Sex and Drugs and Rock 'n Roll
or
privacy in online social networks

Jon Crowcroft,
University of Cambridge
Jon.Crowcroft@cl.cam.ac.uk
http://www.cl.cam.ac.uk/~jac22
Dunbar’s Number & Trust

- Dunbar’s number usually cited as 150
  - Size of simple communities of humans
  - Reflects ability to cope with group
  - Humans gossip rather than physical grooming
  - Language lets us abstract
  - We can reason up to 5 levels of intentionality
    - (Shakespear does 6 :-)

- $T = \frac{1}{3.x^N}$
  - $T$ is trust metric
  - $3.x$ is a number between 3 and 4
  - $N$ is distance in social net

NGN 2008
Why?

- $N = 0 = \text{Kin (sex)}$
- $N = 1 = \text{friends (beer/drugs)}$
- $N = 2 \text{ or more} = \text{acquaintances (dancing/music/laughing at same jokes)}$

- How does this help in facebook?
Social Networks Project

- We’re looking at co-lo networks
  - c.f. haggle, cityware - bluetooth etc
- AND online social networks
  - Friendship graph on orkut, li, facebook
- AND communication networks
  - Email address book, sms, phonecalls
- Can use to infer real realationship
  - I.e. type of edge in graph (and value of N)
Trust

- Trust in terms of revelation/disclosure
  - Or carrying data (in ferry net)
  - Or simple grouping for ACLs
- Need to do some experiments
  - Figure out how ties are broken
  - Forgetting
  - How new tools/technology affect
  - Size and dynamics of social net...
Questions?

- What net/edge type is more likely to cause an edge in another net?
- Does meeting someone dominate over online or vice versa -
  - I.e. how does new tech affect x (size of immediate gang) and
  - N (scope of gang/level of intentionality reasoning?)?
- Can you use this to detect dodgy behaviour?
- Has anyone got an mp3 of the blockheads on their phone or laptop?