

# **\*:96 Overheads**

## **Part 3a: E-mail introduction**

More about this course about Internet application protocols can be found at URL:

<http://www.dsv.su.se/~jpalme/internet-course/Int-app-prot-kurs.html>

Last update: 29 Jan 2005

# Internet e-mail address format

"Paul K. Rarey" <prarey@ssf-sys.dhl.com>

User friendly name

E-mail address

# Envelope, Content, Heading and Body

Subject: RE: Meetings

Date: Fri, 12 Jan 2001 09:34:09 -0800

From: "Mary Smith" <marys@foo.net>

To: "James Thorn" <jamest@bar.net>

} Heading

We met, we parted, we met again. We did not know then, that what we had, was the best that our life good give.

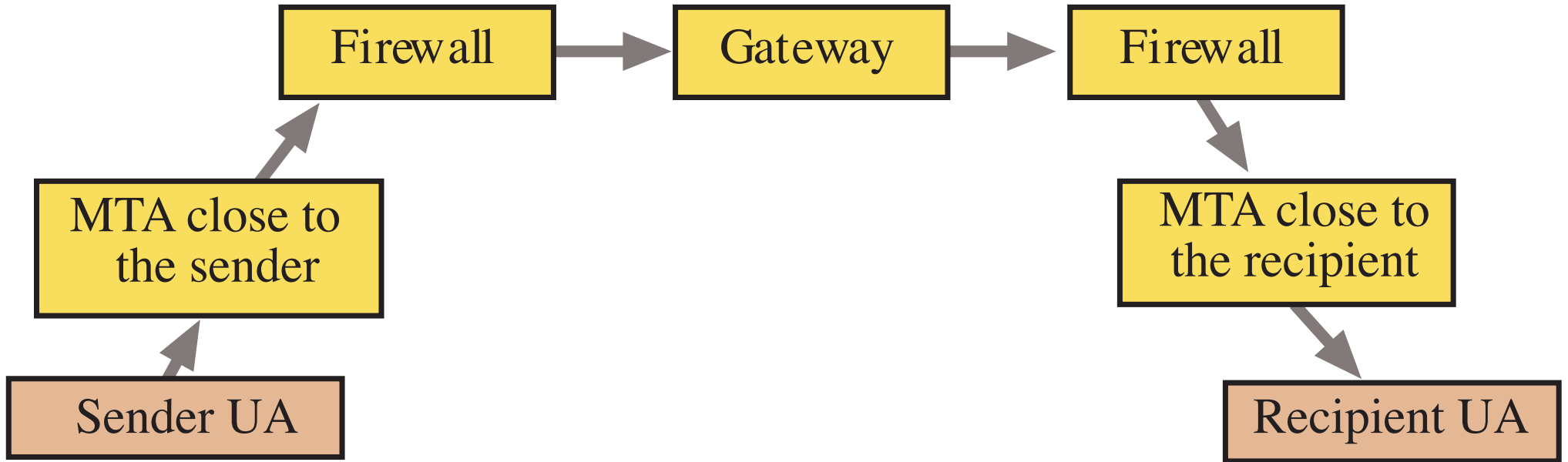
} Body

**MAIL FROM:<dduck@duckville.net>**

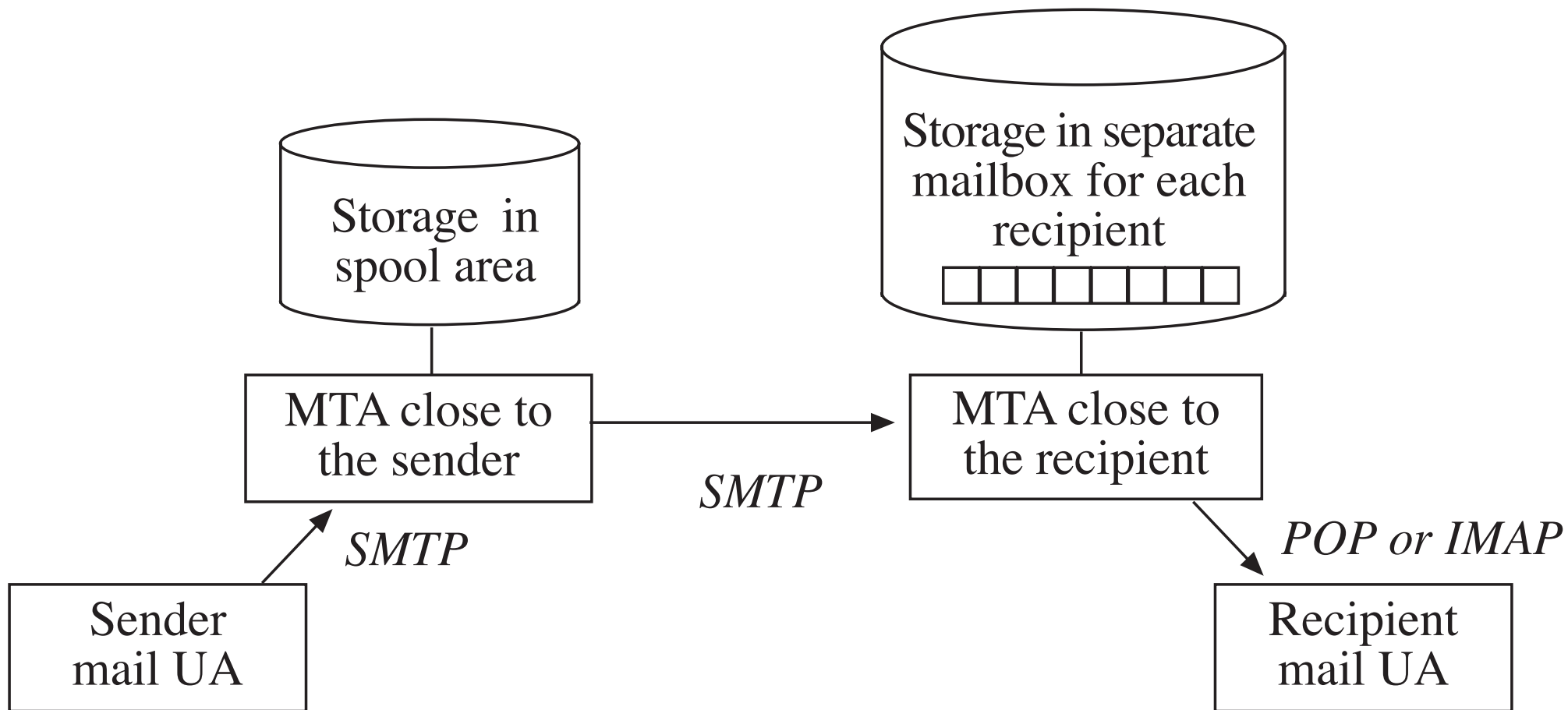
**RCPT TO:<jpalme@dsv.su.se>**

} Envelope

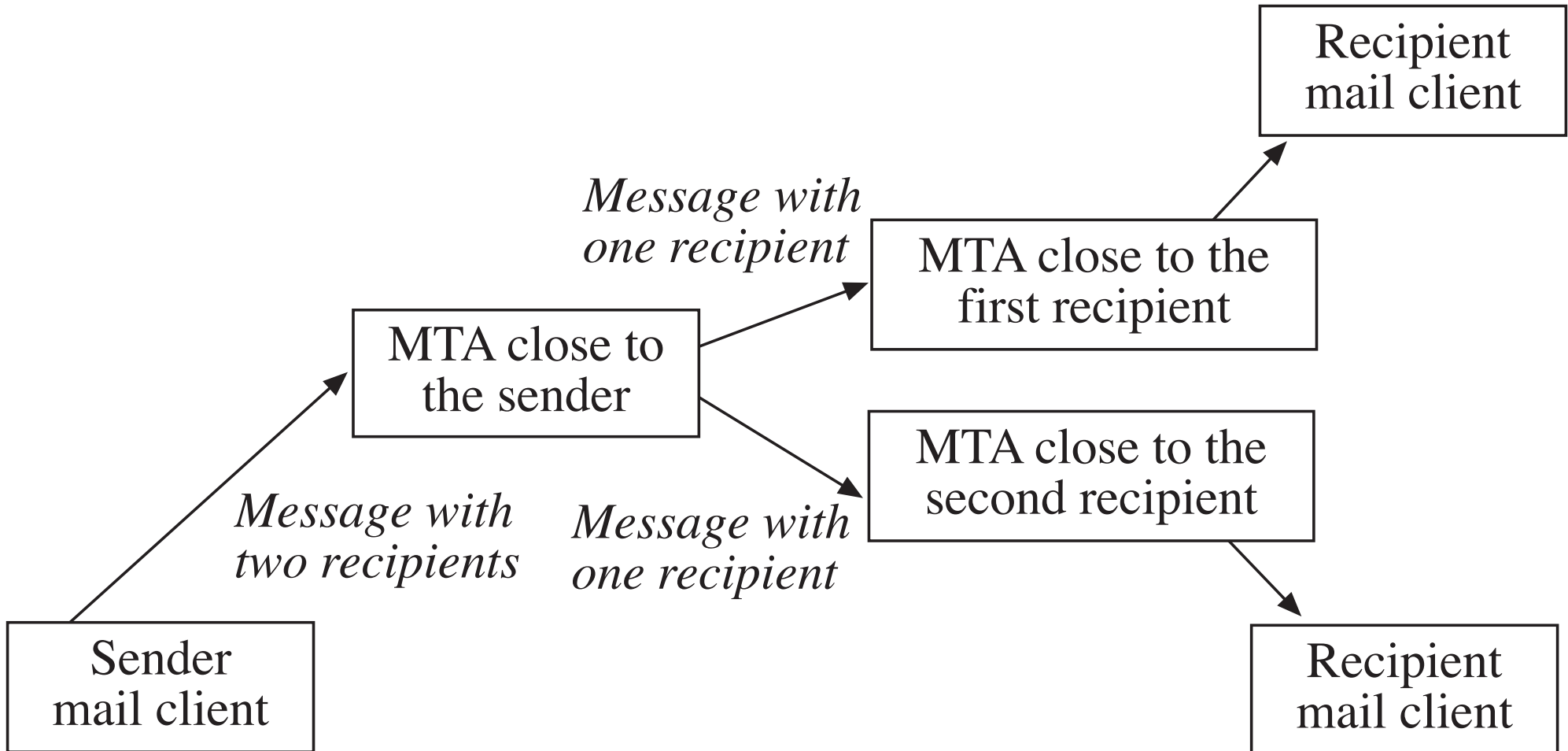
# Multiple Relaying because of Firewalls



