



The Confluence of Wi-Fi and Apps: What to Expect Next

Kevin Almeroth

University of California—Santa Barbara

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Two Take-Away Messages

1. An interesting area of research crosses boundaries between Computer Science, Sociology, Economics, and Business Development.
2. One of the key areas for future Internet growth is via always-on, everywhere-available wireless connectivity.
 - ...or at least being around others who might have interesting things to share

SURVEILLANCE



[Let the Creative Juices Flow...]

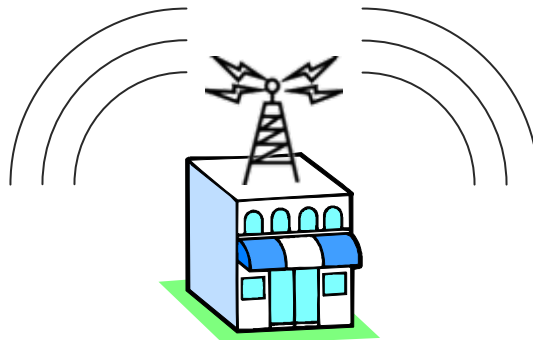
- In a world of almost pervasive access
 - Another key driver is “opportunistic contact”
- In a world where the Internet is evolving beyond the web (to web 2.0)
 - Another key driver is “social interaction”

[The Idea of Coupons]

- A “store” wants to advertise a “coupon”
 - Wants to reach more than just the people passing by
 - How to create an incentive mechanism?
- Users don’t want to forward “spam”
 - Or do they?
- A basic information dissemination problem
 - Technique: use “epidemic” broadcasts
 - Challenge to solve: need wide but efficient distribution

Coupons: The Basic Idea #1

- A “store” wants to advertise a “coupon”



