PAPAGENO

Configuration, Installation and Administration

Version 5.9

VIPcom
Communications

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Content

General

PAPAGENO creates the connection between mail server and TC system. All messages and user addresses are centrally stored and can be easily administrated.
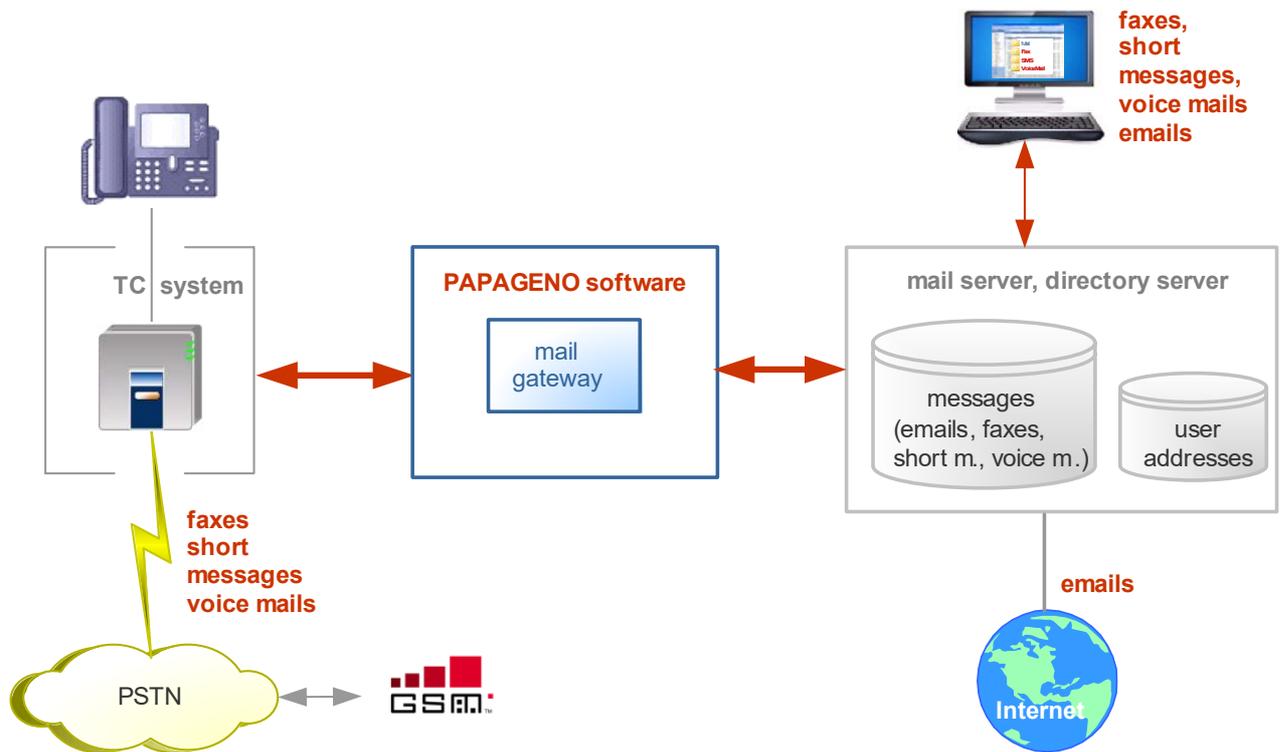
PAPAGENO is flexible

- Via mail gateway PAPAGENO can be integrated into any SMTP compliant mail system.

- High-performanced device drivers connect PAPAGENO to ISDN cards or modems.

- Via interfaces PAPAGENO can be integrated to external systems and internal applications.

- PAPAGENO is compatible with many platforms on the Linux, Unix and Windows operating systems and can be made reliable.

- PAPAGENO can be clustered and extended as required.

- For each PAPAGENO communication computer up to 90 channels can be used. Several PAPAGENO communication hosts can operate in parallel.

Mobile Access is no problem with PAPAGENO.

PAPAGENO Configuration, Installation and Administration - Overview

You **have to** plan or do in any case	You **can** plan or do additionally

1. Planning the Configuration

Which **computer (s)** do you use ?

Which **phone system** do you use?

Which **devices** do you use ?

How many **Lines** are required ?

How to connect PAPAGENO to your **mail system** ?

Where documents will be **converted into fax format** ?

Do you want to retrieve messages by **phone?**

Do you want to **reduce** the main computer's workload ?

Do you want to be sure that PAPAGENO is always available (**Backup concept**)?

Do you want to archieve high performance fax transmission

Do you want to send faxes inexpensively from various locations (Least cost routing)

2. Installing PAPAGENO

Execute the **main installation**
(Installed together with PAPAGENO are :
all PAPAGENO servers, drivers, commands,
software interfaces, ASCII administration
programm comfax -adm)

Install the **devices**

Installing single **PAPAGENO server processes**
(e.g. THETA server for devices)

Securing **access to the mail server**
(Installing **mail gateway** or **MAPI connector**)

Installing an **Administration programm** with
graphically interface

Installing **comFAX clients**

3. Administer PAPAGENO

with one of the Administration programs : Admin/Win, or Web-Admin or comfax-adm

Enter:

Servers (Computers, on which PAPAGENO is
installed)

Users

Devices with corresponding device drivers
(Fax, Fax/Voice Telex, SMS, depending upon
device)

at least one **distribution rule**

Enter:

User groups

Additional distribution rules

Number mapping

… and PAPAGENO works!

PAPAGENO Configuration, Installation und Administration

A. Configuration Planning

1. Which Computer Do you Use for the PAPAGENO Installation on Windows?

Software Requirements

- minimum Windows 2000 or higher
- NTFS partition for the PAPAGENO installation

Hardware Requirements:

- Pentium system, as efficient as possible, 200 MHz minimum
- 300 MB minimum disk storage
- 256 RAM minimum (accordingly more in case Microsoft Office is started to open fax transition)

The higher the number of open lines the higher the efficiency of the computer must be.

Disk Space for Faxes

Producing a fax means image processing. Note that each page stored in the server requires about 60 KB; 10,000 pages require about 600 MB. Therefore take into account the number of documents and the storage duration for planning. If a mail gateway is used pages reside in memory temporarily but are not stored.

If your messages (faxes, telexes, voice mails) haves to be saved in PAPAGENO you need:

- Sufficient disk space for those documents.

Network Requirements:

- A TCP/IP based network

Devices Requirements

As devices you need: slots for ISDN cards (PCI 2.1, full height) and/or a corresponding number of serial interfaces (V.24) for the connection of fax modems.

The serial interfaces must be modem-capable. The possible transmission rate must at least be 19.200 bauds per second.

Further Requirements

- DNS name can be resolved

- It is recommended to define an alias name for the PAPAGENO computer, e. g. "message server" and to enter this alias name during the installation.

- A connection to the telephone network exists.
  PAPAGENO has to be connected via one or several PRI or BRI connections and CAPI with the **public telephone network**. This connection is realized either via a TC system or a telephone provider.

- A **CAPI interface** exists on the PAPAGENO device computer.

- A **mail server** is installed and configured.

If you plan the configuration with an IMAP and an LDAP connection between device server and mail server:

▸ Make sure that the services LDAP and IMAP4 are configured in your mail server.

2. Which Computer Do You Use for the PAPAGENO Installation on Linux/Unix?

Software Requirements:

- A Linux or Unix operating system must be installed.
  The current platform versions, compatible with PAPAGENO are listed on our web site `www.vip-comag.de under Products - PAPAGENO - Versions`

Hardware Requirements:

- 300 MB minimum disk storage for the basic installation of PAPAGENO

- 256 RAM minimum

The higher the number of open lines the higher the efficiency of the computer must be.

Disk Space for Faxes

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3. Which Phone System Do you Have or Need?

Phone System	PAPAGENO	Services
analog	modem	fax
digital	ISDN card	fax, SMS, voice mail
IP system	CAPI VoIP protocol stack	fax, voice mail SMS

Analog Line

With an analog line you can use the **fax service** only.

Digital Line

A digital line permits the use of **all PAPAGENO services and features**: fax, SMS, voice mail, fixed network sms. Up to 30 channels and up to 1000 direct dial numbers are at your disposal.
High fax volume is no problem. See below „Digital Phone System", page 17.

IP Phone System

In case you handle telephony via Internet already (IP-PBX or ISP) you can use the services voice mail, SMS and fax without additional hardware by means of a protocol stack. See below „IP Phone System", page 19.

Digital Phone System

Access Via TC System

An ISDN point-to-point connection must exist in the TC system. The TC system must support the cascading of private branch exchanges with internal connection code. Thus an ISDN card works like a system within the system.
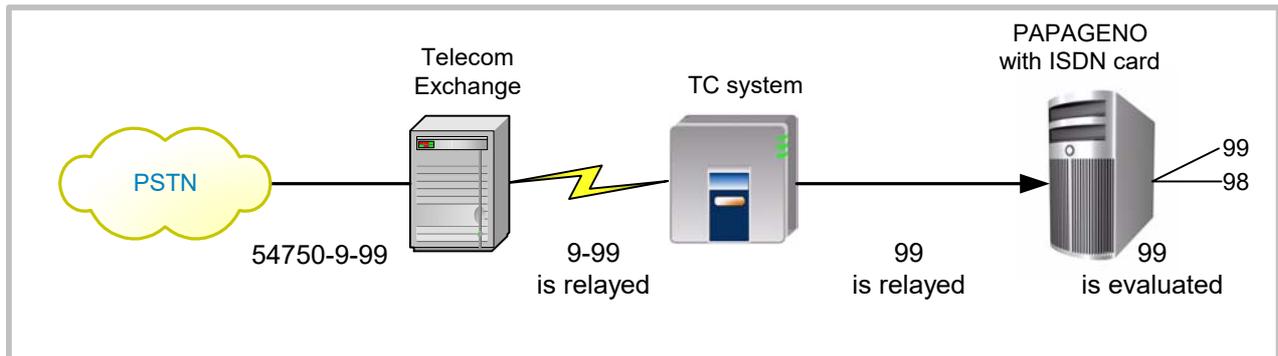
The TC system evaluates the fax prefix (in the above example it is number 9), the device and PAPAGENO interprets the direct dial numbers.

If you have identical extensions at various locations (e.g. Munich and Sidney), PAPAGENO provides for messages being deliverd correctly.

Make sure that for incoming calls the called number is signalized in the D channel. For this propose the access must be realized via the DSS1 protocol.

Advantage: You can continue to use your "old" phone number structure. Internal call forwarding is possible. An incoming call can be forwarded to the voice box in case of lines being "busy" or "unavailable".

Disadvantage: Possibly higher installation and investment efforts.

Access Via Parallel-Connected External Lines

PAPAGENO is connected directly to the local loop:
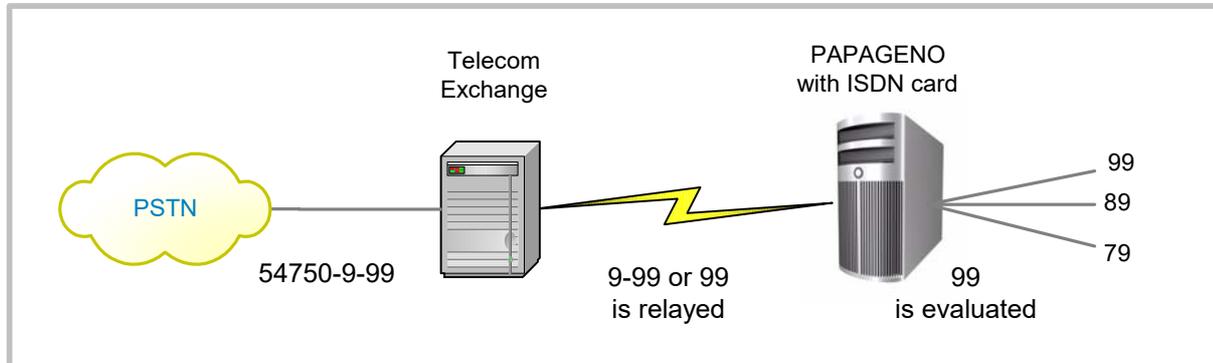
The ISDN router and PAPAGENO evaluate the direct dial numbers.

If several S_0 or S_2m connections exist it is recommended to bundle them in parallel
(= to bundle). Thus every termination will respond to the same number. The computer with ISDN
cards or a router are connected directly to the S_0 or S_2m interface of the local loop.

Advantage: simple and low priced, standardized environment, easy to install.

Disadvantage: Internal connections are not possible. Forwarding and inquiring the voice box is only
possible via the public telephone network.

If every user likes a personal voice box ...

... you will need a TC system in any event. If the number is "busy" or "unavailable" an incoming call
will then be rerouted to the voice box.

IP Phone System
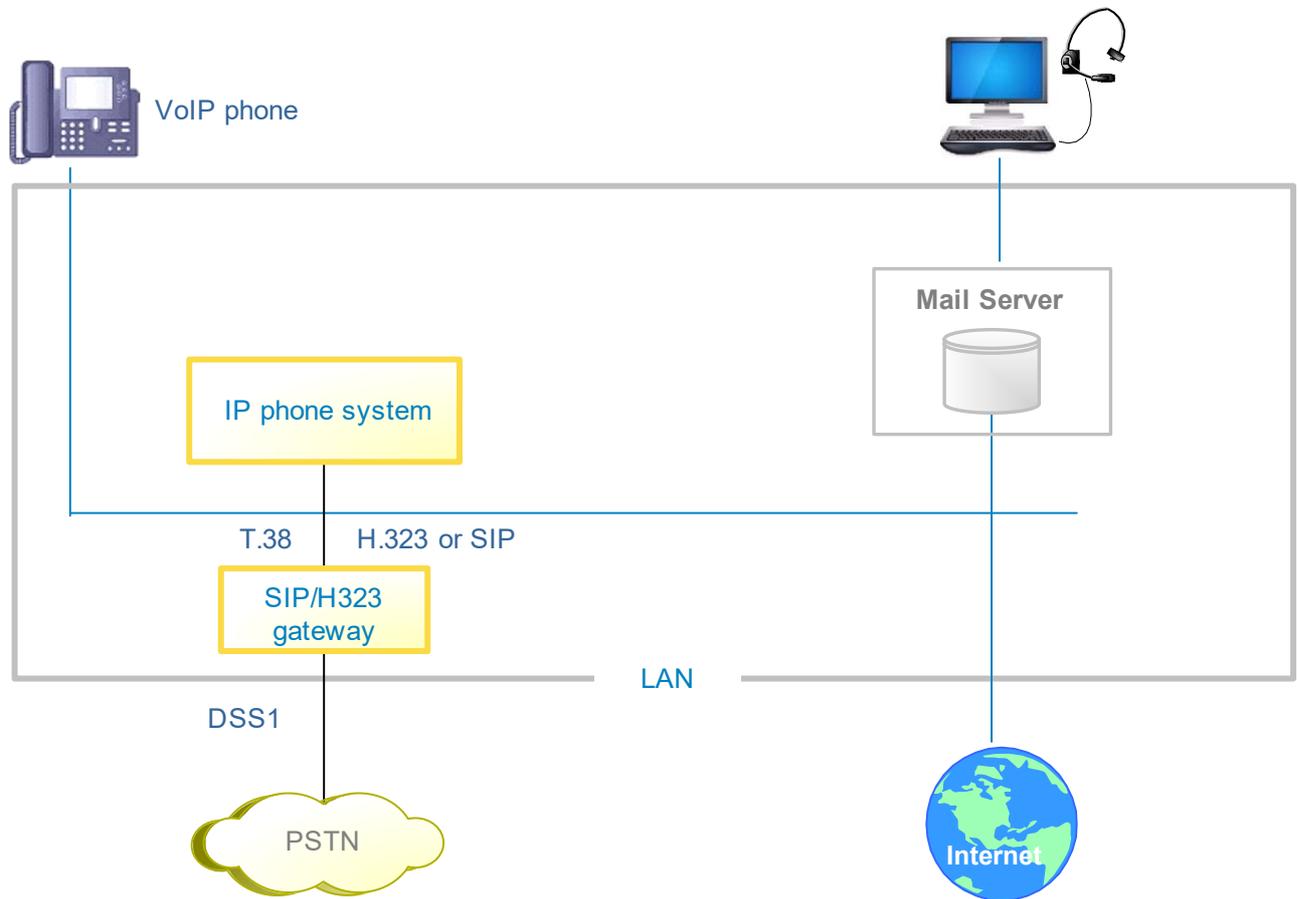
You can integrate **PAPAGENO** easily into that system:
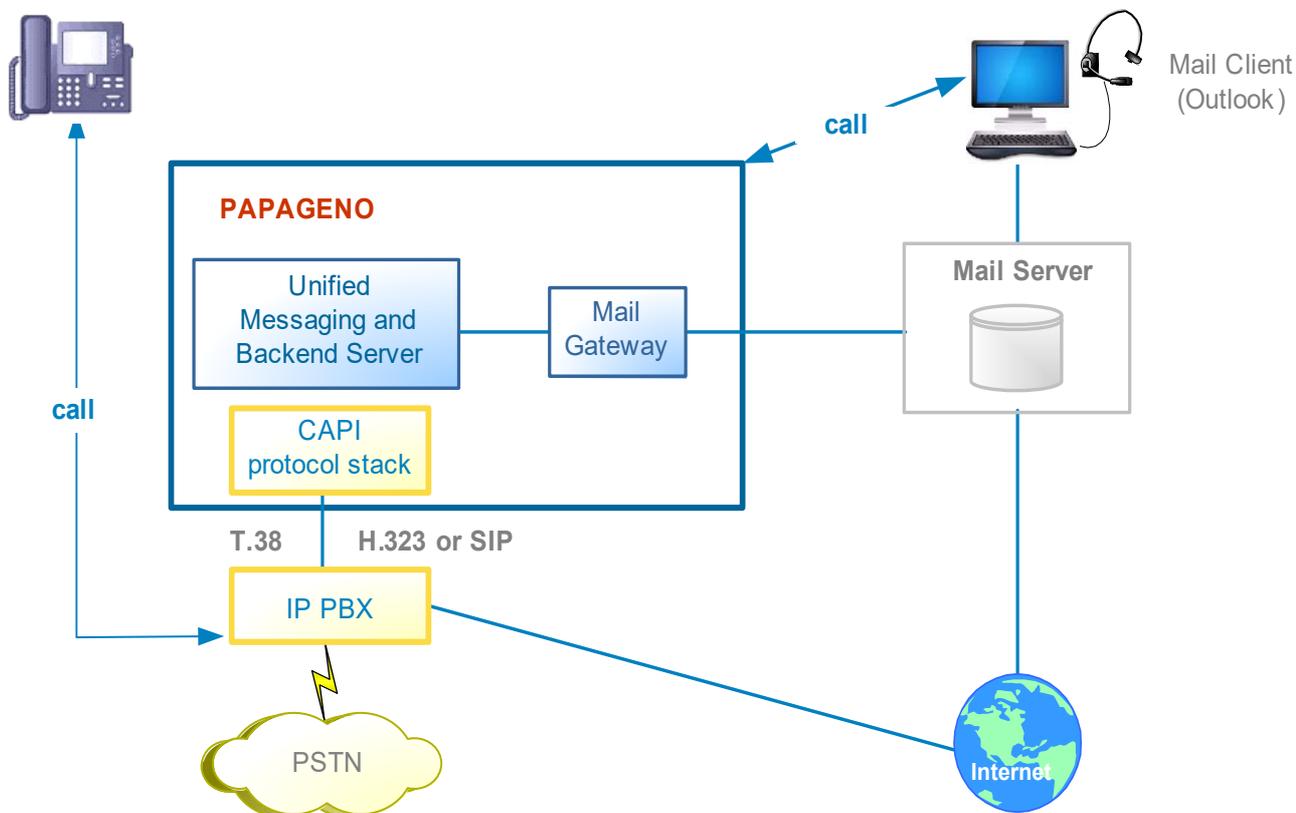
A CAPI-VoIP protocol stack connects PAPAGENO to the IP phone system

If you are already using Internet telephony (using an IP PBX or a provider), you can also use voice mail, SMS, and fax services without additional hardware. (Fax can be used if the IP PBX supports If many faxes are to be sent, however, we recommend an ISDN device (card or router), as transmission time and fax quality over the public telephone network are better..

Voice-Mail is processed via H.323 resp. SIP.

Faxes are sent via T.38

SMS is processed via H.323 resp. SIP. The IP phone system must support the SMS protocol.

4. Which Devices are Used?

PAPAGENO supports ISDN and analog devices.

Devices you can use with PAPAGENO

ISDN cards and routers	Dialogic (Eicon Diva) with Server BRI (S_0); Dialogic (Eicon Diva) with Server 4BRI ($4xS_0$); Dialogic (Eicon Diva) with Server PRI (S_2m). Funkwerk bintec RT1202 Media Gateway
PAPAGENO Communication Server	Pre-configured, S_2m cards.
GSM devices	Devices which can send/receive via GSM (e. g. mobiles with V.24-Adapter, wireless modul)
Telex devices	Telex adapter, Hasler
Modems	Any modems supporting class 2 standard

The ISDN router Brick / BinTec is still supported, but not sold any more by the company BinTec since the beginning of 2003.

The devices support the following services

ISDN card, router	**Fax, fixed network SMS, voice mail**
PAPAGENO Communication Server	**Fax, fixed network SMS, voice mail**
GSM devices	**SMS (no fixed network SMS)**
Telex devices	**Telex**
Modems	**Fax**

With an ISDN device you can use all PAPAGENO services (fax, voice mail, SMS).

Devices can be used with the following PAPAGENO installations and operating systems:

Device	Operating System
ISDN cards	**Windows, Linux**
PAPAGENO computer	**Windows, Linux**
Modems, GSM devices	**Windows, Linux, Unix**

Which Computer is Used for Devices?

Devices can connect or be attached to a PAPAGENO host or to a separate PAPAGENO system.

In any case a PAPAGENO device server (**THETA)** and a device driver must be installed on the "device computer".

The following software is required on the device computer:

ISDN card	**ISDN cards need a CAPI interface and therefore are running on Windows and Linux.**
GSM device, modem, telex	**The PAPAGENO drivers are running on all platforms.**

Text-to-Speech can be used on **Windows and Linux** since both the PAPAGENO Scripting Engine and the Text-To-Speech software from Acapela (former Elan) are running on Windows and Linux.

