Online Everywhere: Evolving Mobile Instant Messaging Practice

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Online Everywhere: Evolving Mobile Instant Messaging Practice

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Introduction

• This work:
  • Results of an online user survey
  • 447 mobile instant messaging users
  • Focused on status setting behavior

• Research Agenda:
  • Build better tools to support communication of mobile context
Introduction

- What is “status”?
- A manually entered short message
- Native to Instant Messaging
- One message to all buddies
Introduction

- What is “status”?
- A manually entered short message
- Native to Instant Messaging
- One message to all buddies
Outline

• Methodology
• Results
  • Interruption Management
  • Custom Status Messages
  • The Dark Side
• Conclusions
• Methodology
• Results
  • Interruption Management
  • Custom Status Messages
  • The Dark Side
• Conclusions
Methodology

- Conducted an online user survey on:
  - “Demographics”
  - “Mobile Computer Usage”
  - “Instant Messenger Usage”
  - “Instant Messenger Interruptions”
  - “Managing Interruptions”
  - “Mobility”
Methodology

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53 Total Questions
Methodology

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  - “Managing Interruptions”
  - “Mobility”
- Two-pass coding
- Statistical analysis

53 Total Questions
Methodology

604 People Started
447 People Eligible
Methodology

384 People Finished
Methodology

86% Completion Rate
Methodology

86% Completion Rate

23 min to complete
Methodology

- Participants were predominantly in California
- "Mobility" = Mobile Laptop Users
- > 85% used their device while on-the-go
- No evidence of cell-phone IM
Methodology

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• Conclusions
• 92% reported being interrupted by IM
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• Are mobile interruptions a problem?
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• 25% had seen a presentation interrupted by IM
• 92% reported being interrupted by IM
• Are mobile interruptions a problem?
  • 25% had seen a presentation interrupted by IM
  • 5% had had their presentation interrupted by IM
Interruption Management - Recipient

• 92% reported being interrupted by IM
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• Have you received an embarrassing IM?
• 92% reported being interrupted by IM

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• Have you received an embarrassing IM?
  • 78% had received one!
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  - 78% had received one!
  - 80% had been around to see one!
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Are mobile interruptions a problem?
25% had seen a presentation interrupted by IM
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Have you received an embarrassing IM?
78% had received one!
80% had been around to see one!

“It contained bad language and I was around my family”
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“a surprise birthday party invitation and the person whose birthday it was was standing right next to me”
Interruption Management - Recipient

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“Are you still in the meeting with those losers?’ popped up on the screen while i was; in fact; still in the meeting with those losers.”
Interruption Management - Recipient

- 92% reported being interrupted by IM
- Are mobile interruptions a problem?
  - 25% had seen a presentation interrupted by IM
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- Have you received an embarrassing IM?
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• Mobile interruptions are a problem:
  • 43% had specific strategies for managing interruptions
  • 15% indicated that they had quit using IM for an extended period
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**Managing Interruptions**

- Screen/Block Buddies
- Sensory Corral
- Fake Status
- Deactivate IM
Mobile interruptions are a problem:

- 43% had specific strategies for managing interruptions
- 15% indicated that they had quit using IM for an extended period
• What was the reason for the last IM?
• What was the reason for the last IM?

“just catching up”
“I hadn’t spoken with them in a while”
“just wanted to say hi”
• What was the reason for the last IM?

“making dinner plans”
“coordinating airport pickup”
“transportation discussion”
• What was the reason for the last IM?

“just bored”
“I was encrypting files; which involves long gaps of waiting so I wanted a bit of a diversion”
Interruption Management - Initiator

- What was the reason for the last IM?

“check to see if some mail of mine arrived”
“Let her know info about Mom”
• What was the reason for the last IM?

“Question about class.”
“advice on fixing a laptop”
• What was the reason for the last IM?
• 18% of responses included “just”
• 77% of the responses appeared flexible
• Could have been delayed.
• Could have asked someone else
Interruption Management - Initiator

- 90% report being aware of their own status
- 92% indicated they had received messages when indicating “busy”
- 89% report being aware of buddy status
- 93% indicated they would IM even when buddies were busy
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What is going on here?
Interruption Management - Initiator

- 90% report being aware of their own status
- 92% indicated they had received messages when indicating “busy”
- 89% report being aware of buddy status
- 93% indicated they would IM even when buddies were busy

What is going on here?

