# **PUP** security

### Will Harwood



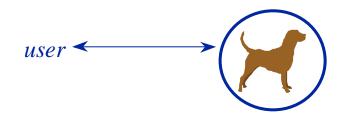
Puppies 1960.01 © 1997 APM Ltd

# Security

- Authenticity
- Privacy
- Anonymity
- Delegation
- Non Repudiation

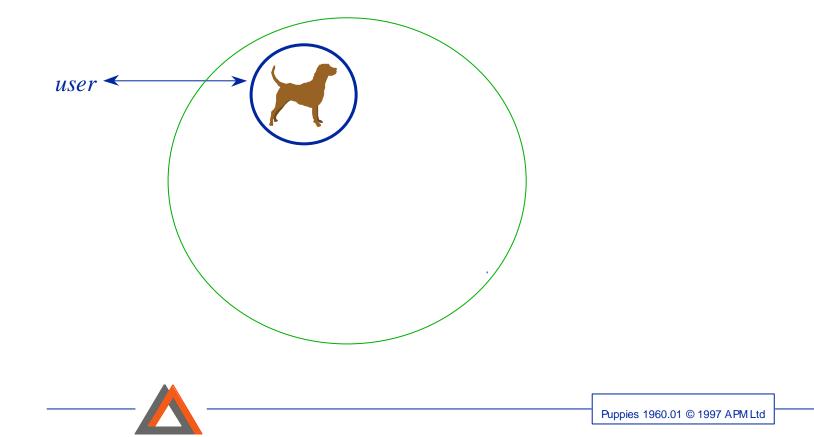


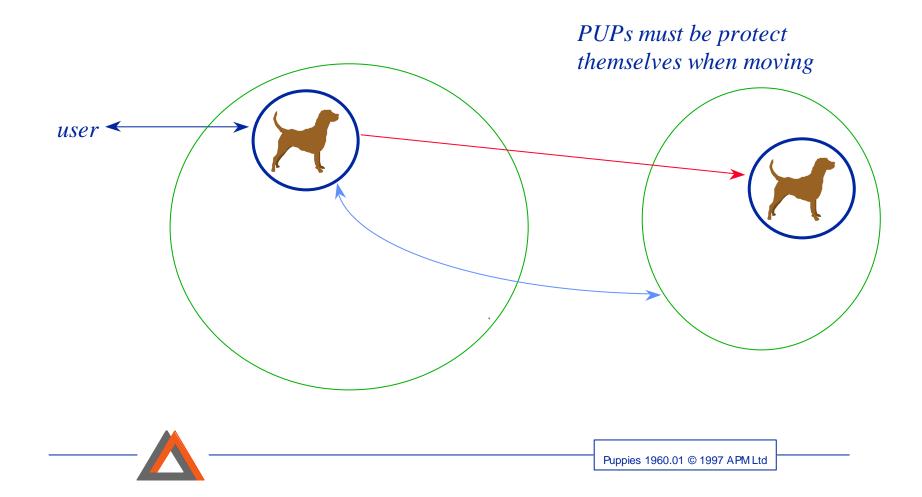


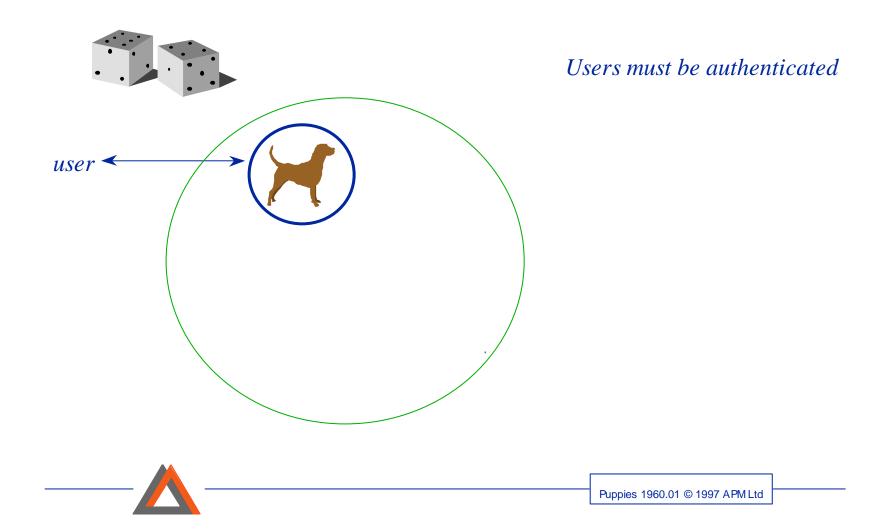


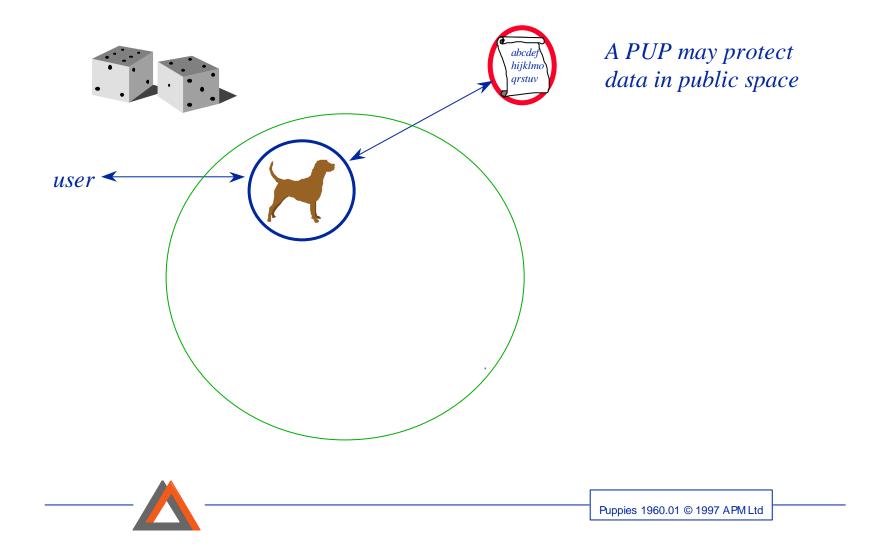


