

# IMAGINATION TO REALITY

I<sup>2</sup>R

## News Video Indexing & Search

Premium news content is expected to be a key enabler for IPTV & Digital Video Recorder (DVR) applications. A news broadcast bulletin usually contains a collection of varied stories (each ~ 2 minutes long). To facilitate personalization and re-purposing, the challenge is to automatically segment each of these story units and to categorize them into topics using news text-script, close captioning and speech recognition.

### Technology

- News story unit segmentation using broadcast jingle detection, news anchor person detection.
- Adaptive anchor person detection using visual facial/body template and audio voice-print.
- Speech-to-Text news transcription using I<sup>2</sup>R's Automatic Speech Recognition (ASR) technology for Asian languages.
- I<sup>2</sup>R's Optical Character Recognition (OCR) technology for transient on-screen text.
- Topic categorization using text document analysis.
- Automatic alignment of video with news stories.
- Duplicate story segment detection & removal.
- Automatic alignment of news video search results to related Wikipedia Table of Content (ToC).

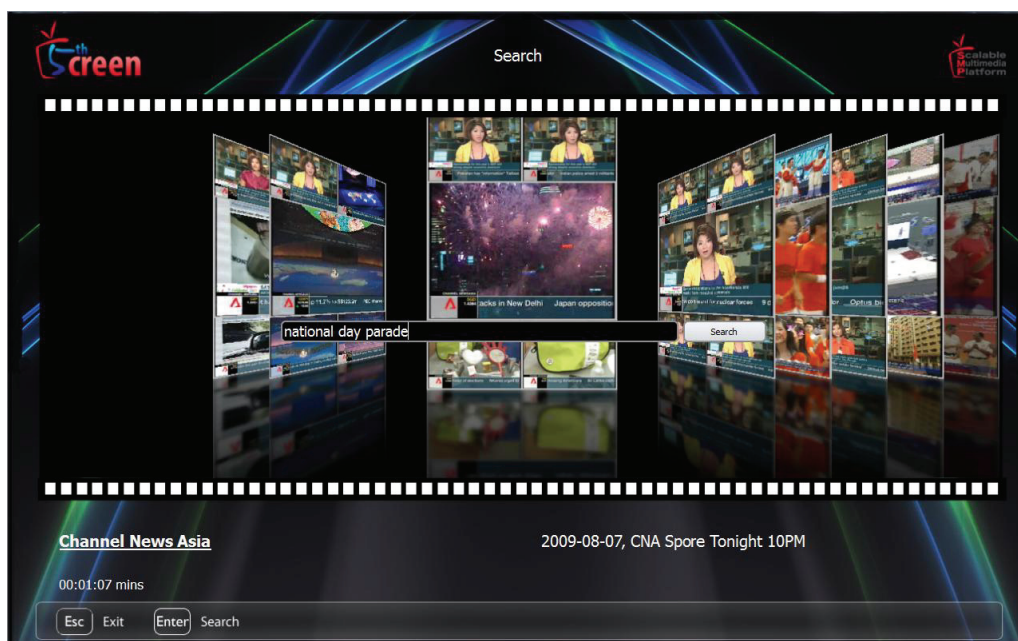
### Our Solution

Our solution makes use of a combination of media extraction technologies to automatically segment the video and to extract textual description. The system automatically identifies the boundaries of independent news stories within a broadcast news programme and analyses the story video to extract a short textual description.

The technology is built on the concept of multi-modal content understanding, which combines automatic speech recognition, visual scene recognition, optical character recognition and semantic association with external web sites. Our system can be implemented either as a resident application in a IPTV set-top box with built-in storage, or as a web-service, which can be integrated seamlessly with other internet enabled applications such as an IPTV Video-on-Demand (VOD) system.

### Applications

- Personalized news alert
- Rapid news browsing
- News search
- New news detection
- Search-without-search in non-keyboard based IPTV



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