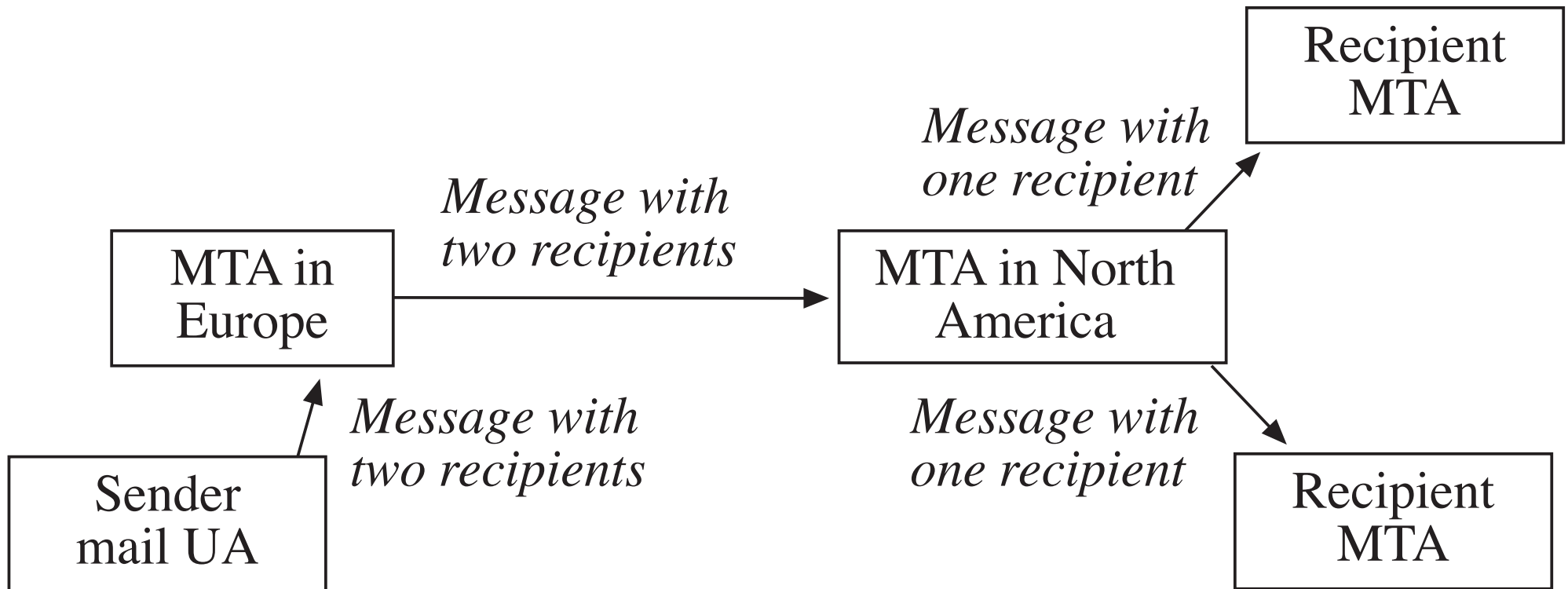
# Storage of Mail in MTAs



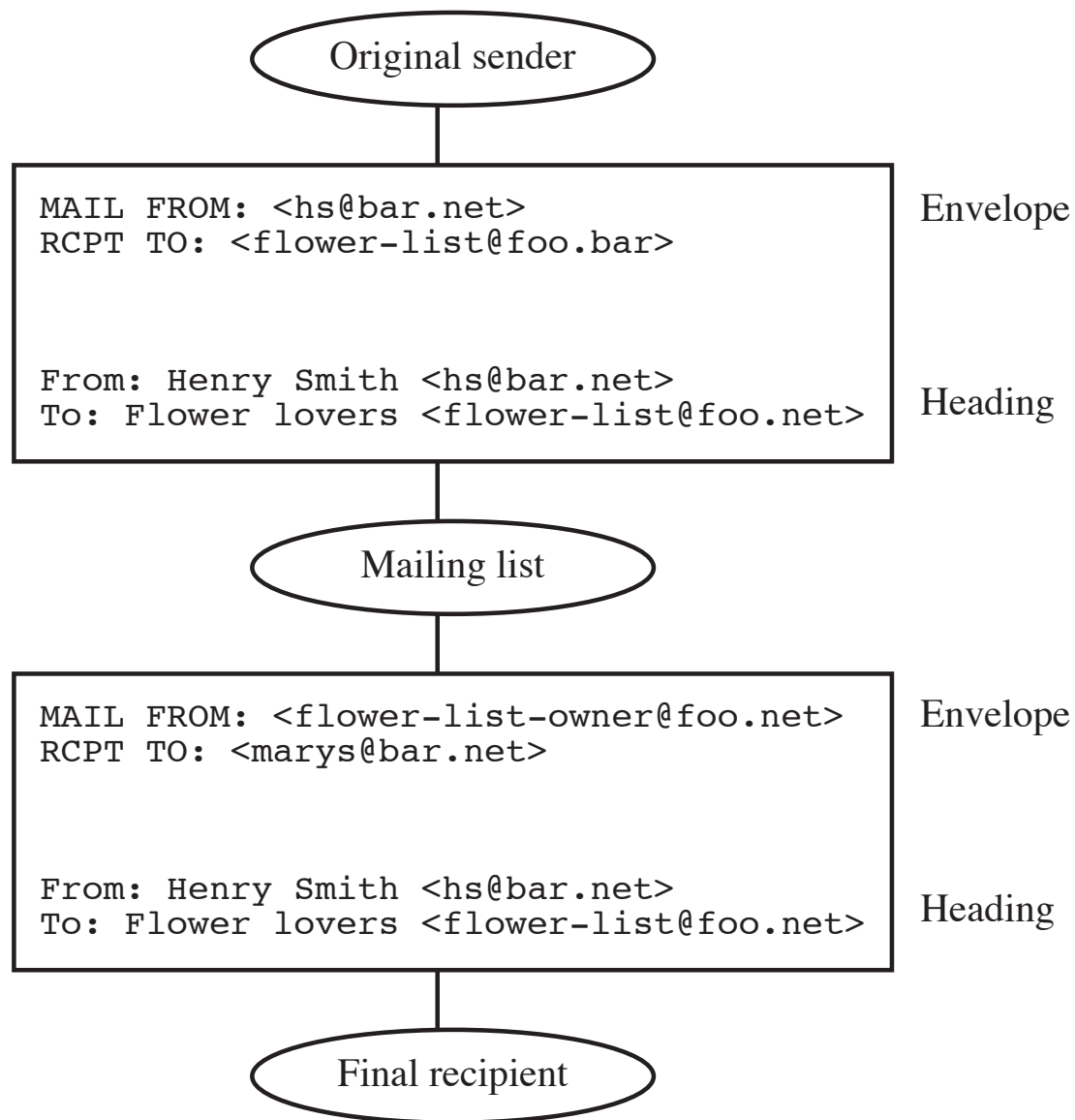
# Split of Messages in MTAs



# Saving Netload by Split in