The following hardware is required on the device computer:

ISDN card	**Slot, S_0- or S_2- interface. No other CAPI applications must be installed on this computer.**
GSM device	**Serial interface (V.24)**
Modem	**According number of serial interfaces (V.24). Interfaces must be modem-compatible. The minimum transmission rate is 19,200 bauds per second.**

NOTE: PAPAGENO must have exclusive rights for all its devices. If other application programs can access these devices this may affect the performance of PAPAGENO.

5. How Many Lines are Required?

The more lines you use, the more messages you can send and receive in a short time period.

The number of lines depends on the kind of device being used.

The devices provider the following number of lines

Dialogic (Eicon) Diva server S_0 card	**2 channels**
Dialogic (Eicon) Diva server S_2m card	**30 channels**
Dialogic (Eicon) Diva server 4 BRI S_0 card	**4 or 8 channels**
Dialogic (Eicon) Diva server S_2m card	**30 channels**
Funkwerk bintec RT1202, 2 BRI S_0 card	**4 channels**
PAPAGENO communication server	**30, 60, 90 or 120 channels (by request 2 or 8 channels)**
GSM device, modem, telex device	**1 channel**

Fax examples:

1 line: approx. **60** pages per hour

30 lines: **1,800** pages per hour or 18,000 per day (10 hours)

These specifications may vary if a dialled number is busy and the dialling procedure has to be repeated.

VIPcom provides a licence for a certain number of channels ("lines"). Enter the appropriate number of lines setting up the device drivers for each device. Be aware that the total number of lines you enter does not exceed the total number of licences.

Fax and voice mail may use the same lines. Enter the number of licensed lines for the fax/voice driver.

6. How to Connect PAPAGENO to your Mail System

PAPAGENO can be integrated into any SMTP-capable mail system via a gateway.
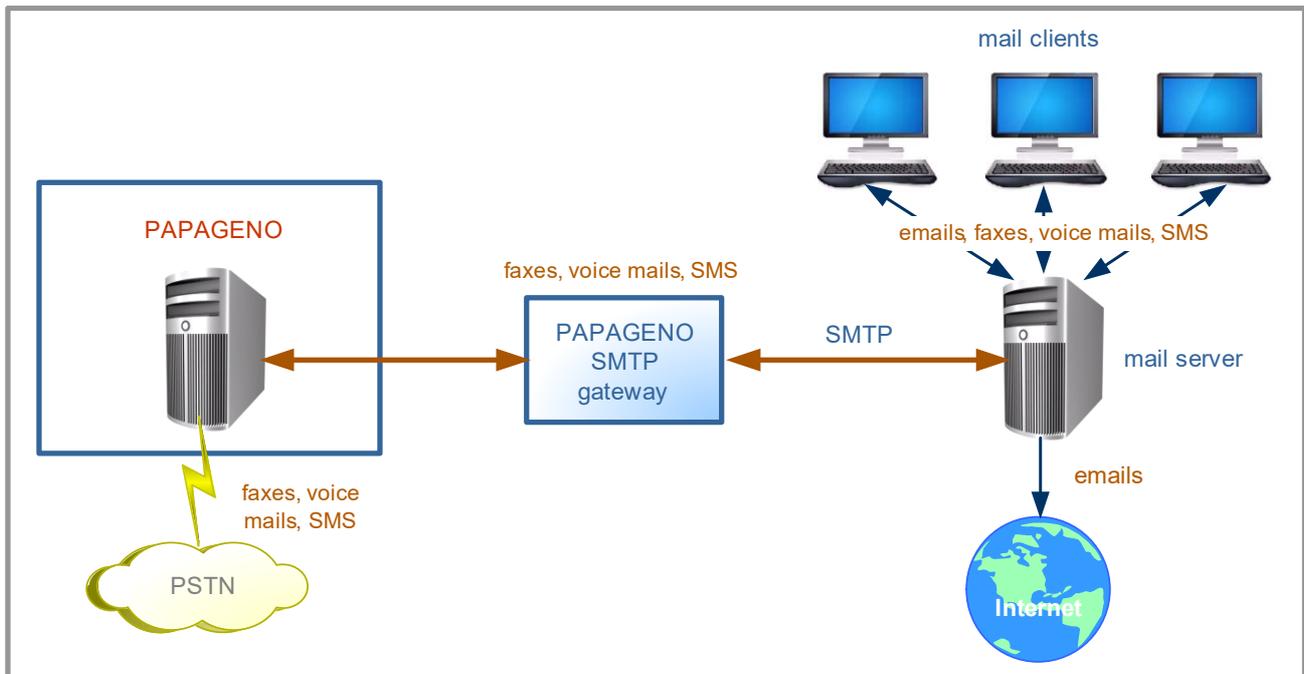
Which mail system can be used?

The "PAPAGENO-SMTP-Gateway" works with any mail server whose communication functions via port 25. It is platform-independent and can use MAPI on Window for document conversion.

If you do not use a mail server, there are other ways to convert documents to fax format (see below Chapter 7. „If No Mail Gateway is Used...", page 27).

Is it possible to use an existing user database?

Yes, the records may be extended to include fax, voice mail or SMS addresses.

Do you use a directory server?

If yes, PAPAGENO, via LDAP, has access to user data and fax numbers on your directory server.

If no, save the numbers of your users for fax, SMS and voice mail in PAPAGENO.

On which platforms does the gateway run?

It is platform-independent, but can use MAPI for document converting under Windows.

On which platform the PAPAGENO server can be installed?

On Windows or Linux/Unix, independently on the platform where the gateway is installed.

Do you need multiple mail gateways?

No, not normally. The use of additional gateways can be useful with extremely high bandwidth (very many messages in a short time), the use of client systems or frequent serial fax transmissions..

The PAPAGENO SMTP Gateway can parallel manage messages for multiple SMTP mail servers.

Which formats can be converted by the SMTP gateway?

Common formats like ASCII, TIF as well as PCL, HPGL, PostScript Level 2 if licensed, can be converted to fax format via the gateway. Via MAPI also the formats of the Windows applications such as: .doc, .xls, .pdf.

7. If No Mail Gateway is Used...

.. documents must be converted to fax format on the user computers. After this they can be forwarted to PAPAGENO. (See below Chapter 8. „Document Conversion", page 28).

Windows User Computers

Users create documents in any Windows applications and send them to the FAX MAPI Printer that converts the documents and forwards them via the PAPAGENO user interface comFAX/Win or via Outlook/PAPAGENO MAPI Connector to PAPAGENO.
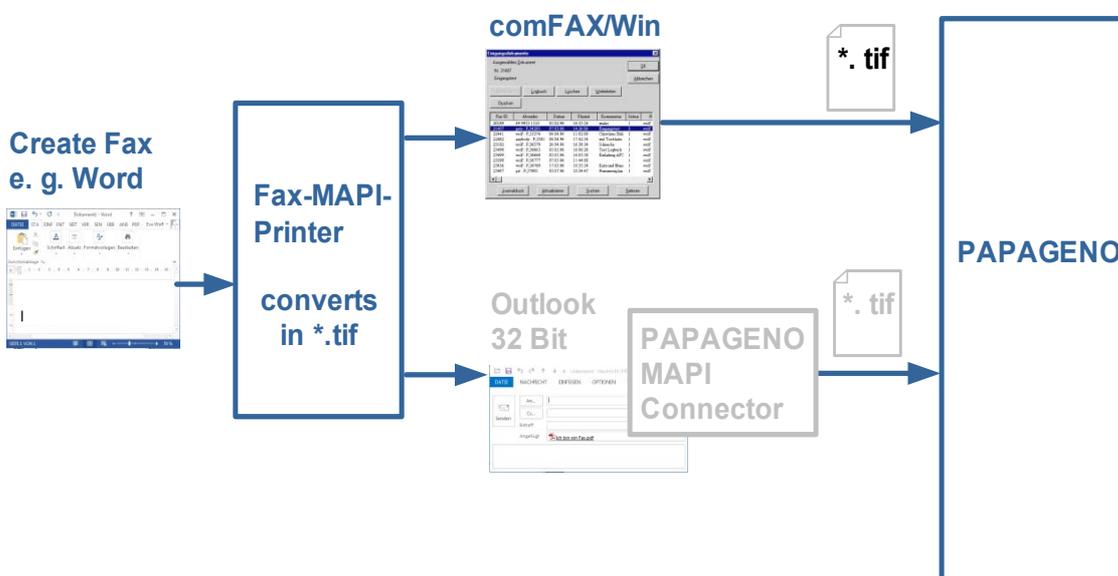
The **FAX MAPI Printer i**s part of the PAPAGENO MAPI connector but can be seperately installed.

The **PAPAGENO-MAPI Connector** connects Outlook with PAPAGENO. It also converts send documents to fax format. Nevertheless the connector only works with an Outlook Version that is lower than 2010 (32 Bit) and therefor is hardly used anymore.

Send Faxes from Applications

Documents can be sent from Windows- or Linux applications directly.
(See below Chapter 15. „Sending Dokuments from Applications Directly", page 42).

Conclusion:

Without mail gateway use the vitual PAPAGENO printer **FAX MAPI Printer** for document conversion together with the PAPAGENO client **comFAX/Win**.

For unified messaging you should consider a mail gateway in order to benefit from all features

8. Document Conversion

The best way to fcreate faxes is in a graphical or a word processing program.

The conversion to fax format is performed

- either on the gateway system via the PAPAGENO MAPI Connector and/or PAPAGENO Tools

- or on the client computer via a PAPAGENO Printer

If a PAPAGENO MAPI Connector is installed on the client it will convert the regarding documents into fax format.

How to Convert Documents on the Gateway System

Fax documents created in a Windows application can be sent as email attachment to a fax address. The they are converted to the fax format on the gateway computer via the **PAPAGENO MAPI Connector** or via a **PAPAGENO tool**..
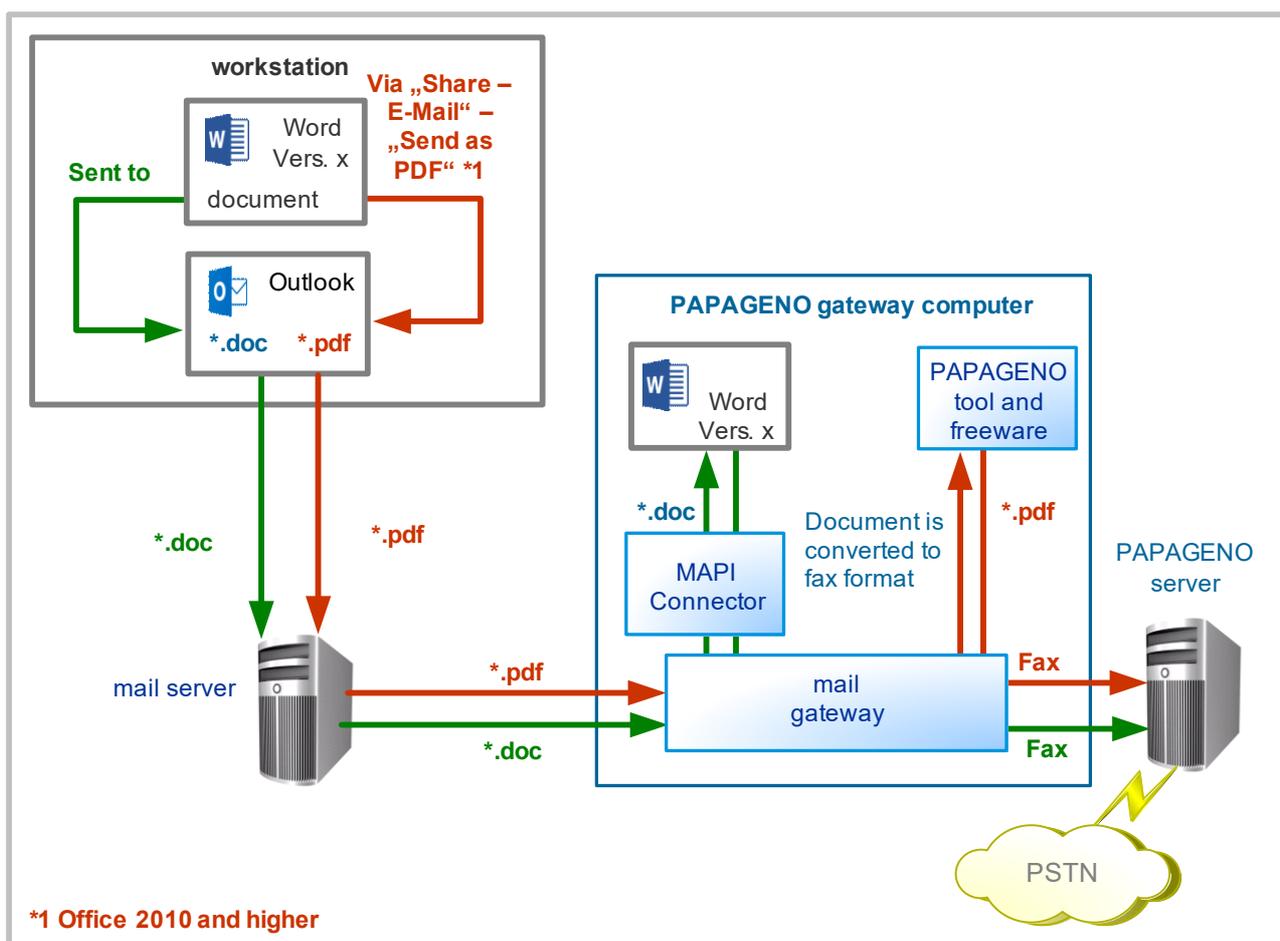
*. pdf conversion
pdf and html documents will be converted via PAPAGENO Tools and freeware programs

*. doc conversion:
Windows formats (exept of pdf) will be converted by the PAPAGENO MAPI Connector. Since the PAPAGENO MAPI Connector needs an according Windows converting program on the gateway system all of the Windows applications from which users may send faxes have to be installed. To avoid problems the server version must be compatible with the client versions.

Advantage:

- The CPU load for conversion is on the gateway computer.

- For pdf and html conversion you only have to install the freeware and to activate the tools
  Note that each office document can reach Outlook as a pdf**.**

Disadvantage:

- Using the PAPAGENO MAPI Connector: Installation and maintenance of the regarding Windows applications on the gateway system.

- Version maintance

How is the PAPAGENO MAPI Connector Installed?

It is included with PAPAGENO and is installed easily. All you need to do is to indicate the PAPAGENO host and the user name.

How to Convert Documents on the Clients

Fax documents created in an **Windows** application can be converted directly to fax format via the PAPAGENO FAX MAPI printer. .
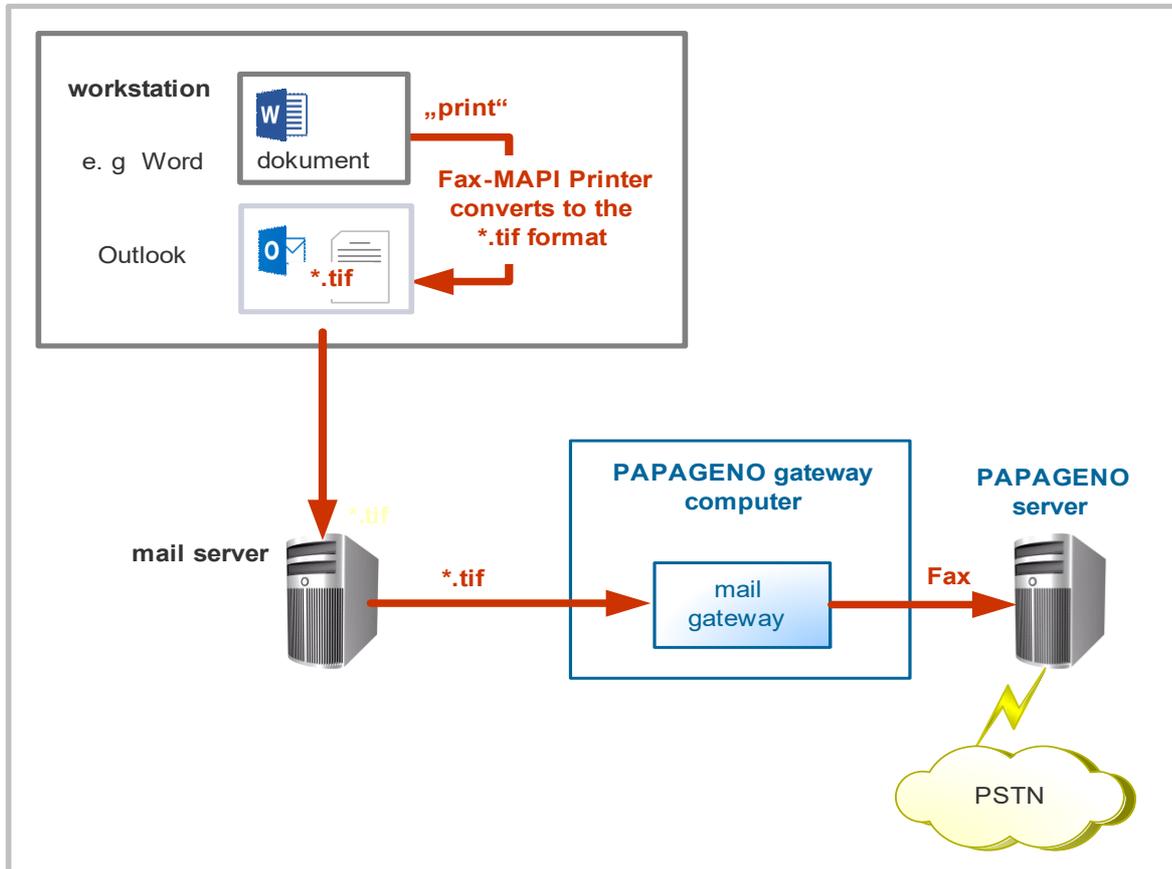
The FAX MAPI printer is part of the PAPAGENO MAPI connector.

On **Unix**, there are special PAPAGENO / comFAX Printers (drivers), that convert ASCII and PostScript documents. Also they send documents from Unix applications to PAPAGENO in fax format.

FAX-MAPI Printer

The user selects the FAX-MAPI Printer in the application in which he has created the document. This converts the document into fax format and passes it to the mail client. There it resides as a document with the extension *. tif and can be viewed immediately or be sent to a fax address.

Advantages:

• The user sees the document in the mail send window as it has been sent. (Tiff format)

• No programs have to be maintained on the gateway system

• Insurance against macro viruses

• Version incompatibilities are avoided

Disadvantage:

- The burden of conversion is on the user's computers.

- A FAX-MAPI Printer has to be installed on each user computer.

What Formats does the FAX-MAPI Printer Convert?

All output formats that are common today: Microsoft Office formats (Word, Excel, etc.) as well as all formats supported by the OLE interface. Everything you can print from the Windows PC can also be converted to the fax format.

The FAX-MAPI printer does not have to be configured. (He is not client to PAPAGENO).

9. How To Retrieve Messages by Phone

In order to retrieve messages by phone there are two possibilities:

Configuration with mail server	Configuration without mail server
All messages are stored on the mail server. PAPAGENO will accesses them via IMAP. For this configuration you need: PAPAGENO mail gateway, Directory-Server, LDAP, IMAP4	You can access all faxes and voice mails, because they are stored in PAPAGENO. For this configuration you only need PAPAGENO. A mail gateway is optional.

Retrival of Faxes and Voice Mails

In PAPAGENO you can specify that all incoming faxes and voice mails are to be stored both on the PAPAGENO server and the mail server.

The disadvantage of this solution is that messages are kept twice: on the mail server and the PAPAGENO server. Thus double disk space is required and administrative efforts are higher. Email cannot be retrieved by phone because they are stored on the mail server only.
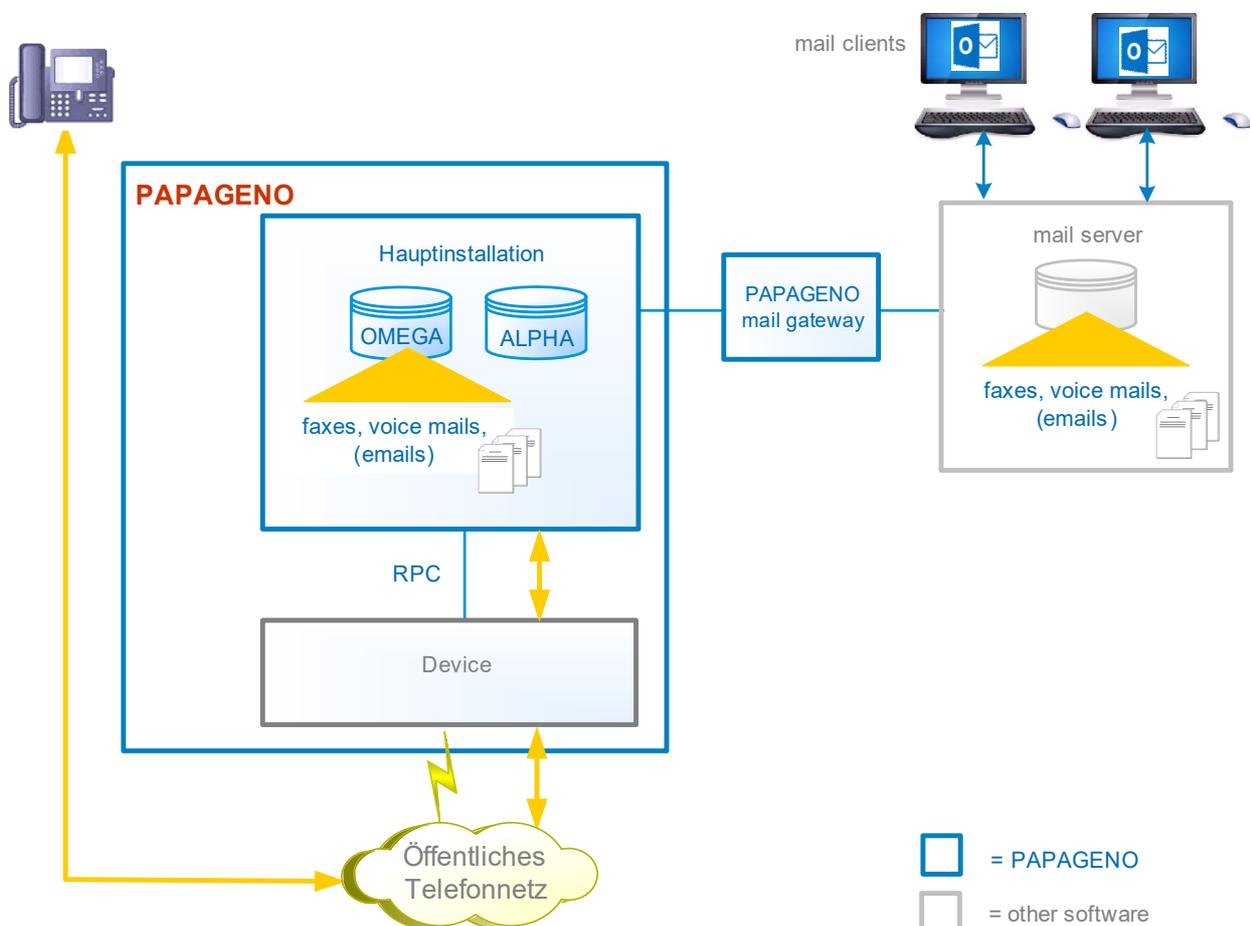
Retrival of the Faxes, Voice Mails AND Mails

PAPAGENO supports access to mail systems via an IMAP4 interface.

