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# Browsing and searching in local multimedia collections

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## Some issues seen in townships

- Water, housing, electricity
- Transport
- Communication
- Education
- Safety
- Security
- Access to jobs

Makes you wonder where on this list of needs “Multimedia Information Retrieval” features... Yet if my house burnt down (and everyone was safe) I would rescue my photo album



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# Multimedia Search



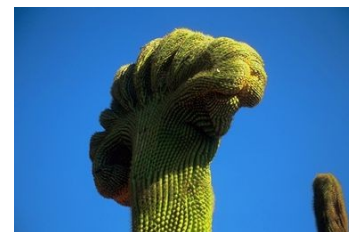
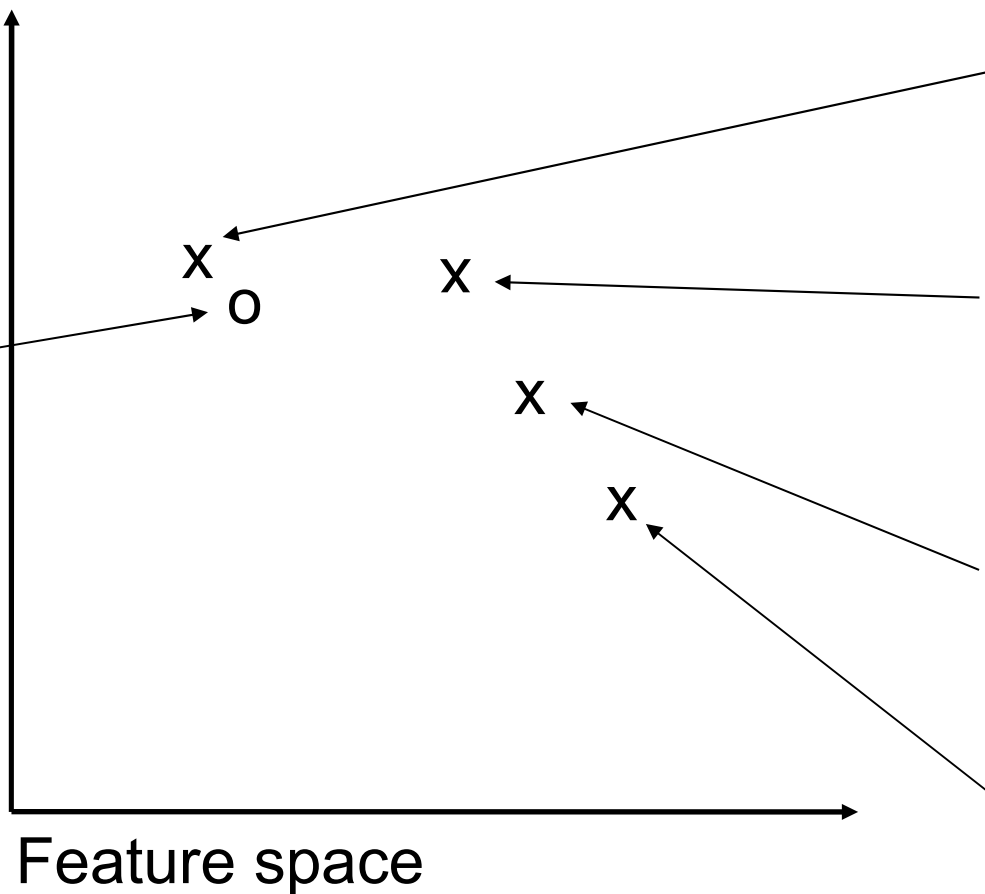
Built in 1685 by Dutch immigrants this was the heart of the first vinyard in Africa, located near what is today known as Cape Town...



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# Features and distances





# New search types

	text	image	location	speech	sound	humming	motion	query / doc
✓								text
								video
								images
✓								speech
						✓		music
								sketches
								multimedia

Example

conventional text retrieval

type "floods" and get the BBC radio news music piece



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# Automated annotation



[with Yavlinsky et al CIVR 2005]  
[with Yavlinsky SPIE 2007]  
[with Magalhaes CIVR 2007, **best paper**]

**Automated:** water buildings city sunset aerial

[Corel Gallery 380,000]



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# The good

door



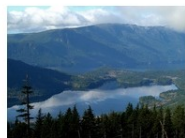
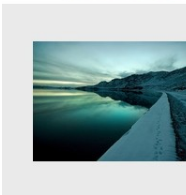
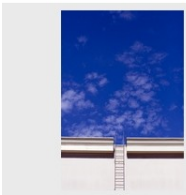


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# The bad

wave



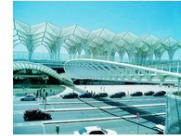
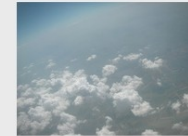
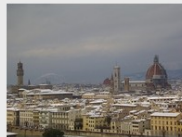
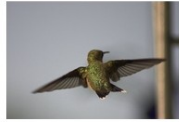


