walking or running
- Explosion or fire: segment contains video of an explosion or fire
- Map: segment contains video of a map
- US flag: segment contains video of a US flag
- Building exterior: segment contains video of the exterior of a building
- Waterscape/waterfront: segment contains video of a waterscape or waterfront
- Mountain: segment contains video of a mountain or mountain range with slope(s) visible
- Prisoner: segment contains video of a captive person, e.g., imprisoned, behind bars, in jail, in handcuffs, etc.
- Sports: segment contains video of any sport in action
Feature Detection Performance

IBM Video Concept Detection Performance

Thanks to John Smith, IBM, for slide
Feature-based retrieval

In retrieval, features should be used in combination;

Detector (in)accuracy is compensated for by dependencies among semantic features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor</td>
<td>0.2</td>
</tr>
<tr>
<td>Outdoor</td>
<td>0.8</td>
</tr>
<tr>
<td>CityScape</td>
<td>0.7</td>
</tr>
<tr>
<td>Landscape</td>
<td>0.3</td>
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<tr>
<td>People</td>
<td>0.1</td>
</tr>
<tr>
<td>Face</td>
<td>0.0</td>
</tr>
<tr>
<td>Sky</td>
<td>0.8</td>
</tr>
<tr>
<td>Vegetation</td>
<td>0.2</td>
</tr>
<tr>
<td>Building</td>
<td>0.7</td>
</tr>
</tbody>
</table>
Query tool: text + concept search
TRECVID Columbia U
CMU: Interface to Support Rich Visual Sets
Use visual objects as queries

Automatic Understanding of Objects?

Take a simple object, a car
4 wheels, fairly recognisable shape
Should not pose problems?

Well, it is not quite that easy...
Automatic Understanding of Objects
Automatic Understanding of Objects
Object-based video retrieval

For certain types of user query, with patience, and time, object-based retrieval can help;

Another Físchlár system shows how it can be done
SEARCH RESULT

Following is the ranked list of the search result. An image with a check mark indicates it contains an object within it. Click on QUERY button to use an image/object as query, click on SAVE button to save this point in bookmark.
The images and objects below will be used for searching. Refresh the query panel or add/remove items below and click SEARCH button. [ADD EXTERNAL IMG/OBJ]

You can search objects when there is a icon beside an image.

SEARCH RESULT
Following is the ranked list of the search results. An image with icon indicates it contains an object within it. Click on QUERY button to use an image/object as query, click on SAVE button to save this point in bookmark.
Does content search work?

On small, closed video libraries, it works well.

Annual VideOlympics showcase shows it working in practice.
Challenges

We’re still only doing keyframe/image and not video (with motion of objects and cameras);

We’re still doing shot retrieval, not scene, or clip;

Feature detection accuracy, scale-up to more features, relationships between features, move away from independent solo to ontology-based ... need to progress this;

Combining features, keyframe match, text and objects in a natural and usable way ... the learnability of the interface;

Dynamically adjusting retrieval to the query/video type;

IT IS NOT MAINSTREAM YET, NOT YET READY FOR THE BIG TIME, HAS SOME WAY TO GO, BUT WILL GET THERE;