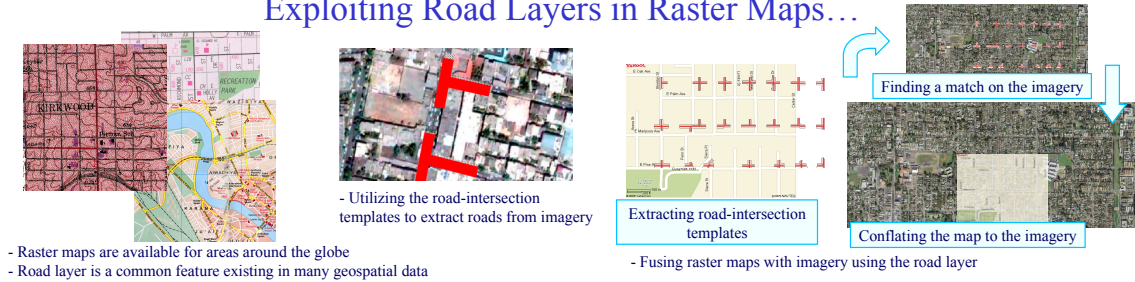


A Method for Automatically Extracting Road Layers from Raster Maps

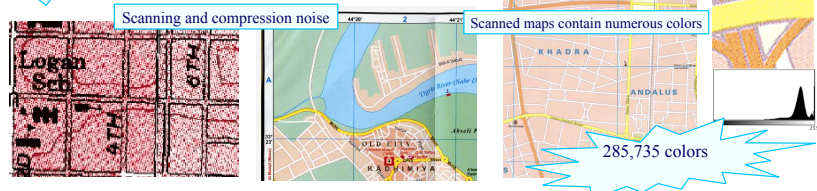
Yao-Yi Chiang and Craig A. Knoblock

Exploiting Road Layers in Raster Maps...

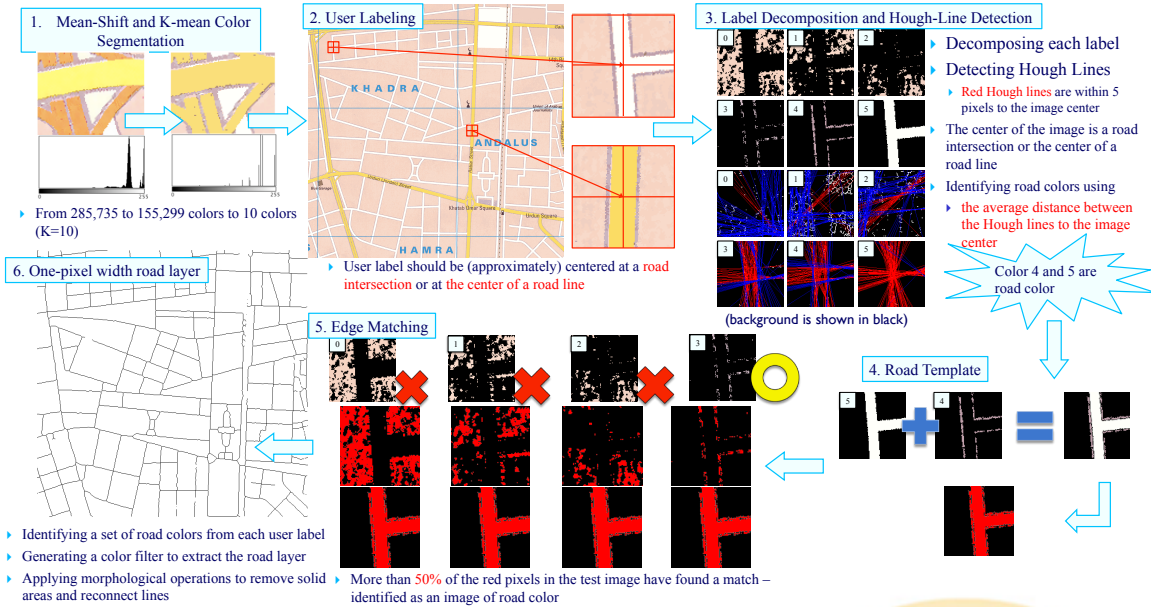


Difficulties for Extracting Road Layers from Raster Maps

- Maps are complex
- Poor image quality
- Lack of metadata



Approach for Extracting Road Layers from Raster Maps



Experimental Results

- We successfully extracted the road layers from all 100 maps
- The average computation time per map was below 5 seconds
- The three sets of scanned maps were cropped from three scanned maps (350dpi) from Gizi Maps, Gecko Maps, and International Travel Maps

Map Set	Map Count	Avg. User Labels	Avg. Computation Time (s.)
1. USGS topo. maps	19	1.5	1.5
2. USGS topo. maps	5	1.6	1.2
3. USGS topo. maps	6	1.8	1.8
4. Scanned maps	12	2.7	2.7
5. Scanned maps	18	2.1	3.3
6. Scanned maps	30	2.6	4.2
7. Rand McNally maps	10	3.9	2.4