MTAs

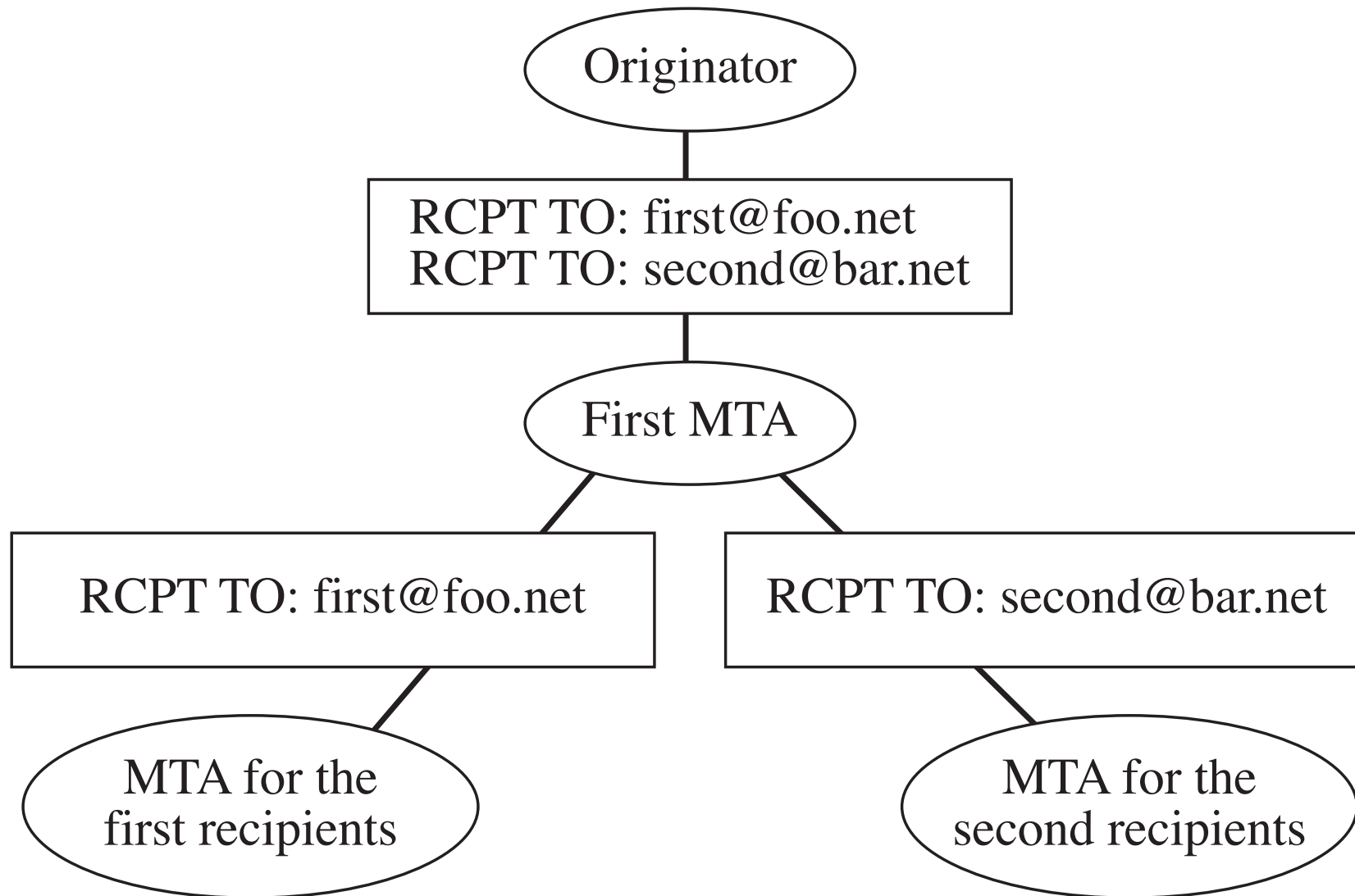


# From and MAIL FROM for Mailing Lists

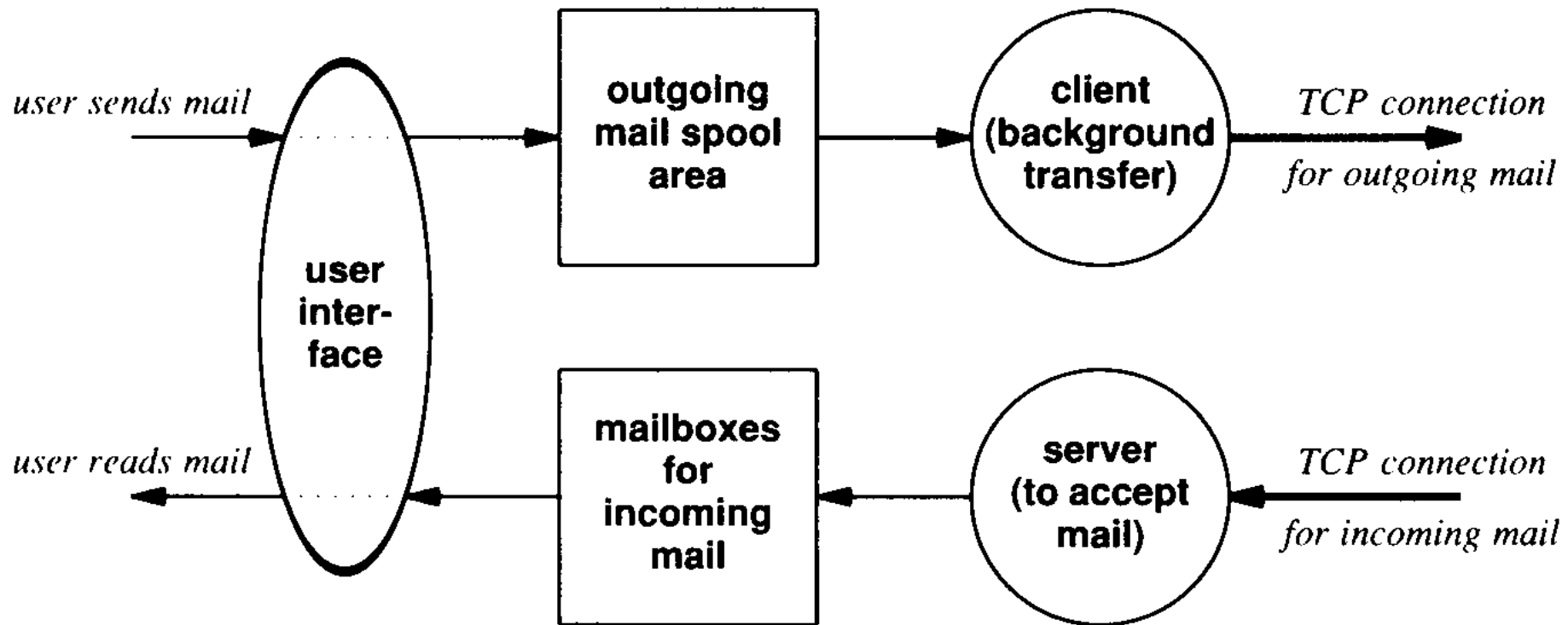




# RCPT TO versus To after Split