With an **IMAP4 link** between the PAPAGENO device and the mail server all messages (faxes, voice mails AND mails) can be retrieved by phone.

All messages are stored on the mail server (and exclusively there).Together with an text-to-speech-application users can also be notified of mails and have their mail texts read out.
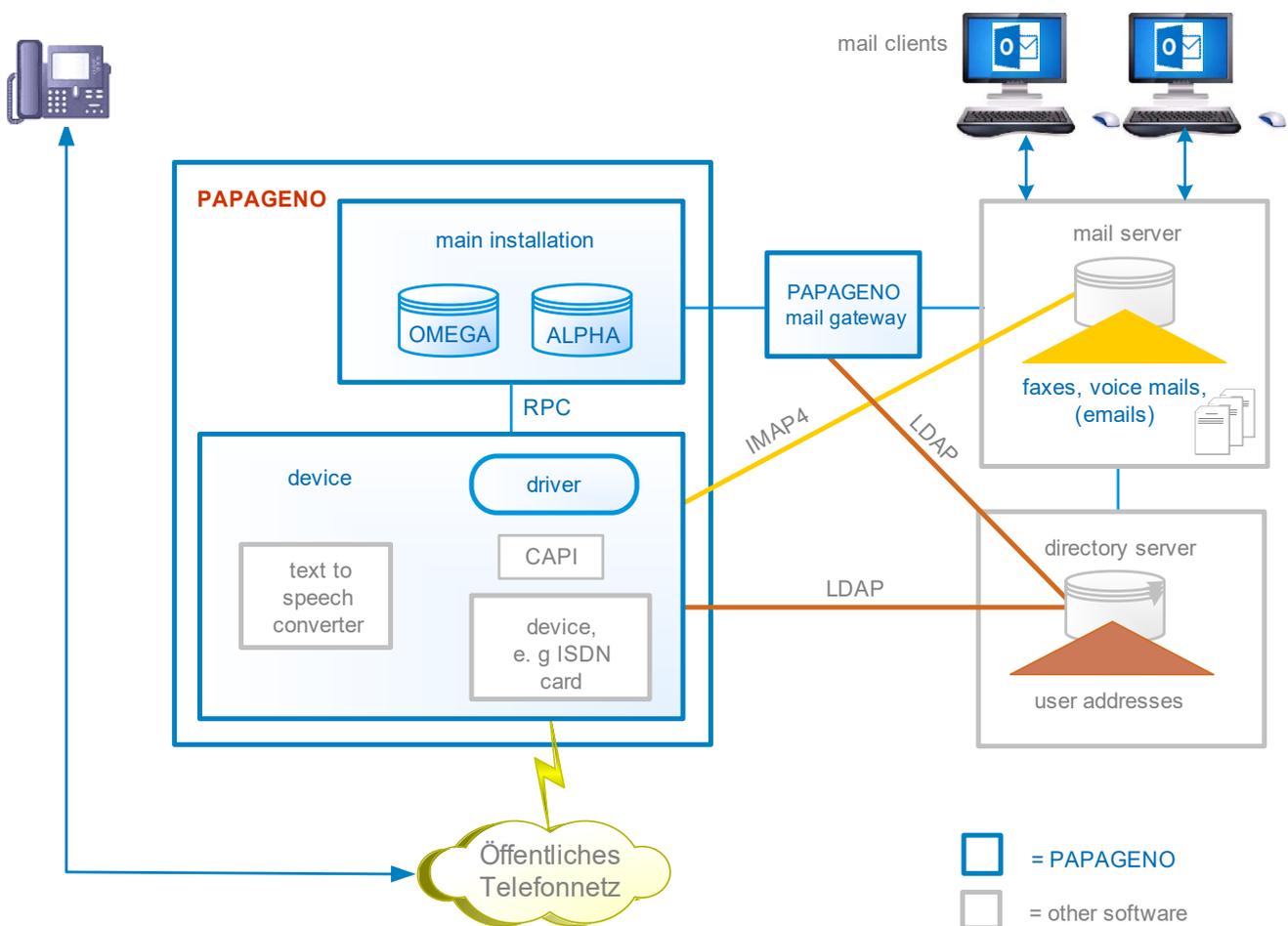
User addresses (mail, fax and voice numbers) are stored on the mail system's directory server. This server can be accessed from the gateway and the PAPAGENO device via **LDAP**.
The advantage is that addresses are only stored once.

If you plan to store all messages on the mail server sufficient disk space must be available on this server (one page of a document requires about 60 KB; this adds up to 600 MB for 10000 pages).

10. How To Reduce the Main Computer's Workload

Certain parts of PAPAGENO (server processes) can be relocated as follows:

- **ALPHA servers** to computers where users are managed.

- **THETA servers** to computers where devices are connected/mounted.

- **PI servers** to computers to which the PAPAGENO printers are connected.

- Under Unix you can install separate **print clients**.

Individual PAPAGENO servers can also be installed on **Unix computers**, even if the main installation is running on a **Windows computer** and vice versa. You can mix the platforms on which PAPAGENO runs in any way you like.

To install an individual server you will need the PAPAGENO version for the desired plattform.

Why Relocate ALPHA Servers?

Because the computer on which the OMEGA server is installed does not have sufficient disk space for the user's documents.

You may want to manage users by department. (Each department has a computer on which its users and their documents are managed.)

Please note: If all fax documents and voice mails are stored on the mail server, less space is required on the ALPHA computer.

A THETA server must be installed on **every computer with a mounted or connected device.**

A PI server must be installed on **every computer to which a printer is connected.**

Printer Clients

`comfaxpr` and `comfaxps` printer clients are responsible for the creation of PAPAGENO documents.You can use them to send faxes from the shell.

Printer Clients are installed separately to unburden the fax computer.

11. To Guarantee the PAPAGENO Availability

In order to achieve a high level of fail-safety, use the high-availability solution of an operating system. .
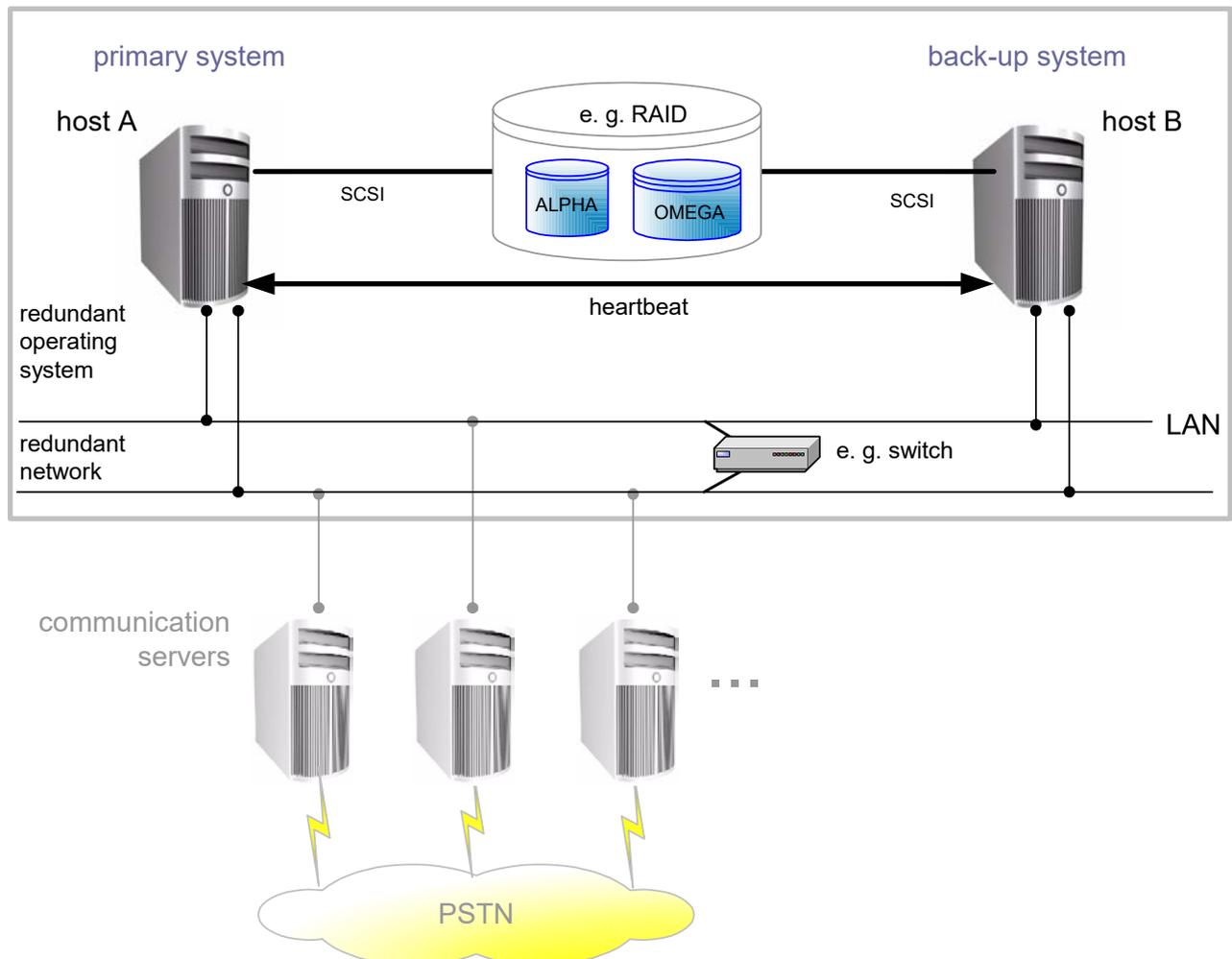
This ensures that a computer automatically takes over the work as soon as another fails. The data is also kept fail-safe, eg on a "double-ported RAID system.

Procedure: PAPAGENO is installed on two computers with the fail-safe system. One host accesses the PAPAGENO processes. If it fails, the same PAPAGENO installation is started from the other host. For this purpose, the high-availability solution of the operating system offers suitable tools.

The high availability solution may include two separated networks. Host A and host B are each connected to both networks. If one network fails the operation can proceed normally.

Backend High Available Solution

In order to achieve a high degree of failure security for backend devices and to always have the desired number of channels available, the following configuration can be used:!
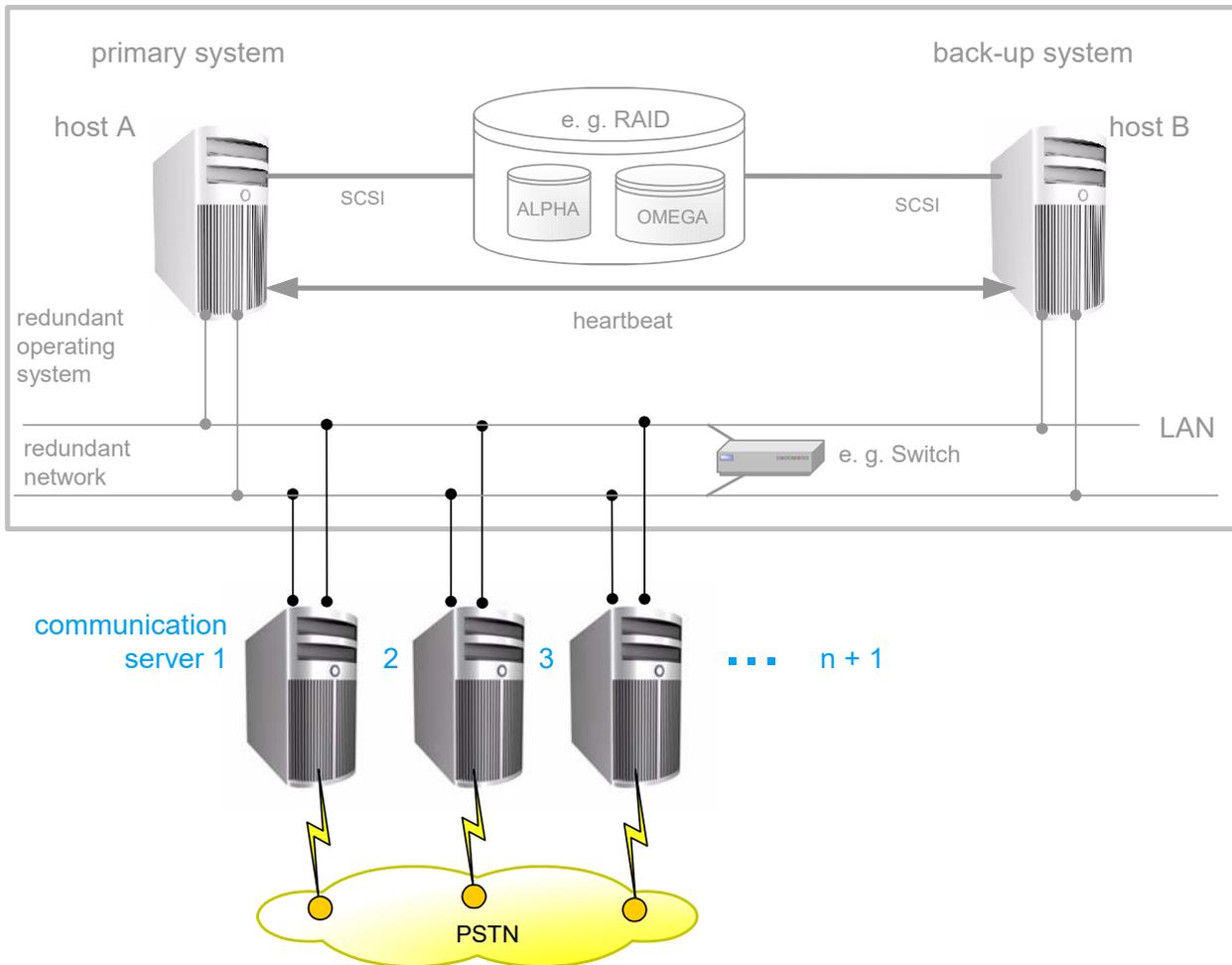
n+1 communication servers are used.

n+1 means that one more server than necessary will be implemented for ordinary message transmission. If one server fails sufficient channels are still available.

A communication server is a computer with one or more fax cards (2 to 120 channels) and a PAPAGENO THETA server process.

Example: There is a need for 90 channels. Then 4 communication servers with 30 channels each are used. (All in all there are 120 channels). If a computer fails, the required 90 channels are still in use.

All communication servers are connected with **both networks**. If one network fails the services will continue without a break.

The communication servers are connected to different nodes of the telephone network. Thus, here too, reliability is guaranteed.

If You Prefer a More Simple Solution...

... use the simple backup concept
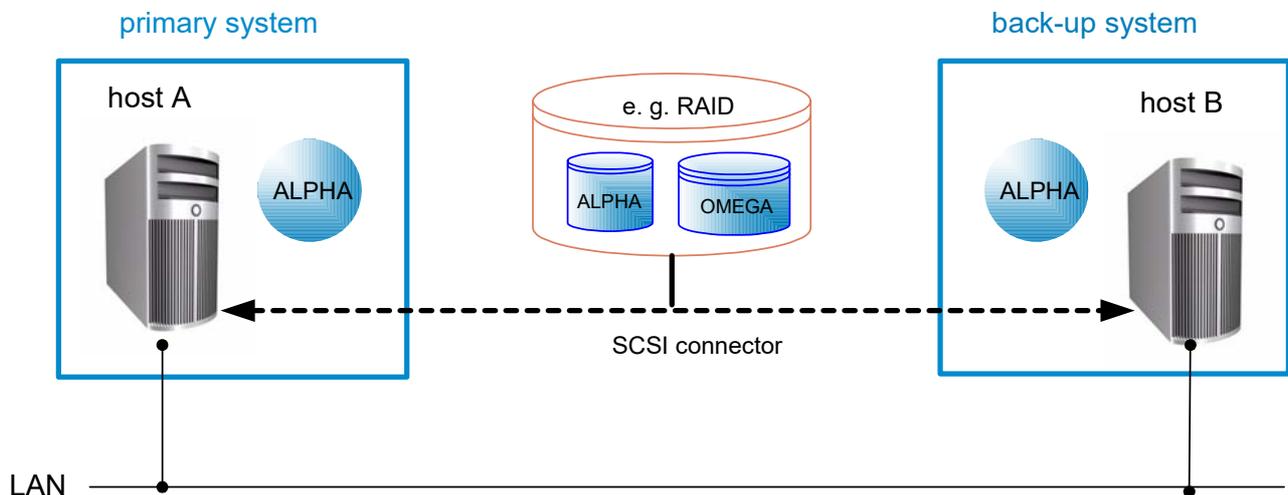
PAPAGENO is installed on a failsafe harddisk system.

Host A and Host B are responsible only for any server processes of the PAPAGENO servers ALPHA and OMEGA.

Databases, file systems and images of these server processes are located on a RAID system. Both Host A and Host B have access to this RAID system. Host A usually controls all fax operations. If it fails only the SCSI connector has to be switched for Host B to take over.

It is recommended to use **two identical computers** (harddisk, CPU, configuration). In any case it is essential to provide exactly the same PAPAGENO installation on both systems!

Not essential is the use of a RAID system. It is also possible to use a disk mirroring between Host A and Host B. If Host A fails simply the network address or the alias name of Host B has to be changed.

The Simplest Solution for Devices...

...is to redouble everything:
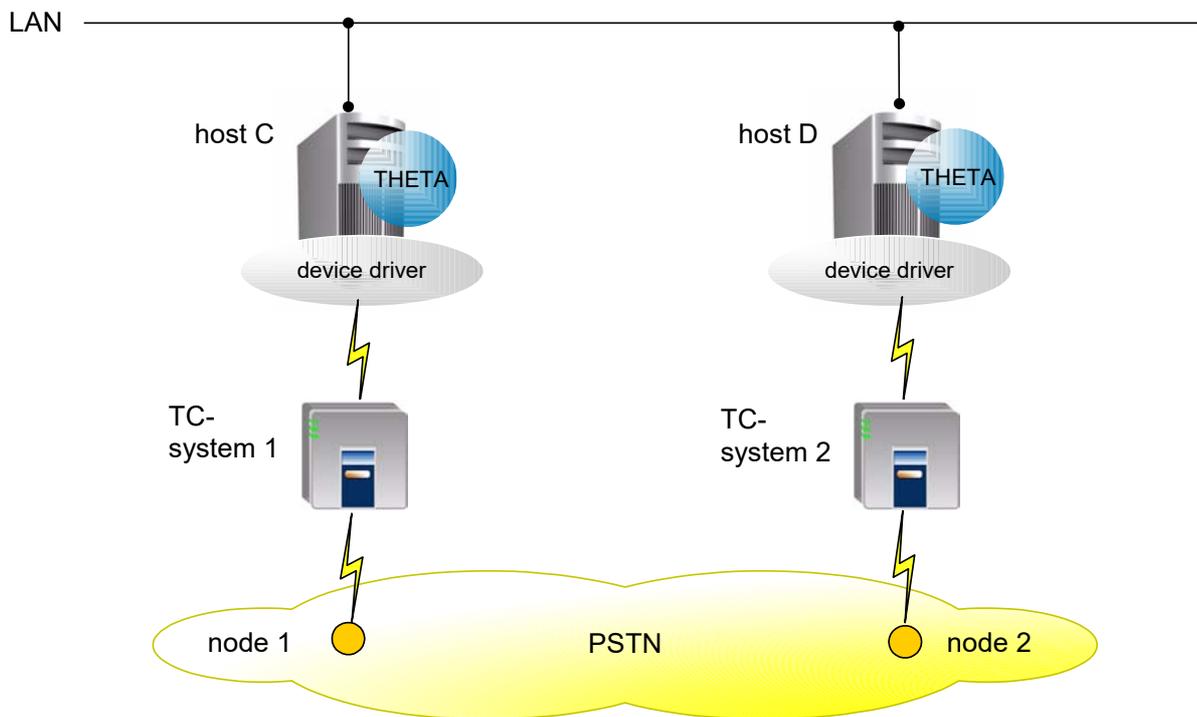
Two devices are connected each with a TC system and with different nodes of the public switched telephone network (PSTN).

Both devices can be used for normal operation. If either Host C or D fails, the other system will be available, although only **half of the lines** can be used.

In case that the TC system or a line fails, the device system of the other line can be used.

12. To Achieve High Performance Fax Transmission

... you can install several communication servers for load balancing.

One communication server is able to serve up to 120 lines. And one line receives or sends approximately 60 fax messages per hour. If you plan to handle 6,000 faxes per hour you will need 100 lines.

In the example shown above every communication server is connected to the TC system with 2 primary rate interfaces (PRI) connectors.

