**CONTACT SHEETS: SEARCHING UNTAGGED IMAGES ON SMARTPHONES**

(*CMU, ^Rice University)

**PROBLEM**

How do we do  
▪ real time  
▪ mobile device  
▪ image search  
while conserving:  
▪ energy  
▪ bandwidth

**EVALUATION**

▪ Vision and image processing black boxes  
▪ Test performance on fidelity reduced inputs  
▪ Dataset size of 12,963 images  
▪ Varied  
  ▪ Size in resolution  
  ▪ JPEG Quality Factor

**SOLUTION STRATEGY**

We focus on a cloud-based approach to opportunistic, near real-time search of untagged images on smartphones that is sensitive to bandwidth and energy constraints.  
▪ Fidelity Reduced virtual contact sheets  
▪ Just-in-time retrieval of full fidelity images

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**Average JPEG Size**

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<th>Resolution</th>
<th>Full</th>
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<th>90</th>
<th>75</th>
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