

MDRPA: Mobile Imaging, Rosetta Phone, and Light-Weight Visual Analytics for In-Field Analytics

- Personnel: Mireille Boutin
- External Partners: Next Wave Systems
- Goal - Enable an individual with no prior knowledge of a foreign languages to translate foreign text, in real time, with no network connection
- Approach:
 - Develop real-time, light-weight software
 - Deploy on commercially available, hand-held devices equipped with built-in cameras
 - Network connection not needed
 - Challenges: computational and memory limitations, built-in camera with low light and heavy noise



Acquire Image

Text Area Selection

Text Recognition

Translation

Display Translation

رحیم یار خان

Transliteration: Rahim Yaar Khan
Translation: Rahim Yaar Khan
Context: Town name
Spoken text in original language and English translation of text

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Outcomes

- Developed a recognition methodology for languages in various character sets
- Focused on text found in road signs and documents
- Development platforms: Nokia N900, iPhone
- Extend the functionality to European languages and to documents
 - Deliver a set of light-weight tools for domain specific Spanish word recognition
 - Evaluate the performance of these tools

