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Gari Owen
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Introduction

A cynic once remarked that before the age of television, a relaxing form of entertainment used to be watching the dying embers of a fire, but it is doubtful whether the information content of the contemporary form of entertainment is any higher in some cases.

This remark perhaps reflects one major issue that is continually identified at this conference. There is an ever increasing amount of video product being generated and stored, but how much of it produces useful information? The temptation to store increasing amount of data also increases as a consequence of the ever decreasing cost of data storage. Vast amounts of data stored means, however, that there is a requirement for ever increasing data processing capability to search for useful information, which in many security scenarios is required in real time or at least near real time.

One paper discussed a way of addressing this analysis problem by consideration of the human approach to searching for useful information in a visual scene rather than a machine-based approach. The area of pre-processing information to eliminate unnecessary data storage is worthy of further investigation. A key to addressing this problem is to define the threat, define what we are looking for, and transform "unknown unknowns" into "known unknowns." Any identification process is also required to have a low false alarm rate.

The incorporation of biometric technology within video analytics provides a possible means of extracting information, at least about human subjects. A vast amount of research has been conducted over the years on problems such as object tracking within video, but a relatively small amount of this research has been commercialised for various reasons. There is also a requirement for standardised realistic data to test new algorithms such as object tracking. The UK Home Office i-LIDS database represents a major advance to meet this requirement.

Visualisation is a rapidly evolving field and capture techniques such as LIDAR combined with high resolution photography are being developed. This has the potential of revealing scene changes and thus minimising the danger of travelling through hostile terrain.

Optics and photonics techniques are widely applicable across many spectral regions for the identification of hazardous materials such as improvised explosives and radiological materials. Considerable strides have been made here, with the emphasis being on low-cost, easy to use systems that can provide results in near real time.

In general, low false alarm rate systems are likely to emerge from combining disparate technologies such as photonic-based explosives detectors with video analytics. Again, there is a need for realistic data to test such integrated systems. In this case, the system would have a physical component such as a hazardous material or its simulant together with video data. Consideration should also be given to extracting useful video data from the internet. This could be used either as test data or indeed can be analysed to extract intelligence and identify trends.

It is hoped that some of the issues above can be addressed at future conferences in this series.

Gari Owen