

Demo: Applications of Document Analysis on Camera Phone

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Abstract

Camera phones have penetrated every corner of society. The combined image acquisition, processing, storage and communication capabilities in mobile phones have rekindled researchers' interests in applying pattern recognition and computer vision algorithms on camera phones in the pursuit of new mobile applications. This demonstration will highlight recent research on camera phone applications which enable a camera phone to:

- *Read barcodes (1D, 2D and video barcodes)*
- *Retrieve document from a one snapshot*
- *Recognize currency for the visually impaired*

We have addressed many of the challenges encountered in implementing vision and recognition algorithms on light-weight systems with embedded cameras. Often solutions require a fundamentally different approach than traditional document analysis techniques.

¹Applied Media Analysis (AMA) Inc. is the leading provider of Mobile vision solutions for a variety of vertical and consumer markets that include healthcare, defense and consumers. Based upon our patent-ready mobile vision technology, a computer vision technology which allows camera-enabled handheld devices, such as PDAs and Smartphones, to read and see, AMA products turn users' camera phones into personal data scanners. By leveraging the convergence of sensor, processing and networking capabilities on commodity hardware, MobileVision creates an opportunity to build applications which link the existing physical world - traditionally processed primarily by the human visual system or dedicated hardware - to mobile content. In its rudimentary form, this platform enables devices to recognize barcodes and other language characters, such as the information printed on a business card.