Distributed Synchronous Applications

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Mobile phone subscribers per 100 inhabitants 1997-2007 in the Developed World

- Ling & Yttri
- Grinter & Eldridge
- Taylor & Harper
- Heyer & Brereton
- Grinter, Palen, & Eldridge

Data adapted from http://upload.wikimedia.org
Context
Early Work (Ling and Yttri 1999)

• Context
• Study
  – Interviewed: Teens (14 to 18), young adults (19 to 27), parents (2 career families), older users
• Micro coordination
  – Instrumental use of mobile to coordinate everyday activities (all except older users)
• Hyper coordination
  – Micro coordination + expressive use (teens)
Why teens?

“This is perhaps the only time in our lives when friends come fully to center stage, transcending all other relationships in immediate importance ...”

- Rubin (1985)
Findings and Future Directions

<table>
<thead>
<tr>
<th></th>
<th>Instrumental</th>
<th>Secondary</th>
<th>Remote</th>
<th>3rd party information</th>
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<td>Social interaction</td>
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(Ling and Yttri, 1999)
Laying the foundation of SMS
(Grinter and Eldridge 2003)

• Studies the content and character of SMS, how often and with who

• Study (2000)
  – 5 girls, 5 boys, aged 15 -16, in UK
  – Some shared their phone while most owned, 2 on contract while rest had pay as you go
  – Teens logged incoming and outgoing messages

• Teens do not have many simultaneous multiple conversations via SMS

• End most SMS by switching to another medium

• Contrast with Ling: teens communicate with few friends via SMS
Findings

(Grinter and Eldridge 2003)
Expression through SMS: Gift Giving
(Taylor and Harper 2002)

• Study
  – 4 month long ethnographic study
  – 2 boys and 4 girls, aged 16 to 19
  – interviewed 2 times a week for 8 weeks

• Certain text messages, call credit and mobile phones are treated as gifts

• Teens use aspects of gift giving: give, accept, reciprocate to demonstrate friendship or rivalries
Meaning of a Gift

“It is through the offering of the gift – the ritual exchange – that the gift takes on its meaning”

(Taylor and Harper 2002)
Future Directions

• A memory solution that further enhances the association between the physical object and symbolic meaning

• Memory cards

• Objects of exchange can be shared and swapped in practical ways that support gift giving

(Taylor and Harper 2002)
Multichannel communication
(Heyer and Brereton 2006)

- The channel shapes the message itself

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<th>Characteristics</th>
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<th>IM</th>
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<td>free</td>
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<tr>
<td>frequency</td>
<td>immediate and direct</td>
<td>depends on log in to computer</td>
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<td>interruption</td>
<td>high</td>
<td>low</td>
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<td>typing</td>
<td>slow and tedious</td>
<td>fast</td>
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</tbody>
</table>
RHUB

- Web + IM + EMAIL + SMS + context awareness
- Form/join group, private/public message
- Instant and threaded discussion messages

Findings:
- Great for group communication: get message out
- Feeling of connectedness
- Receiving texts are enjoyable
- Unintended consequences: large number of SMS (phone holds 150 messages max), early in the morning

(Heyer and Brereton 2006)
## More on IM and SMS

*(Grinter, Palen, and Eldridge 2006)*

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<td>homework</td>
<td>quick request</td>
<td>broader discussion</td>
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<tr>
<td>coordination</td>
<td>micro coordinate where context is already known</td>
<td>initial establishment of plan</td>
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Consensus in Research

• Teens use SMS to micro coordinate
• Teens communicate with their peers
• SMS helps teens to establish a sense of independence
• The continuous presence of mobiles makes teens more available to each other
• Financial considerations is a factor in the initial adoption and continued use of SMS

(Grinter, Palen, and Eldridge 2006)
Future Outlook

• Ling and Yttri: access to databases and games

• Taylor and Harper: enhanced memory solution that supports ritual gift exchange
What next?

Location based SMS

Loopt

http://www.loopt.com/blog/2010/12/ping/
Discussion

• Do you think that the usage of IM and SMS has changed since early 2000?

• What is next for IM and SMS?