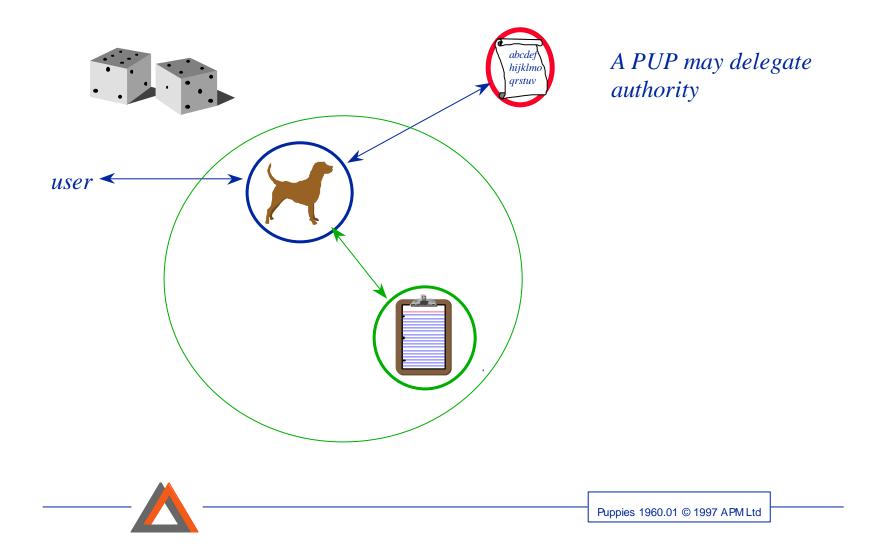
#### PUPs must be protected

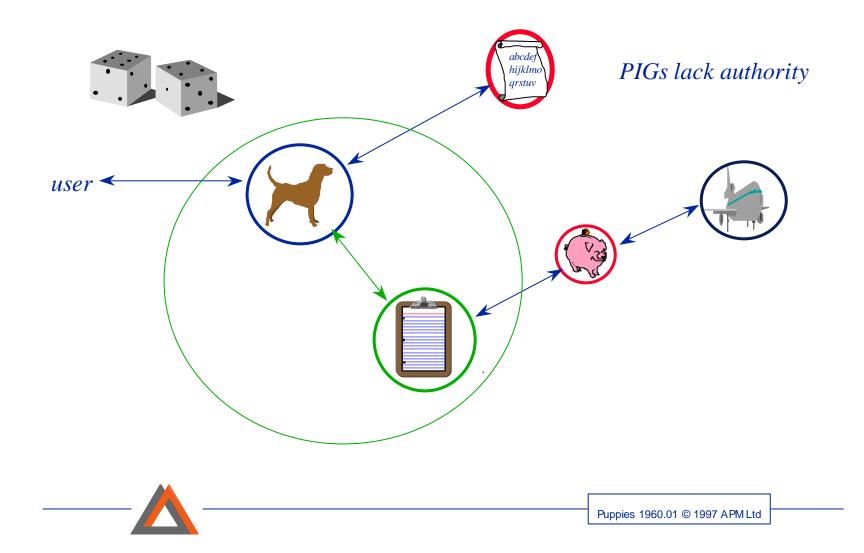


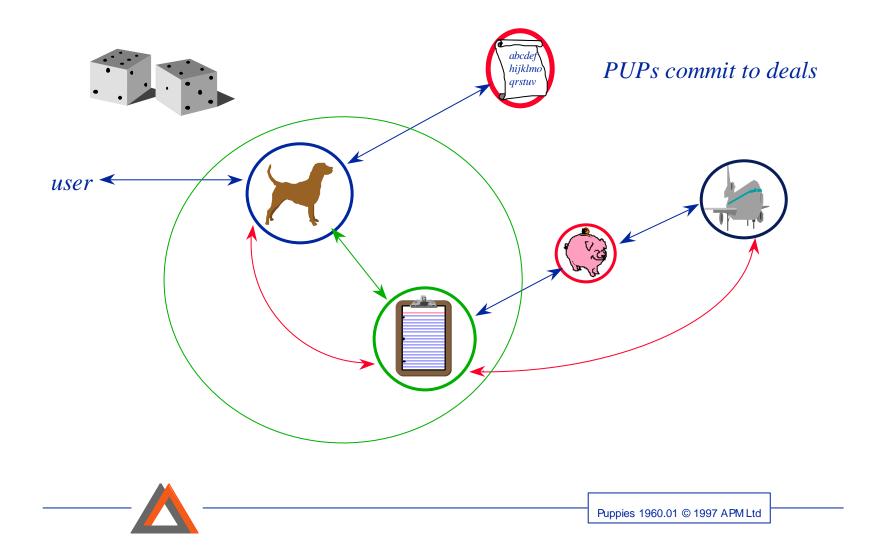


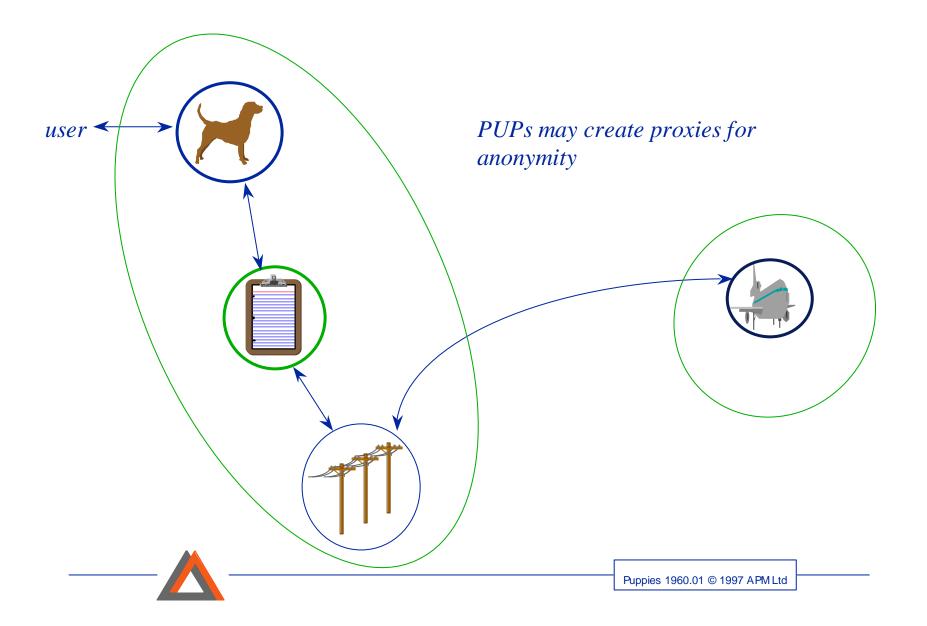


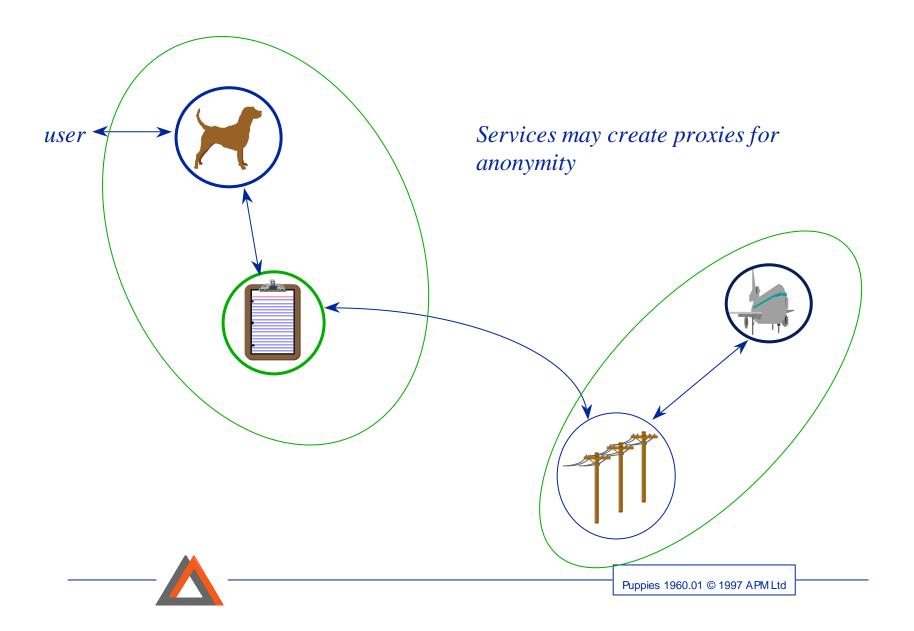


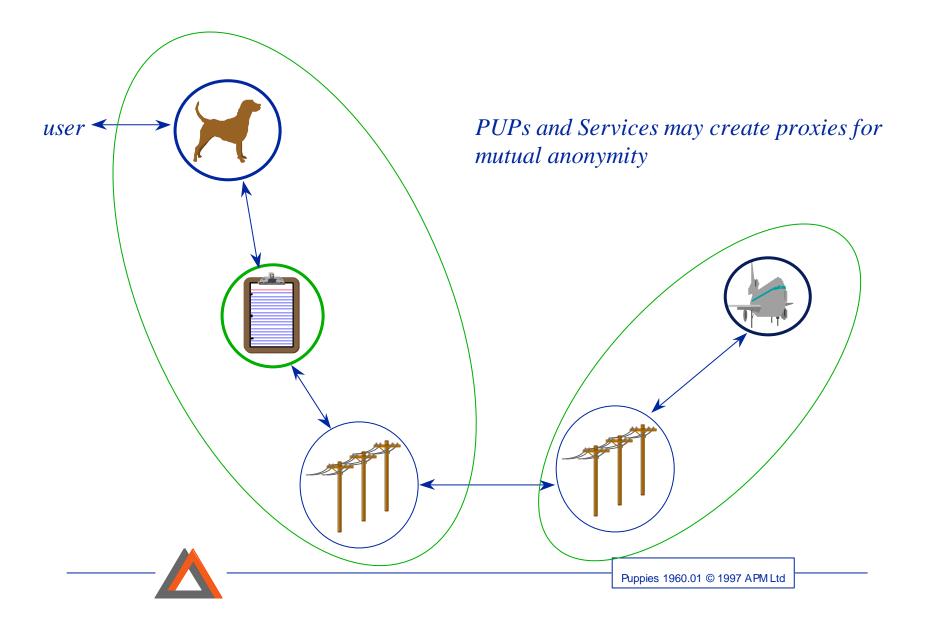












## Authentication

- Users
  - Multiple Modalities
  - Scaleable Risk
- PUPS
  - need to authenticate their location
- Services



# **Privacy**

- PUPs internal data
  - need to protect PUPs from disection
- User data space
  - not all user data is in a PUP
- Communication
  - User to PUP
  - PUP to TA, PIG & Service ...



# **Delegation & Non Repudiation**

- PUPs may delegate authority to TA's
- Users cannot repudiate deals done by PUPs
- PUPs cannot repudiate deals done by TA's
- Service cannot repudiate deal offered



# Questions

## • Audit?

- users, services, network providers
- Other notions of security?
- Do users want agents to have authority?
- Are agents actions legally binding?
- What happens at international boundaries?
- Are there valid, legal uses for double blind dealing?

