

Chapter 9

Privacy in E-Postage Systems

9.1 ANONYMOUS MAIL

Privacy of the post, or secrecy of correspondence, as it is sometimes called is a human right respected and guaranteed in many democratic countries. Sending mail anonymously, however, is not. It is easy to send personal letters anonymously simply by using stamps and omitting the sender's name and address. The postal operators do not recommend sending mail anonymously for various reasons. An obvious one is that they find it difficult to return such mail to the sender if it is not deliverable.

Another reason is that anonymous mail imposes significant risks on the postal operator, the recipient and other third parties. In fact, anonymous mail has been used as a weapon against the intended recipients, for example, by sending explosives (mail bombs), chemical poisons or biological germs (anthrax spores). These substances may also inflict serious injury or even death upon postal workers or bystanders or damage upon property. Another risk of anonymous mail is that senders can construct false images of individuals, organizations or political parties or spread other pieces misinformation while keeping their identities secret.

On the other hand there is a good thing in anonymous mail as well. It can be used to cast votes in an election. It is a way of revealing a true story behind a plot to the law enforcement agencies or the press without risking one's life. It is a way to give witness testimony to a lawyer without putting oneself in danger. It is sometimes the only way of communicating a legitimate standpoint that happens to oppose the current political or economic majority opinion.

In most of today's mail processing systems, anonymous mail is a service that is readily available through the payment instrument of stamps. Although sending mail anonymously is not promoted, it is also not discouraged, because stamps cost the same whether it is used for anonymous or for identified mail. Preventing the processing of anonymous mail is hardly economic, because reading the sender's address, verifying it and rejecting mail pieces whose sender's address cannot be verified requires significant investments into the postal operators mail processing centers if the performance shall not be degraded.

In today's electronic postage systems, sending mail anonymously is not an available service, because all postal operators requires each online or offline

e-postage device to be registered to them before it is enabled to print postage. Interestingly, this security requirement of the postal operators easily aligns with the advertisement interests of most mailers. Business mailers want to advertise their products and services and make their corporate identity known to their correspondents and to the public in every way possible and efficient, which includes to use the envelopes of their mail. Even many private mailers demand for individual e-postage, showing their personal preferences or achievements. This can be seen from the popularity of customized stamps, which show photographs of the mailers, their children, pets, quilts, or any other pursuit one can think of.

So what are the data items found on anonymous mail? We distinguish three types of anonymous mail according to the overview presented in Table 23 on page 202.

Table 23. Types of Anonymous Mail

Mail	Anonymous to	
	postal operator	recipient
r-anonymous	no	yes
p-anonymous	yes	no
fully anonymous	yes	yes

9.1.1 R-Anonymous Mail

R-anonymous mail is anonymous to the recipient, but not to the postal operator. This can be achieved by using a pseudonym for the mailer’s identity whose owner is known to the postal operator only. If the mailer uses one-time (transaction) pseudonyms, none of his mailings can be linked by the respective recipients, i.e., be recognized as originating from the same mailer.

The recipient addresses can be given in the clear because the postal operator needs to know them anyway and the recipients already know their addresses before the mail is sent.

9.1.2 P-Anonymous Mail

P-anonymous mail is anonymous to the postal operator, but not to the recipient. This can be achieved by using a pseudonym for the mailer’s identity whose owner is known to the recipient only. If the mailer uses one-time (transaction) pseudonyms, none of his mailings can be linked by the postal