

Epitome – A Social Game for Photo Album Summarization

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Motivation

- Number of photos taken in our daily life is increased
- **Social networks** – friends, family and colleagues can access **shared photos**
- Use **photos to tell story** of some important events in the life
- **Summarization** – get a quick overview of a set of photos

Why game?

- **Gaming** provides a new way of motivating people to make the subjective data acquisition interesting and enjoyable
- Humans are best at solving some types of problems
- Humans like to play games
- Build a game that is:
 - **enjoyable, pleasant, funny**
 - solves a hard problem
 - **collects research data**
- The **goal** is to see whether showing a reduced set of images is enough to summarize a large number of images in one album
- Game concentrates on small tasks: **selection of the most representative photo** of a reduced set of images and **partitioning** of the reduced set into two distinct parts



Method

"Select the Best!" game

Entire Facebook album

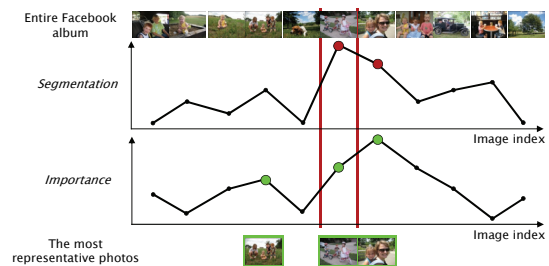
P1	BestCount	0	0	0	0	0	0	1	0	0	0	0	0	0
l2	BestCount	0	0	0	0	0	0	1	1	0	0	0	0	0
y3	BestCount	0	0	0	0	0	0	1	1	0	0	1	0	0
e...	BestCount	1	0	1	2	0	2	4	2	1	0	1	0	1
s...	BestFreq	5	6	6	9	9	10	10	9	8	7	6	6	6
	Importance = $\frac{\text{BestCount}}{\text{BestFreq}}$	0.2	0	0.17	0.22	0	0.2	0.4	0.22	0.12	0	0.17	0	0.17



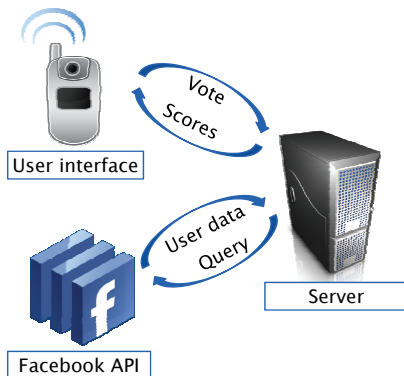
"Split it!" game

Entire Facebook album

P1	SegmCount	0	0	0	0	0	1	0	0	0	0	0	0	0
l2	SegmCount	0	0	0	1	0	1	0	0	0	0	0	0	0
y3	SegmCount	0	0	0	1	0	1	0	0	0	0	1	0	0
e...	SegmCount	0	1	0	1	0	4	3	2	1	2	0	0	0
s...	SegmFreq	5	6	6	9	9	10	10	9	8	7	6	6	6
	Segmentation = $\frac{\text{SegmCount}}{\text{SegmFreq}}$	0	0.17	0	0.11	0	0.4	0.3	0.22	0.12	0.33	0	0	0



System overview



Screenshots



Contact

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Dataset

– "HP Challenge 2010: High Impact Visual Communication":



Results

Finalist for ACM Multimedia 2010 Grand Challenge

– The distribution of the participants' performance

