

## University of Modena and Reggio Emilia

D.I.I. - DIPARTIMENTO DI INGEGNERIA DELL'INFORMAZIONE

# VidiVideo

Interactive semantic video search with a large thesaurus of machine-learned audio-visual concepts

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Dissemintation activities

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### 1. Introduction

This report describes the dissemination activities carried out until M12 by the UoM team in the VIDI-VIDEO project. The conducted actions are in the area of video surveillance and include two main tasks: the creation of a usergroup for the research community on videosurveillance and the diffusion of the Video Surveillance Online Repository (ViSOR) related to Task 7.7 [4].

### **TASK 7.7 VIDEO SURVEILLANCE** (from the VidiVideo Annex)

#### Surveillance video collection

An important element of the task is to create a contact with user groups of surveillance enabling a higher impact of the results of VIDI-Video. Different sources of surveillance data video will be available, such as fixed indoor and outdoor cameras, mounted at high positions with a large field of view, moving cameras with pan, tilt and zoom capabilities, fixed indoor cameras, and mobile cameras, such as those mounted on board of cars of some private surveillance companies. At UoM tools and video analysis techniques have been developed, and could be used to further provide annotation for *a posteriori* logging. It could also be used as a searching system for activities detection in case the VIDI-Video system is too general in its capabilities.

The task will perform the following activities:

- Providing a large collection of security and surveillance videos, in order to create a complete set of views of a significantly wide area, covering a 24 hours time frame, with different, also non-overlapping, views. Videos will be provided about outdoor and indoor scenes, such as roads, public parks, offices and university campus. This allows potential queries such as *find me all sequences that contain a person pushing a stretcher from 6.00am to 6.30am* or *give me all the clips of video acquired in this area containing a person with a read coat.*
- Metadata annotation in MPEG-7 to ensure interoperability with Task 6.2 and 4.1, allowing us to provide additional features and metadata to the query engine.
- Testing the capability of the concept detection techniques developed in the project, by means of a sub-set of thesaurus such as people, face, car, bicycles, all providing insight in a surveillance setting. Videos will be provided about outdoor and indoor scenes, such as roads, public parks, offices and university campus.
- Compare the results obtained with the general-purpose features extractors and invariants, as defined in the Tasks 4.1, 4.2 and 4.3 with specific surveillance techniques that take into account additional information such as camera calibration data.

### Surveillance User group

This as preparation to the aim of development of a forum for the surveillance community, able to attract user groups which will have the ability of providing new requests and use cases, sharing knowledge and annotated video and testing different approaches to the video surveillance application field.

### 2. Videosurveillance Forum

An important aspect for a research community is the information exchange and the opportunity to share opinions, requests, comments about the videos and the annotations, and so on.

The online portal of Visor [1] includes a forum in which one topic for each video, generic topics on video surveillance, and topics on VISOR (e.g., call for videos) are already active. In addition, each registered user can create his own topics.



The access to the forum is free and guest user can read all the posts. The registration is instead mandatory in order to post in the forum.

At the end of December, there were 23 registered users plus 8 staff members.

The forum is powered by Snitz Forums 2000; a screenshot of the main page is reported in Fig.1.

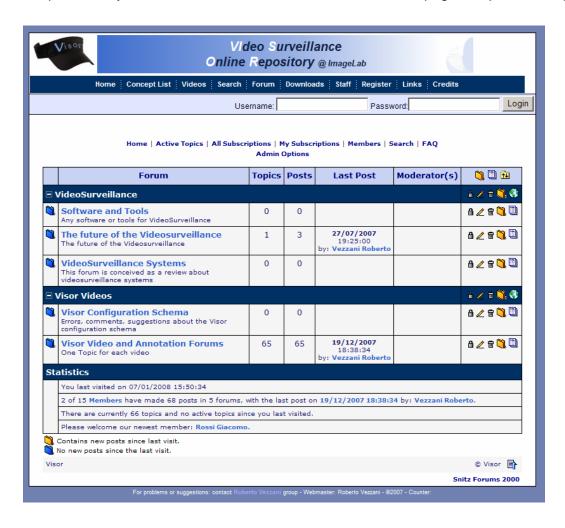


Fig. 1: SCreenshot of the Forum homepage

### 3. Other dissemination activities

The Visor System has been presented during the following events:

### 14<sup>th</sup> International Conference on Image Analysis and Processing (ICIAP 2007)

10-14 September 2007, Modena (Italy)

ICIAP is one of the most important events covering image processing and pattern recognition which is organized every two years by the Italian group of researchers on pattern recognition (GIRPR) affiliated with the IAPR (International Association on Pattern Recognition). The topics of ICIAP 2007 have been organized into main streams, one of which was about Surveillance and Security. During the conference UoM did a demo presentation and advertized the system with posters and depliants.

### **ANSA** news bulletin

13 September 2007

ANSA (Italian General News Service) is the Italy's leading newswire providing national and international news. The Ansa news agency, created by Italian newspapers in 1945, supplies up-to-the-minute coverage of events in Italy and around the world.

The ViSOR system has been segnalated as a new technology available for video surveillance researchers. Some screenshots of the news published on different web site in Italian and Spanish are reported in Appendix.

### VideoGov Summit

27 September 2007, Rome (Italy)

VideoGov was a national summit principally for public administration. The topic of the summit was the future of the Videosurveillance, with particular attention to real implementation issues.