“I may attend to the ‘idle/active’ flag; as it’s a more reliable indicator of presence at the keyboard; but even then I often just leave a message to be read later.”
Interruption Management - Summary

• Initiator
  • “Busy” is interpreted as “don’t expect a fast reply”
  • 77% of IM’s don’t have to be sent immediately

• Recipients:
  • Interruptions through mobile IM are a problem
    • disrupting
    • causing embarrassment
  • People strategize on how to manage mobile IM interruptions
  • Those strategies sometimes require abandoning IM
• Social Frictions in Mobile IM
  • A personal computer isn’t private any more
  • A virtual desktop isn’t a place anymore
  • The assumption that a buddy is flexible isn’t as appropriate
• This is consistent with a mental model of a desktop to desktop communication
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Custom Status in IM

• What were people putting in their custom status lines?
Custom Status in IM

- What were people putting in their custom status lines?

"baking"
(so friends can know I’m available but busy)
Custom Status in IM

- What were people putting in their custom status lines?

“never regret something that once made you smile”
(express my emotions/thoughts at the time)
• What were people putting in their custom status lines?

“i'm at work until 9:00pm. call me if you need me.”
(to let my friends know what i'm doing)
What were people putting in their custom status lines?

“my hobby is people; i glue seashells on them”
(its funny; duh)
Custom Status in IM

- What were people putting in their custom status lines?

“`At work.`”
(Because it is not there in the drop down list.)
Custom Status in IM

- Hypothetical Context-Aware Status Lines

<table>
<thead>
<tr>
<th>Status Line</th>
<th>Num. of People Who Wouldn't Pick it</th>
</tr>
</thead>
<tbody>
<tr>
<td>In seat 22, Langson Library, UCI campus</td>
<td>17</td>
</tr>
<tr>
<td>At Langson Library, UCI campus</td>
<td>39</td>
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- % Companions
  - 0%
  - 25%
  - 50%
  - 75%
  - 100%

- Comfort Level
  - Uncomfortable
  - Comfortable
Custom Status in IM

- Hypothetical Context-Aware Status Lines

- In seat 22, Langson Library, UCI campus
  - At Langson Library, UCI campus
  - At UCI
  - On campus
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- Doing homework
- Working
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![Bar chart showing Comfort levels]

Num. of People Who Wouldn't Pick it

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Custom Status in IM

• Hypothetical Context-Aware Status Lines

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Uncomfortable | Comfortable
• Hypothetical Context-Aware Status Lines

![Bar chart showing comfort levels for different statuses]

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- Comfortable
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Custom Status in IM

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Num. of People Who Wouldn't Pick it

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Comfortable

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50%
75%
100%

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Custom Status in IM

- Hypothetical Context-Aware Status Lines

- People choose the most appropriate status line

- Previous place/activity custom status were consistent
Custom Status in IM - Analysis

- People want to reveal appropriate information
- People want to reveal an interpretation of sensors, not the raw data
- Custom Status Messages look like the merger of:
  - Place disclosure
  - Activity disclosure
  - Interruptibility disclosure
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• 5% had “bad” experiences with revealing location
The Dark Side of Mobile IM

- 5% had “bad” experiences with revealing location

“somehow I forgot to tell my mom that I was leaving [a city in the Americas] to travel to a small village in the Atacama desert for a week. When I came online she was not exactly thrilled with where I was.”
The Dark Side of Mobile IM

• 5% had “bad” experiences with revealing location

“My wife was upset when she knew I was at home instead of at school”
5% had “bad” experiences with revealing location

“Studying at a location and friends came over and were distracting me”
The Dark Side of Mobile IM

- 5% had “bad” experiences with revealing location

- 1% reported physically threatening scenarios
  - Threatened through IM then noticed their location was revealed on the status line
The Dark Side of Mobile IM

- Mobile IM is not one big happy social network
- 14% reporting feeling obligated to use mobile IM
- Feelings of obligation positively correlate with
  - Being in a committed personal relationship
  - Being male
  - Using mobile IM weekly rather than daily
  - Being interrupted in a presentation
  - Receiving embarrassing IMs
The Dark Side of Mobile IM - Analysis

- We see two mobile IM personas
  - 1) Daily IMs, to friends, lots of custom messages which invite social contact
  - 2) Would just assume stop using IM, doesn’t talk to friends, occasional user, lots of bad IM experiences

- Design implications:
  - Don’t automatically reveal context
  - Don’t assume all of your users are happily crafting a digital social space
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Conclusion

• We conducted a 447 user survey about the state of mobile instant messaging

• IM is evolving

  • Evolution is causing frictions as people adapt to
    • less private displays
    • less confidence about where a buddy’s computer is
    • more risk to multi-tasking when receive an IM

• There are lots of opportunities for automating and improving the user experience with context-aware status