

## Chapter 1.12

# E-Services Privacy: Needs, Approaches, Challenges, Models, and Dimensions

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### ABSTRACT

This chapter introduces several aspects related to e-privacy such as needs, approaches, challenges, and models. It argues that e-privacy protection, although being of interest to many parties such as industry, government, and individuals, is very difficult to achieve since these stakeholders often have conflicting needs and requirements and may even have conflicting understanding of e-privacy. So finding one model or one approach to e-privacy protection that may satisfy these stakeholders is a challenging task. Furthermore, the author hopes that this chapter will present an acceptable definition for e-privacy and use this definition to discuss various aspects of e-privacy protection such as principles of developing e-privacy policies, individuals and organizations needs of various privacy issues, challenges of adopting and coping with e-privacy policies, tools and models to support e-privacy protection in both public and private networks, related legislations that protect

or constraint e-privacy, and spamming and Internet censorship in the context of e-privacy. The author hopes that understanding these aspects will assist researchers in developing policies and systems that will bring the conflict in e-privacy protection needs of individuals, industry, and government into better alignment.

### INTRODUCTION

The Internet in general and the World Wide Web (WWW) in particular, were initially intended to facilitate sharing of information between individuals, research centers, organizations, and so forth. However, they have now become the fastest growing means to provide a variety of services such as e-government, e-commerce, e-communication, e-entertainment, e-education, e-investment, and so on.

Although “electronic services” (e-services) is a term that implies the offering of services by

electronic means, it is mostly used now to mean the offering of services via the Internet/WWW. E-services are of various types, including those that enable individuals and organizations to access information (e.g., surfing the WWW) and those that facilitate transmitting of data (e.g., banking application, e-shopping).

Individuals and organizations using and offering e-services are subject to many potential threats (e.g., unauthorized intrusion and collection of IP addresses, session hijacking, copying/stealing information digitally stored, etc.). This raises the need for high standards of security measures.

One of the threats that is receiving growing attention is violating the privacy of users using e-services. One type of violation may occur by harmful software that attacks computers to collect sensitive information for purposes such as identity theft, or to destroy stored information. This requires continuous adopting of new and up-to-date protection techniques.

A second type of privacy violation is committed by organizations offering e-services. Such organizations tend to collect some of an individual's personal identifiable information (PII), which is considered critical for the organizations' interests, but also is seen private by the individual using the e-services. This necessitates preventing PII from being collected without consent and protecting PII collected with consent. This has raised Internet privacy protection as one of the top policy issues for legal institutions and legislators.

In order to resolve this conflict of interests between individuals and organizations, several laws and acts have been issued with the aim of balancing the interests of the two parties. The purpose of these laws and acts is to organize the process of collecting, processing, and protecting PII of individuals using e-services, and hence, to provide some protection for individuals. This is what we call in this chapter "e-service privacy protection," or "e-privacy" for short.

E-privacy is a concept that is difficult to define. It is seen differently by the parties involved. Some

of the organizations that collect PII may view the Internet as a public environment, and those who connect to it should expect to be noticed. Other organizations offer free services, thus those who use the services should expect some trade off. On the other hand, individuals believe that their online activities and all their PII are private and belong to them. Since these individuals switch between TV channels and view whatever they prefer in privacy without being tracked, they expect the same privacy when surfing the WWW. Legislators always debate comprehensively, before the issuing of any related privacy law, on how to balance the interests of the collecting organizations and individuals, and what principles and standards may be used (e.g., the Canadian Personal Information Protection and Electronic Documentation Act [Government of Canada-1]). In addition, e-privacy may be broadened to cover individuals' rights not to receive any unsolicited advertisements (spamming) in their e-mail inboxes, as well as their rights to access Web sites without restrictions (Internet censorship). Another question is whether or not the meaning of e-privacy would differ according to whether the communication network used is public (Internet) or private (belongs to an organization or a workplace).

There are many issues related to e-privacy such as its criticality, types, scope, standards, legal requirements, challenges, approaches, and how to protect it.

This chapter will discuss some of these issues. In particular, it aims to:

1. Introduce e-privacy, define and consider it from various perspectives,
2. Highlight standards and principles of e-privacy policies,
3. Identify various challenges of adopting and coping with e-privacy policies,
4. Discuss e-privacy in the context of public networks,
5. Relate e-privacy to electronic security,

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