13. To Send Faxes Inexpensively from Various Locations

... use the "**cellular concept"**
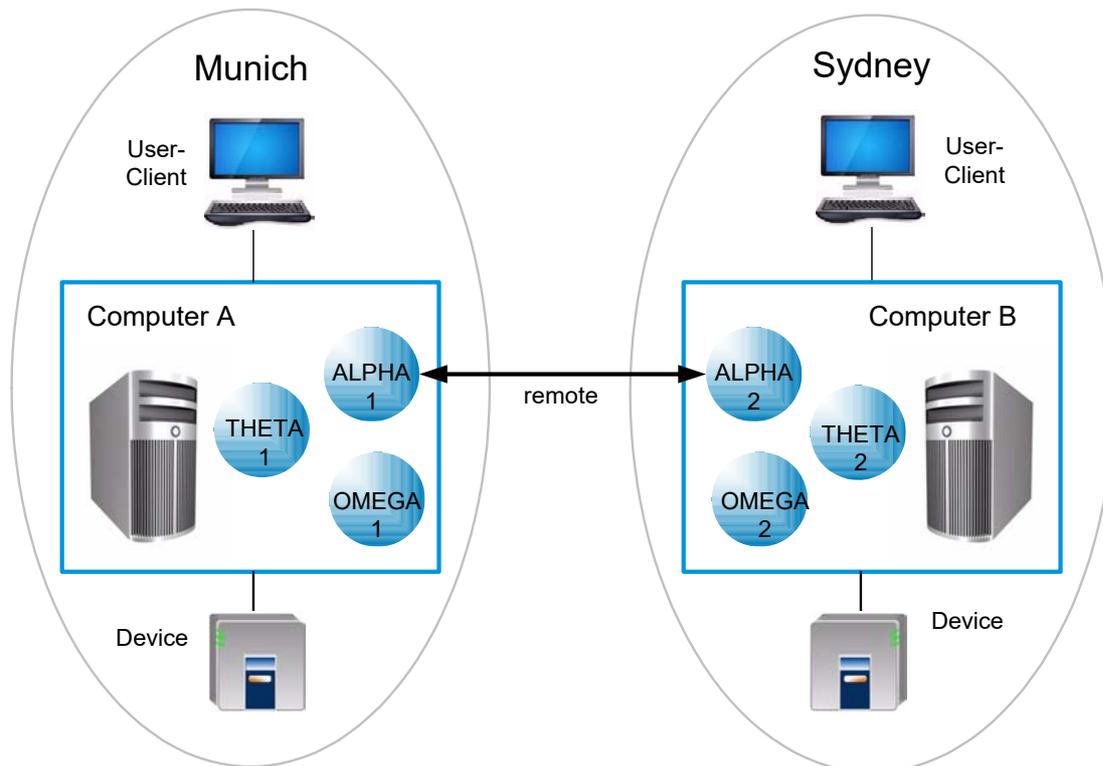
This requires a **complete PAPAGENO installation** at each of your company's locations.

Every OMEGA server recognizes all ALPHA servers of all installations.
This means that users at location 1 will find another user at location 2 in the user list and can forward a document to him.

Documents can thus be sent free of charge from one location to another .

By setting up the so called **least-cost-routing** (permanent feature of PAPAGENO) you can also send faxes to another location **at local rates**.

Example: You have a branch in Munich and one in Sydney. From Munich you can, for example, send thousands of pool faxes to Sydney at local rates.

=> Least-cost-routing enables you to send documents to another location at local rates.

14. To connect the Fax System with your Process Control Application Software

The PAPAGENO XML interface connects the PAPAGENO fax system to the process-driven application software of your company..
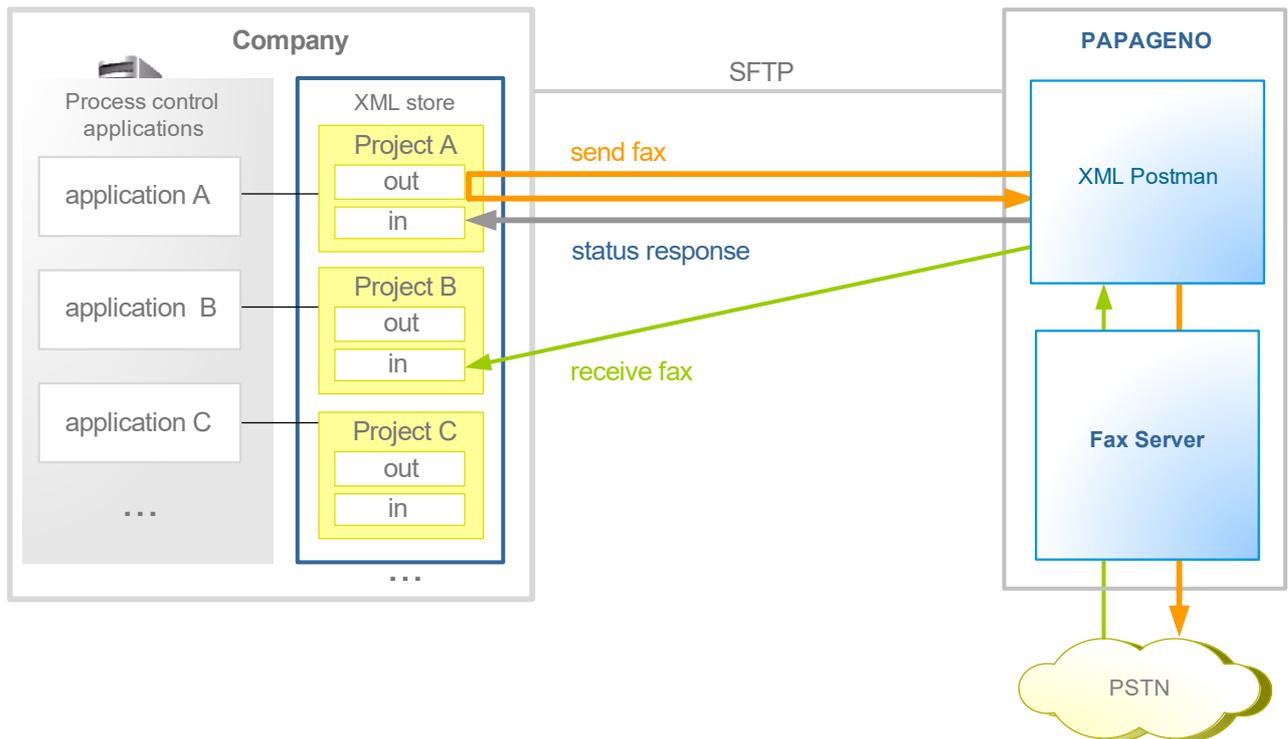
A store with "projects" is created on the user's side. The application software places faxes to be sent to the output boxes of the respective projects. The PAPAGENO XML postman collects all output faxes and sends them via the fax server.

Status feedbacks of the transmitted faxes are placed in the input box of the respective project.

Incoming faxes are placed directly into the input system of the project in the store. For every received fax, an XML file is included which contains all data relevant to the fax. The process-controlled application can be programmed to read and evaluate data and fax contents.

Fax as a Service

If you do not have or want to have a PAPAGENO installation inhouse: Use our powerful Unified Messaging server PAPAGENO in highly qualified data centers.

In this case, you only set up the stores with the projects. We take care of the rest.

15. Sending Dokuments from Applications Directly

Documents can be directly sent out as faxes from Windows- or Linux applications directly without any client. Users write send options like receiver fax number, solution, sendtime and priority in form of control commands into the dokument. A spezial PAPAGENO printer interprets and evaluates the control commands.

Via scripts and macros this process can be automated e. g. for busines processes.

Linux/Unix Applications

PostScript

A PostScript-Dokument with control commands is sent from an application to the PAPAGENO printer faxps. This interprets the control commands, converts the document into the fax format and forwards it to PAPAGENO with all „send options".

ASCII

The PAPAGENO printer `faxpr` interprets the control commands for fax transmission as well as for document appeerence (bold, line spacing, barcode, etc.). `faxpr` converts the ASCII document into the fax format and forwards it to PAPAGENO.

The Unix Printer **`faxpspr`** converts ASCII or PostScript documents into fax format and forwards them to PAPAGENO.

See PAPAGENO german manual „Schnittstellen", Part A.

Windows-Applications

Documents from Windows applications (Microsoft Office, etc.) can be sent with control characters to the printer RedMon (free software).

PostScript Documents

The RedMon printer converts the documents into PostScript format and forwards it to the PAPAGENO tool `psscan`.

`psscan` scans for control commands, reads them and forwards the document to the PAPAGENO printer `faxps`

e. g. Word document

#PHONE 1234567#
(fax number of the receiver) and other control commands in the document

PAPAGENO single server installation

print to

Printer RedMon — converts the document to the PostScript format

PostScript Level2 license

forwards to

psscan — scans for control commands and reads them

forwards to

faxps — converts the document to the fax format

Forwards it with the control command informations to the PAPAGENO driver to send

☐ = PAPAGENO
☐ = different software

`faxps` interprets the control commands, converts the document to fax format and forwards it with all send options to the PAPAGENO driver.

ASCII Documents

Documents from Windows applications can be converted into ASCII format and then be sent.

If the document contains no pictures this is the favourable alternative, for PostSript is licensed with costs.
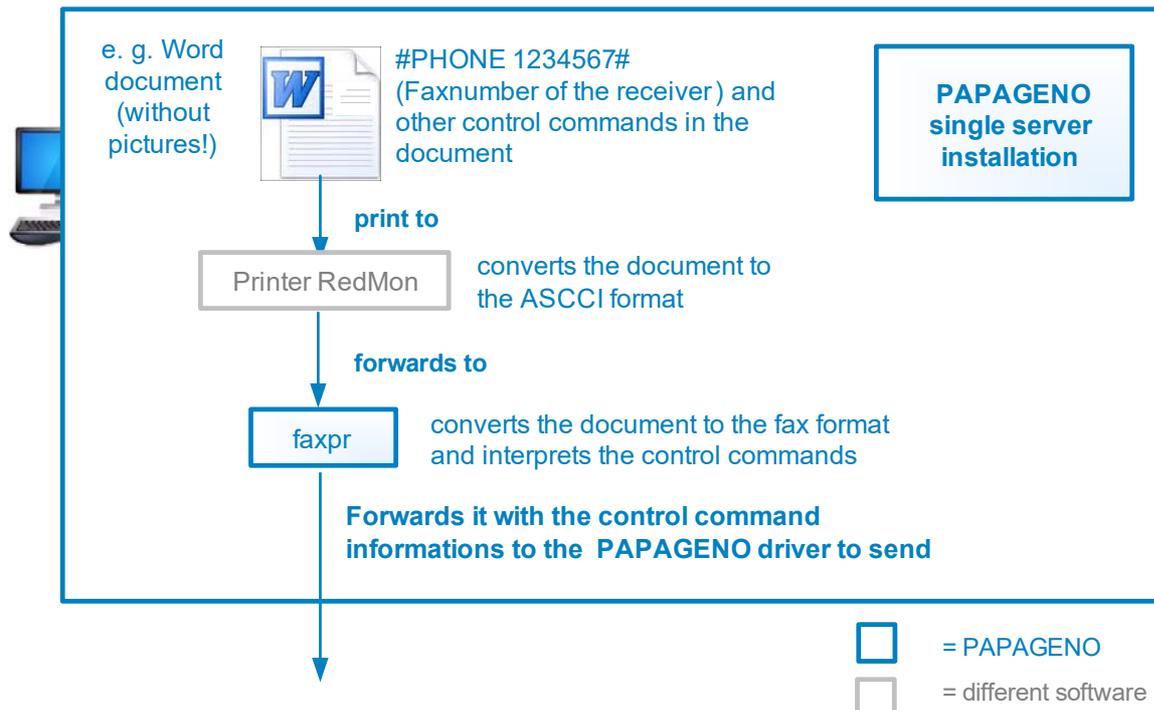
The RedMon printer for ASCII converts the documents into the ASCII format and forwards it to the PAPAGENO printer `faxpr`.
`faxps` interprets the control commands, converts the document into fax format and forwards it with all send options to the PAPAGENO driver.

The free software „Redmon" must be installed on a user computer and configured as ASCII or PostScript printer. (See below „", Kapitel „How to Setup the RedMon Printer", Seite 135.)

B1. Installing PAPAGENO on Windows

1. Prior to Installation ...

... pay attention to the following **requirements**:

- There is a connection to a telephone network
PAPAGENO has **access to the public network** via one or more PRI or BRI ports and CAPI. This link can be implemented via a telephone provider or via a PBX.

- A **CAPI interface** on the PAPAGENO device computer exists.

- A mail server is installed and configured.

If you are planning a configuration with **IMAP and LDAP** connection between PAPAGENO and mail server:

▸ First make sure that the LDAP and IMAP4 services are available on your mail server.

On the computer where you want PAPAGENO to irun

...install as

- an Windows administrator (Make sure that its name is `Administrator.` Otherwise he has no PAPAGENO rights).

- or as a system user `comfax .`

▸ Possibly create a user `comfax` and assign administrator rights to him.

▸ Log in as administrator resp. as user `comfax.`
▸ Close all programs.

If the Windows server is also an Exchange server:

▸ Close Exchange as well.

Close Services that are not Important for Windows:

▸ Select the `Control Panel.` Open the `Services` window.
▸ Close all services that are not necessary for Windows.
you should pay particular attention to RPC-based applications (CD ROM servers, archiving systems) that install their own portmapper. Per Windows system, only one portmapper can run. Possibly you can replace the portmapper of the special system with that of PAPAGENO.

Otherwise installation problems may occur!

2. PAPAGENO is Easy to Install

▸ On our Website go to `Downloads PAPAGENO - Software packages - PAPAGENO-Server Version 5.9` to find the PAPAGENO server versions of the several operating systems.

▸ Unzip `Server_Windows_5_9.zip`

All directories are displayed.

▸ Change to the `Server` directory.

▸ Select `Setup` and click `Complete`.

In the normal case, you can accept all presets (left column, bold) with `Next. :`

Setting options	Meaning
Deutsch English	Installation language.
C:\FAXSERVER	installation directory
System server (OMEGA) **User server (ALPHA)** **Device server (THETA)** **Printer server (PI)**	Server components. For the main installation of PAPAGENO you need all servers.

▸ Enter the license key.

Germany **Other countries**	Country where PAPAGENO is used. This can be changed later.
None SMTP MAPI	Select `None` for no mail notifications or `SMTP`, if a gateway is used and users will be notified by e-mail when a message has been received or sent.[1] Do not use `MAPI`, because that requires some other configurations. You can subsequently change the settings for mail notifications in the `C: \FAXSERVER\etc\mapimail.ini` file.
Deutsch English Francais	Language for user interfaces. This can be changed later.
8859 Charset Other character sets	Default character set. This can be changed later.

¹ If mail notification via SMTP is selected:

‣ Enter the name of the computer via which the mails are sent.

‣ In the `SMTP User` box, type the name that you want to appear as the sender of the mail notification, e.g. `UMserver`.

Now a PAPAGENO user can set up in an e-mail client, which he is notified by e-mail when a message has been received or sent.

‣ Complete the installation protocol.

After installation it is sent to VIPcom GmbH as a fax.

The installation is now complete.

When you finish your entries with `Done` PAPAGENO is started automatically.

The fax server will now managed by Windows as a service. Normally, the server processes are started automatically when Windows is started or stopped when Windows is stopped.

3. Starting and Stopping the PAPAGENO Servers

Select `Start > Settings > Control Panel > System > Administration Tools > Fax servers`

Normally the PAPAGENO fax server is started automatically when Windows is started and stopped when Windows is shut down.

4. Installed With PAPAGENO are

- All **PAPAGENO server processes**
  (ALPHA, OMEGA, THETA, PI, LAMBDA, NUE, GAMMA)

- PAPAGENO **drivers for devices**

- The **PAPAGENO-SMTP-Gateway**."
  It is unlocked by entering the license key and can be activated by a configuration variable (see Manual „PAPAGENO-SMTP-Gateway")

Reserved User Names

User name	Description
User **comfax**	comfax is an example user in PAPAGENO.
System administrator **FAXADM**	If the user `FAXADM` is logged on to a PAPAGENO ALPHA server, all user documents and telephone books are displayed to him. This user should be protected by a dedicated password.
user **.winpr**	The user `.winpr` is the owner of all documents that are spooled by the PI server to the printer `faxps` or `faxpr` printer. Since the user `.winpr` is preceded by a "dot", it does not appear in the PAPAGENO user list.
System administrator **.routing**	The user `.routing` is important for handling the least-cost routing. Since the user `.routing` is preceded by a "dot", it does not appear in the PAPAGENO user list.

comfax-adm Administration Program

The ASCII interface of the PAPAGENO administration program allows you to perform most of the settings. However, only fax management is possible here.

The graphical interfaces of the administration program (PAPAGENO Windows-Administrator and Web-Administrator) must be installed separately (see below: 5.„How to install a User-friendly Administration Program", page 54).

PAPAGENO Commands

The following list provides a description of the most important PAPAGENO commands:

Command	Description
`l_startserver alpha/` `l_stopserver alpha`	Starts respectivly stops the ALPHA server on the local computer. All other servers can be started in the same way (e.g. `l_startserver omega`)
`l_startserver server/` `l_stopserver server`	*server* means the server names (`omega`, `gamma`, `lambda`, `nue`, `pi`, etc.). Starts and accordingly stops the named server on the local computer. **Attention:** `l_stopserver theta` does **not exist**. Use `t_shutdown` Instead (see below).
`t_shutdown`	Stops the THETA-Server. The current job on the corresponding device will be completed first! When all drivers have been stopped, the THETA server will **shut down**. The completion of a current send or receive job will be finished currently but may take some time. Check this with the command `l_ps` when the shutdown has been finished.
`l_startfax`	Starts all configurable server processes on the local computer. To use `l_startfax` the LAMBDA server has to run first.
`l_stopfax`	Stops all server processes on the local computer - with the exception of the LAMBDA server.
`l_startdrivers`	Starts all locally accessible drivers. The THETA server must be started separately with the command `l_startserver theta`. If the other servers are not accessible documents can be received this way. These documents will be saved locally until the responsible ALPHA server is accessible again.
`l_startdriver driver` `l_stopdriver driver`	Starts or stops the named driver. *driver* is the name by which the fax or telex driver equipment has been registered in the administration program. The driver `gd-capidrv` is finished automatically as soon as all lines are "dead".
`l_stopgateways`	Stops all local gateway processes
`l_startdeamon deamon` `l_stopdeamon deamon`	Starts/stops the according daemon process.
`l_startgateway gateway` `l_stopgateway gateway`	Starts/stops the according gateway process.

In the PAPAGENO-Web-Administrator or in the PAPAGENO Windows-Administrator in the menu "process" all processes that run on the computer are displayed. There you can start or stop processes via buttons.

ATTENTION: Be shure to use the commands `l_stopfax, l_startfax` and `t_shutdown` only in case of exception.

During the installation of PAPAGENO the service "fax server" is configured so in such a way that it is started and stopped automatically with Windows.

CMD-line Commands (Software Interfaces)

With PAPAGENO you can also use the CMD-line commands. With these commands you can control all actions that can also be executed via PAPAGENO interfaces (user and printer clients, administration program).

With the command `a_find_do` you can, furthermore, record charges for each user separately, find documents and initiate actions (delete, forward, send documents, etc.)

5. How to install a User-friendly Administration Program

In addition to the ASCII interface (comfax-adm) you can:

- install the graphical user interface **Windows-Administrator** on an Windows system.

- use the Web-Administrator via a Web browser.
  This gives you computer independent access via HTML technology.
  Requirement: The Windows-Administrator has to be installed on this computer.

To install the Windows-Administrator

▸ Insert the PAPAGENO installation CD.

▸ Start the installation by opening `Software > Install` in the `Control Panel`.

▸ Click `Search` and change to the directory `VB Admin/English`.

▸ Select `Setup` and click the button `Open`.

▸ Confirm with `Complete`.

The administration program will be installed.

You can launch the program by clicking the desktop icon „Link to papageno.exe".

6. How to Install a Single PAPAGENO Server

Requirement: A PAPAGENO basic installation with the OMEGA server.

Reminder:

You can install ALPHA, THETA and PI servers separately on different computers.

- ALPHA servers are responsible for user and document management.
  An additional ALPHA server should be installed if users and documents are to be managed seperately (not on the fax computer).

- Install a THETA server on each computer with a connected/mounted device (ISDN card, modem, PAPAGENO comminication system).

- Install a PI server on each computer that is connected to a printer.

The procedure for server installation is exactly the same as for the main installation

Under "Server components" select only the server you wish to install (only ALPHA, THETA or PI server).

▸ Deactivate the other server components.

▸ Enter the host name (alias name) of the computer on which the OMEGA server is installed where the main installation has been carried out.

What is included with the installation of a PAPAGENO server?

- PAPAGENO drivers for devices

- Reserved user names

- comfax-adm administration program

- PAPAGENO commands

- CMD-line commands (software interfaces)

7. How to Install a PAPAGENO Mail Gateway

PAPAGENO can be connected to your mail system via a mail gateway (see above Part A, Chapter 6.„How to Connect PAPAGENO to your Mail System", page 25) .

The PAPAGENO **SMTP Gateway** is installed with the PAPAGENO main installation.

If the gateway should run on a different computer:

▸ Install PAPAGENO on that computer and deactivate all server components (ALPHA, THETA and PI) during the installation (see 6.„How to Install a Single PAPAGENO Server", page 55).

If a PAPAGENO mail gateway is already in use:

▸ Install the **newest upgrade**. Otherwise errors may occur!

8. How to Install an Update Version

Within one network an identical PAPAGENO version must be installed on all PAPAGENO computers .

The accounts and documents remain unchanged during an update.

PLEASE NOTE:
Version 5.0 servers or higher are not compatible with server processes for earlier versions!
If PAPAGENO servers are installed within a PAPAGENO cell on distributed computers, an update to version 5.0 must be made on all these computers.

First of all update the fax server, then all other computers with PAPAGENO server processes.

How to install an update

The procedure for installing an update is exactly the same as for a first-time installation.

▸ Select the directory in which „the old" PAPAGENO version is installed.

▸ Answer "yes" to the questions whether the server computer and RPC port mapper should be shut down.

▸ Select the server components (all or only certain PAPAGENO server processes) you wish to install.

How to Install an ALPHA Server Update

To update an APHA Server do the same as with a normal update; just be sure to anywhere enter "ALPHA Server" when asked for server components.

9. How to Handle a Large Number of Documents

If faxes and voice mails **are stored on the mail server** (see „Retrival of the Faxes, Voice Mails AND Mails", page 33) you do **not** need to regard this page.

During installation, 16 subdirectories are created for each ALPHA server in the directories `e` (Incoming), `p` (Desktop) and `s` (Outgoing). In order to avoid difficulties caused by large numbers of documents in one directory.

For large installations it is recommended to even increase the number of subdirectories.

16 directories are recommended for small and medium-sized, 256 for large installations.

The creation of subdirectories is recommended when upgrading from comFAX 4.0 or earlier.

To Increase the Number of Subdirectories ...

via the ALPHA configuration variables `DIRBUCKETE, DIRBUCKETP and DIRBUCKETS`.

If you have a large number of documents this may take an hour or more!
PAPAGENO users will **not** be able to continue working during this time.

How to Use the Variables

▸ Log in as administrator to the ALPHA computer on which you wish to create the subdirectories.

▸ Start the ALPHA server by entering `l_startserver alpha`

▸ Open the `Start` menu then choose `Settings > System`. Open `System attributes` and select `Environment`.

▸ For user `PAPAGENO` set for the environmental variable `SETUSER` to `FAXADM`

▸ Restart Windows.

▸ In the MS-DOS command line enter `a_put_usrconf` *variable name* and *value*.

  Example: `a_put_usrconf DIRBUCKETE 16`

  Values must be positive integer up to 4096.