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# The ugly

iceberg





# Connect similar objects

focus

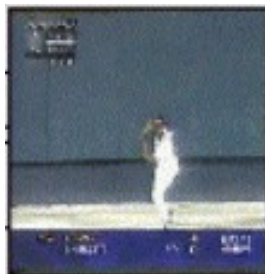
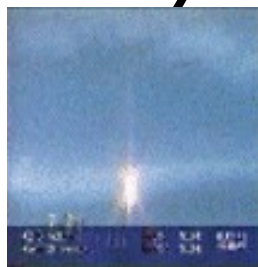


Structure



[with Heesch ECIR 2004, CIVR 2005]  
[with Heesch et al ACM MM 2006, TRECVID 2003-2004]  
[PhD thesis Heesch, nominated for best UK thesis 2005]

Colour

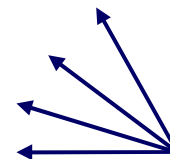


Text

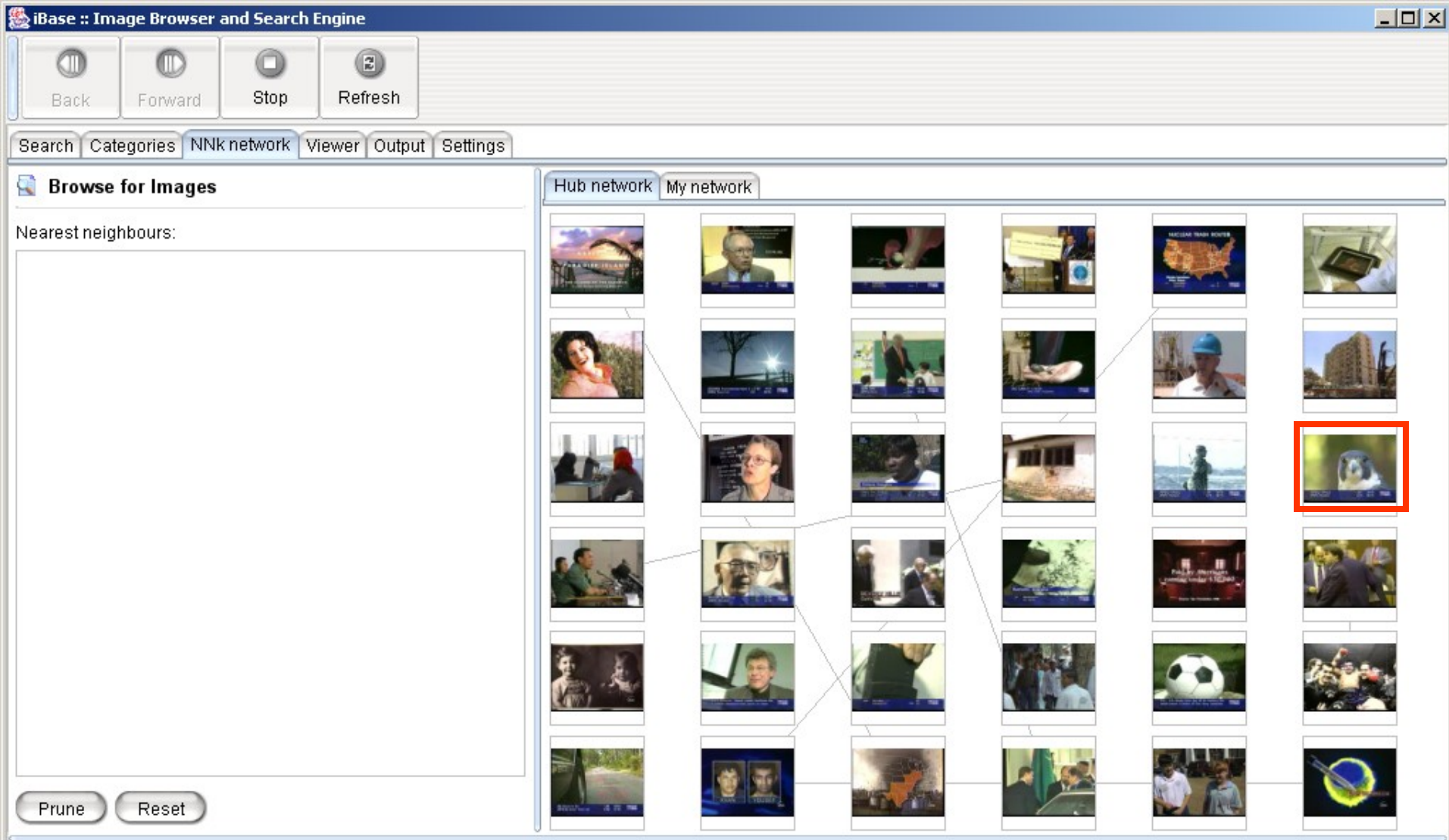


# Browsing example

- TRECVID topic 102: Find shots from behind the pitcher in a baseball game as he throws a ball that the batter swings at



