

News Video Extraction & Categorization

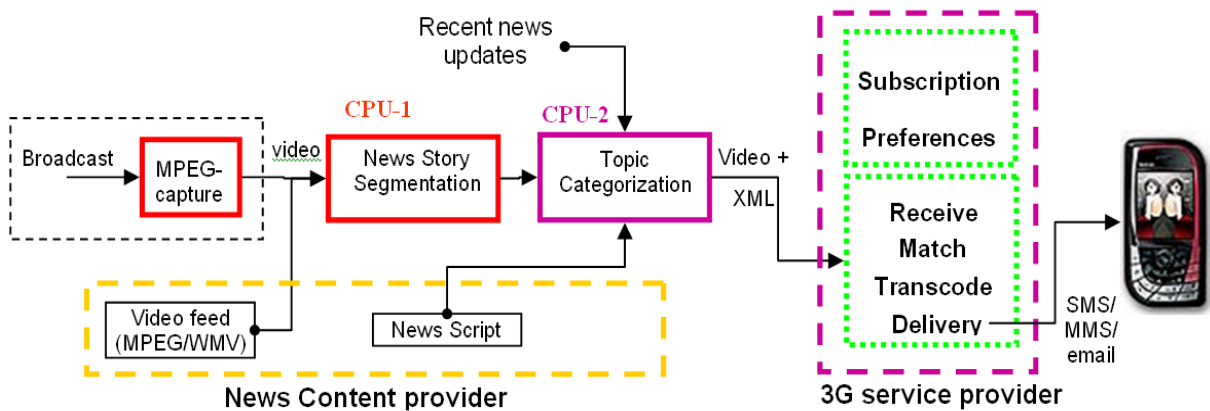
Introduction

Premium news content is expected to be a key enabler for 3G and Digital Video Recorder (DVR) applications. A news broadcast bulletin usually contains a collection of varied stories (each ~2 min long). To facilitate personalization and repurposing, the challenge is to automatically segment each of these story units and to categorize them into topics using news text-script, close caption and speech recognition.

Benefits

- Automatic segmentation of news story units
- Personalization by matching news content with user preferences
- Repurposing of news content for:
 - Audio/visual 3G news alert
 - DVR browsing and search

System Architecture



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
- Topic categorization using text document analysis
- Alignment of video with news scripts

Results and Demonstrations

- Experiments on local broadcast news:
 - 95% accuracy in isolating news segment from commercial interval
 - 90% in isolating individual news story units
 - 90% in aligning video with news script
- Live demonstrations available online and at STARhome