▸ Stop the ALPHA server with the command `l_stopserver alpha` and then restart it with `l_startserver alpha`

  Documents will be assigned via links to the according subdirectories on the basis of their document number. Filed signatures and desktop documents which are currently being worked on will be stored in dedicated directories (`signature` and `scratch`). Once this has been completed, the original directory will be replaced by the converted directory. The original directory will be renamed with the extension `_old`. The variables then will be deleted to prevent subdirectories being created all over again when the ALPHA server is started the next time.

  Once you are sure that the conversion has been successful:

▸ Delete the directory with the ending `_old`.

10. How to Deinstall PAPAGENO

‣ Insert the PAPAGENO CD.

‣ In the `Control Panel select Software.`

‣ Select the PAPAGENO software and click on `Add/Remove.`

11. How to Install Devices

If you have not yet installed the devices to receive or send faxes you have to install and configure them now.

Installing ISDN Cards on a Windows computer

▸ Make sure that a THETA server is running on each computer with an ISDN card.

▸ IInstall the ISDN card (s) on a Windows computer.

Connecting the PAPAGENO Device Computer to the Network

If a ready-configured PAPAGENO computer is being used as a device:

▸ Assign an IP-address to this computer and connect it to the network.

▸ Register the OMEGA host under `$FAXSERVER/etc/config`.

▸ Enter the OMEGA host with its corresponding IP-address in the host table of the PAPAGENO computer.

▸ Enter the PAPAGENO computer with the corresponding IP-address in the host table of the OMEGA computer.

After this:

• Publish the OMEGA server to the THETA server (register it as a new server in the administration program. See also: Part C, chapter 55.„How to Forward Faxes Free of Charge to a Remote PAPAGENO Installation", page 123)

• Register PAPAGENO as a device in the administration program.

Setting Up Modems

▸ Install them.

▸ Make sure that a THETA server is running on each computer connected to a modem.

12. How to Install FAX Clients

If users want to work only with faxes, we provide several FAX clients:

- **comFAX/Win**: fax client under Windows: runs on 32 Bit Windows versions and dedicated 64 Bit versions.

- **comFAX/ X Window**: runs under Unix with an X Window interface

- **comFAX/ASCII**: ASCII interface for Unix and Windows users. (Faxes can be displayed only in a limited way!)

Installation of the fax clients

comFAX/Win

The installation files can be found on the CD in the directory `support_for_old_Versions\Fax-Client` respectively on our website (`Download - ` PAPAGENO ` - Software - User Clients).`

comFAX/ X Window

comFAX/ X Window is installed together with the basic Unix installation of PAPAGENO or PAPAGENO servers.

comFAX/X Window can be started in a Unix shell **with the Unix ID of a user. X Window must exist**.

comFAX/ASCII

comFAX/ASCII is installed with the basic installation of PAPAGENO or PAPAGENO servers.

comFAX/ASCII can be started at shell level or at the MS-DOS command line.

B2. Installing PAPAGENO on Linux/Unix

1. Prior to Installation ...

... pay attention to the following **requirements**:

- There is a connection to a telephone network
  PAPAGENO have **access the public telephone network** via one or more PRI or BRI connections and CAPI. This link can be implemented via a telephone provider or via a PBX.

- A **CAPI interface** on the PAPAGENO device computer (Windows computer) exists.

- A mail server is installed and configured.

If you plan a configuration with an **IMAP and LDAP** connection between the PAPAGENO device and the mail server:

▸ First make sure that the LDAP and IMAP4 services are available on your mail server.

PLEASE NOTE: Prior to Version 5.2, PAPAGENO was called comFAX
comFAX still appears frequently in internal names and commands.

How to set up the Unix user `comfax` and the installation directory

▸ With Bourne Shell (bash) or Korn Shell (ksh) create the login shell for the user `comfax` on the computer on which PAPAGENO will be installed.

  If the software is going to be installed in the HOME directory of the user `comfax` the creation of a subdirectory (e. g. `faxroot`) is recommended. This will distinguish the `bin` directory of the user from the `bin` directory of the PAPAGENO directory.

▸ Create an installation directory in which PAPAGENO is to be installed. This directory must belong to the user `comfax`.

▸ Assign the rights `rwx r-x r-x` to the user `comfax` for this directory.

Verifying the RPC Services

RPC services (Remote Procedure Calls) must be available for the installation of PAPAGENO. These services can be found either in TCP/IP or in the NFS package of the operating system.

To verify that the network services are activated in your system:

▸ Enter the commands
`ping localhost`
and
`ping `uname -n``
If these commands are executed correctly the file `/etc/hosts` contains a correct entry for the computer to be installed.

The output of the following two commands must be identical. In addition to other services the port mapper service is generally displayed in SV R3-Unix systems and the "rpcbind" service in SV R4-Unix systems.

▸ Enter the command
`rpcinfo -p localhost.`

▸ Enter the command
`rpcinfo -p `uname -n`.`

The availability of RPC services is also verified at the start of the PAPAGENO installation.

Making Entries in the `/etc/hosts`

The `/etc/hosts` file must contain the following entry for "local host":
`127.0.0.1 localhost`

The `/etc/hosts` file must contain the correct IP address with the computer name.

▸ Check the entries.

How to Define an Alias Name

▸ In the `/etc/hosts` file assign an alias name to the computer on which the OMEGA server is going to run.
It is possible that a name server (DNS) managing the host names of all computers in the network is being used. In this case the name entered in the local `/etc/hosts` file is not applicable. Refer to your network administrator on how to proceed.

2. PAPAGENO is Easy to Install

▸ Log in as user `comfax`.

▸ On our Website go to `Downloads PAPAGENO - Software packages - PAPAGENO-Server Version 5.9` to find the PAPAGENO server versions of the several operating systems.

▸ Download the desired PAPAGENO operating system version.

▸ Unzip the software with command `tar -xvf` *filename* .

filename consists of the path, the name of the operating system and the PAPAGENO version. Example:
`tar xvf/server/AIX`

PAPAGENO directories and files will be copied into the installation directory.

To start the installation:

▸ In the installation directory execute the command `etc/install_fax`.

In the normal case, you can accept all presets (left column, bold) with `Next` **:**

Setting options	Meaning	Input
1 Deutsch 2 English 3 Francais	Installation language	Enter: `2`
b f q	<u>B</u>asic installation <u>F</u>urther installations <u>A</u>bort	Confirm

▸ Enter the **alias name** for the server computer.

▸ Enter the **licence key**.

Germany **Other countries**	Country in which PAPAGENO is being used. This can be changed later.	Enter a number

1 Deutsch **2 English** 3 Francais	Language for user interfaces. This can be changed later.	Enter a number
8859 Charset Other character sets	Default character set. This can be changed later.	`y or n`

Complete the installation protocol. It will be sent to VIPcom as a fax after installation.

What happens during installation?

During installation the database is generated and filled.

The file `.profile` is extended by entries for the environment variable `FAXROOT` and the call of the file `comfaxdefault`.

The LAMBDA, NUE, OMEGA and ALPHA servers are started.
The installation protocol is generated and a fax job to VIPcom is generated.

User client(s) (`comfax-asc` and `comfax-x`) are set up.

Now the basic installation is completed.

Finishing the installation

▸ Log off.
▸ Log in again as user `comfax`.
▸ Enter the command `runfax`.

For further information on `runfax` see also below „PAPAGENO Commands", page 74.

The PAPAGENO server processes are started.

3. After Installation ...

... configure the PAPAGENO server processes to automatically start and stop.

Because the database must be opened and closed in order, the PAPAGENO servers must be shut down (stopped) before each computer restart.

Otherwise data loss may occur!

Creating a Start and Stop Script:

‣ Login as user `comfax.`
‣ Execute the command `$FAXROOT/etc/make_rc.`
  The file `comfax.rc` is created.

  `comfax.rc` activates the automatically start and stop

Setting up Automatic Start and Stop:

Configuring how to automatically start and stop the PAPAGENO servers depends on your operating system.

Linux Debian, Ubuntu

‣ Copy the `$FAXROOT/etc/comfax.rc` file to the `/etc/init.d` directory
‣ Enter the command `update_rc.d comfax.rc defaults`

RedHat, SuSE, Fedora

‣ Copy the `$FAXROOT/etc/comfax.rc` file to the `/etc/init.d` directory.
‣ Enter the command `checkkconfig --add comfax.rc`

Here is a suggestion for **most Unix operating systems**:

‣ Copy the `/tmp/rc.comfax` file to the `/etc/rc2.d` directory under the name: `S99comfax` and to the `/etc/rc0.d` directory under the name: `K01comfax.`

In `S99comfax` and in `K01comfax` you can find the following lines:

```
su - comfax -c stopcomfax
su - comfax -c runcomfax
```

`stopcomfax` is the command for stopping,
`runcomfax` the command for starting the server.

Attention:

PAPAGENO relies on the communication mechanisms of RPC. Therefore, the script to start the servers may not run until TCP / IP and the RPC services are successfully started. The server shutdown script must be run before terminating TCP / IP and RPC. Otherwise, the PAPAGENO servers are no longer accessible!

Make sure that the `.profile` file of the user `comfax` idoes not contain an interactive query (eg, query of the terminal type, etc.). Such a query would prevent the PAPAGENO servers from starting or stopping automatically.

4. Starting and Stopping the PAPAGENO Servers

▸ To start server enter `runfax` to stop it enter `stopfax`.

If automatic starting/stopping has been configured the fax server is started/stopped during start/ shutdown of the operating system.

5. Installed With PAPAGENO are:

- **All PAPAGENO server processes**
  ALPHA, OMEGA, THETA, PI, LAMBDA, NUE, GAMMA

- PAPAGENO **drivers for devices**

- The **PAPAGENO SMTP Gateway**
  It is unlocked by entering the license key and can be activated by a configuration variable (see Manual „PAPAGENO-SMTP-Gateway")

Reserved User Names

User name	Description
User **comfax**	comfax is an example user in PAPAGENO. If a distribution rule is not applicable for a received document, this document is assigned to the user comfax by default rule. Do not confuse the PAPAPGENO user comfax with the system user comfax!
System administrator **FAXADM**	If the user FAXADM is logged on to a PAPAGENO ALPHA server, all user documents and telephone books are displayed to him. This user should be protected by a dedicated password. [1]
user **.winpr**	The user .winpr is the owner of all documentsthat are spooled by the PI server to the printer faxps or faxpr printer. Since user .winpr is preceded by a "dot", it does not appear in the PAPAGENO user list.
System administrator **.routing**	The user .routing is important for for handling the least-cost routing. Since the user .routing is preceded by a "dot", it does not appear in the PAPAGENO user list.

[1] **This gives you access to all documents and telephone books of the corresponding ALPHA server:**

▸ Login as system user comfax.

▸ In an application interface, override the loginname with FAXADM.
  or set the value of the environment variable SETUSER to FAXADM.

The comfaxdefault File

The standard PAPAGENO environment is set in this file. The names of the OMEGA and ALPHA computers as well as the default language and character set for PAPAGENO interfaces are entered here. This information is set during installation.

You can change the language and character set in this file and set each according to user and/or device. You can also set the OMEGA host according to users.

The file `comfaxdefault` will be processed each time PAPAGENO is launched.

comfax-adm Administration Program

The ASCII interface of the PAPAGENO administration program allows you to perform most of the settings. However, only fax management is possible here.

The graphical interfaces of the administration program (PAPAGENO Windows-Administrator and Web-Administrator) must be installed separately (see above: part B1, chapter 5.„How to install a User-friendly Administration Program", page 54).

PAPAGENO Commands

The following contains a description of the most important PAPAGENO commands:

Command	Description
`l_startserver alpha/ runalpha l_stopserver alpha`	Starts respectivly stops the ALPHA server on the local computer. All other servers can be started in the same way (e. g. `l_startserver omega`)
`l_startserver server/ runserver l_stopserver server`	*server* means the server names (`omega`, `gamma`, `lambda`, `nue`, `pi`, etc.). Starts respectivly stops the named server on the local computer. **Attention:** `l_stopserver theta` does **not exist**. Use `t_shutdown` resp. `stopdrivers` instead (see below).
`t_shutdown/ stopdrivers`	Stops the THETA-Server. The current job on the corresponding device will be completed first!. When all drivers have been stopped, the THETA server will **shut down**. The completion of a current send or recceive job will be finished currently but may take some time. Check this with the command `l_ps` when the shutdown has been finished.
`l_startfax/ runfax`	Starts all configurable server processes on the local computer. To use `l_startfax` the LAMBDA server has to run first.

Command	Description
`l_stopfax/ stopfax`	Stops all server processes on the local computer - with the exception of the LAMBDA server.
`l_startdrivers`	Starts all locally accessible drivers. The THETA server must be started separately with the command `l_startserver theta`. If the other servers are not accessible documents can be received this way. These documents will be saved locally until the responsible ALPHA server is accessible again.
`l_startdriver` *driver* `l_stopdriver` *driver*	Starts or stops the named driver. *driver* is the name by which the fax or telex driver equipment has been registered in the administration program. The driver `gd-capidrv` is finished automatically as soon as all lines are "dead"..
`l_stopgateways`	Stops all local gateway processes
`l_startdeamon` *deamon* `l_stopdeamon` *deamon*	Starts/stops the according daemon process.
`l_startgateway` *gateway* `l_stopgateway` *gateway*	Starts/stops the according gateway process.

In the PAPAGENO-Web-Administrator or in the PAPAGENO Windows-Administrator in the menu "process" all processes that run on the computer are displayed. There you can start or stop processes via buttons.

Printer Clients

The PAPAGENO printer clients `comfaxps, comfaxpr` and `comfaxpspr` enable the sending of faxes directly from an application. ASCII documents can be generated with `comfaxps`, postscript documents with `comfaxpr. comfaxpspr` automatically differs between ASCII and postscript. `comfaxps` permits documents to be sent from any Unix application.

A number of **options** exist for printer clients, e.g. exact time slots (night rate), etc.

Addresses, time slots, text formatting, etc. can be specified in the document itself by **internal control characters**.

CMD Line Commands (Software Interfaces)

With PAPAGENO you can also use the CMD line. With these commands you can control all actions that can also be executed via PAPAGENO interfaces (user and printer clients, administration program).

With the command `a_find_do` you can, furthermore, record sending charges for each user separately, to find documents and to initiate actions (delete, forward, send documents, etc.)

comFAX Clients

The PAPAGENO user can apply the comFAX ASCII (`comfax-asc`) and X Window (`comfax-x`) clients for fax management.

Both clients can be activated/invoked immediately after the PAPAGENO installation.

6. How to Install a Single PAPAGENO Server

Requirement: A PAPAGENO basic installation with the OMEGA server.

Reminder:

You can install ALPHA, THETA and PI servers separately on different computers.

- ALPHA servers are responsible for user and document management.
  An additional ALPHA server should be installed if users and documents are to be managed seperately (not on the fax computer).

- Install a THETA server on each computer with a connected/mounted device (ISDN card, modem).

- Install a PI server on each computer that is connected to a printer.

- Printer clients should be installed separately to relieve the load on the other PAPAGENO server systems. (The CPU gets strained when fax documents are generated.)

The procedure for server installation is exactly the same as for the main installation

▸ Archive the preliminaries (create the user `comfax`, verify RPC services, check entries in the file `etc/hosts`).

▸ Use the command `rlogin` to verify if the computer on which the OMEGA server is installed can be accessed in the network.

▸ Log in as user `comfax` .

▸ Load the software.

▸ Change to the directory in which the software is installed.

▸ Execute `etc/install_fax` .

▸ Select `w` for "Installation on further computers".

▸ Enter the host name (alias name) of the computer on which the OMEGA server is installed (i.e. the main installation has been carried out).

▸ Select the server type you wish to install (either ALPHA or THETA or PI).

▸ Log out and in again as user `comfax` .

▸ Enter the command `runcomfax` .

▸ Configure automatic starting and stopping.

How to install printer clients only:

▸ Proceed exactly as with the installation of individual servers (make preparations, load software, start installation, select `w`, indicate alias name for OMEGA host).

▸ Select **no** PAPAGENO server.

▸ Answer `Yes` to the question whether you wish to use another computer's ALPHA, THETA and PI server.

What is included with the installation of a PAPAGENO server?

- PAPAGENO drivers for devices

- Reserved user names

- comfax-adm administration program

- Printer clients

- PAPAGENO commands

- User clients (`comfax-asc` and possibly `comfax-x`)

- CMD line commands (software interfaces)

7. How to Install a PAPAGENO Mail Gateway

PAPAGENO can be connected to your mail system via a mail gateway (see above Part A, Chapter 6.„How to Connect PAPAGENO to your Mail System", page 25) .

The PAPAGENO **SMTP Gateway** is installed with the PAPAGENO main installation.

If the gateway should run on a different computer:

‣ Install PAPAGENO on that computer and deactivate all server components (ALPHA, THETA and PI) during the installation (see chapter 6.„How to Install a Single PAPAGENO Server", page 77).

If a PAPAGENO mail gateway is already in use:

‣ Install the **newest upgrade**. Otherwise errors may occur!

8. How to Set Up a Sandbox

On Linux, you can set up a sandbox (isolated area). The SMTP gateway and the printer client `faxpspr` run in this secure, isolated area.

In the sandbox read access to the most important areas of the operating system is available. Full writing is only available for `FAXROOT,` `tmp` and `var/tmp` .

Establishing the Sandbox

▸ Create the start script `comfax.rc`
(see above „Creating a Start and Stop Script:", page 69").

▸ Assign executing rights to `comfax.rc.`

▸ Login as `root.`

▸ Establish `comfax.rc` as start script (see above „Setting up Automatic Start and Stop:", page 69)
Every time PAPAGENO is started as `root` the sandbox is built - without any further settings.

Note: If the start script runs as user `comfax` no sandbox will be created)

How to check whether processes are running in the sandbox

▸ Look to the `gateway` and `daemon` logbooks .

▸ In a shell enter the command `faxpspr  -debug.`

To start PAPAGENO without sandbox:

▸ Login as system user `comfax.`

▸ Start PAPAGENO via the command `runfax.`

9. How to Install an Update Version

Within one network an identical PAPAGENO version must be installed on all PAPAGENO computers .

The user accounts and documents remain unchanged during an update.

PLEASE NOTE:
Version 5.0 servers or higher are not compatible with server processes for earlier versions!
If PAPAGENO servers are installed within a PAPAGENO cell on distributed computers, an update to version 5.0 must be made on all these computers.

First of all update the fax server, then all other computers with PAPAGENO server processes.

How to Install an Update

‣ With the command `stopcomfax` stop PAPAGENO on all systems.
‣ With the command `t_get_kzg` verify that the device driver has been stopped as well.
  If yes you will receive an error message (e.g. `RPC not registered`).

‣ Log in as user `comfax` and change to the installation directory.
‣ Load the software.
‣ Enter the command `update_comfax` .

‣ When the installation is complete, enter `runcomfax.`

How to Install an ALPHA Server Update

To update an APHA Server do the same as with a normal update; just be sure to anywhere enter "ALPHA Server" when asked for server components.

10. How to Handle a Large Number of Documents

If faxes and voice mails **are stored on the mail server** (see „Retrieval of the Faxes, Voice Mails AND Mails", page 33) you do **not** need to regard this page.

During installation, 16 subdirectories are created for each ALPHA server in the directories `e` (Incoming), `p` (Desktop) and `s` (Outgoing). In order to avoid difficulties caused by large numbers of documents in one directory.

For large installations it is recommended to even increase the number of subdirectories.

16 directories are recommended for small and medium-sized, 256 for large installations.

The creation of subdirectories is recommended when upgrading from comFAX 4.0 or earlier.

To Increase the Number of subdirectories ...

via the ALPHA configuration variables `DIRBUCKETE, DIRBUCKETP and DIRBUCKETS`.

If you have a large number of documents this may take an hour or more!
PAPAGENO users will **not** be able to continue working during this time.

How to Use the Variables

‣ Log in as user `comFAX` to the ALPHA computer on which you wish to create the subdirectories.
‣ Start the according ALPHA server by entering `runalpha`.
‣ Set the environment variable SETUSER to FAXADM
‣ In a Unix shell enter `a_put_usrconf` *variable value*.
   Example: `a_put_usrconf DIRBUCKETE 16`

   Values must be positive integer up to 4096.

‣ Stop the ALPHA server with the command `l_stopserver alpha` and then restart it with `l_startserver alpha` **or** `runalpha`.
   Documents will be assigned via links to the according subdirectories on the basis of their document numbers. Filed signatures and desktop documents which are currently being worked on will be stored in dedicated directories (`signature` and `scratch`). Once this has been completed, the original directory will be replaced by the converted directory. The original directory will be renamed with the extension `_old`. The variables then will be deleted to prevent subdirectories being created all over again when the ALPHA server is started the next time.

   Once you are sure that the conversion has been successful:

‣ Delete the directory with the ending `_old`.

11. How to Deinstall PAPAGENO

▸ Delete the complete `$FAXROOT` directory including any subdirectories.

▸ Delete the entries for PAPAGENO in the `.profile` file.

12. How to Install Devices

If you have not yet installed the devices to receive or send faxes you have to install and configure them now.

Installing ISDN Cards on a Linux Computer

▸ Make sure that a THETA server is running on each computer with an ISDN card.

Installing Dialogic Diva Server Card under Linux

To set up a Dialogic (former Eicon) Diva Server card under Linux RedHAT or SuSe 8.1 you have to install the latest software version and then configure the card.

Requirement

The card is built in.

Download RPM package

▸ On the Dialogic website (www.dialogic.com) download the current installation RPM package for the card and the Linux kernel.

Installing the RPM package

▸ Change to the RPM package directory.
▸ In a command line enter
`rpm -U` *packagename*
packagename is the name of the RPM package.

Configuring the card

▸ Change to the `/usr/lib/eicon/divas` directory.
▸ Activate the `config` file and configure the card.

Delivering capi 20

Change the rights so that only PAPAGENO can use the capi 20.

▸ In a command line enter
`chown comfax /dev/capi20`
▸ Enter:
`chmod 600 capi20.`

Connecting the PAPAGENO Device Computer to the Network

If a ready-configured PAPAGENO computer is being used as a device:

▸ Assign an IP-address to this computer and connect it to the network.

▸ Register the OMEGA host under `$FAXSERVER/etc/config`.

▸ Enter the OMEGA host with its corresponding IP-address in the host table of the PAPAGENO computer.

▸ Enter the PAPAGENO computer with the corresponding IP-address in the host table of the OMEGA computer.

