Distributed Synchronous Applications

Yin He 2013

Table of Contents

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

2
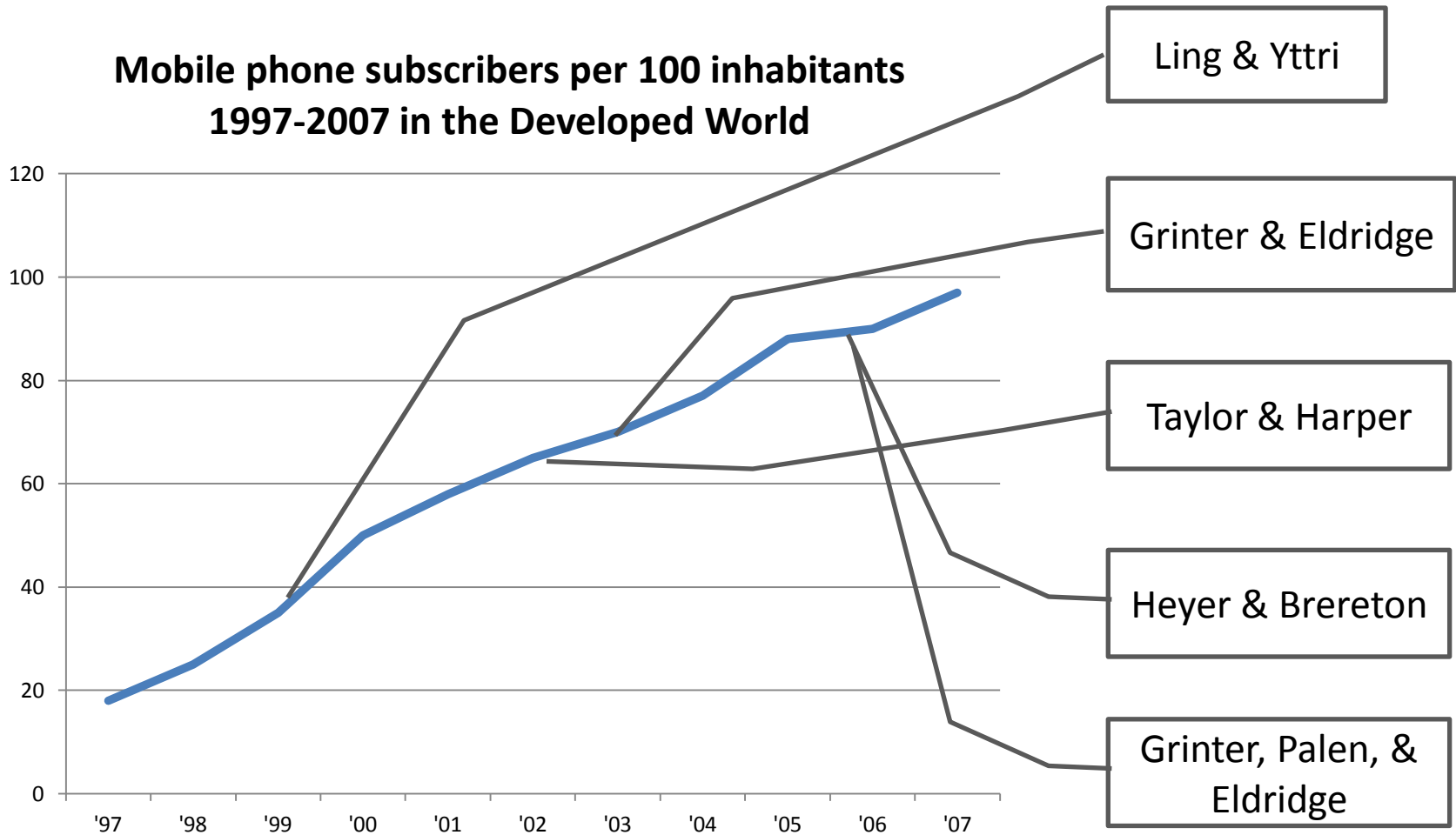
Context

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)

(Ling and Yttri, 1999)

Findings and Future Directions

	Intimate/Primary	Secondary	Remote
Instrumental	Security Coordination	Coordination	Security Coordination
Expressive	Social interaction	Social interaction	

