

CLARITY

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Issues in

Designing Novel Applications for Emerging Multimedia Technologies

At the Workshop: Interactive Information Access:
 Untangling Tasks and Technologies
 CWI, Amsterdam, 7 December 2010

CLARITY: Centre for Sensor Web Technologies
Dublin City University

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Novel Applications

- Photo-blogging with Automatic Face Annotation
- Visual Diary with SenseCam
- Personal Mobile Photo Manager
- CCTV Video Searching
- Personalised News Update on Mobile
- Competitive Card game
- In-car Video Navigator
- Image Searching using External Sample Objects
- Object-based Searching
- Communal Online TV Broadcast Recorder
- Movie Browser for Film Study Class
- Movie Scene Browser
- My Diet Monitoring and Analysing
- Field sports summariser

Emerging MM Tools

- Face Recognition
- Movie Scene Segmentation
- Keyframe Extraction
- News Retrieval
- Object Detection & Tracking
- News Story Segmentation
- Video Recommendation
- Sports Summarisation
- Pedestrian Detection
- Content-based Relevance Feedback for Video
- Large-scale Image Retrieval
- Content & Context Augmentation
- GPS location-based UAV Video Retrieval
- LifeLogging Data Indexing & Retrieval
- Fusion of Image and Text Evidence

CAMERAS
Select a camera below to see the list of events from that camera.

ID	CAMERA NAME	#EVENTS	DURATION	STATUS	ALERT
PHX1	PHYSICS B/D LEVEL1 FRT. #1	36	15m 45s	ON-LIVE	
PHX2	PHYSICS B/D LEVEL1 FRT. #2	4	27s	ON-LIVE	
PHX3	PHYSICS B/D LEVEL1 FRT. #3	18	6m 57s	ON-LIVE	
PHX4	PHYSICS B/D LEVEL1 FRT. #4	51	22m 05s	ON-LIVE	
PHX5	PHYSICS B/D LEVEL1 BAK. #1	23	17m 25s	ON-LIVE	
PHX6	PHYSICS B/D LEVEL1 BAK. #2	0	0s	OFF	
PHX7	PHYSICS B/D LEVEL2 FRT. #1	47	23m 55s	ON-LIVE	
PHX8	PHYSICS B/D LEVEL2 FRT. #2	29	14m 23s	ON-LIVE	

QUERY PANEL
Select object(s) in the added event below, limit the date/time to search, select a camera then click SEARCH.

MAIN ENTRANCE #1
13:06 - 13:06 12/10/2004 (Duration: 8s)
EVENT TYPE: PERSON; OBJECT

SEARCH PERIOD: -1 week -1 day -10m -1h -1d +1h +1d +1 week

SEARCH

PLAYBACK

PHYSICS B/D LEVEL1 FRT. #3
14:01 - 14:01 12/10/2004 (Duration: 1s)
EVENT TYPE: PERSON

EVENT DETECTION MODE: ☒ ON

SEARCH RESULT
Total 24 matches found from 18 cameras, includes 43 different objects.

MAIN ENTRANCE #1
13:06 - 13:06 12/10/2004 (Duration: 8s)
EVENT TYPE: PERSON; OBJECT

COMPUTING B/D EXT. EXIT BAK. #1
13:21 - 13:21 12/10/2004 (Duration: 6s)
EVENT TYPE: PERSON

COMPUTING B/D EXT. LEVEL2 FRT. #1
13:11 - 13:11 12/10/2004 (Duration: 5s)
EVENT TYPE: PERSON

COMPUTING B/D EXT. LEVEL1 BAK. #2
13:09 - 13:10 12/10/2004 (Duration: 12s)
EVENT TYPE: PERSON

Object contour detection was semi-automatically checked/annotated for the small number of data set

Lee H. Smeaton A.F., O'Connor N and Murphy N. User-Interface to a CCTV Video Search System. ICDP 2005 - IEE International Symposium on Imaging for Crime Detection and Prevention, London, U.K., 7-8 June 2005.