Store

Basic Idea #2

- Users passing the store receive the broadcast



User A



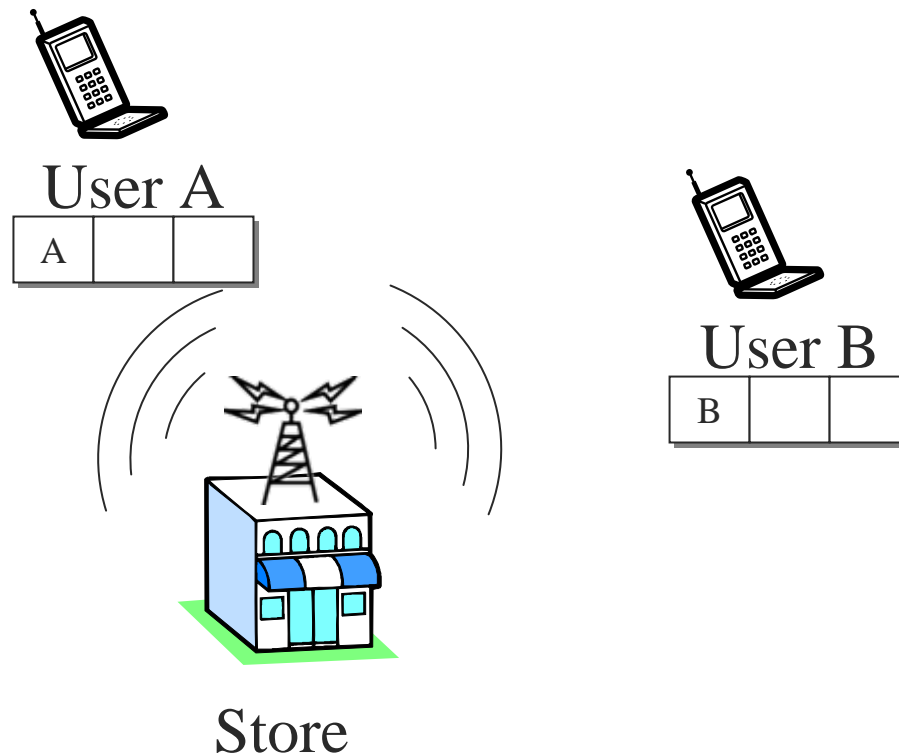
User B



Store

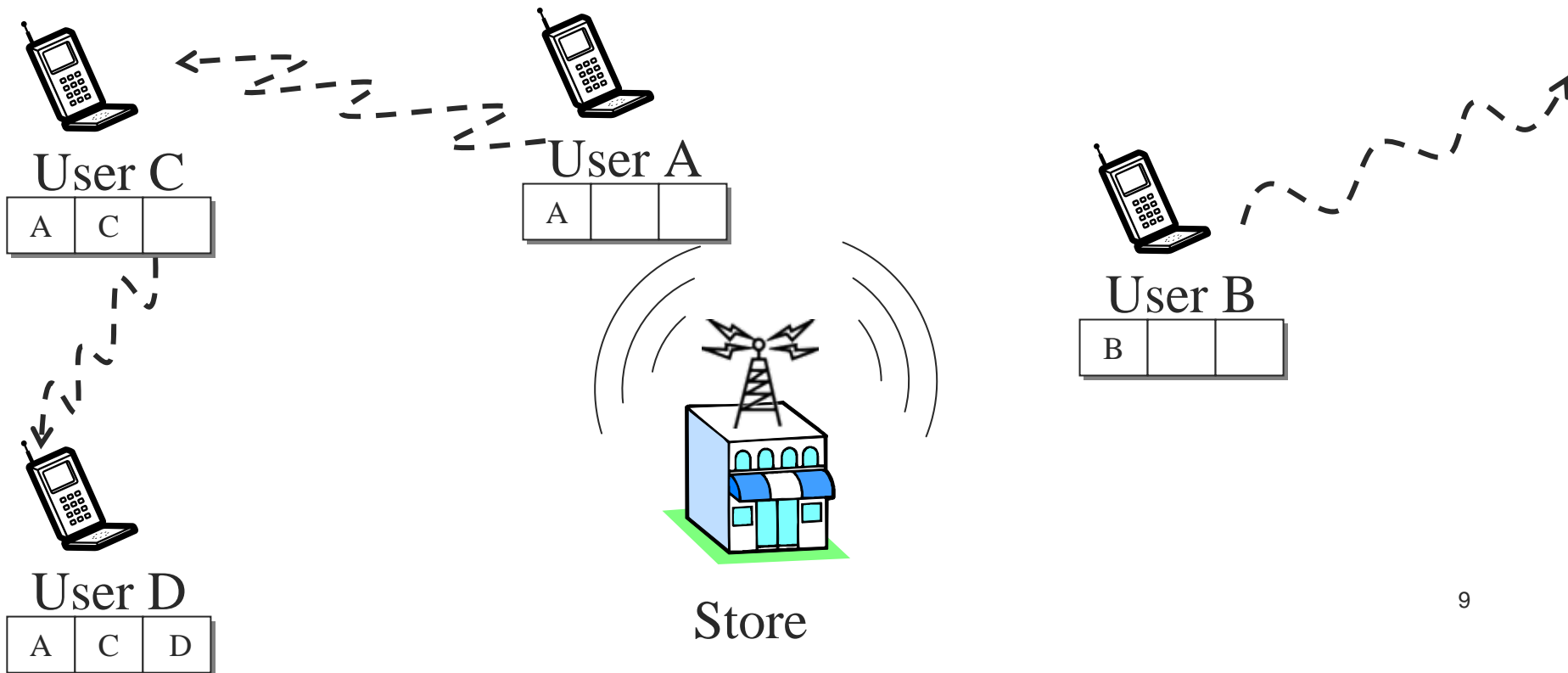
Basic Idea #3

- Users who receive the “coupon” add their ID to a linked list



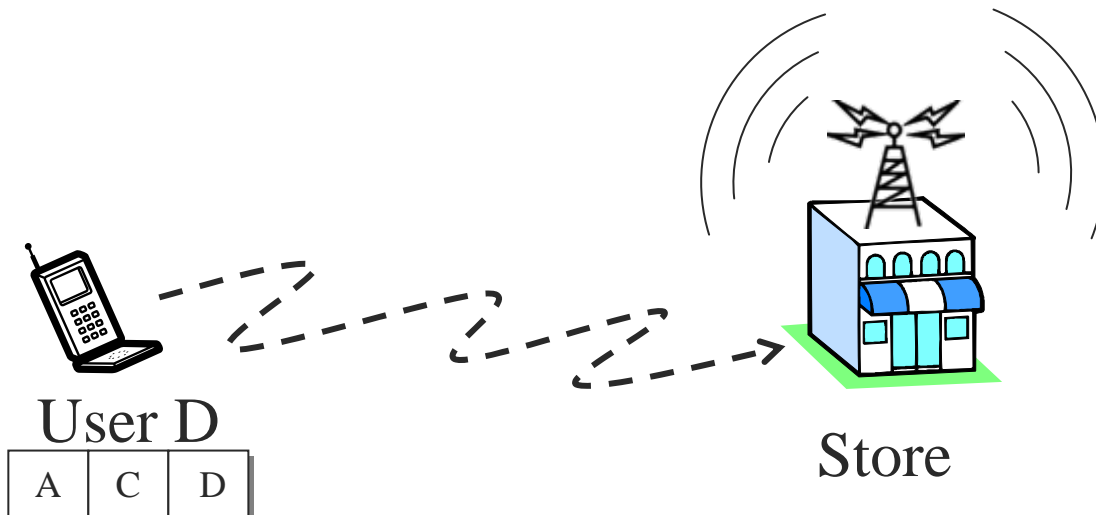
Basic Idea #4

- Users then move and “infect” other users, who also add their ID to the end of the list



Basic Idea #5

- At some point a user will return to the store and use the coupon



Basic Idea #6

- Discount is divided among list members
 - Option #1: equal discount for all
 - Option #2: constant discount, divided equally among all of the list members
 - Option #3: weighted division of discount



Store

Observations About This App

- Computer Science problem
 - How often to broadcast?
- Sociology problem
 - Do users change behavior (for better or worse)?
- Economics problem
 - What should incentive scheme look like?
- Business development problem
 - How do I turn this into a product?

[Final Thought]

- An interesting deployment scenario

