

Media Content Metadata & Mobile Picture Sharing

Risto Sarvas

Mobile Content Communities

MC²

Helsinki Institute for Information Technology
(HIIT)

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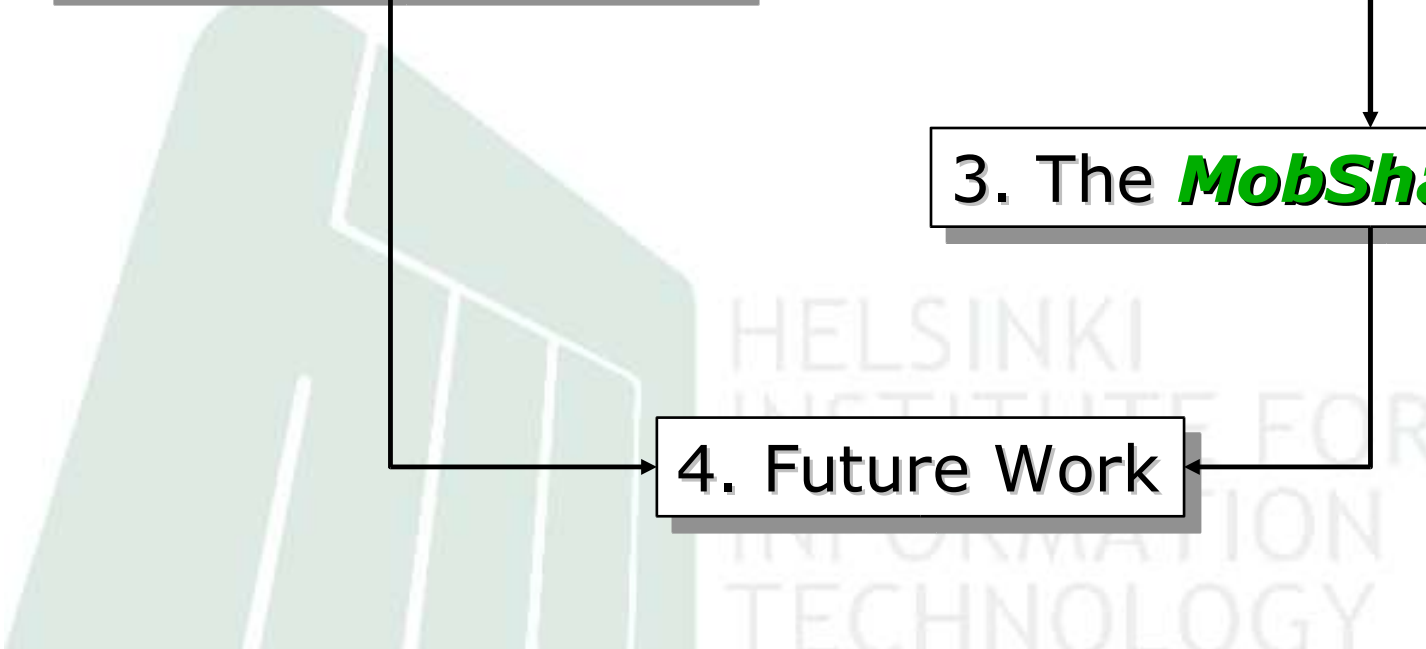
Overview

1. Introduction
Metadata & **Mobile Media**

2. The **MMM** system

3. The **MobShare** system

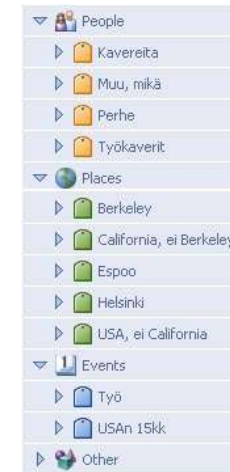
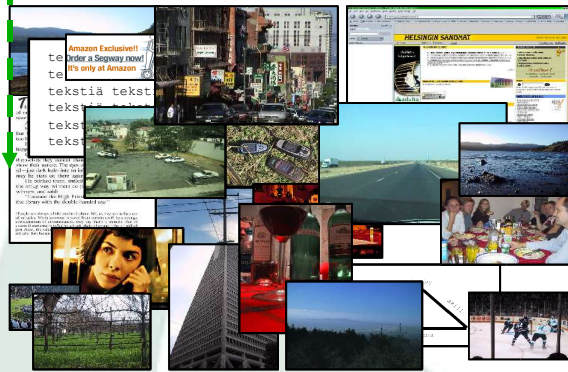
4. Future Work



Introduction

The Media Management Problem:

How to manage the vast amount of personal media we create and share?