Fischlár News: Browse - Microsoft Internet Explorer

Address: http://www.fischlar.dcu.ie/news/browse

Fischlár-News
Online Video Archive of Daily RTE1 9 o'clock News

Check the recommended news for you [COMMENTS](#)

SEARCH: GO

September 2003

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

August 2003

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

July 2003

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

News Story 3 (duration: 00:01:44)

Health Minister Micheal 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 Micheal Martin has rejected critics by failing to appoint key independent personnel. - reports shaping the changes, said she was alarm the Government launched its health reform programme decision-making. And greater financial controls.

The Minister for Finance said hospital reform, on which progress reports should be every 10 weeks, she was concerned about the lack of momentum being lost. The Department of Health will help to clear staff. Then we'd move on to the info can take two years. - The Department of Health is it's not just Ms Brennan who believes that until a

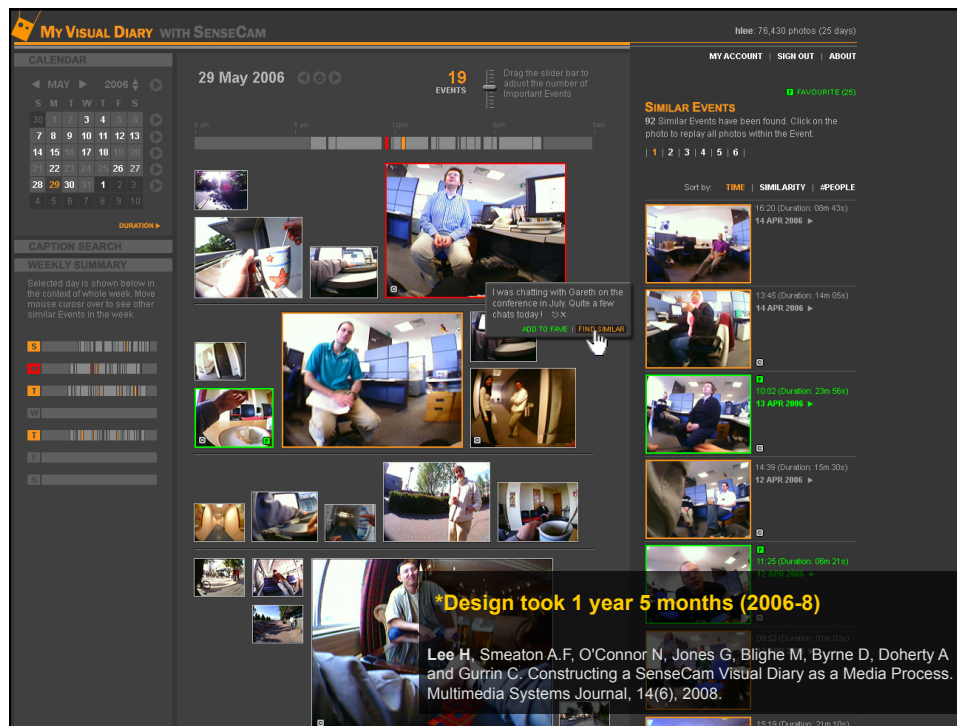
RTE News - RTE 1 - 16 SEPT 20:56 (30min) - Micr...

Created user base over 5-year period by deployment effort, but...

- Manually indexing Story Segmentation results for its 3-year archive

- Correcting news story boundaries each morning for 1 year!

