

## List of Compatible E-mail Systems

**TABLE OF CONTENTS**

|      |  |   |
|------|--|---|
| 1.   | Introduction .....                         | 3 |
| 2.   | Sending and Receiving E-mail.....          | 3 |
| 3.   | Compatible E-mail Systems .....            | 5 |
| 3.1  | Cyrus IMAPD Mail Server .....              | 5 |
| 3.2  | HP OpenMail .....                          | 5 |
| 3.3  | Lotus Domino Mail .....                    | 5 |
| 3.4  | Microsoft Exchange 5.5.....                | 5 |
| 3.5  | Microsoft Exchange 2000.....               | 6 |
| 3.6  | Oracle InterOffice Mail Server .....       | 6 |
| 3.7  | Stalker CommuniGate Pro Mail Server .....  | 6 |
| 3.8  | Sun Internet Mail Server.....              | 6 |
| 3.9  | TeamWare Office Mail Server .....          | 6 |
| 3.10 | University of Washington IMAP4 Server..... | 6 |
| 3.11 | ZMailer.....                               | 6 |
| 3.12 | Other solutions .....                      | 6 |
| 4.   | RFC Documents .....                        | 7 |

**Legal Notice**

Copyright © Nokia Mobile Phones 2001. All rights reserved.

Reproduction, transfer, distribution or storage of part or all of the contents in this document in any form without the prior written permission of Nokia is prohibited.

Nokia and Nokia Connecting People are registered trademarks of Nokia Corporation. Other product and company names mentioned herein may be trademarks or tradenames of their respective owners.

Nokia operates a policy of continuous development. Nokia reserves the right to make changes and improvements to any of the products described in this document without prior notice.

Under no circumstances shall Nokia be responsible for any loss of data or income or any special, incidental, consequential or indirect damages howsoever caused.

The contents of this document are provided "as is". Except as required by applicable law, no warranties of any kind, either express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, are made in relation to the accuracy, reliability or contents of this document. Nokia reserves the right to revise this document or withdraw it at any time without prior notice.

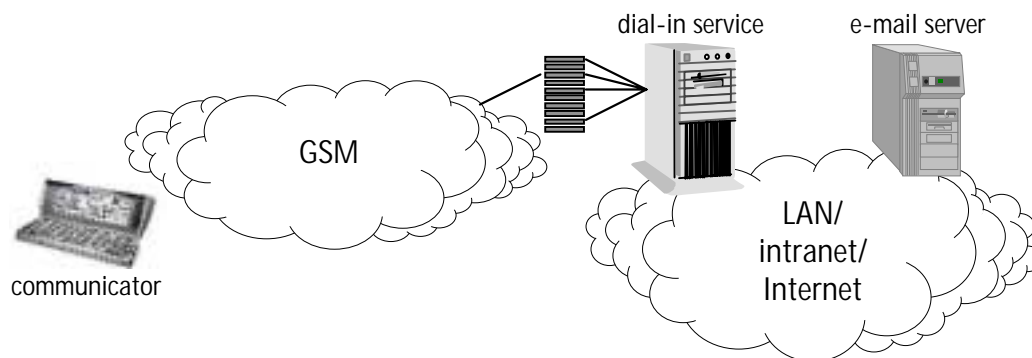
The availability of particular products may vary by region. Please check with the Nokia dealer nearest to you.

Copyright © Nokia Mobile Phones 2001. All rights reserved.

## 1. Introduction

This document describes compatible e-mail systems that can be used with the Nokia 9210 Communicator.

The Nokia 9210 Communicator messaging system includes an e-mail client that supports the most common Internet e-mail protocols to access the company's e-mail server. Figure 1 illustrates how the communicator connects to the e-mail server via a dial-in service access point.



**Figure 1. Connecting the Nokia 9210 Communicator to an e-mail server**

There are certain requirements to make e-mail access possible. There must be:

- A TCP/IP connection between the communicator and the user's e-mail server (via a dial-in service with PPP support). For more information about setting up network connections in the Nokia 9210 Communicator, see the *Nokia 9210 Communicator Internet Connections Guide*.
- POP3 or IMAP4 (Version 4rev1, RFC 2060) protocol support from the remote e-mail server for retrieving messages. Both of these protocols are commonly supported by the latest e-mail servers.
- SMTP support for sending e-mail messages.
- Messages must also follow MIME formats.

