**Safebook**: A Decentralized On-line Social Network Leveraging on Real Life Trust

### 1. Security and privacy issues in OSNs

- **Threats**
  - ID Theft
  - Cloning
  - Porting
  - Harvesting
  - Profiling
  - Censorship

- **Current status of OSNs**
  - Ease of data leakage
  - Ease of impersonation
  - Limited privacy support
  - Lack of flexibility in privacy

- **Privacy protection** against
  - Intruders
  - Crawlers
  - Third parties

OSN as “Big Brother”

New privacy preserving OSN architecture are needed with decentralization as a requirement for privacy

### 2. Design Principles & Contribution

- **Requirements**
  - Decentralization
    - P2P architecture
  - Leveraging existing Trust
    - Social trust ⇒ trusted link
    - Friend = neighbor
    - Trust strength = link weight

- **Goals**
  - Cooperation enforcement
    - Friends cooperate
  - Privacy
    - Simple anonymous routing
    - Based on trusted links
    - Group Encryption

### 3. Architecture & Feasibility

- **x’s Matryoshka**
- **x’s profile lookup**

Non transitive trust

DHF

90% one valid path probability

### 4. Open Questions & Future Work

- **New Applications**
- **Super DNS for Communications**

- **Anonymous networks**
- **Privacy**
- **Cooperation enforcement**

- **Decentralization**
- **Trusted links**
- **P2P**
- **Social trust**
- **Group encryption**

**PROTOTYPE**

http://www.safebook.us