	Intimate/Primary	Secondary	Remote	3rd party information
Instrumental	Security Coordination	Coordination	Security Coordination	Coordination
Expressive	Social interaction Gaming	Social interaction Gaming	Social interaction Gaming	Gaming

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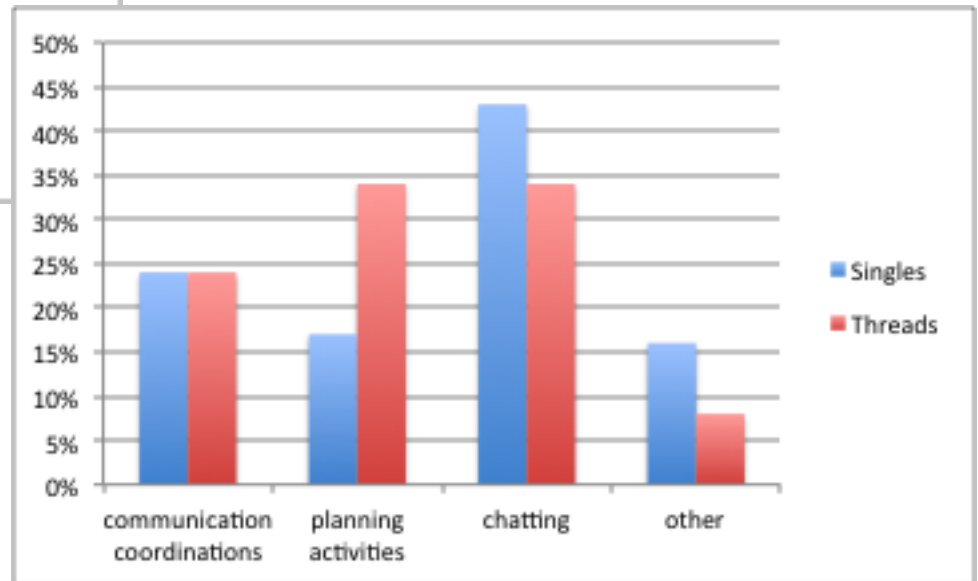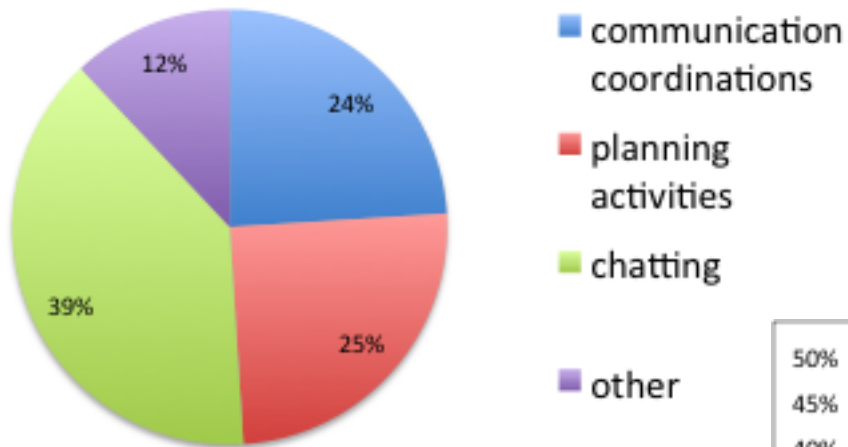
Expression through SMS: Gift Giving
(Taylor and Harper 2002)

- 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

Characteristics	SMS	IM
general	synchronous	synchronous/asynchronous
	direct	direct
	informal	informal
	$	free
frequency	immediate and direct	depends on log in to computer
interruption	high	low
independence / privacy	high	varies
typing	slow and tedious	fast

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)

Characteristics	SMS	IM
general	synchronous	synchronous/asynchronous
	direct	direct
	informal	informal
	$	free
frequency	immediate and direct	depends on log in to computer
interruption	high	low
Independence/ privacy	high	varies
typing	slow and tedious	fast
homework	quick request	broader discussion
coordination	micro coordinate where context is already known	initial establishment of plan

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?