UoM has participated as invited speaker presenting the ViSOR portal.

### BMVA symposium on "Security and surveillance: performance evaluation"

12 December 2007, London (UK)

The BMVA provides a national forum for individuals and organisations involved in machine vision, image processing, and pattern recognition in the United Kingdom. The aim of this meeting was to provide a forum for the discussion of recent algorithms, results, protocols and datasets for the evaluation and validation of computer vision algorithms for security and surveillance.

UoM participated with an oral presentation [2].

### References

- [1] "Visor portal," Website, 2007, http://imagelab.ing.unimore.it/visor.
- [2] R. Vezzani, R. Cucchiara, "Visor: Video Surveillance Online Repository", Proceedings of BMVA symposium on "Security and surveillance: performance evaluation", London, 2007
- [3] R. Vezzani, R. Cucchiara, "Video surveillance concepts and the VISOR system (VIdeo Surveillance Online Repository)", Tech Rep 1.0, 20 Apr 2007.
- [4] R. Vezzani, R. Cucchiara, "The VISOR system (VIdeo Surveillance Online Repository)", Tech Rep 2.0, 15 Jan 2008.

### 4. Appendix - press clippings



13/9/2007

### E' nato "Youtube per la sicurezza"

Portale web per il riconoscimento

E' già stato battezzato "Youtube per la Sicurezza" e promette grandi passi in avanti in questo campo. E' nato in Italia **Visor**: portale web in perfetto stile Youtube, il più grande portale di videoclip, che, come un archivio, raccoglie video e foto per studiare e migliorare tecniche di riconoscimento delle persone in caso di situazioni o movimenti sospetti.



Basta collegarsi al sito <a href="http://imagelab.ing.unimo.it/visor/">http://imagelab.ing.unimo.it/visor/</a> e sarà possibile vedere le immagini di videosorveglianza registrate in luoghi aperti, giardini pubblici o metropolitane, ma anche filmati ripresi da telecamere poste all'interno di uffici. I video presenti su Visor (Video surveillance online)

repository from unimore) sono accompagnati da una scheda con indicazioni specifiche sul luogo, il tipo di situazione, la camera utilizzata, orario e giorno della registrazione.

"Chiunque può caricare i video sul portale - spiegano gli ideatori del progetto - owiamente in regola con la legge sulla privacy. Visor è uno strumento di raccolta immagini per la comunità scientifica e serve per testare e mettere a confronto i sistemi che si occupano di videosorveglianza". Il portale web si inserisce nel progetto europeo



Vidivideo, che si occupa di nuove tecniche per indicizzare i video in modo automatico, riconoscere similarità tra clip e semplificare la ricerca automatica attraverso ricerche su dati visuali e audio.

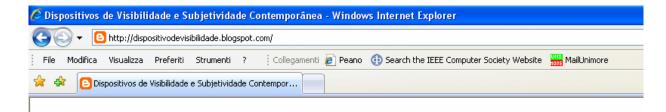
Le tecniche utilizzate, però, non si limitano ad essere applicate per la raccolta di video legati alla sicurezza: "si applicheranno anche a biblioteche digitali di broadcast e a biblioteche di beni culturali" assicurano gli ideatori.

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#### Arquivos de vigilância on-line



Esse post vem do meu "Alertas do Google", uma espécie de dispositivo de vigilância personalizado ao qual delego parte da tarefa de vigiar na rede notícias sobre vigilância. Hoje cedo recebi um "alerta" informando que um site recém-criado na Itália destina-se a ser um arquivo de imagens de vigilância que são catalogadas, classificadas e analisadas para fins de pesquisa diversos. Segundo a matéria da Agência ANSA, o Visor (Video Surveillance Online Repository), apelidado pela agência de "YouTube da segurança", permite que interessados colaborem inserindo ou visualizando vídeos de modo a construir um arquivo colaborativo para a comunidade científica pesquisar e testar sistemas de videovigilância. Visitei o site e como não fiz o download dos programas requeridos, não tive acesso a quase nada. Além de ver as próprias imagens, gostaria de saber como o site lida com as normas legais de divulgação de imagens capturadas por câmeras de vigilância e com as leis de proteção à privacidade. Trecho da referida matéria:

"O Video Surveillance Online Repository foi apresentado na Convenção da Associação Internacional para Reconhecimento de Formas (IAPR). "Visor faz parte do projeto europeu Vidivideo, que se dedica a novas técnicas para classificar os vídeos automaticamente, reconhecer similaridades entre os clipes e simplificar a busca por meio de pesquisas sobre dados visuais e de áudio", explica Rita Cucchiara, organizadora da convenção.

"Qualquer um pode carregar vídeos no portal, obviamente observando as regras de privacidade. Visor é um instrumento que recolhe imagens para a comunidade científica e serve para testar e confrontar os sistemas de vigilância em vídeo", acrescenta Rita.

Os vídeos apresentados em Visor são acompanhados de uma ficha com indicações de lugar, tipo de situação, câmera utilizada, horário e dia da filmagem. As fichas são escritas por meio de técnicas de anotação para algoritmos desenvolvidas pela universidade norte-americana de Maryland. (ANSA) "

Postado por Fernanda Bruno às 21:36 o comentários

