Challenges in streaming temporal and spatial network data

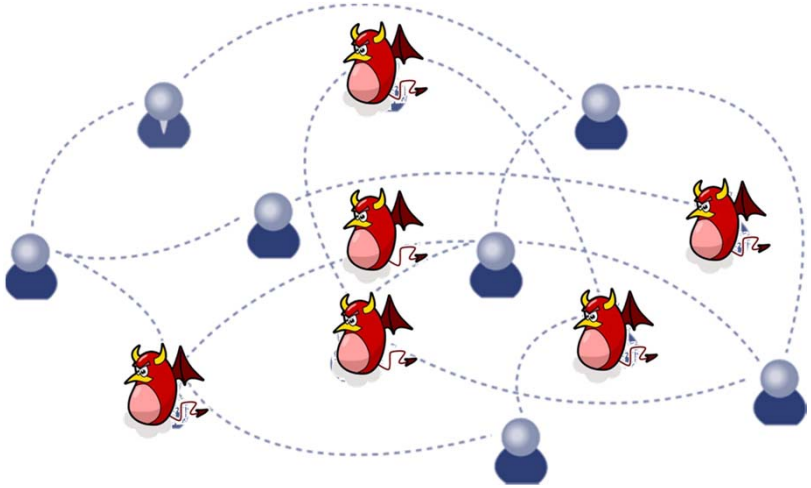
First SysSec workshop, BiC session:
Building a long-term INCO strategy in Trustworthy ICT

Computer Science and Engineering Department

Topic 3: Challenges

- Fast streaming of huge temporal and spatial network data.
- Mapping the operational (application) information architecture to statistical data stream patterns.
  - Identifying strange behavior.
    - Ex: interaction networks (power law distribution, clustering, ..)

Antisocial Behavior in Social Networks



Adversaries' streams exhibit fundamentally different statistical properties compared with normal streams.

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Distributed and Parallel Computing and Systems + Computer Security groups

- http://www.cse.chalmers.se/research/group/dcs/
- http://www.chalmers.se/cse/EN/research/research-groups/computer-security

- Networking – general, sensor, application-level (peer-to-peer overlays): clustering/matching, coordination, …
- Parallel computing systems: parallel processing, efficient synchronization, shared data structures, run-time system services, …