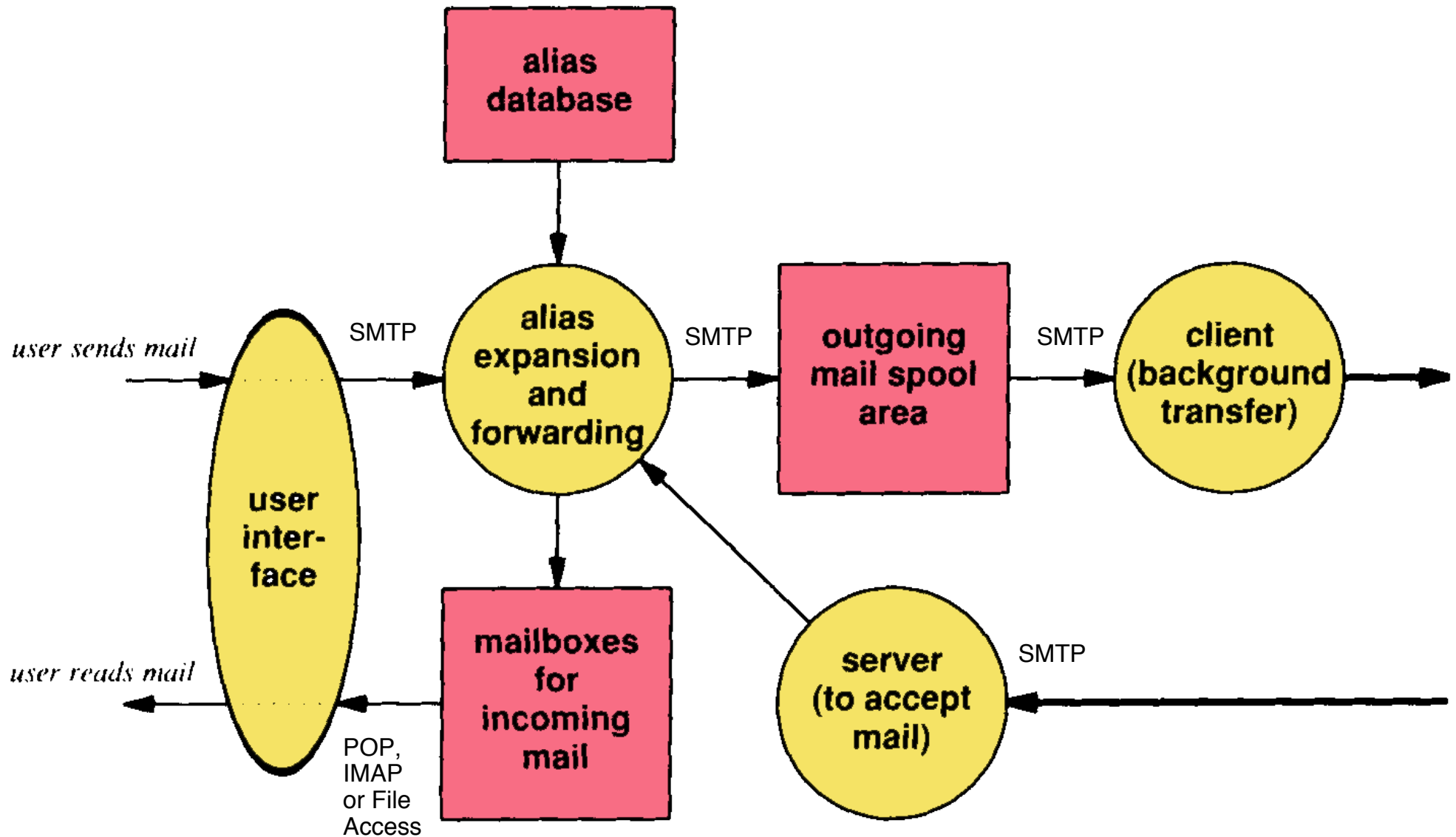
# Mail architecture and spooling



**Figure 25.1** Conceptual components of an electronic mail system. The user invokes a user interface