After this

• Publish the OMEGA server to the THETA server (register it as a new server in the administration program. See also: part C, chapter 55.„How to Forward Faxes Free of Charge to a Remote PAPAGENO Installation", page 123)

• Register PAPAGENO as a device in the administration program.

Setting Up Modems

▸ Install them.

▸ Make sure that a THETA server is running on each computer connected to a modem.

13. How to Install FAX Clients

If users want to work only with faxes, we provide several FAX clients:

- **comFAX/Win**: fax client under Windows, runs on 32 Bit Windows versions and dedicated 64 Bit versions.
- **comFAX/ X Window** runs under Unix with an X Window interface
- **comFAX/ASCII**: ASCII interface for Unix and Windows users. (Faxes can be displayed only in a limited way!)

Installation of the fax clients

comFAX/Win

The installation files can be found on the CD in the directory `support_for_old_Versions\FaxClient` respectively on our website (`Download - PAPAGENO - Software - User Clients`).

comFAX/ X Window

comFAX/ X Window is installed together with the basic Unix installation of PAPAGENO or PAPAGENO servers.

comFAX/X Window can be started in a Unix shell **with the Unix ID of a user. X Window must exist**.

comFAX/ASCII

comFAX/ASCII is installed with the basic installation of PAPAGENO or PAPAGENO servers.

comFAX/ASCII can be started at shell level or at the MS-DOS command line.

C. Administer PAPAGENO

1. PAPAGENO Administrator

There are Three Different Administration Programs

- **comfax-adm**

- **PAPAGENO Windows-Administrator**

- **PAPAGENO Web-Administrator**

The **setting options are the same in all three administration programs.**
The interfaces can, however, be applied in **various environments**.
.

comfax-adm	Windows-Administrator	Web-Administrator
ASCII interface	Windows interface	HTML pages
Runs on any **Unix, Linux** or **Windows** system in the network (via Telnet).	Runs on any **Windows** computer with a network link to the PAPAGENO system.	Can be executed via **web browser** on every computer in the network Enables computer-independent access via HTML technology.
Automatically included in the basic PAPAGENO installation Unified messaging services **can not** be setup!	Must be installed on a Windows system.	Must be installed on a WIndows system with **Microsoft Internet Information Server (IIS).** PAPAGENO Windows-Administrator must be installed on the same computer.

PAPAGENO Windows-Administrator and PAPAGENO Web-Administrator offer **additional features** compared to comfax-adm. (e.g. registration of user substitutes and setting actions, deleting gateway users from the database, voice settings for voicemails).

The following chapters describe the Administration with the PAPAGENO Windows-Administrator interface.

Items Entered Via the Administration Program

In order to make PAPAGENO operative:

- Register the server on which the PAPAGENO server processes are installed

- Enter the user data of all PAPAGENO users or the Gateway users

- Install the drivers for all **devices** and **services** that being used

- Enter at least one **distribution rule**

  via the **administration program**.

In addition, you can:

- Set up **user groups** to which incoming faxes are to be on-routed

- Set up further **distribution rules** for incoming faxes

- Register **printers** which are used for printing faxes

- **ALPHA servers** on PAPAGENO installations of another cell ("remote ALPHA server")

- Replace starting numbers of specific fax numbers by other numbers (**number substitution**).

- **Poll documents** for passive polling

- Set **system parameters**, e.g. for sending copies of all incoming documents to a specific user.

Differences in Program Structure

The following differences in program structure exist in the administration programs:

PAPAGENO **Windows-Administrator** and PAPAGENO **Web-Administrator:**

In case of a distributed installation you first have to register all computers on which the PAPAGENO servers are installed. Users (ALPHA servers installed), devices (THETA servers installed) or PAPAGENO printers (PI servers installed) must be registered for these computers thereafter.

When registering a user, a device or a printer in **comfax-adm** you specify which server computer to use.
Only remote ALPHA server computers have to be registered here.

Attributes of ALPHA servers are specified in "System Parameters".

Starting the PAPAGENO Windows-Administrator

The PAPAGENO Windows-Administrator can be executed on any Windows system within the PAPAGENO network.

▸ Double-click the PAPAGENO Windows-Administrator icon (Link to `papageno.exe`) on the desktop to open the login window..

.
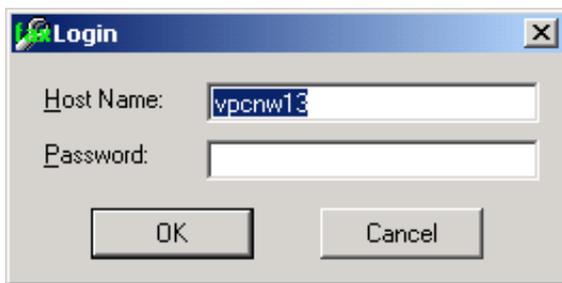
▸ In the `Host Name` field enter the name of the computer on which the OMEGA server is installed and confirm.

▸ The main window of the administration program will open.

Working with the PAPAGENO Windows-Administrator

The individual folders are listed on the left. Click on a folder to view the sub-folders on the next level or their contents in the list box on the right.

The folder `Servers contains` the sub-folders `Processes` and `Events` and if entered yet, the sub-folders `Users, Printers` and `Devices.`

Adding entries to a folder

▸ Click in the left-hand list box with the right mouse button on the appropriate folder and select `New...`

or:

▸ Highlight the folder and then select the option `New...` in the menu `File`

Displaying entries

▸ Double-clicking on an entry will open a window in which you can view and change data.

Conventions

For all devices, printers, users, user groups, distribution rules and server configurations the first box must always contain a unique short term corresponding to the key field of a database.
The short term must not be longer than 10 characters and must not contain spaces or special characters. It should start with a letter. Once the entry is confirmed, it cannnot be changed.

Each short term has a comment box for a more detailed description (30 characters,spaces and special characters allowed).

Deleting entries

To delete an entry from the right-hand list box:

▸ Highlight the entry and press the `DEL` key.

Changing entries

▸ In the left-hand list box click the right mouse button on the appropriate folder and select `Proper-ties...`
or:
highlight the folder `Administrator` and select the option `Properties...` in the menu `File.`

2. Assigning an Administrator Password

While the administration program can be accessed by any user the password ensures that no changes can be made by an unauthorized person!

▸ In the main administration program window highlight the folder `Administrator`.

▸ Open the menu `File - Properties...`

▸ In the window `Administrator Details` click `Change Password...` to open the `Change Password` window.
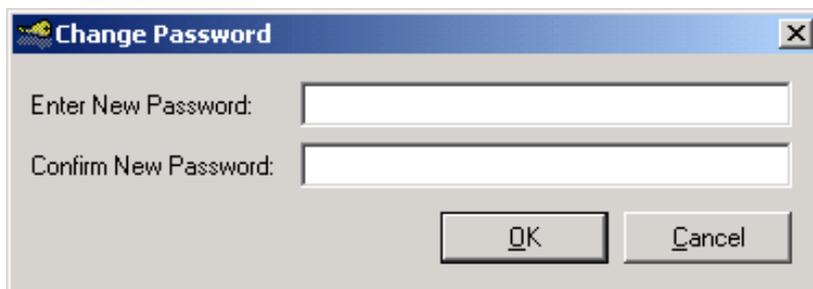
▸ Enter the password in the `New Password` edit box.

▸ Re-enter the password in the `Confirm New Password` box.

Your entry will not be readable. The characters will be replaced by asterisks.

▸ Close the window with `OK`

If the password entries concur the new password will be saved and must be entered next time you log in.

NOTE: If you forget the password for the PAPAGENO administrator, you will not be able to access the administrator program.
In this case, PAPAGENO must be re-installed.

The administrator password can be changed at any time in the `Change Password` window. The new password is valid as soon as it has been entered correctly.

3. Registering the PAPAGENO Servers

In the administration program the **servers** (networked computers, on which PAPAGENO server processes are installed).have to be registered.

For each server you can, for instance, determine whether PAPAGENO users shall use it as an ALPHA server. You can also determine whether devices (modems or ISDN cards) or printers are to be connected to the computer. If devices are connected, a THETA server must be installed, if printers are connected, a PI server must be installed.

‣ In the main administration program window, highlight the folder `Server`.

‣ In the menu `File` click `New ...` to open the window `Server Details`
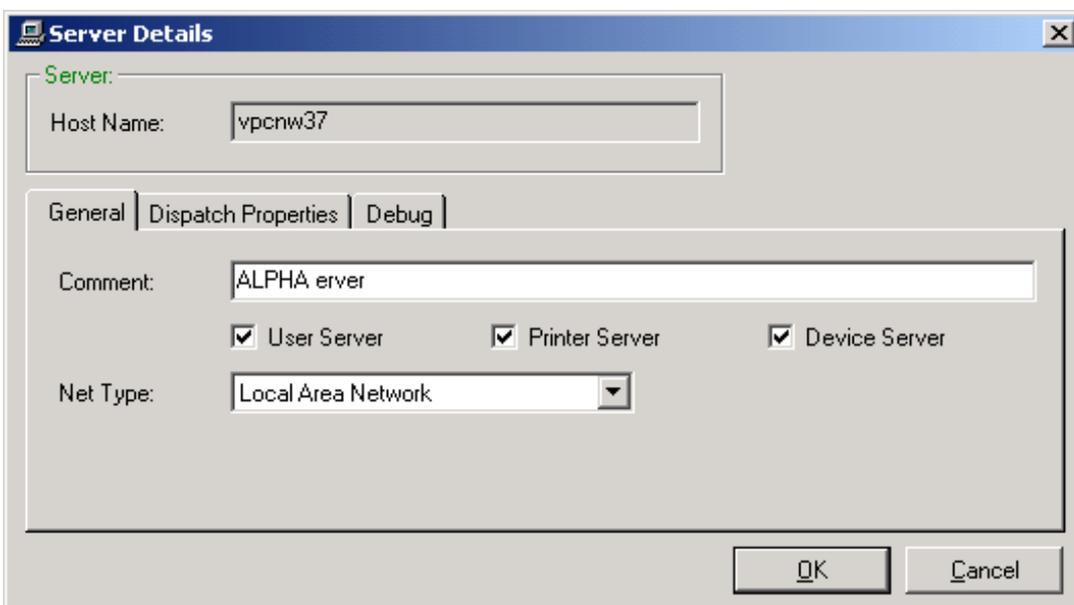
General file card

Host Name	Short term, maximum 10 characters, no spaces or special characters. First character should be alphanumeric. After confirmation this entry cannot be changed anymore. Confirm with `Return.`
User Server	Activate if documents and the environment of users shall be stored on this server computer. (ALPHA-Server must be installed).
Device Server	Activate if devices are connected to or installed on this server computer. (THETA-Server must be installed).
PrinterServer	Activate if a printer is connected to this server computer. (PI-Server must be installed).
Comment	Description (up to 30 characters)

At least one of the servers `User Server, Printer Server` or `Device Server` **has to be activated**.

If you activate one of the boxes `User Server, Printer Server` or `Device Server`, the corresponding sub-folder will be created once the server registration has been completed. Later on further users/devices/printers can be added in this sub-folder.

After activating the `User server` box, you can start the ALPHA server.

▸ On the computer for which you have registered the ALPHA server enter at the MS-DOS command prompt enter `l_startserver alpha`

   or:

▸ start the ALPHA server via `System Control Panel – (Administration) – Services`

   The ALPHA server will be started. The `Server Details` window will display `Online: Yes.`

Net Type	local or remote ALPHA server. Select the type of network to which the computer is connected. `(Local Area Network` for the local ALPHA server or `Wide Area Network` for a remote TCP/IP network). If the words `Online: Yes` are displayed in the box, the server is accessible.

Make Adjustments for Dispatching Jobs if Necessary

The `Dispatch Properties` tab is activated only if the `user server` box is activated and the `Online - Yes` field is visible.

The "dispatcher" is the central job manager. It controls which jobs are dispatched and when, deactivates inactive logins, etc.

Serialize Same Number	Serialization should be activated. It ensures that several jobs to one destination are dispatched one after the other. If the serialization is deactivated sending jobs will be realized to parallel lines. Since receivers often have only one telephone line for reception the transmission jobs would handicap each other (busy line).
Dispatcher off	Deactivate the dispatcher. It is used for temporary system maintenance work only.
Dispatch Count	Use the arrow buttons in the Dispatch Limit box to select the number of dispatching jobs to be executed simultaneously by the ALPHA server. We recommend limiting jobs to 50 - 100.

Increase the Debug Level if Necessary

The `Debug` tab is active only if the `User Server` box is activated and the `Online: Yes` field is visible..

Debug Level	The higher the debug level the more detailed the activities of the alpha server are logged. They are stored in the log directory `C:\FAXSERVER\alpha`. Debug levels vary from 1 – 10. Level 1 logs all standard messages, the highest level 10 logs all available messages. **Attention!** Logging on high level requires a lot of disk space! You cannot stop the recording of the server log file via the `Debug Level` field. This is only possible via the CMD line command `a_write_log`.

‣ Save your settings by clicking `OK`.

Starting and Stopping Server Processes Via the Administraton Program

For each server computer you can stop and restart all running PAPAGENO processes.

How to stop or start ALL server processes:

▸ Click the right mouse button in the left list box on the server for which you wish to shut down all PAPAGENO processes.

▸ Select: `Stop` or `Start` in the menu.

How to stop or start a specific server process:

▸ In the left list box in the sub-menu of the server highlight `Processes`.

The server processes will display in the right list box.

▸ Highlight the server process which you wish to stop or start.

▸ Select: `Stop` or `Start` in the menu.

4. Registering Users

Depending on your configuration PAPAGENO users must be entered via the administration program in PAPAGENO:

No mail gateway or **no** LDAP directory server	**All users in** PAPAGENO The fax and/or voicemail and/or SMS users will be stored in PAPAGENO. Enter a password in the form of a numeric string for every user to allow access to his messages via phone.
Mail gateway **and** LDAP directory server	**All users in the directory server, gateway user in** PAPAGENO. PAPAGENO users are stored in the directory server. In PAPAGENO enter the gateway user who shall receive all incoming faxes and voicemails.
Mail gateway **without** LDAP and IMAP4 connection **but:** access to messages by phone shall be possible	**All users and all gateway users in PAPAGENO and on the mail server.** For users who want to access their messages via phone, all incoming messages, except for those stored in the mail server, must also be saved in the PAPAGENO server. For this, all users and gateway users must be saved in the PAPAGENO server. Distribution of messages takes place according to distribution rules. For access via phone ensure that a password in form of a numeric string is entered for every user in the PAPAGENO server.

A user in PAPAGENO is defined by a **user name** and the **ALPHA server** on which his environment and his documents are administered. This way two identical user names "Johnson" can exist in PAPAGENO if they are registered on different alpha servers.

If you have to register **a great amount of users** we recommend doing this by scripts.

Note: The two user names `comfax` and `FAXADM` exist already and have a special meaning. They cannot be deleted.

If a user name begins with a "." it will **not** appear in the user list. This form of user name is reserved for special users, e.g. for the user `.winpr` handling Windows print jobs, e.g. for the user `.routing` handling Least Cost Routing.

How to Register a New User

▸ In the main window of the administration program click in the `Server` folder on the server were you want to register the user.

▸ Highlight the `Users` subfolder and click `New...` in the `File` menu to open the `User details` window:

NOTE: If you use a gateway, the only user you have to register is the „gateway user". You only enter the user name (e. g. `smtpgw`), comment and a password, if required!

User Name	Short term, maximum10 characters, no spaces or special characters. First character should be alphanumeric. We recommend entering all user names in either **lower** or **upper** case. The `User Name` and the `Host Name` of the data server (ALPHA) create the database key. Once confirmed with Return, the `User Name` box no longer can be changed. **Confirm with Return.**
Comment	Maximum 30 characters,
Bar Code	Enter up to 10 alphanumeric characters (e. g. the name of the user). A barcode will be generated from this entry. If direct dialing numbers are not being used this barcode is important. Faxes with bar-code are delivered directly to the owner. A user can add his barcode to documents automatically or manually. A licence is required for bar code option!

Admin. Priority	Priority for the executing of send jobs. Enter a number between 1 and 32000. The higher the number, the higher the preference for a send job...
Change Password	Via button `Change Password...` Users can enter or change their password in the PAPAGENO user client interface. If a user has forgotten his password a new one can be entered only here.

How to Enter User's Fax Send Properties

The `Send Properties` tab is active only if a user is registered on a local ALPHA server. Send properties for gateway users have to be defined directly in the directory server.

When sending a fax the parameters set for a user have priority to those set for a device!

Priority	Percentage value of the administration priority, that is assigned to the user. Users can set their own priority for each send job. If a user works with Outlook via the the PAPAGENO MAPI Connector no entry has to be made in the `Priority` box. It will be ignored.
Source identifier (TSI)	Fax number with country and area code as well as extension number. Format: +*country code_without_0 area code_without_0 phone fax number extension number* e. g. +49 89 54750 999 Your fax system will use this for identification when documents are sent.
Pin Code	Pin code for billing in the TC system .

Sender identification(CPI)	This number will be delivered and displayed with each SMS. The recipient can answer if this number is entered as fixed network SMS number. For gateway users the CPI has to be entered in the directory server in the user-specific send properties.
Headline	User specific headline up to a maximum of 80 characters being displayed on all trans-mitted documents. The following variables can be useed: $$ Dollar symbols ($) D Date and time, e.g. 18:45 11 March 2011 $Dxxx$ Date and time with format. xxx follows the syntax of the ftime system calls T Specific source identification (TSI) p Current page (three-digit, preceded by space) P Severall number of pages (three-digit, preceded by space) N Current job number L Modem device name (line ID) H Name of the computer (host ID), on which the sender's ALPHA server is installed U Name of the user in PAPAGENO (user ID) R Dial string before transduction Any additional text will be simply adopted.

How to Appoint a Substitute

The Substitute tab is active only if the user is registered on a local ALPHA server.
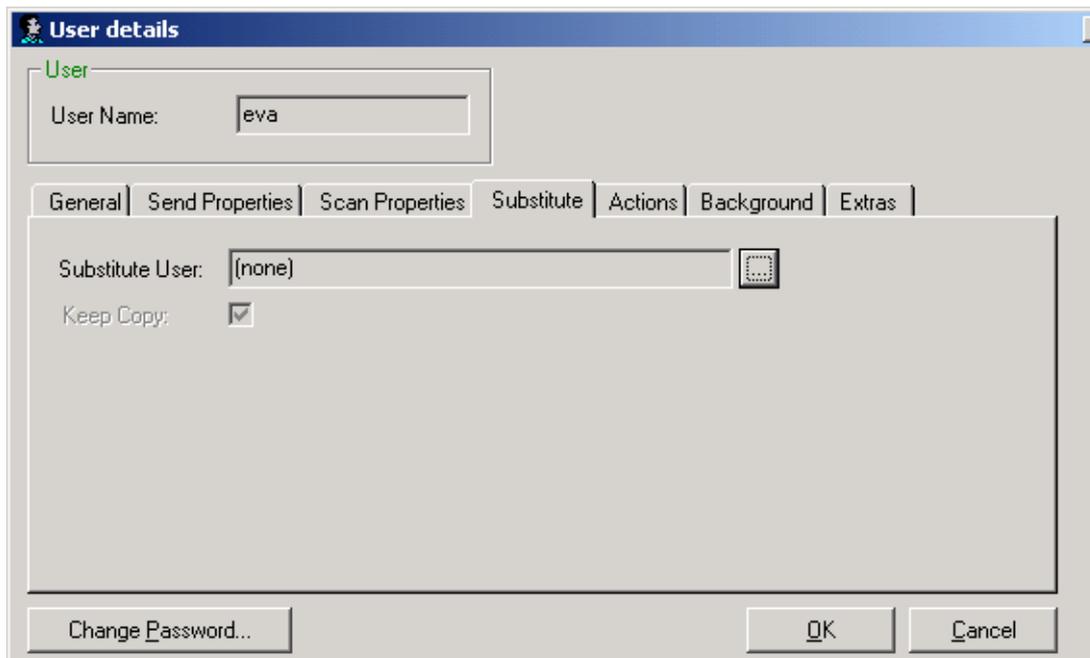
Substitute User	The substitute receives the messages sent to a user. Users can define a sustitute in their PAPAGENO user client interface.
Keep Copy	The user keeps a copy of every incoming document.

‣ Click on the `...` button next to the `Substitute user` box. to open the `User Selection` window.
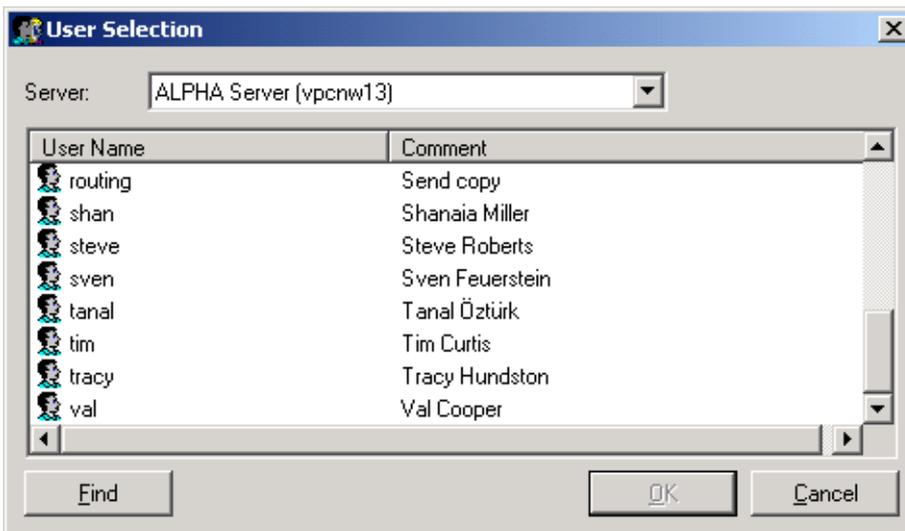
‣ In the `Server` pull down menu select the ALPHA server on which the subsitute is registered.
‣ The users of these ALPHA servers will be displayed.
‣ In the list box select the according user.
‣ Close the window with `OK`.

The substitute's user namewill now be displayed in the `Substitute user` box.

How to Enter Different User Notification Types

This tab is active only if the user is registered on a local ALPHA server.

Users can enter these adjustments in their user client interface except for `Mail address` and `Phone Signal Nr.`

All of these settings can also be specified by the user individually in the user client interfaces. The last entry (either via the administration program or the client) is valid.

