Today's Online Social Networks (OSNs)

Walled Garden Architect
- OSNs control large amounts of users' private data
- Serve contextual targeting online ads

Monopoly
- Account required to view friend's content
- OSNs own all user information, including personal information, social data, and friends list

Alternatives To Current OSNs
- Academic proposals offer high levels of privacy but offload cost to users
- Open source proposals gain minor increases in privacy, but not enough

Design Choice
- Ability for users to choose their own privacy versus cost tradeoff
- Ability for users at different points in the privacy versus cost design space to still interact

Polaris Architecture

Polaris Basics
- Allows users to make their own trade-off between cost and privacy
- Common APIs enable communication between clients and providers

Clients
- Smartphones act as Access Control Managers (ACMs) and as OSN client
- Clients distribute access tokens pairwise between each friend and each service signed up for

Providers
- Implement a single social functionality, status updates or photo posting for example
- No account required to view a friend's social data on provider you don’t use, thus your privacy is not affected by friend's choice

Client Implementation
- Android Application
- Cloud to Device Messaging (C2DM) platform for real-time push notifications
- Bump API for friending securely and instantly

Provider Implementation
- Ruby on Rails
- Services include status, geolocation, and photo