to deposit or retrieve mail; all transfers occur in the background.

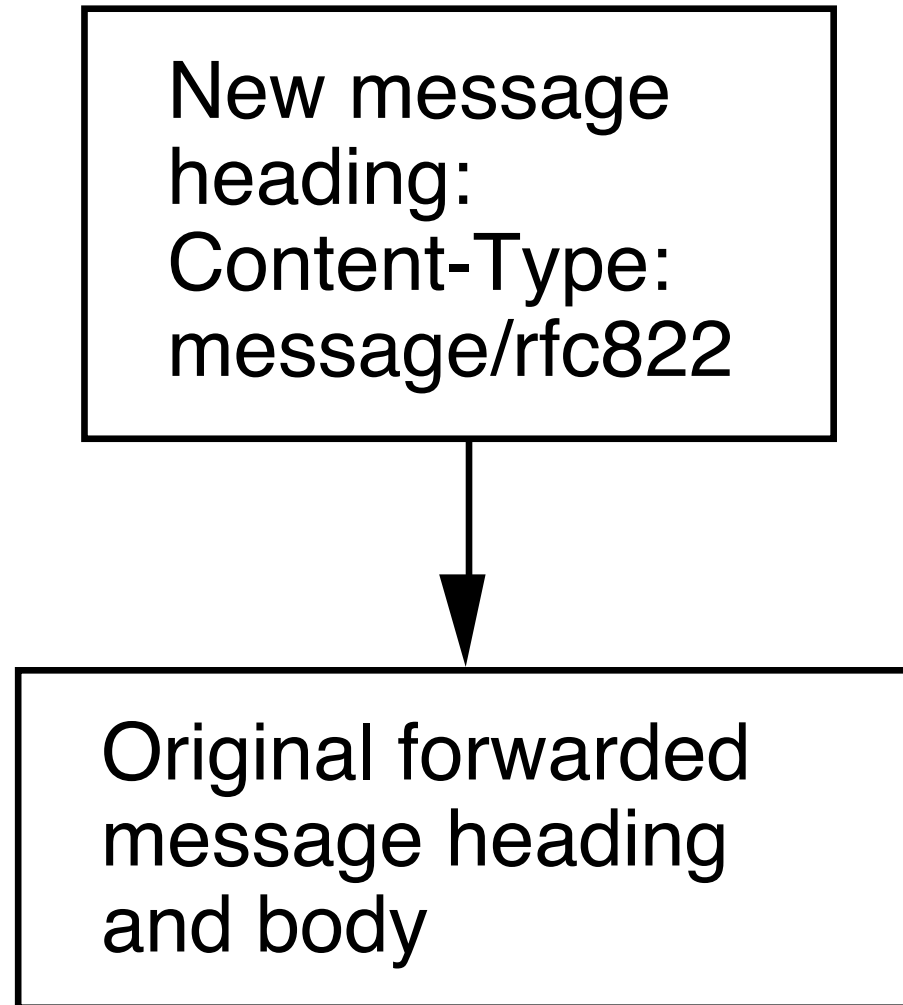
Picture from Comer: Internetworking with TCP/IP page 434