**In your mind**



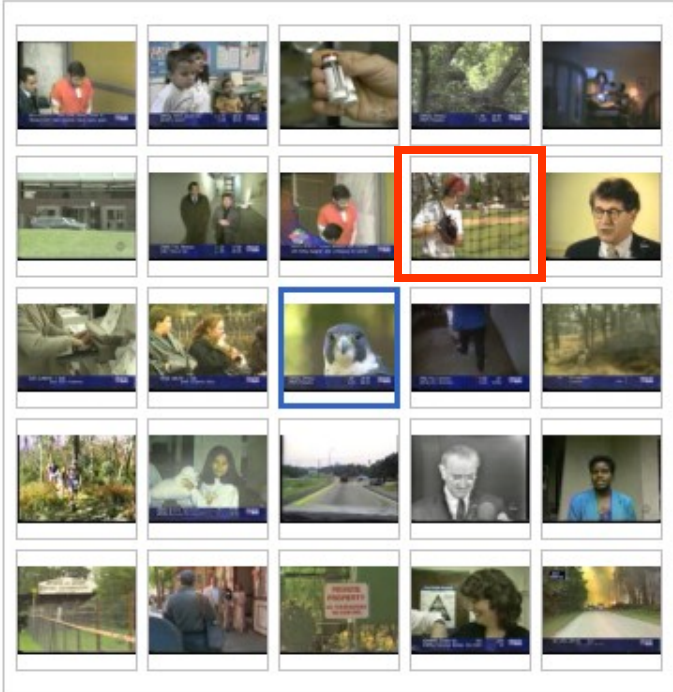
[Alexander May: SET award 2004: best use of IT – **national prize**]  
[dataset TRECVID 2003]

Navigation buttons: Back, Forward, Stop, Refresh

Search Categories **NNk network** Viewer Output Settings

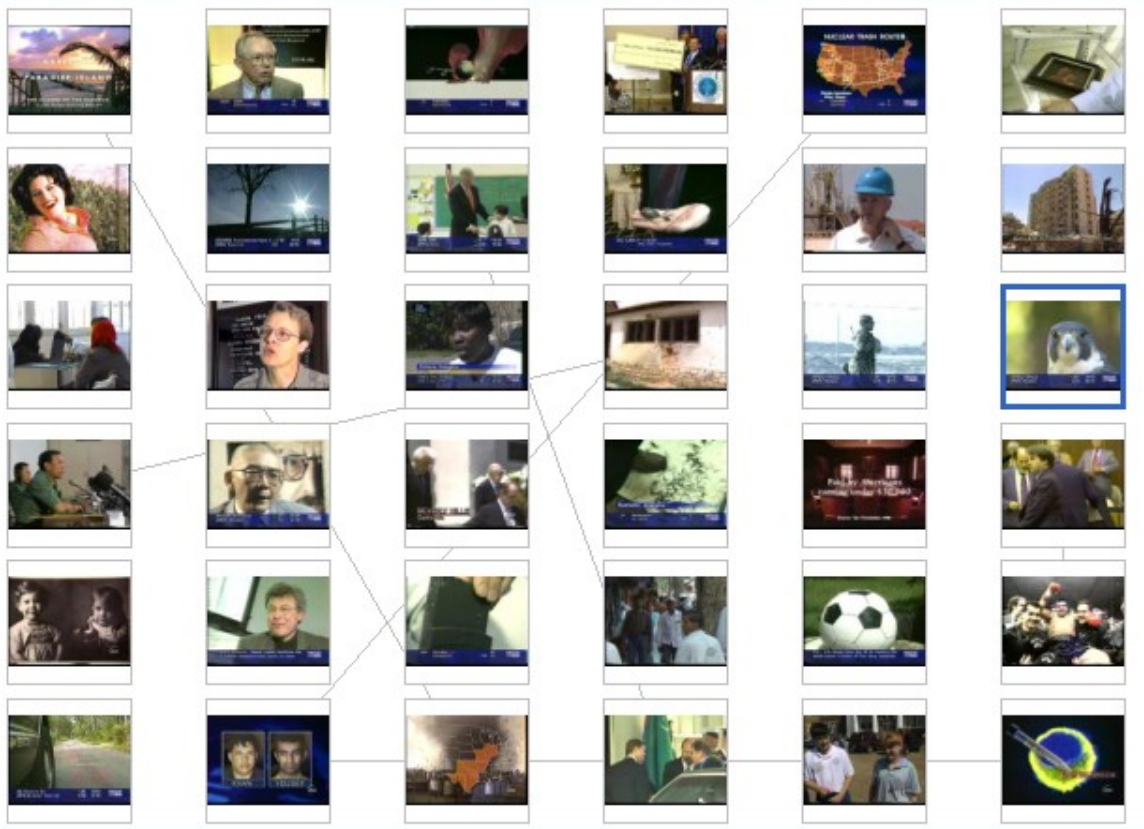
Browse for Images

Nearest neighbours:



Prune Reset

Hub network My network



Temporal My selection



(179 remaining) Loading images...






