

Notes for the Workshop on Freedom and Privacy by Design

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Introduction

My position is that strong privacy protection laws and institutional arrangements **and** effective technologies are both essential.

My arguments in relation to the legal framework were presented in Communications of the ACM (February 1999). The inadequacies of conventional ‘fair information practices’ legislation are analysed in ‘Beyond the OECD Guidelines: Privacy Protection for the 21st Century’ (2000).

These Notes relate to technological protections. I distinguish three categories of technologies:

- **privacy-invasive technologies (the PITs)**. Examples include data-trail generation through the denial of anonymity, data-trail intensification (e.g. identified phones, SVCs, and ITS), data warehousing and data mining, stored biometrics, and imposed biometrics;
- **privacy-enhancing technologies (PETs)**. These set out to reverse the trend in technological development, in order to produce tools that directly assist the protection of the privacy interest. These are commonly tools that provide genuine, untraceable anonymity; and
- **privacy-sympathetic technology (PSTs)**. These are intended to balance the interests of privacy and accountability, and are oriented towards protected pseudonymity rather than anonymity.

An accessible introduction is provided in a 1999 paper on ‘Privacy-Enhancing and Privacy-Sympathetic Technologies’.

The following sections identify papers I've published on various aspects of the topic, followed by a resource-page that lists a large number of papers published by other people.

Papers

Papers I've published that are directly relevant to the question of technologies to protect privacy are as follows (in chronological order):

- Information Technology and Dataveillance (1988)
- Human Identification (1994)
- Identification, Anonymity and Pseudonymity (1995-97)
- The Digital Persona (1994)
- Spam (1997)
- Cookies (1997)
- Privacy and E-Lists (1997)
- Chip-Based Identification (1997)
- Privacy and Digital Signatures (1997)
- Privacy on the Internet (1997)
- Cyberspace Invades Personal Space (1998)
- Smart Cards As Privacy-Protective Or Even Privacy-Enhancing Technology (1998, s.8.4 of a larger work)
- W3C's Platform for Privacy Preferences (1998):
 - Overview
 - Critique
- Direct Marketing (1998)
- Public Key Infrastructure: Position Statement (1998)
- The Legal Context of Privacy-Enhancing and Privacy-Sympathetic Technologies (1999)
- Anonymous, Pseudonymous and Identified Transactions: The Spectrum of Choice (1999)
- Identification, Authentication and Anonymity in a Legal Context (1999)
- Person-Location and Person-Tracking Technologies (1999)
- Technological Protections for Digital Copyright Objects (2000)

Reference List

The following page provides references to many other papers on the topic:

- 'Privacy-Enhancing and Privacy-Sympathetic Technologies – Resources'
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