RFC documents specifying these protocols are listed at the end of this document.

Note that the X.400 mail system is not supported.

For better security, it is possible to use encrypted connections between the communicator and the e-mail server. Encryption is implemented using transport layer security (SSL/TLS), which protects the IMAP4, POP3, and SMTP connection between the communicator and the e-mail server. Note that encrypted e-mail messages (such as S/MIME and PGP) are not supported. Secure SSL/TLS connection is negotiated using IMAP4, POP3, and SMTP protocol extensions (specified in RFC 2487 and RFC 2595). Systems that use separate TCP ports for secure connections, and do not negotiate the security protocol during the IMAP4, POP3, or SMTP session, are not supported.

## 2. Sending and Receiving E-mail

The communicator supports both POP3 and IMAP4 protocols for retrieving e-mail. Either of them can be used, but IMAP4 is recommended, since it enables the user to access different folders and to determine whether or not to

retrieve attachments. The e-mail client in the communicator sends e-mail messages using the SMTP protocol, and both MIME1 and MIME2 encodings are supported.

Attachments are supported and downloaded attachments can be viewed on the communicator. Initially supported attachment types are marked with (\*) in Table 1. Other attachment types in Table 1 are supported if the appropriate application or converter is installed in the device. New attachment types can be supported via add-on applications installed in the communicator. Downloaded attachments can be also saved to files, and transferred to a PC for viewing. Overall use of attachments is rather limited by the small disk space and amount of free memory. A memory card can be used to expand the available disk space for messaging.

| Attachment type                            | File extensions                           | MIME types   |
|--|---|--|
| Audio File                                 | WAV, AU, WVE                              | "audio/x-wav"<br>"audio/basic"<br>"audio/x-sibo-wve"   |
| CompuServe GIF (*)                         | GIF                                       | "image/gif"  |
| Computer Graphics Metafile                 | CGM                                       | "image/cgm"<br>"image/x-cgm"   |
| Corel/Novell Presentations                 | SHW                                       | "image/x-presentations"  |
| EPOC Word (*)                              | -   | "x-epoc/x-app268450404"  |
| EPOC Sheet (*)                             | -   | "x-epoc/x-app268450429"  |
| EPOC Bitmap (*)                            | MBM                                       | "image/x-epoc-mbm"   |
| Internet HyperText Markup Language (*)     | HTML, HTM                                 | "text/html"  |
| Lotus 1-2-3<br>v.1/2/3/4/5/97/Millennium   | WQ1, WKU, WK1, WK3,<br>WK4, WK5, WK6, 123 | "application/x-lotus-123"<br>"application/vnd.lotus-1-2-3"   |
| Lotus AMI Draw                             | SDW                                       | "image/x-amidraw"  |
| Microsoft Excel<br>2/3/4/5/7/97/98/2000    | XLS, XLC                                  | "application/x-msexcel"<br>"application/x-excel"<br>"application/vnd.ms-excel"<br>"application/msexcel"<br>"application/xlc"                                 |
| Microsoft PowerPoint<br>3/4/7/97/98/2000   | PPT, POT, PPS                             | "application/x-mspowerpoint"<br>"application/vnd.ms-powerpoint"<br>"application/ppt"<br>"application/pot"<br>"application/pps"<br>"application/mspowerpoint" |
| Microsoft Project                          | MPP                                       | "application/vnd.ms-project"   |
| Microsoft Word<br>1/2/3/4/5/6/7/97/98/2000 | DOC, WRI                                  | "application/msword"<br>"application/vnd.ms-word"<br>"application/vnd.msword"  |
| Paintbrush                                 | PCX, DCX                                  | "image/x-pc-paintbrush"  |
| PKZIP Format                               | ZIP                                       | "application/zip"  |
| Portable Network Graphics                  | PNG                                       | "image/png"<br>"image/x-png"   |
| Rich Text Format                           | RTF                                       | "application/rtf"<br>"text/rtf"  |
| Ringing Tones (*)                          | MG  | "application/vnd.nokia.ringing-tone"   |
| Tagged Image File Format (TIFF, JPEG (*))  | TIF, JPG, JIF                             | "image/tiff"<br>"image/jpeg"   |

