

The New Front Line

Dealing with the retained
communications data explosion

History of communication

- 1660: National postal service introduced
- 1876: Bell patents first telephone
- 1976: First commercial email services
- 1979: First commercial cell phone service
- 1988: IRC introduced: birth of IM
- 1989: DSL developed
- 1992: First SMS sent to Richard Jarvis of Vodafone UK
- 1993: Prepaid cellphone tariffs introduced
- 1995: Vocaltec introduce first VoIP service
- 1997: First social networking site
- 1999: Modern peer-to-peer file sharing begins
- 2004: YouTube launches
- 2007: Fuser & other aggregators launched

Current state of communication

- 600M webmail accounts on top 4 webmail sites
- 30% Americans have more than one email account
- 1.2B social networking accounts
- 500M DSL subscribers
- 60 Exabytes/year (15000 Gbps) internet bandwidth

Wealth of data to exploit

What can we use this for?

- Identify relationships that were previously impossible e.g. cellphone number to email address
- Improve detection of crime e.g. online exploitation, phishing, identity fraud
- Identify patterns in criminal behaviour
- Go undercover without being exposed to high risks

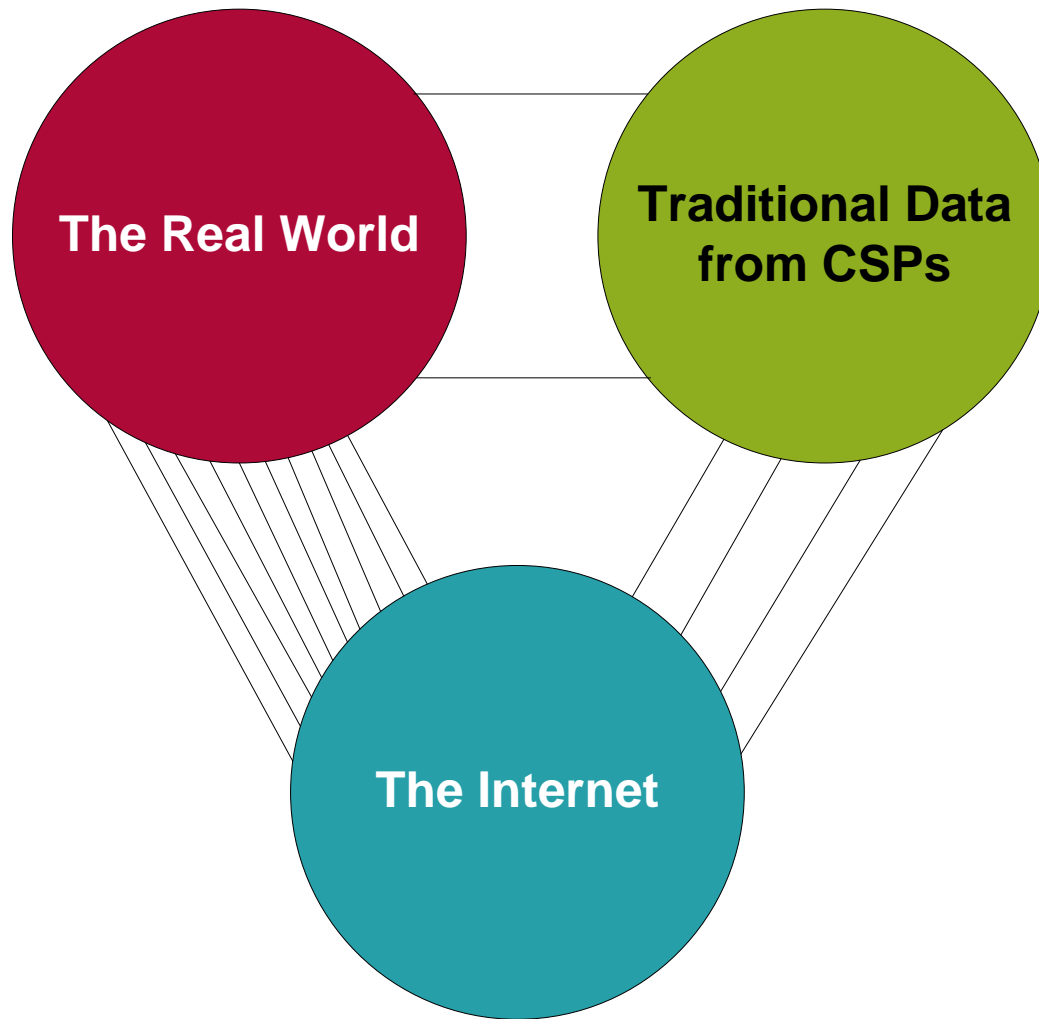
The Internet is a platform for new crime

