



Progress of Project 3-3: Enhanced Information Communication Systems

Investigators:

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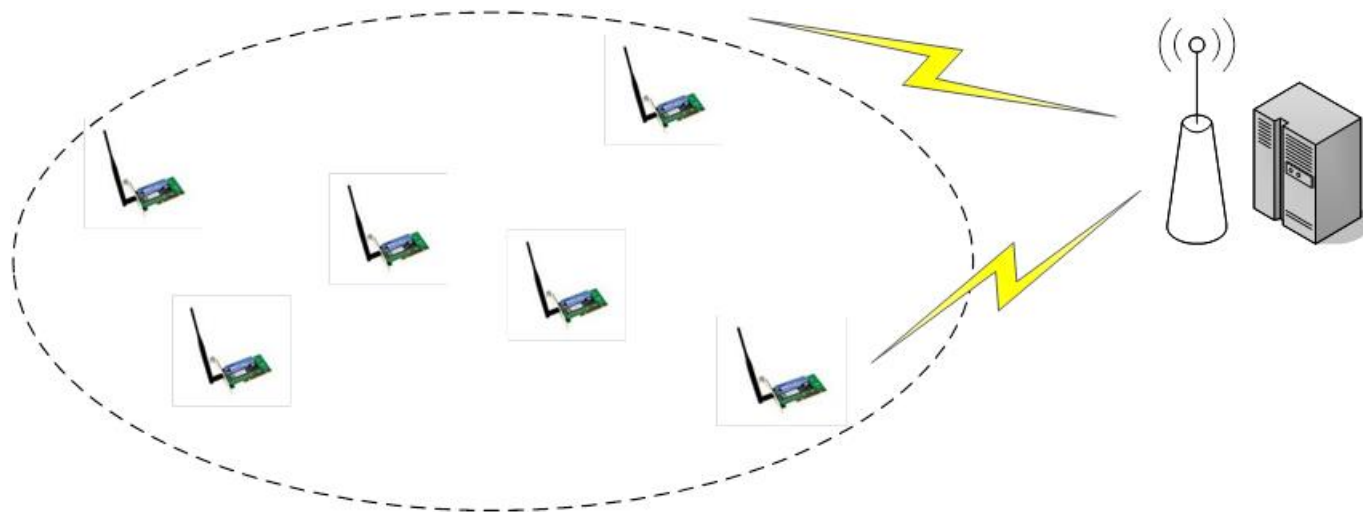
Montreal, Canada

Project Objective

- To investigate and develop effective and efficient wireless networking strategies to reliably transmit FloodNet sensing data to the information processing center and disseminate flood warning messages to the general public in a timely manner.

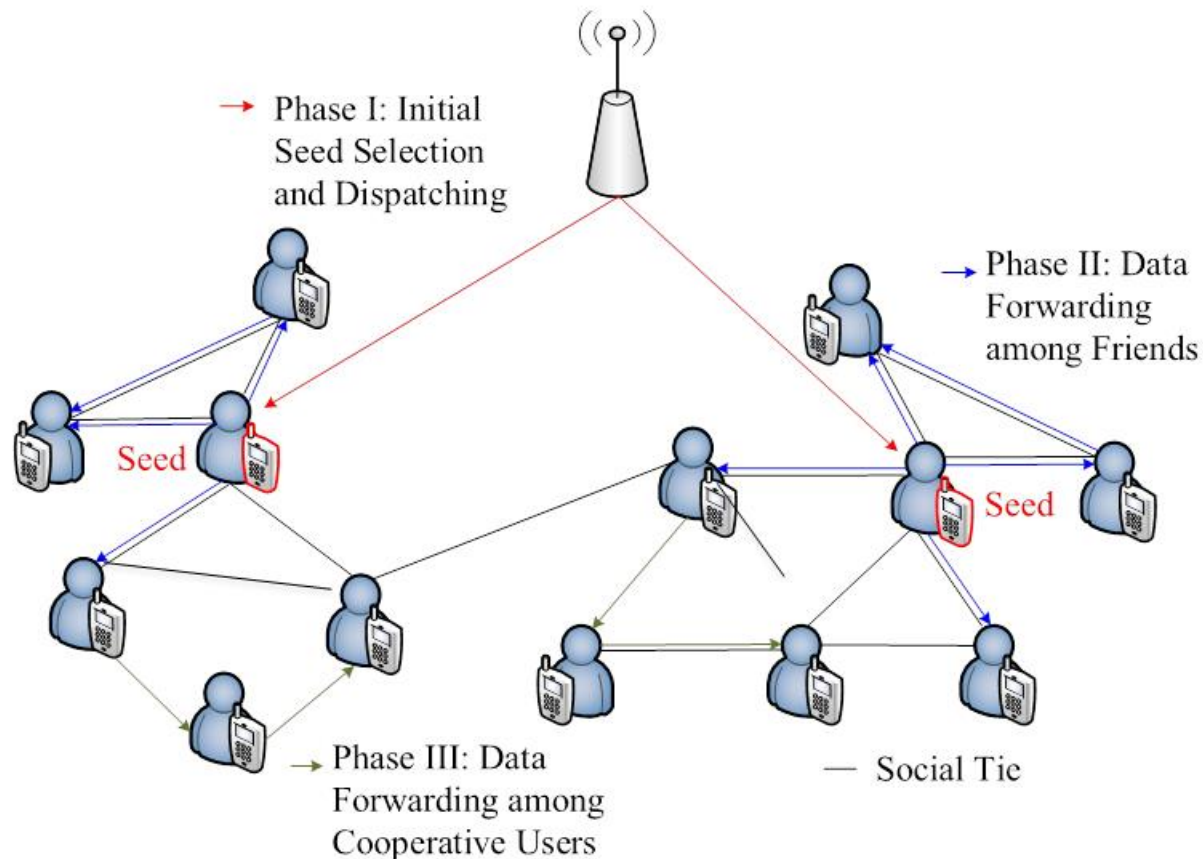
Example: Data Collection

- *Data collection* aims at reliably transmitting sensing data over a geographical region via wireless networks to an data sink.



Example: Data Dissemination

- *Data dissemination* aims at delivering information to a group of target users in a geographical region.



Project Milestones

- Survey existing information transmission solutions
 - Complete
- Design peer-to-peer (P2P) networking algorithms and protocols
 - In progress
- Design new approaches of wireless transmissions
 - In progress

Completed Work (1)

- Cooperative communications in wireless device-to-device (D2D) networks (Zhuang & Zhou)
- Joint data packet scheduling and transmission power control (Zhuang & Rahimi Malekshan)
- Traffic load adaptive medium access control for D2D communications (Zhuang & Ye)
- Flood forecasting and early warning system using wireless multimedia sensor networks (Zhuang & Mousaa)

Completed Work (2)

- Packet assignment for coverage expansion via D2D communications (Zhuang & Song)
- Energy-efficient social-aware data dissemination with D2D (Song & Zhao)
- D2D-based collaborative message distribution (Song, Xie & Tao)