

Chapter 2

Electronic Postage Systems

2.1 GENERAL MODEL OF E-POSTAGE SYSTEMS

Electronic postage is a special currency valid only for postal transportation of mail pieces and related additional services. The minting and printing of electronic postage is mostly regulated by national universal postal operators. The rules and regulations for using electronic postage differ from one country to another. Any electronic postage system needs an *e-postage minting system* where mailers can purchase electronic postage and pay for it. All such electronic postage can be turned into valid imprints, which can be applied to physical mailings, thus providing evidence to the postal operator that the mailer has paid for the transport of a mail piece. The postal operators in turn can reconcile the amount of electronic postage they have sold against the amount of electronic postage they have processed through their mail processing centers. This constitutes the basic cycle of electronic postage as shown in Figure 11 on page 26. We will now take a closer look at this cycle.

2.1.1 E-Postage Devices

Mailers need *e-postage devices* in order to acquire electronic postage and apply it to their mailings. An e-postage device is called *offline* if it can download an amount of electronic postage in advance, store it and then produce imprints upon request of the mailer. Offline e-postage devices connect to an *e-postage minting system* by some communication network to perform a so-called *postage value download (PVD)*. The typical example for an offline e-postage device is a digital *postage meter*, also called *postage evidencing device*. Traditionally, postage meters have connected to an e-postage minting system by modem through a telephone network or a cell phone network. Former postage meters that were not yet equipped with modems required their users to enter appropriate pass-codes that the mailers had to obtain from an operator at the e-postage minting system in the first place.

Postage devices are called *online*, if they need to contact the e-postage minting system every time they produce a postage imprint for a mail piece. Online e-postage devices do not download and store electronic postage in advance. They usually connect to the e-postage minting system through the Internet. Online e-postage devices can be convenient to use for small offices where the printing speed of imprints is not essential.