Media Content Metadata:

Information about the media's content in a computer-readable form (*who, where, what, when*).

Introduction



+



media recording
+
communication



- Media Recording (pictures, video, sound)
- Context Information (time, location, other devices)
- Metadata Annotation (advanced UIs)
- Network Connectivity (Bluetooth, GPRS)
- Programmability (J2ME, C++, Python)
- Familiar device, social device, always present...

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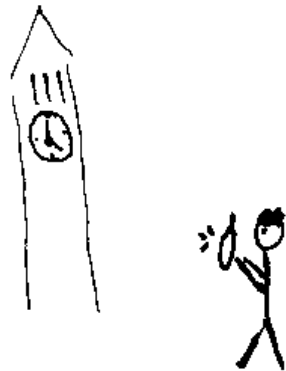
MMM system

Mobile Media Metadata = *MMM*

- How to create content metadata at **time of capture**?
- How to take advantage of **mobile phone** characteristics?
- How to create **semantically rich** metadata?
 - How to take advantage of **human** knowledge?
 - How to take advantage of **computing** power?

Use Case

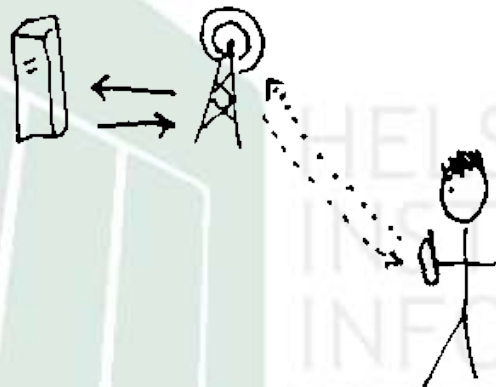
1.



2.



3.



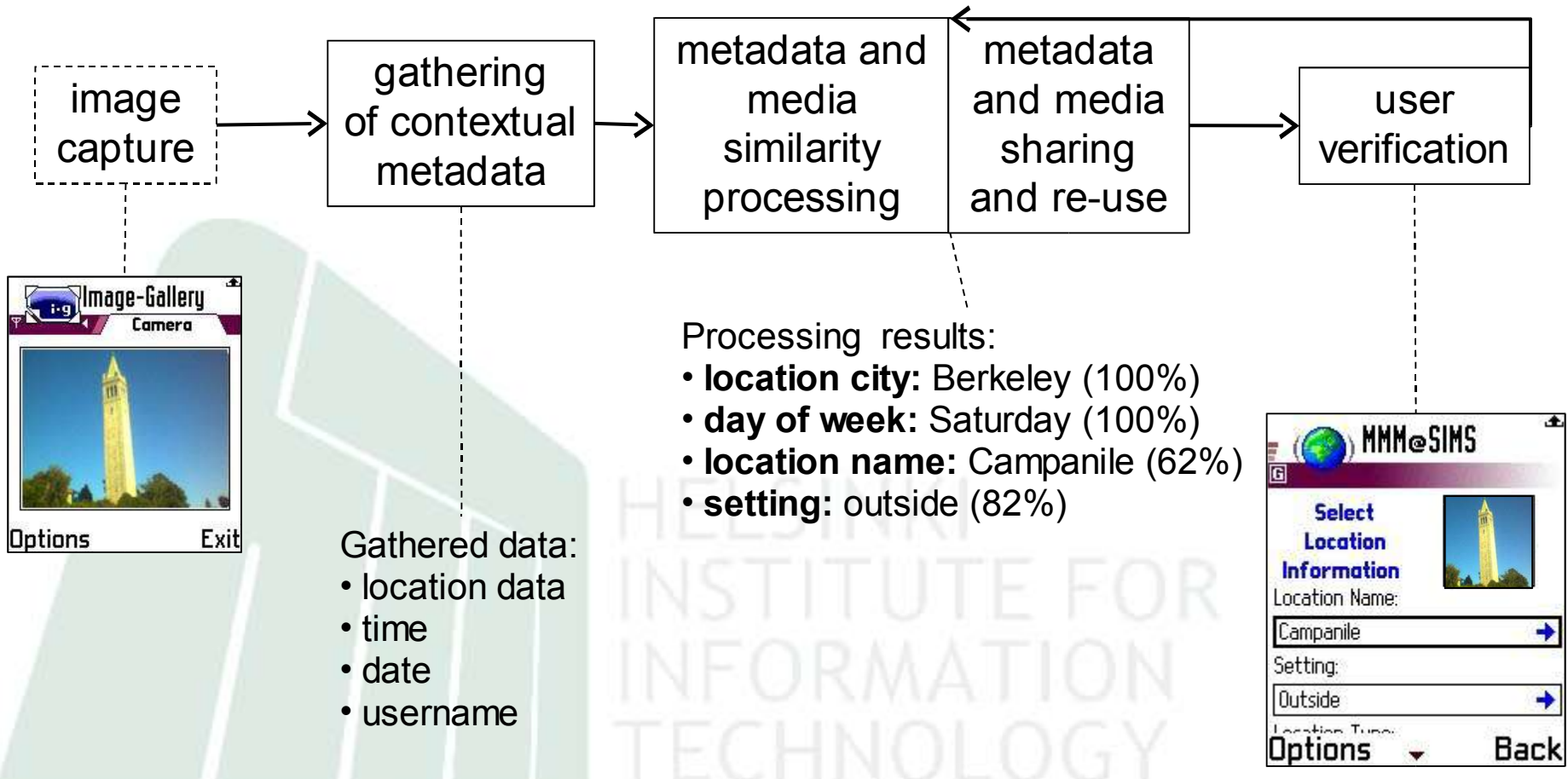
4.