|                          |                    |  |
|--------------------------|--------------------|--|
| Text (*)                 | TXT                | "text/plain"   |
| UNIX Compress, Tar       | TAR, TAZ           | "application/x-tar"  |
| UNIX Gzip                | TGZ                | "application/x-gzip"<br>"application/gzip"   |
| Visio                    | VSD                | "application/vnd.visio"  |
| Windows Bitmap           | BMP, RLE, ICO, CUR | "image/x-win-bitmap"<br>"image/x-MS-bmp"<br>"image/bmp"<br>"image/x-bmp"                   |
| Windows Metafile         | WMF, EMF           | "image/x-win-metafile"<br>"image/x-wmf"  |
| WordPerfect<br>4/5/6/7/8 | WPD                | "application/wordperfect5"<br>"application/wordperfect5.1"<br>"application/x-wordperfect6" |

**Table 1. Supported attachment types**

For more information how to configure the e-mail client, see the *Setting up E-mail Service* document.

### 3. Compatible E-mail Systems

Here is a list of mail systems which can be connected with the communicator. All of these systems should work with the Nokia 9210 Communicator. This list is not exhaustive, and other mail servers supporting standard Internet protocols (SMTP, IMAP4, POP3) should work as well. The most recent information about compatible e-mail systems can be found at <http://www.forum.nokia.com>.

#### 3.1 Cyrus IMAPD Mail Server

- Cyrus IMAPD Mail Server 1.5 (Carnegie Mellon) supports the MIME, IMAP4, and POP3 standards
- Version 1.6 supports also secure connections (SSL/TLS) with IMAP4
- More information on Cyrus IMAPD Mail Server can be found at <http://asg.web.cmu.edu/cyrus/>

#### 3.2 HP OpenMail

- OpenMail 6.0 (for Linux) supports the SMTP, MIME, IMAP4, and POP3 standards
- More information on the OpenMail server can be found at <http://www.hp.com>

#### 3.3 Lotus Domino Mail

- Lotus Domino R5 Mail Server supports the SMTP, MIME, IMAP4, and POP3 standards
- More information on Lotus Domino Mail can be found at <http://www.lotus.com>

#### 3.4 Microsoft Exchange 5.5

- Microsoft Exchange 5.5 supports the SMTP, MIME, IMAP4, and POP3 standards
- More information on Microsoft Exchange can be found at <http://www.microsoft.com>

### 3.5 Microsoft Exchange 2000

- Microsoft Exchange 2000 supports the SMTP, MIME, IMAP4, and POP3 standards
- More information on Microsoft Exchange can be found at <http://www.microsoft.com>

### 3.6 Oracle InterOffice Mail Server

- Oracle InterOffice Mail Server 5.1 supports the SMTP, MIME, IMAP4, and POP3 standards
- More information can be found at <http://www.oracle.com/>

### 3.7 Stalker CommuniGate Pro Mail Server

- Stalker CommuniGate Pro 3.3 supports the SMTP, MIME, IMAP4, and POP3 standards as well as secure connections (SSL/TLS). The APOP command is supported for POP3.
- More information can be found at <http://www.stalker.com/CommuniGatePro>

### 3.8 Sun Internet Mail Server

- Sun Internet Mail Server 4.0 supports SMTP, MIME, POP3, and IMAP4 standards
- More information on Sun Internet Mail Server can be found at <http://iplanet.com/>

### 3.9 TeamWare Office Mail Server

- TeamWare Office Mail Server 5.3 supports SMTP, MIME, POP3, and IMAP4 standards
- More information can be found at <http://www.teamware.com/products/>

### 3.10 University of Washington IMAP4 Server

- UW IMAP Server v10.173 supports the POP3 and IMAP4 standards
- More information on UW IMAP Server can be found at <http://www.washington.edu/imap>