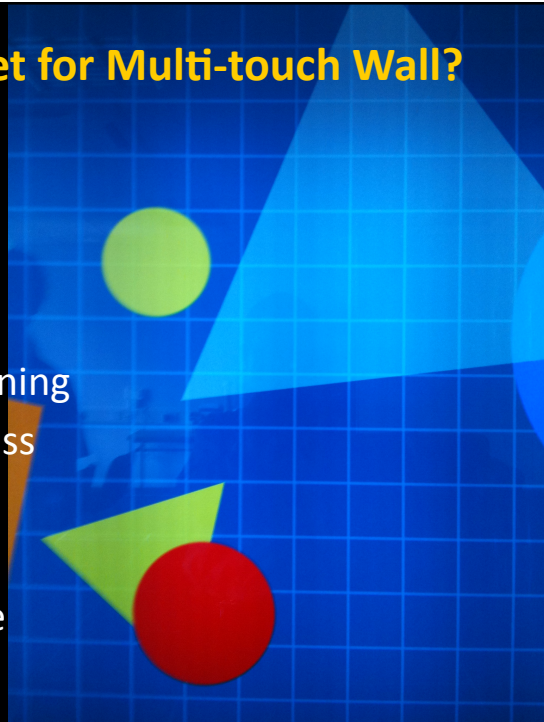
Lee H. Smeaton A.F., O'Connor N and Smyth B. User Evaluation of Fischlár-News: An Automatic Broadcast News Delivery System. ACM Transactions on Information Systems, Vol. 24, No. 2, 2006.

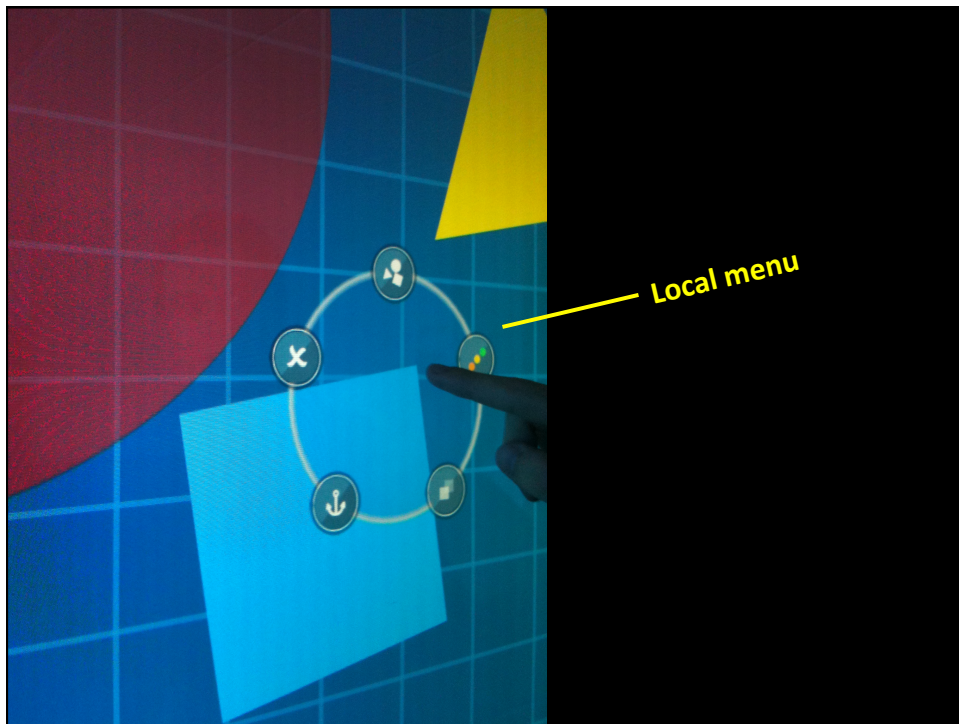


“Ideal” menu widget for Multi-touch Wall?

Dividing menu system into two:

- **Global functions**
 - Affect everyone
 - Awareness/warning
 - Communal access
- **Local functions**
 - Affect only me
 - Appear near me





Conclusion

In designing novel applications that incorporate emerging Multimedia technologies:

- Need alternative design methodology - clues may be **solutions** not **problems**
- Leverage designers' ability to work in unclear problem situation
- Design to hide(?) inaccurate MM output
- Consider making demo system with novel interaction platforms, not just PC/Web and Mobile

THANK YOU