Metadata Creation Process

Verified information:

- **location name:** Campanile (100%)
- **setting:** outside (100%)



- Gathered data:
- location data
 - time
 - date
 - username

Processing results:

- **location city:** Berkeley (100%)
- **day of week:** Saturday (100%)
- **location name:** Campanile (62%)
- **setting:** outside (82%)





mobshare

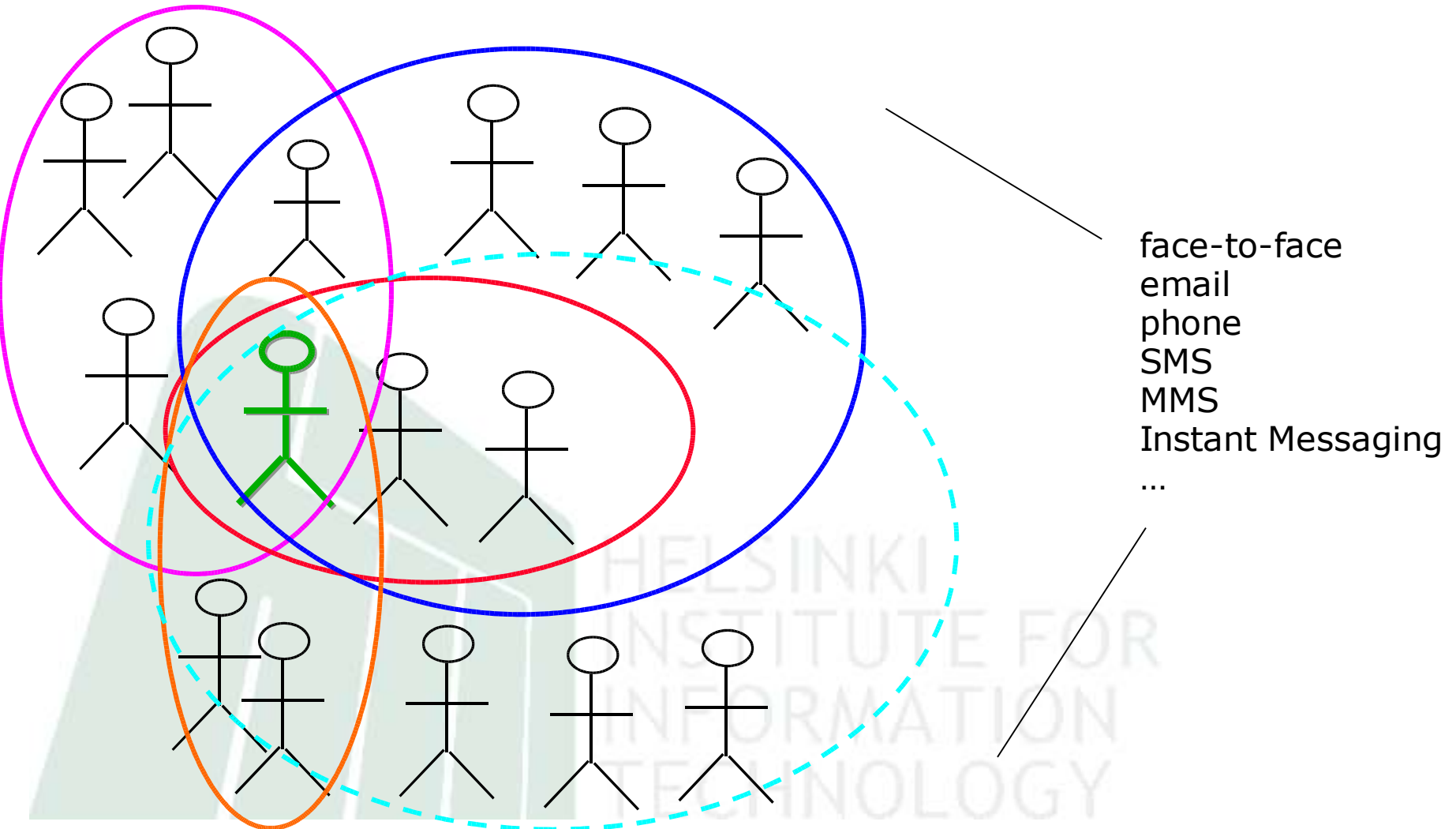
Share snapshots just with your friends

What is mobile imaging?

- **What** kind of pictures people take with mobile phones?
- **When** and **where** people take mobile phone pictures?
- With whom people want to **share** pictures?
- How are **mobile phones** special?
- Is this **picture-taking** or **communication**?

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communication inside groups such as
friends, families, colleagues, hobbyists...

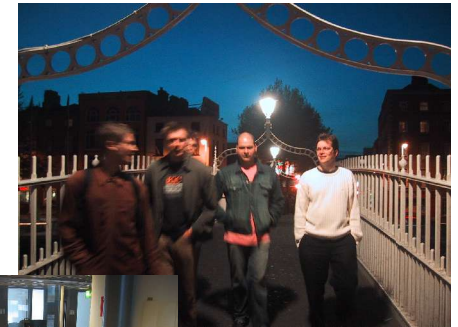


picture-taking in group communication, identity, entertainment, social intercourse, memorabilia

friends,

family,

colleagues...



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New Images Viewed Gallery selection mode: Single Multi

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 **lokakuu 2004** 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

risto Savonlinna Mörse Picnic Prediction Lara Inbo Testihlöt

mikko Maraton

hanno Lomapurjehdus Purjehdus Otteita elämästä Päiväkirja

juha Hylkypuisto

Soija Mörse

Hege Mini Holland

Eija

immediate sharing

organized sharing