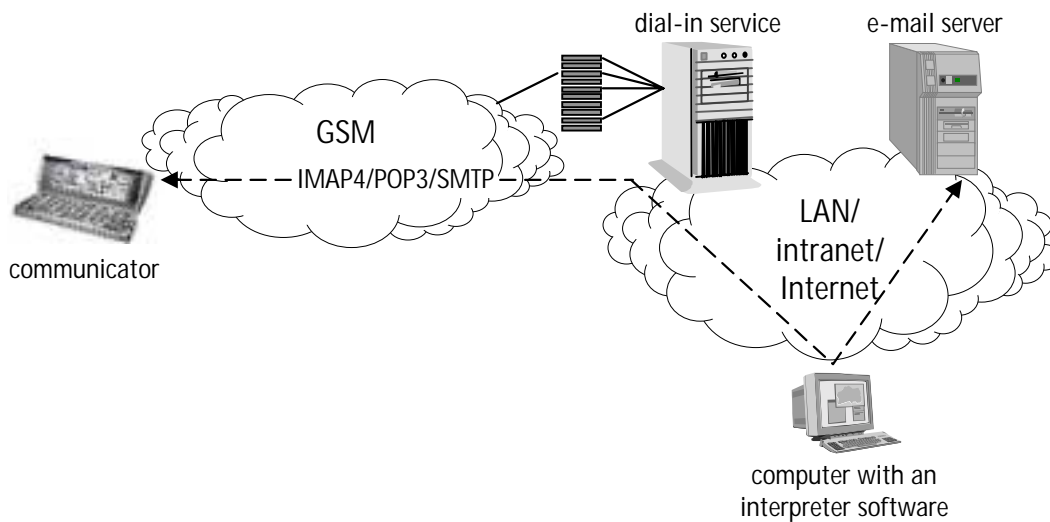
### 3.11 ZMailer

- ZMailer (version 2.99) supports the SMTP standard
- More information can be found at <http://www.zmailer.org/>

### 3.12 Other solutions

If the e-mail server does not support the POP3/IMAP4 and SMTP protocols, connections to the e-mail server can also be established with the communicator's Web browser as shown in Figure 1, if the e-mail server supports HTTP/HTML access.

Additionally, it may be possible to use converter software that provides necessary POP3/IMAP4 and SMTP protocol support for the e-mail server. Use of the converter is illustrated in Figure 2.



**Figure 2. Connecting the Nokia 9210 Communicator to an e-mail server using interpreter software**

Examples of converter software include *Infinite InterChange* by Infinite Technologies. Infinite InterChange creates POP3, IMAP4, and HTTP/HTML support. More information on Infinite Interchange can be found at <http://www.ihub.com>

#### 4. RFC Documents

Internet e-mail protocols are specified using RFC (Request for Comments) documents. RFC documents are available, for example, from IETF (The Internet Engineering Task Force, <http://www.ietf.org/>).

|  |          |
|--|----------|
| SMTP (Simple Mail Transfer Protocol)   | RFC 821  |
| Standard for the format of ARPA Internet text messages                                   | RFC 822  |
| POP3 (Post Office Protocol, version 3)   | RFC 1939 |
| PPP (Point-to-Point Protocol)  | RFC 1661 |
| MIME (Multipurpose Internet Mail Extensions) Part One: Format of Internet Message Bodies | RFC 2045 |
| MIME (Multipurpose Internet Mail Extensions) Part Two: Media Types                       | RFC 2046 |
| MIME (Multipurpose Internet Mail Extensions) Part Three: Message                         |          |

Nokia Mobile Phones

Nokia 9210 Communicator

List of Compatible E-mail  
Systems

|  |          |
|--|----------|
| Header Extensions for Non-ASCII Text   | RFC 2047 |
| IMAP4 (Internet Message Access Protocol, version 4rev1)  | RFC 2060 |
| TLS (Transport Layer Security Protocol, version 1.0)   | RFC 2246 |
| Read receipts (An Extensible Message Format for Message Disposition Notifications, Disposition-Notification-To header) | RFC 2298 |
| SMTP Service Extension for Secure SMTP over TLS  | RFC 2487 |
| Using TLS with IMAP, POP3, and ACAP  | RFC 2595 |