Search Categories NNk network Viewer Output Settings

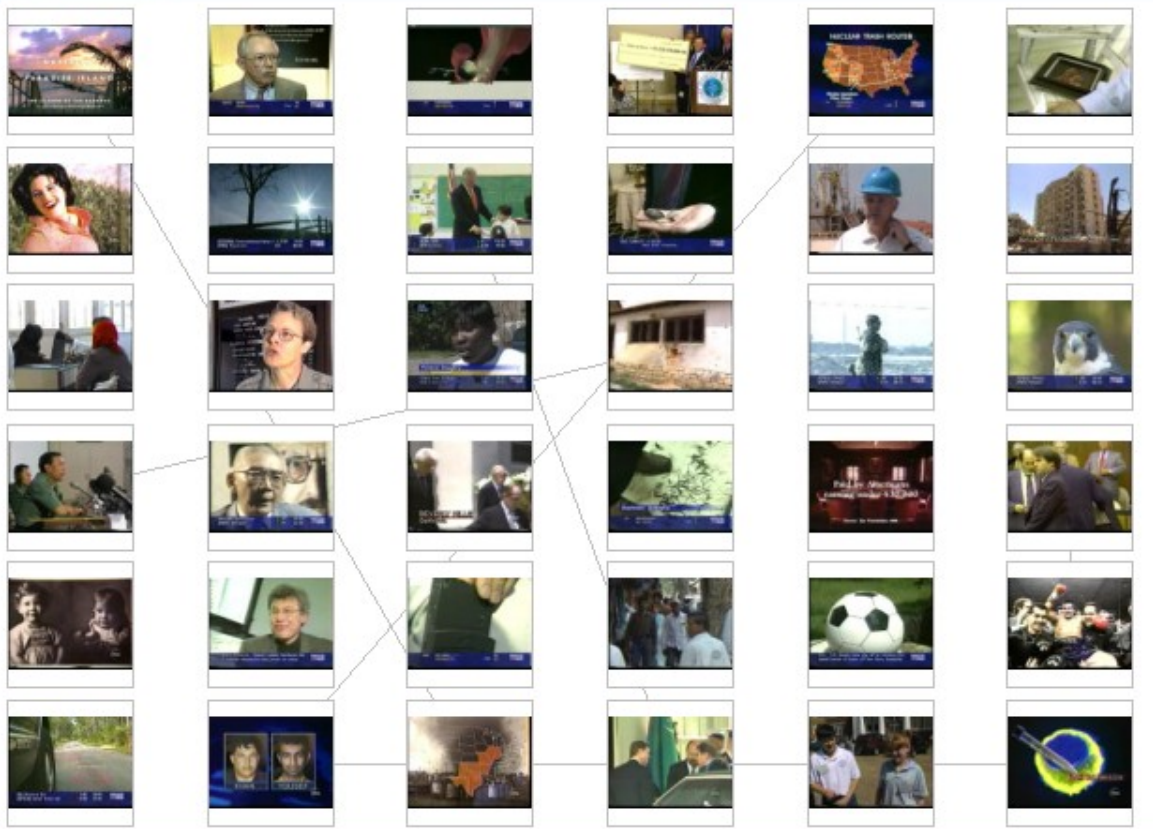
Browse for Images

Nearest neighbours:



Prune Reset

Hub network My network



Temporal My selection



Image ID: 6635 Filename: TRECVID2003\_156/shot156\_308\_RKF.jpg Keywords: THE UNDERDOG FIGHTING TO BE RECOGNIZED OR THE COMMITMENT THEY MADE TO EACH OTH...



Back



Forward



Stop



Refresh

Search Categories NNk network **Viewer** Output Settings**Image Properties**

Image ID: 1263

Collection: Video

Resolution: 352 x 264

Filename: TRECVID2003\_138/shot138\_210\_RKF.jpg

Keywords: FOR ONE WIN OVER THE SHARKS IN THE MAJORS THE BRAVES BEAT THE



Temporal My selection



Image ID: 1263 Filename: TRECVID2003\_138/shot138\_210\_RKF.jpg Keywords: FOR ONE WIN OVER THE SHARKS IN THE MAJORS THE BRAVES BEAT THE