Mail, Print, Light, Voice	You can specify whether a user is to be notified by the TC system on receipt and/or dispatch of documents and in the event of errors by mail, by light signals on your phone system, by acoustic signals on your phone system. You can specify to print incoming, outgoing or send failed documents automatically.
Mail Address	Once you have checked mail actions the `Mail Address` box will be active. You now can enter the address at which E-Mail system users can be reached. Example: keith@vipcomag.de The mail address will be examined by the ALPHA server and must be understood by the operating system of the computer on which the ALPHA server is installed. If you make no entry in the E-Mail Address box, the user name from the Name box will be used automatically as a mail address. If the ALPHA server is running under Windows the „mail notification" option must be set during PAPAGENO installation in order to use the the mail notification feature. You can change this any time.
Printer	Once you have set the `Print` actions, the `Printer` box will be active. Now enter the printer to be used for automatic printing of an incoming, outgoing or failed documents.
Extension numbers	Once you have set actions for light or acoustic signals in the Extension field you must enter the user's extension number.

How to Define Background Paper for the User's Faxes

The tab `Background` is active only if the user is registered on a local ALPHA server.

You can define up to 10 different types of stationery (with company logo, etc.) that users may use as a background to faxes.

In the comFAX client users can enter stationeries, the PAPAGENO MAPI Connector does not support background papers. If the user is working with Outlook background documents do not have to be entered.. The entry will be ignored.

When a user sends a document to PAPAGENO from a Windows application and selects "Paper 1", stationery 1 will be used as a background.

Background documents can also be entered by the users themselves. The last entry (either via the administration program or the client) is valid.

The PAPAGENO MAPI client does not support background documents. If the user is working predominantly with the PAPAGENO MAPI client background documents do not have to be created.

Default	Background document to be used whenever a fax is sent: Enter the number of the desktop document to serve as background in the `Standard` box.
Paper X	Enter the number of the desktop document to serve as a background in one of the `Paper` boxes `1-9`. Must be selected when sending from a Windows application.

Additional information:

You can enter PAPAGENO **users** of **different company's locations**. This way faxes can be sent for free between users of the according locations.
You cannot enter passwords, email adresses, phone numbers or user specific send properties for users of a remote ALPHA server.
These users are not being charged to PAPAGENO licenses.

The **User `comfax`** is entered automatically during an every ALPHA server's installation.

5. Registering Devices and Device Drivers

Enter each PAPAGENO device with the correspondent driver via the administration program.

The following devices are currently supported by PAPAGENO in combination with the appropriate device drivers:

Use the Service	with the Device	Driver
Fax, Voicemail, SMS	Dialogic card (Eicon Diva card)	gd-capidrv
Fax, Voicemail, SMS	Funkwerk bintec RT1202/ RT3002/ RT4202/ RT4402H	gd-capidrv
Fax	Multi-Tech modem 56k zdx	gd-mdndrv
Fax	US Robotix modem 56k 5630B	gd-mdndrv fm-usrrobot
Fax	Elsa 28,8 56k modem (no longer available)	fm-elsa

Only the ISDN driver `gd-capidrv` supports all three services (fax, voicemail and SMS).

Note: PAPAGENO must have exclusive rights for the devices you set up in the administration program. If other application programs have access to the devices this may seriously impair the performance of PAPAGENO.

6. Setting Up Services in PAPAGENO

Service fax, voice, SMS

‣ Enter the device with the correspondent driver in the administrator program (see below 108).

Using fax service :

‣ On entering the device, activate the checkbox `Fax` in the tab `General` (see page 109).

Using voice service:

‣ On entering the device, activate the the checkbox `Enable Voice` in the tab `Voice` (see page 112).

Using SMS service:

‣ On entering the device, activate the the checkbox `SMS` in the tab `General` (see page 109).

Using Fixed Network SMS

SMS messages can be sent to the fixed network direct dialling number of a PAPAGENO user.

‣ On entering the device, activate the checkbox `SMS` in the tab `General` (see page 109).

In the device driver the numbers of the Short Message Service Centers are predefined by parameters. These default settings can be changed.(See german Manual „PAPAGENO Installation und Administration für Linux/Unix", Anh. III „Backend-Geräte", Kapitel 3. „CAPI-Parameter für ISDN-Geräte").

Using a directory server:

‣ For every user enter the direct dialling number as the user specific sending parameter (`CPI`).

For every user, who sends via MAPI-Connector (Outlook):

‣ Enter the direct dialling number as CPI (see 100).
On sending an SMS the CPI is included.This allows for an answer SMS from the receiver mobile phone.

‣ Disconnect the numbers of the Short Message Service Centers in the TC system (Parameter `smsc1`),

‣ In the Short Message Service Centers (SMS-C) publish the direct dialling number of every user that uses fixed network SMS. This way the number can be activated as a fixed network SMS number.

How Many B Channels are Available?

For every device you enter the number of channels (lines) the device will use.

You have purchased a certain number of channel licenses by VIPcom.

The sum of the channels which you have entered for all devices cannot exceed the number of purchased licenses!

How to check for the available amount of channel licenses:

▸ On the left side highlight the folder `Licenses`.
In the right list box besides `Max. lines` you see the maximum number of line licenses at your disposal while next to `configured lines` you see the number of licenses you have already configured.

7. Registering ISDN Cards

Prerequisite: The ISDN card all software and the PAPAGENO THETA server processes are installed!

ISDN cards support **source identifier** and **headline**.
If a user sends a fax, the TSI entered here and the specified headline will be included.
If an individual TSI and headline have been specified for a user, they will be used.

‣ In the main window of the administration program click in the `Server` folder on the server system for which you wish to register the device.

‣ Highlight the `Device` sub-folder.

‣ In the `File` menu select `New....`

Device Name	Short term, maximum 10 characters, no spaces or special characters.
Device type	`gd-capi.drv` for a Dialogic Diva Server card. **Confirm with Return**.
Configured Lines	Number of supported channels (lines). The maximum number of lines must comply with your license!

`General` tab

Comment	Maximum 30 characters.
Physical Device	**Do not enter anything!** (Local CAPI will be used.)
Enable Fax	If you want to use the fax service check the option `Enable Fax`.
Enable SMS	If you want to use the SMS service check the option `Enable SMS`.
Benutzer-Server (ALPHA)	Since users may be managed on another system, you can select the name of the ALPHA server here. In this case the incoming messages are sent there.
Enable Send, Enable Receive	If messages shall be sent via the device, activate `Enable Send.` If messages shall be received via the device: activate `Enable Receive.`
Enable Debug Feature 1, Enable Debug Feature 1	Activate the debug features to check the communication between computer and device. When sending and receiving works correctly **disconnect the device!!!** The protocol is logged in the file `C:\FAXSERVER\logging\drv_`*device_name*.

If you want to enter or change settings for sending fax messages and/or want to enter line type:

‣ Select the `Fax/Dial` tab

TSI	Source Identification of your device. Format: +*Country code_without_0 Area code_without_0 Fax number and direct dialing number* e.g. `+49 89 54750 900` If dedicated TSI s have been defined for users those TSIs will be used.
Headline	Maximum 80 characters. Headlines will display automatically on top of each sent document. Variables can be used. If dedicated headlines have been defined specified a special headline for users those headlines will be used.
Get Line Type	In `Get Line Type` you can specify whether a number is to be dialled for obtaining an external line. If your device is **connected directly** to an external line select `None`. If you need to **dial a number** to reach the public network select `Dial Strings`.
Get External Line	If you have activated `Dial Strings,` enter the number that must be dialled to obtain an external line.
Get Internal Line	Features of the of the TC system can be met here. It is possible to enter special characters.

How to Send Fxes Including the CPI

‣ Select the `ISDN` tab.

The edit boxes in the `ISDN` tab are related to the calling party identification (CPI) which may be included in messages sent via an ISDN device.

Calling Party Number (CPI)	The CPI is included when sending an SMS from this device. Whether you enter only the extension number or the complete phone number depends on which information your TC system passes on.
Calling Party Subaddress	Fax subnumber, if available.

How to Enter Parameters for the Inbound Routing

▸ Select the `Inbound Routing` tab

Min. Digits	Counts and enters the number of digists of a phone number that is passed by the TC system or the PBX, example: 3.
Max. Digits	Normally the settings in the `Min. Digits` and in the `Max. Digits` boxes are the same. Only when numbers of varying lengths are used the parameters will differ.
Skip Digits	Here you can cut off the subscriber number: - if only the direct dialling and extension numbers for users shall be listed in PAPAGENO or in the mail server the TC system or the PBX also passes the subscriber number. - if the number has more than 10 digits. **Example**: The fax number is 54750-900. If you want to cut off the main number (54750), enter `5` for the first 5 digits. This means that the last three digits (900) will be passed to PAPAGENO.
Wait Digit Timeout	Enter the time in seconds that the system has to wait for remaining digits, e. g. 10. 12 is the default.

Number Prefix	If you want to enter the complete international phone number for users, even when the system only supplies the direct dialling number or when a number with more than 10 digits has been skipped, you can enter the complete number (optionally with country and area code).here. Example: +49-89-54750
CSI Prefix	The CSI (or CSID = Called Subscriber Identification) is the number the driver returns wen a fax is sent to a destination - the receipient identification. The sender of the fax sees the CSI on his fax confirmation. The CSI corresponds to the TSI (dispatcher identification), which was entered in the `Fax/Dial` tab. Enter the same prefix you entered in the `Number Prefix` box

How to Use Voicemail

‣ Select the `Voice` tab.

.

:
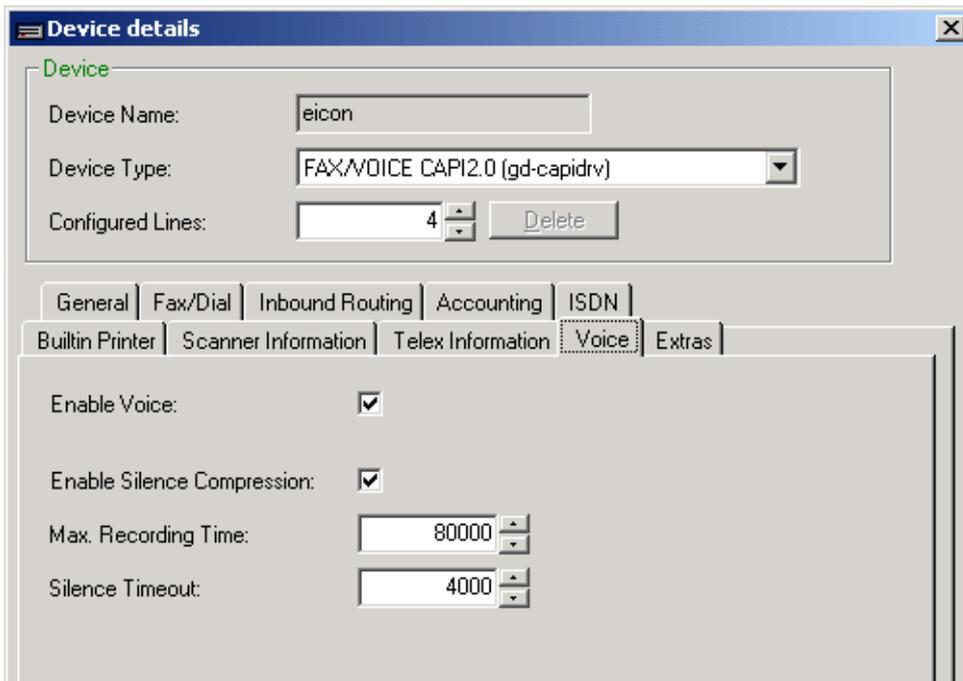
Enable Voice	Activate to use voicemail.
Enable Silence Compression	Activate to compress caller's breaks.
Max. Recording Time	Enter the maximum recording time in milliseconds (e. g. `80000` for 80 seconds).
Silence Timeout	Enter the time (in milliseconds) after which the recording is terminated once the caller finishes speaking (or remains silent) e. g. 4000 for 4 seconds.

PAPAGENO Configuration, Installation und Administration

How to Calculate Charges

▸ Select the `Accounting` file card

Accounting factor	Charge unit as a number (e. g. 12 for 12 Cents)
Accounting Unit	Currency (e.g. `Euro`), in which calculations should be made. A fictional currency can be entered as well.

To complete your input:

▸ Save your entries with `OK`.

▸ Register all other fax cards in the same way.

For your settings to become effective,

you have to **stop** and **restart the appropriate drivers to enable any settings or changes**

▸ After changing the settings click on `Save and Restart`.

8. Registering a PAPAGENO Communication Server

A „PAPAGENO Communication Server" is a complete configured Windows system with ISDN functions and a THETA server. This system has already been entered as a server in the administration program.

Since this system is used as device its device data must be entered as well.

‣ In the main window of the administration program in the `Server` folder click on the PAPAGENO Communication Server

‣ Via the `Device` sub-folder open the window `Device details..`

Since the PAPAGENO computer contains ISDN cards, the entry possibilities are the same as described above for ISDN cards.

In the `Configured Lines` field you **enter the total number of lines** configured for the PAPAGENO-Server.

In the **Device Type** field select `gd-capidrv`.

9. Registering a Modem

Modems support source identification (TSI) and dispatching faxes with a headline.
If a user sends a fax via a modem, the TSI entered in the Device Data and the specified headline which are entered in the „Device Data" will be sent with.

If user-specific TSIs or headlines are defined those will be sent.

▸ In the main window of the administration program in the folder `server` click on the server on which the modem is connected.

▸ Highlight the `Devices` subfolder

▸ In the file menu click: `New.`

The entry possibilities are the same as described above for ISDN cards (see page 108)

Device Type	`gd-mdndrv`
Physical Device	Name of the interface(s) (connection between modem and PSTN) e. g. `com1`, `com2` Get the name of the interfaces on the computer the modem is connected to via `System Control - Connections.`

Enable Speaker	Activate `Enable Speaker` if you want to listen in the selective process of the modem. That can be serviceable, if some receipients are not available.

The `Inbound Routing` and `ISDN` file cards are only available for ISDN devices.

If the modem is voicemail-capable:

▸ Make the required entries on the `Voice` tab. (See page 112).

If you want to enter driver-dependent parameters:

▸ Enter them in the `Extras` ftab.

10. Enter at Least One Distribution Rule

You must enter at least one distribution rule in PAPAGENO, otherwise incoming messages will not be accepted!

Distribution rule r1:

has already been entered. All incoming messages (provided no other rules have been entered), are sent to the user `comfax.`

You can **change** the **user name** "comfax" (e.g. into "registry").

If a PAPAGENO **mail gateway is installed** replace the user name "comfax" with the name of the gateway user (e. g. `smtpgw` for SMTP gateway, see Manual „SMTP Gateway"). All incoming faxes will then be forwarded to recipients via the gateway. Exceptions are faxes for which another rule has been defined.

How to Change Distribution Rule r1:

‣ In the Administrator's main window select `Distribution.`
‣ Doubleclick on the rule `r1.`
‣ In the `Single users` field select a user name respectively the gateway user name.

Other distribution rule options and their hierarchical application by PAPAGENO are described below.

11. PAPAGENO is now ready to use!

Further administration options are described on the following pages.

12. How to Deliver an Incoming Message to Several Users

Create a **user group** including all according users. Register this user group in PAPAGENO and enter a distribution rule.

The distribution rule defines that certain or all faxes and voicemails are to be forwarded to the user group (see below under 13.„Entering Additional Distribution Rules", page 120).

▸ In the main administration program window highlight the folder `User` .

▸ Via the menu `File – New ...` open the window `Group Details`
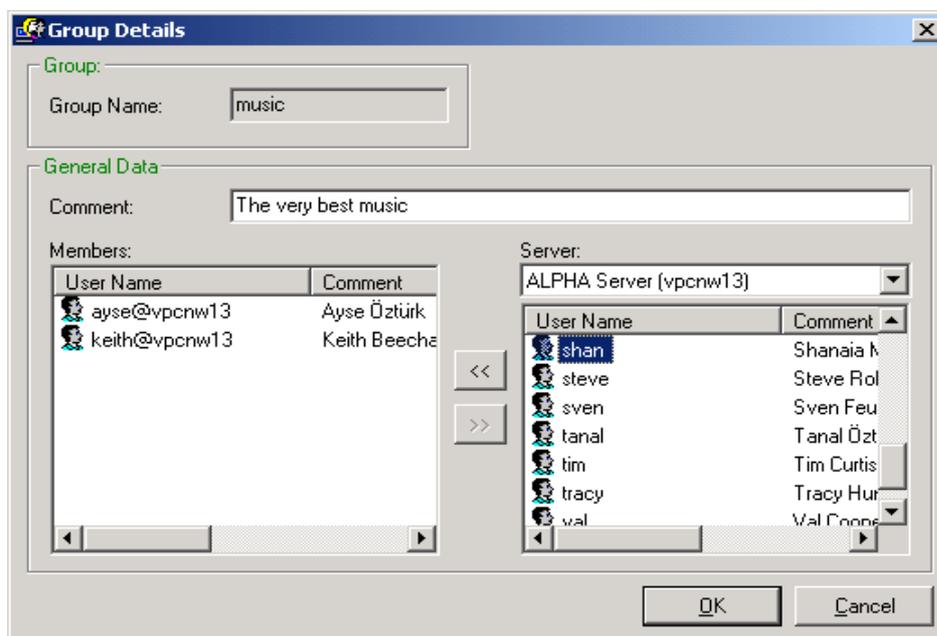
Group name	Short term, maximum 10 characters, no spaces or special characters. Confirm with Return.
Comment	Maximum 30 characters.

To add a user to a group:

▸ In `Server` in the pulldown menu select the server were the user is registered.

▸ Highlight the desired user name and click the button `<<`

The user name will appear on the left side in `Members.`

To delete a user from a group:

▸ In `Members` highlight the user name and click the button `>>`

The user name will be removed from the group.

13. Entering Additional Distribution Rules

Remember:

You have already changed the distribution rule **r1**. A specific **user** or the **gateway user** is registered as the recipient of all incoming faxes.

All incoming faxes will be sent to this user. If the gateway user has been entered incoming messages will be forwarded to the gateway and then distributed to the appropriate receipients.

If user addresses are stored in PAPAGENO (you are **not using a mail gateway** or you are not planning **an IMAP4 connection** to the mail server) each user must be entered in the distribution rules with an appropriate extension number.

Distribution rules to be entered

Apart from rule "r1" you can set up distribution rules by which

- faxes with certain **sender fax numbers**

  and/or

- faxes with a specific **direct-dial number**

  are forwarded to specific users.

PAPAGENO **processes distribution rules in the following sequence:**

1.	Sender	Direct-dial number	Users/user group
2.	-	Direct-dial number	Users/user group
3.	Sender	-	Users/user group
4.	-	-	Users/ user group

This means that each incoming message will be checked whether there is a rule:

1. for the sender's number and direct-dial number,

2. for the direct-dial number only,

3. for the sender's number only.

4. If no rule is applicable to these 3 cases, rule "r1" takes effect. The message will be delivered according to the user entered in this rule or the gateway user.

In this case Only one distribution rule (Rule "r1"). is permitted.If users have direct-dial numbers, option 2. (or 1.) is entered for them in the distribution rules.

Entering distribution rules in PAPAGENO**:**

▸ In the main administration program window highlight the folder `Routes`.

▸ Via the menu `File – New ...` open the window `Route Details`

Route Name	Maximum 10 characters, no spaces or special characters. Confirm with Return.
Comment	Maximum 30 characters.
Match Extension	Distribution rule option 1 and 2: - Enter the `device name` of the ISDN card, modem, ... - Enter the direct-dial number. This number must correspond to the number relayed by the TC system, e. g. 999 or 54750-9-99. Take into account that you may have truncated the number or added a prefix. (see above „How to Enter Parameters for the Inbound Routing", page 111).
Match TSI	Distribution rule option 1 and 3: Enter the TSI of the calling party or select it from the telephone directory.
User	Select a user from the list with the button `...`
Group	Select a user group from the list with the button `...`

14. If Faxes Are to be Printed

... enter the printer to be used in PAPAGENO. In the comFAX clients users the available printers are displayed.

A PI server must be installed on each system connected to a printer.

‣ In the main administration program window in the folder `Server` highlight the server to which the printer shall be connected.

‣ Highlight the sub-folder `Printers`.

‣ Open the menu `File – New ... `.
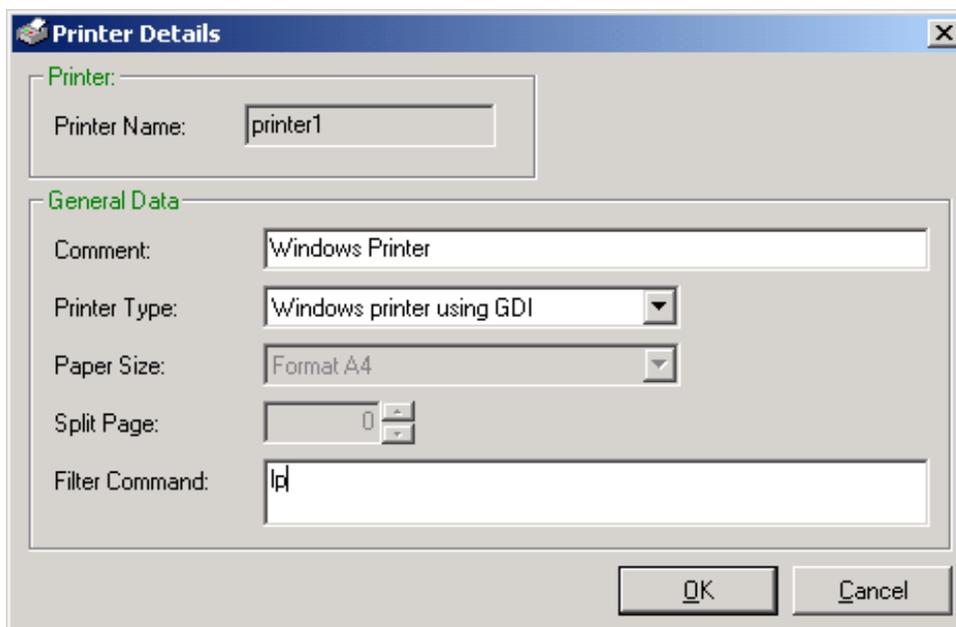
Printer name	Maximum 10 characters, no spaces or special characters. Confirm with Return.
Comment	Maximum 30 characters.
Printer Type	Unix printers: Select the convenient printer type. Windows-Printers: select the printer type `MS Windows`.
Paper Size	`DIN A4,` `Legal` or `Letter`
Split Page	Only for Unix printers.
Filter Command	Unix printers: Enter a filter command to specify the document location. Windows-Printers: Enter the exact printer name (as in the `Print` window in Windows applications).