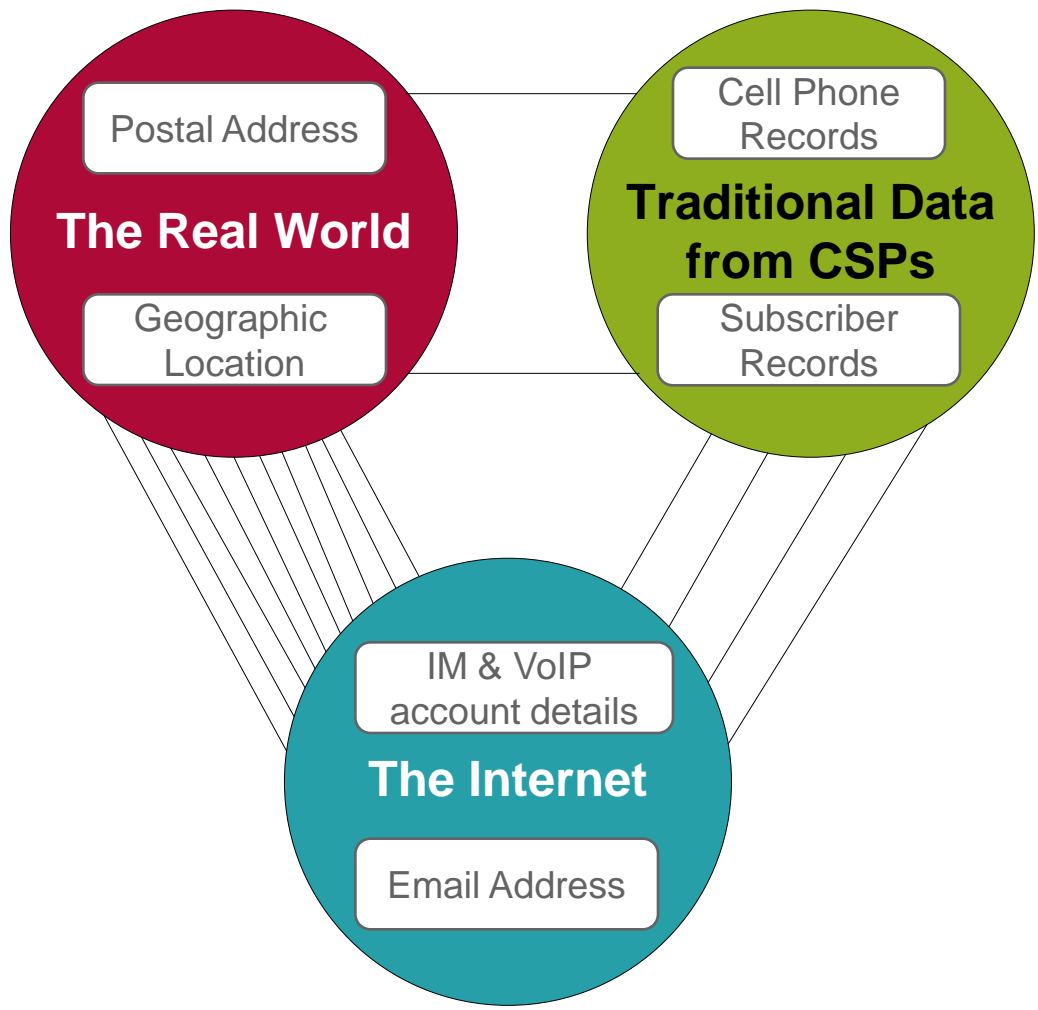
**The Internet can be a platform for new
crime-fighting**

Dealing with the explosion

- Engage CSPs & online providers in a partnership to develop solutions & tactics
- Make use of the data that is available for 'free' e.g. open facebook profiles, blogs, linked-in CVs etc.
- Need to understand the data. How does it relate to the 'real' world? How do LEAs use this to solve crime?







The Challenges



■ Technical Challenges

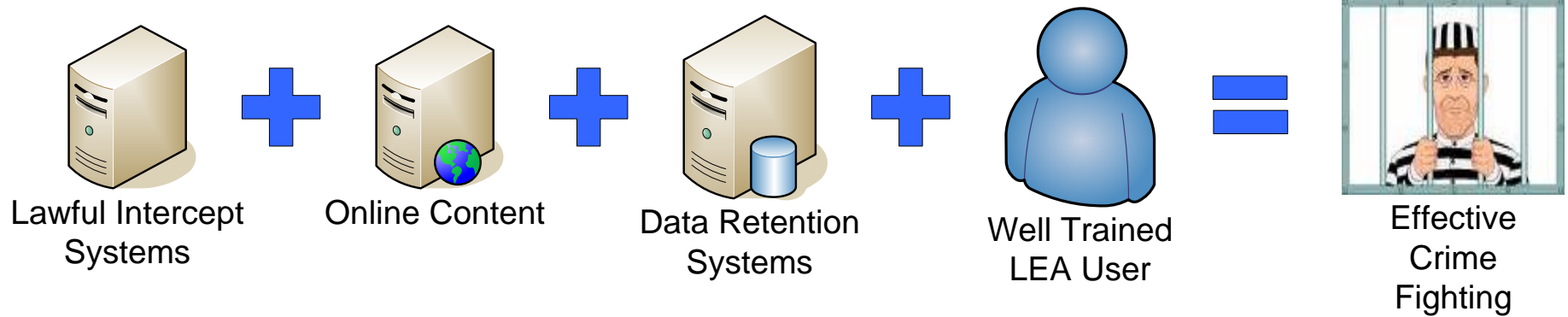
- Enormous quantity of data
- Internet Services diversity & rapid rate of change
- Complex and varied encryption
- Huge number of providers



■ Legal Challenges

- Public acceptability & required legislative changes
- Internationalisation – service hosted across country boundaries

The technology mix



Summary

- Lots of data readily available
- Significant challenges to analyse everything
- Need a good technology mix and knowledge of how to integrate them
- Learn to use the internet in the way that your targets do

This is an opportunity not a disaster

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