# Mail aliasing and forwarding

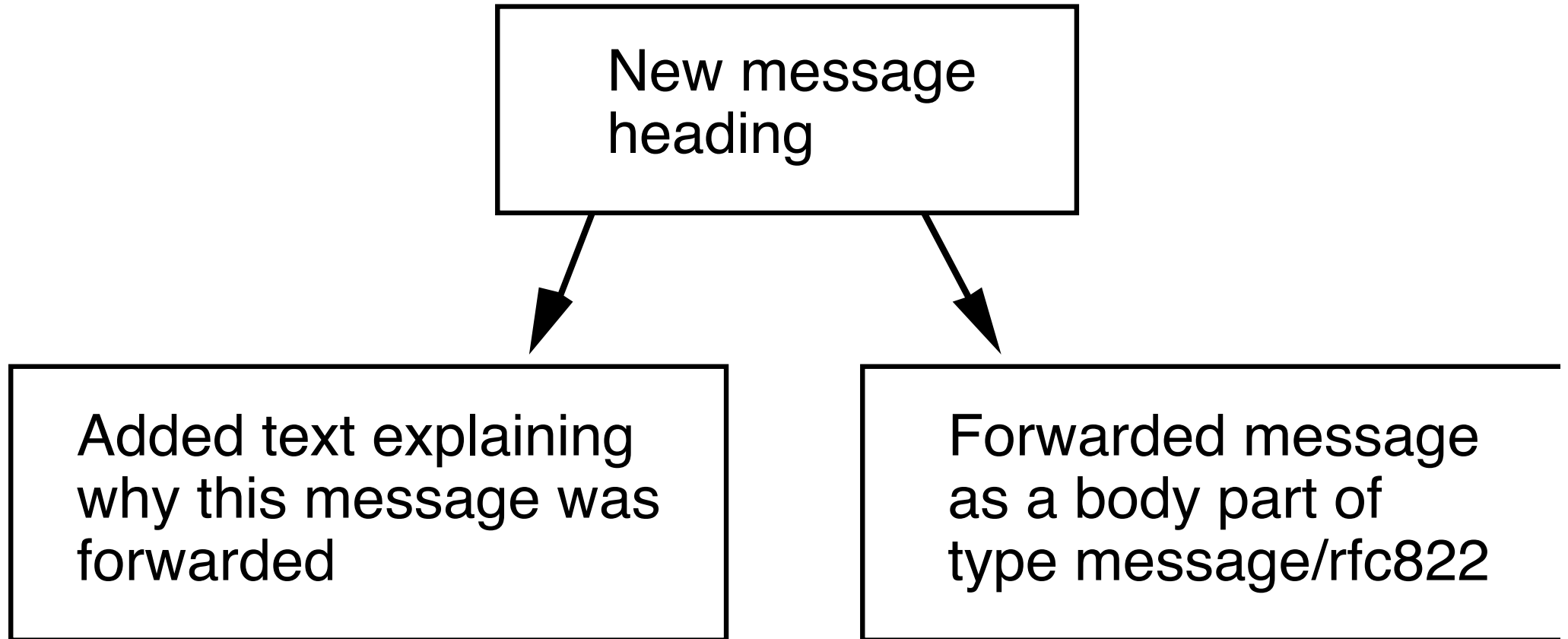


Picture from Comer: Internetworking with TCP/IP page 436

# Forwarding with a MIME Message/rfc822



# Forwarding with a MIME multipart message



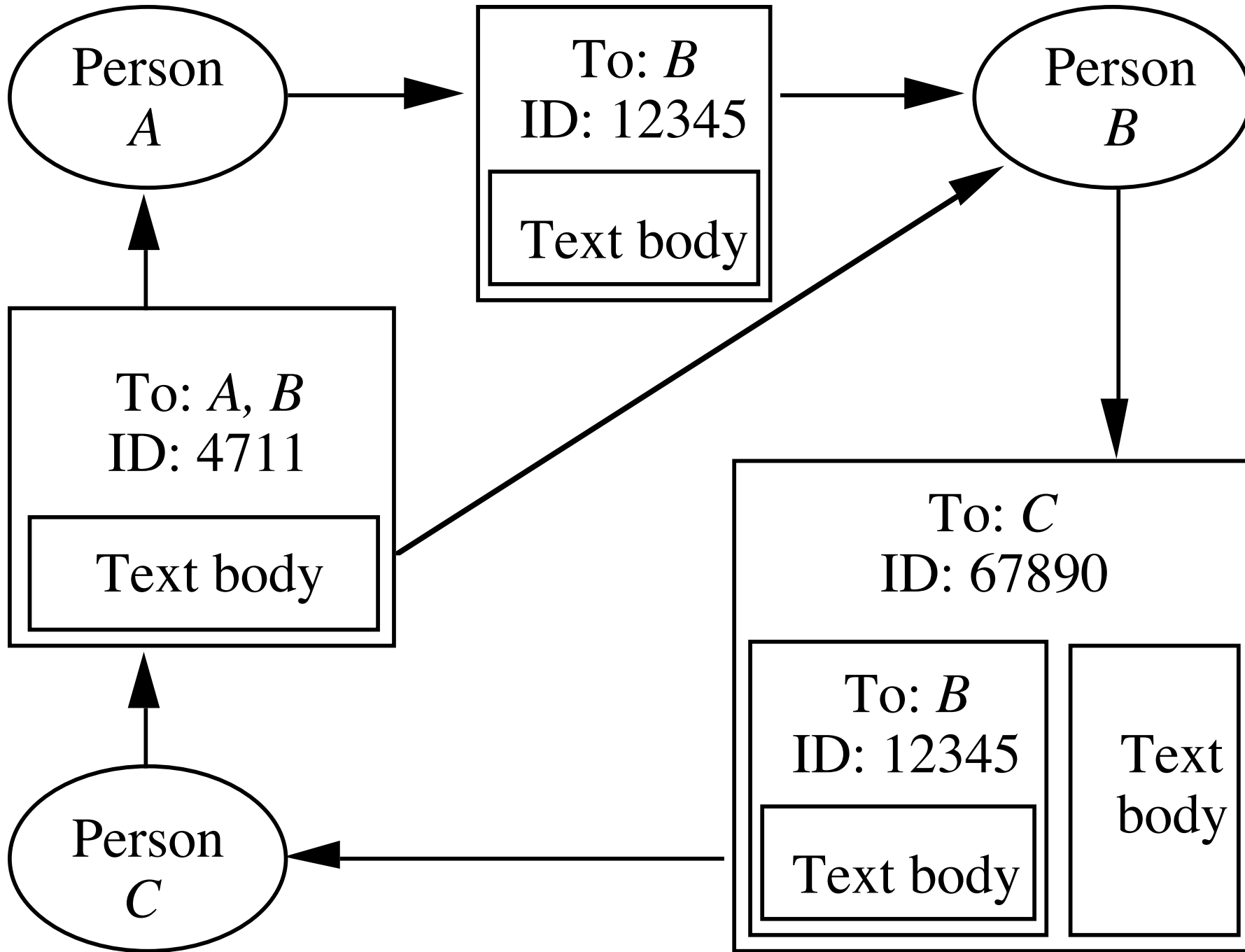
## Resending and Forwarding

Original message	<p>Date: 14 Jan 2005 09:35          From: Donald Duck &lt;dduck@northpole.foo&gt;          To: Jacob Palme &lt;jpalme@dsv.su.se&gt;</p>
Resent message	<p>Date: 14 Jan 2005 09:35          Resent-Date 14 Jan 2005 10:35          From: Donald Duck &lt;dduck@northpole.foo&gt;          Resent-From: Jacob Palme &lt;jpalme@dsv.su.se&gt;          To: Jacob Palme &lt;jpalme@dsv.su.se&gt;          Resent-To: Ducklovers &lt;dlovers@dsv.su.se&gt;</p>
Forwarded message	<p>Date: 14 Jan 2005 10:35          From: Jacob Palme &lt;jpalme@dsv.su.se&gt;          To: Ducklovers &lt;dlovers@dsv.su.se&gt;          &gt; Header and body of original message</p>

Original message	Date: 14 Jan 2005 09:35 From: Donald Duck <dduck@northpole.foo> To: Jacob Palme <jpalme@dsv.su.se>
Mime forwarding variant 1	Date: 14 Jan 2005 10:35 From: Jacob Palme <jpalme@dsv.su.se> To: Ducklovers <dlovers@dsv.su.se> Content-Type: message/rfc822  Date: 14 Jan 2005 09:35 From: Donald Duck <dduck@northpole.foo> To: Jacob Palme <jpalme@dsv.su.se>