Basic view Hourly view Daily view Weekly view Monthly view If you do not see all the images, click here

risto Matti goes - Add image Browse... Edit gallery Download pictures

Shared with: Kai, Hege, fernando, Antti Salovaara, Janne, marko, Antti O työ,
 Edited by: Hege, risto, marko,

controlled sharing

Gallery: Matti goes

nimi: risto kommentti: Lisää

marko: Is it a mod when you play Settlers as a team game? (16.8.2004)
 Poista
 marko: Nice session! I hope Matti enjoyed it too. (16.8.2004) Poista

discussions

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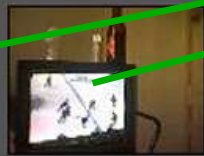


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30.4.2004 klo 18:00



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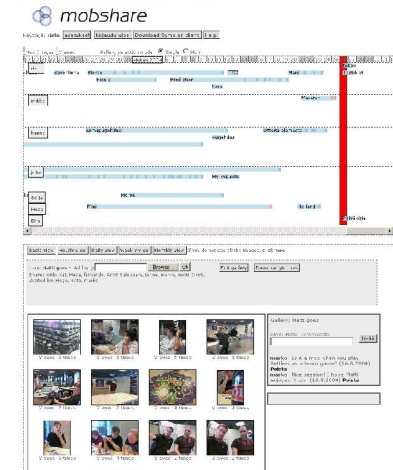
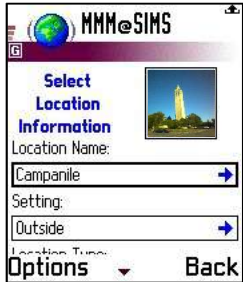
combination
&
comparison

photography as
collaborative

- storytelling
- remembering
- socializing

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Future Work: Combining Lessons Learned



Media Metadata in Sharing Pictures

- More efficient searching and browsing.
- How to visualize all the information?
- Novel uses for media: tools for publishing, storytelling...

Sharing Pictures and generating Media Metadata

- Leveraging social metadata (shared with whom, how often...)
- Inferencing information from other sources (e.g., discussions)
- What information is **relevant** to the user?

Thank You!

`risto.sarvas@hiit.fi`

`www.hiit.fi/risto.sarvas/`



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