How Mobile Disrupts Social as we know it

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Lab affiliates: AVG, Google, ING Direct, Nokia, Samsung.
Part of NSF Programmable Open Mobile Internet (POMI) 2020 project.
Centralized Cloud Services

Proprietary Social Network

Social Intranet vs Social Internet
Centralized Cloud Services

Proprietary Social Network

Proprietary App Platform

Zynga Dependency on Facebook

That reliance has raised investor concerns: In July, Facebook instituted a virtual payment system dubbed Facebook Credits, under which the social network takes a 30% cut of all game-developer revenue. The system has affected Zynga, which experienced a 95% drop in its profits last quarter.
Centralized Cloud Services

Proprietary Social Network

Proprietary App Platform

Proprietary Messaging

Social messaging apps 'lost networks $13.9bn in 2011'

Social messaging applications cost mobile network operators $13.9bn (£8.8bn) in lost SMS revenue last year, a report has claimed.

Analysis firm Ovum studied global use of popular services like Whatsapp, Blackberry Messenger and Facebook chat.

It concluded that mobile operators must “work together to face the challenge from major internet players”.

Industry experts say operators can offset any losses through effective costing plans by mobile networks.

Social messaging costs remain the same - even for messages sent globally.
Centralized Cloud Services

Proprietary Social Network Proprietary App Platform Proprietary Messaging

The Apple / Google / Facebook Message War Starts Now

JOSH CONSTINE

Monday, July 2nd, 2012

We're on the cusp of a global conflict that will see the three most powerful consumer Internet companies fighting to win control of interpersonal communication. The war will pit Facebook's unified Chat / Messages / Email vs Apple's cross-device iMessage system vs. Google's Gmail / GChat / Hangouts. If one emerges as the definitive victor, it could sway the future of digital human interaction.
Must inter-operate across people regardless of privacy concerns.

Need a new experience, not a subset!
Mobile Can Disrupt

Better than centralized cloud services!

✦ More available
✦ Largest social network
✦ My phone book has all my friends in it!
The Phone’s Social Network

Phone/Email

Friends in a Party
Open Social Mobile (OSM) Messaging-Based Network

OSM delivers messages based on user identities. Leverages personal phones & abundant cloud providers.

[WWW 2012]
The Big Picture

Proprietary Social Network

Proprietary App Platform

Proprietary Messaging

Open Social Network

Open App Platform

Open Messaging

PRIVACY MONOPOLY SCALABILITY

But kids don’t care.
Distributed OS & File Systems

- Administration
- Accounts
- Authentication
- Access control
- Protocols
- Multiple devices
- Consistency
- Real-time update
- Data caching

AFS, Coda, ...

Better experience

- Cross platform
- Adoption
- Usability
- Programmability
A Better Mobile Social Experience

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Facebook “offers a gateway for hundreds of shallow relationships and emotionally detached communication”.


“They Are Happier and Having Better Lives than I Am”: The Impact of Using Facebook on Perceptions of Others' Lives

Genuine Social

Groups
- persistent
- on-the-spot
- no strings attached

Real-time

Creative

Collaborative
Social collaboration must be A.F.A.P! (as frictionless as possible)

Metric: # of human synchronizations
Friction

“Could you take the same picture with our 4 cameras please?”
Download 2plus from the iPhone app store.

by MobiSocial, Inc. (spinoff from Stanford)
# Organizational Principle

<table>
<thead>
<tr>
<th>PC</th>
<th>Web</th>
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<tbody>
<tr>
<td>Files and Directories, Dropbox</td>
<td>Apps, Facebook connect</td>
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<table>
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<tr>
<th>Mobile / Social</th>
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<tr>
<td>Group chats, Open Social Mobile (OSM)</td>
<td></td>
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Social First: Groups First

✧ Persistent, ad hoc, on-the-spot
  ✧ 70% of email are sent to 20% of the recipient groups. [KDD SNA workshop 2011]

✧ Group chats as a first-class object
  ✧ On the phone for multiple uses
  ✧ Can be passed around

✧ Illustrate with use case examples ...
Sharing Instantly & Collaboratively
Adding group members as easy as adding email recipients
Directed Sharing in 1 Click

Collaborative real-time photo album

Contextual sharing

Contextual apps
From Capture to Recall

Joint folders based on group & sharing purpose

Chat is a transaction log of database updates.

Embedded blob pointers to distributed databases.
Simplest Collaboration

Monica

Katie

Katie

Congrats Katie!
Click-edit-return in 2 clicks
IN-App Sharing with Identity Firewall via 2+
### Open Social Mobile

<table>
<thead>
<tr>
<th>USERS</th>
<th>Frictionless multiparty interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Privacy honoring</td>
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</table>

| OSM Message Platform |

| APP DEVELOPERS | Social in 2 hours: no servers          |
|               | Contextual apps get more usage         |
|               | Viral spreading across friends          |
MobiSocial Inc.

- New-breed of social network technology company
  - Will not monetize users’ communication
  - No hidden agenda
- Goal: to build and leverage an OSM community
  - individuals, schools, companies, app developers, cloud service providers, device manufacturers, carriers
- Open competition will fulfill the promise of mobile
  - Free to socialize with anybody
  - More apps: Micro-interactions, education, fitness, finance
Easy to build OSM apps?
Migo High-school Project, 2012
7 High-school students, 2 freshmen
6 Weeks
5 Multi-party games

Noes game must be A.F.A.P.!
Programming Simplicity

Multi-party games is like Web pages
2+ chat

is like
browser
CS Stereotype

Nerdy

Not Creative

Solitary

No impact

Tedious

Exclusive
Hypothesis

- Break the stereotype
  - Pique the interest: Video concept competition for mobile/social apps
  - Tinker: mobile social apps
- Get them to take a CS class in college
  - Stanford: 90% of undergrads take a CS class; CS is the largest major
Open Social Mobile (OSM)

- Social 2.0: A phone-based social INTERnet
- Free to socialize with anybody
- Join the OSM community

Open competition rules!
Call to Action

- Publicize mobisocial video competition
  http://facebook.com/StanfordMobiSocial

- Join the OSM (open social mobile) community
  http://mobisocial.us

- Download 2plus
  http://get2pl.us