15. How to Forward Faxes Free of Charge to a Remote PAPA-GENO Installation

In order to send faxes free of charge to a remote PAPAGENO installation enter the remote ALPHA server as a remote server. (See also 13.„To Send Faxes Inexpensively from Various Locations", page 40).

Local users then will see the users of the remote installation in their user list. This way they can send documents to them like internal documents - free of charge.

▸ In the main administration program window, highlight in the folder `Server`.

▸ Via the menu `File – New ...` open the window `Server Details`.

Host Name	Host name of the computer on which the remote ALPHA server is installed.
Comment	Maximum 30 characters.
User Server, Printer Server, Device Server	Activate the box `User Server`
Network type	Select `Wide Area Network`

16. How to Use Fax Number Mapping or Call by Call

The front section of specified fax numbers may be replaced by different number. This enables, for example, all foreign faxes to be automatically handled by a specific phone company which is accessed by a certain prefix.
The country- and area code or when required the direct outward dialing can be removed from all fax numbers.

A total of 99 rules can be defined. These are processed until an appropriate rule has been found Since the administration program will sort the rules automatically their correct sequence must not be considered.

▸ **Via the** `Number Mappings` **menu open the window** `Number Mappings Details`
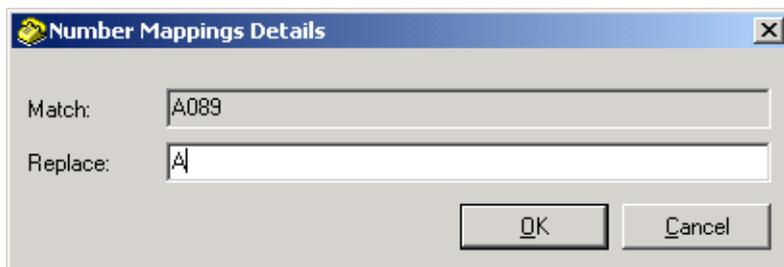
Every number must have a prefix:

- **A**: direct outward dialing as specified in the device definition (must also be specified for a direct connection)

- **N**: Internal number within the TC system

- **V**: Distribution within the fax system. Should only appear in the lower input box.

Examples:

Match: A0
Replace: A
removes the direct outward dialing from all numbers.

Match: A089
Replace: A
removes the prefix 089 from all numbers.

Match: A00
Replace: A0103900
dials the call-by-call service number 01039 before the actual call number for all faxes to be sent abroad.

Match: A54750

Replace: N

redirects all calls to the number 54750 directly to the branch exchange.

Match: $N2$

Replace:V

The PAPAGENO server is connected by the internal number 2. Transmissions to internal numbers beginning with a 2 are not sent by phone line, but directly to the user recognized by the remainder of the number and the specified distribution rules. A fax to the number N250 will be forwarded to the fax user with the (virtual) number 50.

17. Storing Messages in PAPAGENO

If a mail gateway is installed without an IMAP4 connection all incoming messages must be saved on both, the mail server and the PAPAGENO server. Otherwise users will not be able to retrieve their messages by telephone.

There are 3 options for doing this.

In all 3 options

- A distribution rule must be entered for every PAPAGENO user:
  Every direct-dial number is assigned to a user.

- The gateway user is entered as a user

- The gateway user is entered in the distribution rule "r1" (see 119 above).

Option 1:

The gateway user (e.g. `smtpgw` for an SMTP gateway) is entered as substitute for each user.

All incoming messages are saved in PAPAGENO via distribution rules. All incoming messages are also sent to the mail server via the gateway user as substitute.

Option 2:

In the distribution rule a user group whose only member is the gateway user is assigne to the direct-dial number of a user.

All messages received at this direct-dial number will be delivered to the user and the user group `Mail gateway`.
The mail server thus will receive all incoming messages via the gateway user.

Option 3:

In addition to the distribution rules, PAPAGENO can be set to send copies of all incoming documents to the gateway user.

Which of the 3 options you choose...

... depends on which other settings you are going to make.

If a user wishes to nominate a holiday substitute, option 2 or 3 must be chosen, as option 1 does not allow a substitute to be entered.

To record charges choose option 1 or 2 (charges can be calculated with the option "Forward copies of incoming documents to a pseudo user" and a script).

Setting the options:

Option 1

▸ For each user enter a distribution rule in which a fax direct-dial number is assigned to the user name. (See above 13.„Entering Additional Distribution Rules", page 120).

▸ For each user enter the gateway user as a substitute.

Option 2

▸ Enter a user group whose only member is the gateway user
(see also 12.„How to Deliver an Incoming Message to Several Users", page 119).

▸ For each user enter a distribution rule in which the user name is assigned to a fax direct dial number

▸ Select the the gateway user for each user in the `user group` field .
(see also 13.„Entering Additional Distribution Rules", page 120).

Option 3

▸ For each user enter a distribution rule in which the user name is assigned to a fax direct dial number.

▸ In the administration program open the window `Administrator data` and select the option `Retain copies of incoming documents`

▸ Select the gateway user as (pseudo) user.

IMPORTANT: To avoid unnecessary waste of hard disk space it is recommended that documents that users do not wish to retrieve by telephone are deleted in PAPAGENO. This is accomplished with the script `a_find_do.`

D. Configurate PAPAGENO

1. Connecting PAPAGENO to the Mail System

The PAPAGENO **SMTP Gateway** is installed with the PAPAGENO main installation or you have installed it on an own computer (see above Part B1, Chapter 7. How to Install a PAPAGENO Mail Gateway). Now you have to enable the gateway and set some variables.

▸ Enable and set up the gateway .
(See „PAPAGENO SMTP Gateway" manual).

Now users can send documents as faxes and also short messages and voice mails from Outlook. The documents are being converted into fax format either **on the gateway computer** or **on the user computers** via special PAPAGENO printers.

Document Conversion on the Gateway Computer

▸ Aktivate the tools for the conversion of PDF und HTML documents.

The tools `gs_pdftif` and `htmltotif` can be found in the PAPAGENO installation directory under `tools`, the description for using the tool in the same directory in PAPAGENO_Tools.pdf.

If you want to convert other documents to fax format other than PDF and HTML, or if you do not want to use the tools:

▸ On the gateway computer install the PAPAGENO MAPI Connector

and

▸ install all programs from which users send documents in the appropriate version.

Document Conversion on the User Computers

See below chapter 2. „Preparing the User Computers", page 131.

If an LDAP directory server is in use, you have to register all fax and voice mail users in the directory server.

2. Preparing the User Computers

If Outlook is used together with a PAPAGENO mail gateway, users can send faxes, short messages and voice mails from Outlook after the setup of the gateway.

If faxes will be converted into the fax format on the gateway computer **you have nothing to do at this point!**

Sending Documents from Windows Applications via User Clients

If faxes should be converted on user computers, you have to install the FAX MAPI Printer. (See also part A, chapter 7. „If No Mail Gateway is Used...", page 27).

‣ Install the FAX MAPI Printer
(See below chapter 4. „How to Install the Fax MAPI Printer", page 133).

During installation you select the client to which the documents should be forwarded (Outlook, only up to version 2010 or comFAX/Win).

‣ If need install comFAX/Win
(See below Chapter 3. „How to install comFAX/WIn", page 132).

Documents from any Windows application can be converted to fax format via the virtual printer Fax-MAPI-Printer and transferred to the PAPAGENO server via the PAPAGENO user interface comFAX/Win or via Outlook.

Sending Faxes from Applications - without Mail Client

Unix Applications

If faxes are to be sent directly from applications (eg in the form of automated business processes), it is possible for Unix applications to send documents with control commands (recipient fax number, send time, etc.) to a PAPAGENO printer. (See Part A, chapter 15. „Sending Dokuments from Applications Directly", page 42).

The PAPAGENO printers `faxps, faxpr and faxpspr` are part of the PAPAGENO installation.

Windows Applications

From Windows applications documents are sent to the free printer software RedMon, which converts them to PostScript resp. ASCII format and then be forwarded to the PAPAGENO printers for sending. (See Part A, chapter 15. „Sending Dokuments from Applications Directly", page 42).

‣ Install the RedMon printer.
(See below, chapter 5. „How to Setup the RedMon Printer", page 135).

3. How to install comFAX/WIn

Prerequisits

- comFAX/WIN builds on Winsock. Ensure that your TCP/IP installation supports this standard. **Winsock.dll** must be supported.

Download Software

‣ Download the comFAX/Win software from our Web server: `Downloads - PAPAGENO - Components - User Clients  - comFAXClient.msi`

‣ Open `comFAXClient.msi` and follow the installation routine.

   After finishing a confirmation message occurs.

Enter the user who is working with comFAX/WIN on this computer

‣ Doubleclick on comFAX icon.

   The comFAX login window will open.

   To change the user name:

‣ Via settings open the the window `comFAX/WIN-Einstellungen`:
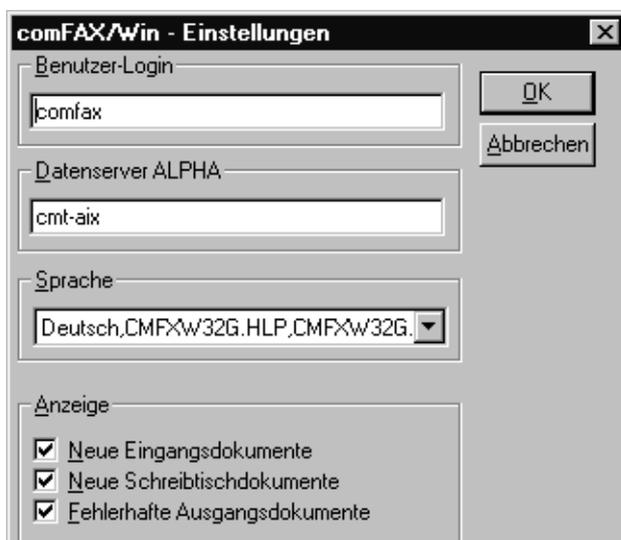
   The user name you specify must be set up in PAPAGENO. Documents sent from local windows applications belong to the user who is entered in `comFAX/WIN-Einstellungen`

‣ Enter the user name.

   Enter ALPHA host

‣ Enter the ALPHA hostname on which the user is entered.

---

4. How to Install the Fax MAPI Printer

The **Fax-MAPI-Printer** is a virtual printer and part of the PAPAGENIO MAPI Connector.

‣ Download the actual version of the PAPAGENO-MAPI-Connector from our homepage (`www.vipcomag.de - Download - PAPAGENO - Components - MAPI-Connector`).

You can install the printer via `setup.exe` (see below) or via a setup command (see below „Install Printer using a Setup Command", page 134).

In either case, select the client to which the converted documents will pass: **Outlook** - to Version 2010 (32-bit) or the PAPAGENO client **comFAX / Win**. For comFAX/Win, specify the user's PAPAGENO name and ALPHA host.

Installing Printer via `setup.exe`

‣ Change to the `MAPI` directory

‣ Start `setup.exe.`

The following window will open:

```
PAPAGENO MAPI connector install 5.8.1.2

 ┌ Please select your Language: ──────────────┐
 │  ⦿ Deutsch   ○ English   ○ French          │
 └────────────────────────────────────────────┘

 ┌ Send via: ─────────────────────────────────┐
 │  ⦿ Papagenc      ○ Mail                     │
 └────────────────────────────────────────────┘

 ┌ Mapi Installation: ────────────────────────┐
 │  ⦿ Printer       ○ Connector and Printer    │
 └────────────────────────────────────────────┘

        [   OK   ]        [  Cancel  ]
```

‣ Select the desired language.

Under `Send via` select whether documents are sent to Outlook (Mail) or to comFAX / Win (`Papageno`).

Attention! Using Outlook 32 Bit you have to select `Papageno.`

‣ Select `Mail` (Outlook up to 2010) resp. `Papageno` (comFAX/Win)

‣ Under `MAPI Installation` select `Printer`

‣ Click `OK`.

If you selected `Papageno` (comFAX/Win) the following window appears:
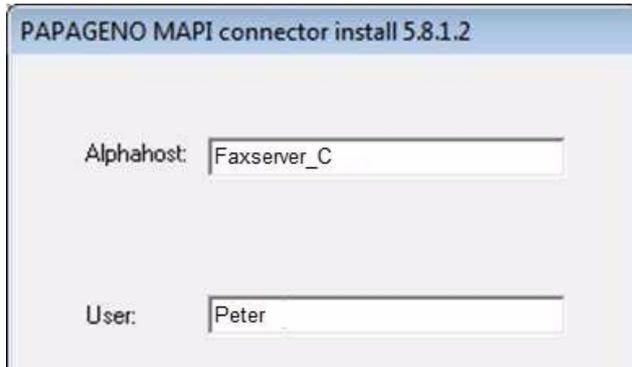
‣ In the `User` field enter the PAPAGENO user name in the `Alphahost` field enter the ALPHA host on which the user is entered.l

‣ Click `OK`.

The fax MAPI printer is installed as a virtual printer on the computer.

Install Printer using a Setup Command

‣ Open a DOS box and change to the `MAPI` directory.

How to use the FaxMAPI Printer setup command :

`setup` *mode* `[alphahost=`*host* `user=`*name*`] [debug]`

mode`:` english, german or french version:

`printerger printereng` oder `printerfra`

If `alphahost` and `user` are specified in the command, the printer forwards the documents to the PAPAGENO client comFAX/Win, otherwise to Outlook.

‣ Enter the FaxMAPI Printer setup command.

The fax MAPI printer is installed as a virtual printer on the computer.

5. How to Setup the RedMon Printer

The free software "„RedMon" converts documents from Windows applications to PostScript or ASCII format, depending on the configuration, and transfers them to a PAPAGENO tool or a PAPAGENO printer. This evaluates the control commands in the document (fax number, sending time, etc.) and sends it as a fax.

For this see above part A, chapter 15. „Sending Dokuments from Applications Directly", page 42.

With „RedMon" users also can send serial faxes.

‣ Download the latest RedMon software for 32 or for 64 Bit.
  `http://redmon.soft-ware.net/download.asp`

After the installation, the printer must be set up so that either a PAPAGENO tool (PostScript) or a PAPAGENO printer (ASCII) is called after the document has been converted.

Setup RedMon as PostScript Printer

‣ Login as an administrator on the computer on which you need the RedMon printer.

Installing faxps and psscan

To use the PAPAGENO printer client `faxps` **and the PAPAGENO PostScript scan tool** `psscan`**:**

‣ Install PAPAGENO and disable all server processes during installation.
  (See also part B, chapter 6. „How to Install a Single PAPAGENO Server", page 55)

`psscan` can be found in the installation directory in the subfolder `tools`, the description in `PAPAGENO_Tools.pdf`.

Activating psscan

‣ Copy the `psscan.exe` file and all `.dlls` resp. shared objects in the `/PI` directory.

‣ Configure the printer filter `.comfaxpsp`

‣ Open a PAPAGENO administrator.

  You cannot see the `.comfaxpsp` printer for its name starts with a point, but it exists.

‣ Specify a new printer `.comfaxpsp` and ignore the warning that the printer alrady exists. Confirm.

‣ As printer type select: `Postscript`

‣ In the `filter command` field enter: `psscan.exe` resp. `psscan`.

‣ Save the Configuration and restart the PI server.

Configuring RedMon

‣ Extract `RedMon17x.`

‣ Start `setup.exe`

‣ In the control panel in the `Devices and Printers` section start the assistent to add a new printer

‣ Select `Lokal Printer.`

‣ In the `Create a new port` box select `Redirected Port` and the name `MTP1.`

‣ Select the driver
`<HP Laserjet 2300 Series PS>`

  It is possible to test and use other PostScript printer drivers.

‣ Enter a printer name
  (e. g. `FAX-PS`)

‣ Finish the printer installation.

‣ Open the printer features

‣ Change to the filecard `Connections` and select `MTP1:`

‣ In the `Redirect this port` box enter the absolute path to the executive file `psscan.exe.`

‣ In the `Arguments for this program` box enter the absolute path of the fax directory.

‣ Select `Run as User.`

‣ Finish the configuration with `OK.`

‣ Create a test page and print it (see below „Sending a Testpage", page 137).
  Under the user ID fax is created in the outbox of PAPAGENO.

Setup RedMon as ASCII Printer

‣ Log on as administrator on the computer where Redmon will run.

Installing faxps

To use the PAPAGENO printer client `faxpr:`

‣ Install PAPAGENO and disable all server processes during installation.
  (See also part B, chapter 6. „How to Install a Single PAPAGENO Server", page 55)

‣ Write the absolute path to the `faxpr.exe` file.
  Later you have to enter the path in the printer configuration.

Configuring RedMon

‣ Extract `RedMon17x.`

‣ Start `setup.exe`

▸ In the control panel in the `Devices and Printers` section start the assistent to add a new printer

▸ Select `Lokal Printer.`

▸ In the `Create a new port` box select `Redirected Port` and the name `MTP1`.

▸ Select the driver
`<Generic / Text only>`

▸ Enter a printer name
(z. B. `FAX-ASCII`)

▸ Finish the printer installation.

▸ Open the printer features

▸ Change to the filecard `Connections` and select `MTP1:`

▸ In the `Redirect this port` box enter the absolute path to the executive file `comfaxpr.exe`.

▸ In the `Arguments for this program` box enter the absolute path of the fax directory.

▸ Select `Run as User.`

▸ Finish the configuration with `OK`.

▸ Create a test page and print it (see below „Sending a Testpage", page 137).

Under the user ID fax is created in the outbox of PAPAGENO.

Sending a Testpage

The test pages differ in terms of the properties

PostScript Printer

The PostScript printer can process RTF and Word documents.

Attention! The arguments in the document (example: `#PHONE 08954750229#`) must have the font colour WHITE! Only then will they be invisible on the fax later.

ASCII Printer

The ASCII printer can only process ASCII documents (editor or notepad).

The arguments in this document can be printed black on white. They are not displayed later in the fax.

Design of a Page - Example:

#PHONE 08954750229#

#USER comfax#

#TITLE Testfax via RedMon#

Hi, this is a test fax via the Windows printer of PAPAGENO

Hi, this is a test fax via the Windows printer of PAPAGENO

Hi, this is a test fax via the Windows printer of PAPAGENO

Hi, this is a test fax via the Windows printer of PAPAGENO

Hi, this is a test fax via the Windows printer of PAPAGENO

Fax Document Arguments

IBelow the most important arguments are listed: .

Option	Meaning
`#PHONE` *faxnummer*`#` *[1]	Fax number of the receipient.
`#USER PAPAGENO-Benutzer#`	Default user in PAPAGENO.
`#ALPHAHOST` *hostname*`#`	User on another ALPHA server.
#PAPER *Schacht*#	Paper tray 0 – 9 for the background
#PAPERID *Faxid*#	Desktop document ID for the background
#PRIORITY *Priorität*#	Sending priority of the fax. *priority* must have a value between 1 (lowest priority) and 100 (highest priority).
#RECEIVERGROUP *Gruppe*#	Receiver group that is entered in the telephone book
#RESOLUTION FINE#	Sending solution high
#RESOLUTION NORMAL#	Sending solution low
#RETRIES *n*#	Number of automatic redialings 1 – 9
#SENDTIME NOW#	Dispatch immediately
#SENDTIME LATER#	Dispatch
#SENDTIME *datum / zeit*#	Dispatch after specified delivery time Syntax: *[day.month.year] hour [:minute[:second]]*
#TITLE *Kommentar*#	Comment

[1] As a special feature, special formats for the fax number are still possible:

@@NUMMER *faxnumber*@@

@@PHONE *faxnumber*@@

6. Configuring Telephone Access to Messages

If a mail gateway is used, all faxes and voicemails are stored in the mailserver together with the emails. They are erased from the PAPAGENO database. In this case users **cannot access** to their messages via phone.

For this problem there are two solutions:

- **Access to the mail server database via IMAP4**.
  (According to the faxes and voicemails even the emails can be accessed)

- **Incoming messages are stored both in the PAPAGENO server and in the mailserver**
  (Then faxes and voice mails can be accesed via phone)

  NOTE: In any case users must have numeric passwords to authorize themselves for telephone access („pincode")

Access via IMAP4

Accessing the mail server database via IMAP4 has the advantage that you can also listen to your e-mails in addition to faxing and voice mail via the phone.

The configuration can be found in the manual „PAPAGENO-SMTP-Gateway", part B, chapter 9. „Configuring Telephone Access to Messages", page 44.

Double Storage

See above chapter 17. „Storing Messages in PAPAGENO", page 126.

Data storage in the PAPAGENO server

▸ Enter all PAPAGENO users who want to access their messages over the phone.
"Short description", "Description" and a password consisting of a number sequence are sufficient (see above chapter 4. „Registering Users", page 98).

▸ Enter a distribution rule for each PAPAGENO user so that incoming messages can be sent and stored in PAPAGENO.

Data storage in the Mail Server

In order to store the incoming messages also in the mailserver, these must be passed on to the gateway user (as well as to the user).

There are 3 ways to do this:

Possibility Number 1

The gateway user is entered as the substitute for each user.

(See above chapter 13. „Entering Additional Distribution Rules", page 120).

Possibility Number 2:

In a distribution rule, a user and a user group are assigned to each extension number. In that user

group only the gateway user is entered.
(See above chapter 13. „Entering Additional Distribution Rules", page 120).

Possibility Number 3:
It is set to make copies of all receive messages to the gateway user.
(For this you enter a distribution rule for each user. In the `Administrator data` window, you select the option `Keep receive data` and select the gateway user as „pseudo user").

Which of the 3 options you choose depends on which settings you would like to make.

If users want to set up a holiday representative, select the option 2 or 3, if you want to calculate charges, 1 or 2 (Receptions to a pseudo-user and charges can be calculated, see manual PAPAGENO Tools, „analyze and getdata", page 3).

In order to avoid unnecessary storage space, it is useful to delete the messages that users no longer want to call via the telephone in PAPAGENO. You do this using the script a_find_do.

7. How to Install other FAX Clients

If users want to work only with faxes, except of comFAX/Win we provide to other FAX clients:

- **comFAX/ X Window**: runs under Unix with an X Window interface

- **comFAX/ASCII**: ASCII interface for Unix and Windows users. (Faxes can be displayed only in a limited way!)

Installation of the fax clients

comFAX/ X Window

comFAX/ X Window is installed together with the basic Unix installation of PAPAGENO or PAPAGENO servers.

comFAX/X Window can be started in a Unix shell **with the Unix ID of a user. X Window must exist**.

comFAX/ASCII

comFAX/ASCII is installed with the basic installation of PAPAGENO or PAPAGENO servers.

comFAX/ASCII can be started at shell level or at the MS-DOS command line.

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