Original message	Date: 14 Jan 2005 09:35 From: Donald Duck <dduck@northpole.foo> To: Jacob Palme <jpalme@dsv.su.se>
Mime forwarding variant 1	Date: 14 Jan 2005 10:35 From: Jacob Palme <jpalme@dsv.su.se> To: Ducklovers <dlovers@dsv.su.se> Content-Type: Multipart/mixed Content-Type: message/rfc822 Date: 14 Jan 2005 09:35 From: Donald Duck <dduck@northpole.foo> To: Jacob Palme <jpalme@dsv.su.se> Content-Type: Text/plain Comment on forwarded message





# Methods of e-mail forwarding

- (a) Add new Resent-headers to the original message.
- (b) The forwarded message is made into a body part of type `message/rfc822` in a new multipart message:
- (c) The text of the forwarded message is simply copied into the text of the new message.

Which method is best if the forwarded message had a digital seal?

# MAIL FROM (Envelope) versus From (Header)

Original message	<pre>RCPT TO:&lt;cmclist@host.net&gt; MAIL FROM:&lt;jpalme@dsv.su.se&gt;  Date: 14 Jan 2005 09:35 From: Jacob Palme &lt;jpalme@dsv.su.se&gt; To: CMC mailing list &lt;cmclist@host.net&gt;</pre>
Forwarded message	<pre>RCPT TO:&lt;mary@host.net&gt; MAIL FROM:&lt;cmclist-owner@host.net&gt;  Date: 14 Jan 2005 09:35 From: Jacob Palme &lt;jpalme@dsv.su.se&gt; To: CMC mailing list &lt;cmclist@host.net&gt;</pre>