T-mail ver. 2300
The system operator manual.

The document and programs designed and written by Andrew Elkin,
1992 and 93, St.-Petersburg, Russia.

CONTENTS

0. RIGHT FOR DISTRIBUTION AND USING

T-Mail 2300, programs, documentation and accompanying files (hereinafter named T-mail) can freely be used, as well as copying distributing by any ways while following conditions:

1) Files distributed in initial constant kind. It should be initial archive, made by author. The inclusion T-mail in another program packets for distribution or sale is not admitted.
2) Reception of profit from copying and/or distribution T-mail is illegal one. It relates to any persons, organizations, corporations and establishments, for exception officially peroxide by author with written permission.
3) Payment for T-Mail distribution can be levied, but it should not be over Your expenses on distribution and/or copying.
4) Quoting, reprinting or another use any parts of documentation or files, entering in T-mail, permitted ONLY with referencing on author and original source.
5) non commercial T-mail using is admitted by physical persons without receptions the any direct or indirect profit from it using Any use T-mail for purposes any corporation, organization, government, church, school, fund or other jurisdiction person can not be admitted without registration and can not be recognize as commercial. The use T-mail on equipment, belong to organization or other jurisdiction person, can be acknowledge as non commercial only in the event that, T-mail tasks no connected with activity this or other organization.

Author not assume on self warranty about using T-mail. Any consequences, financial and another losses, caused by using or non-using T-mail the most on self and/or together with another software is Your personal business. Author does not bear responsibility on obligations T-mail distributors, dialers and sailors.

Information about receiving commercial version of T-mail and/or right to use T-mail for purposes organization, government, church, school or other jurisdiction person described in separate chapter at the end of given document.

1. About T-mail 2300.

T-mail is mailer (otherwise - mail program), estimated for using in FidoNet type networks and support standards, widely distributed in last years (EMSI/ZedZap/WaZOO).

T-mail / Non commercial introduce by self "facilitated" version of T-mail 2300. In it absent code, necessary for Fax-gate functioning, manipulations with facsimile messages Queue, for service Fax-modems (send/receive facsimile messages), as well as code for working with users in local network (external nodes).

T-mail can functioning on multichannel nodes under multitask environment or local network.

2. System requirements.

- Computer, compatible with IBM PC/XT/AT/386;
- operating system MS/DOS (PC/DOS) version not below 3.30;

- not less 280 Kb free conventional memory;
- not less 32 Kb free disk space;
- Hayes-compatible modem ;
- Communication Fossil driver.

It is useful to define environment variable T-mail. For it is necessary to insert in file autoexec.bat string like

SET T-mail=C:\T-mail

The significance this variable is the directory, where (on default) placed T-mail control files. Hereinafter this directory refers to as system one. In the event that this variable not defined, directory where placed executable T-mail.exe is considered as system.

For make accessible COM port necessary load FOSSIL driver. Examples:

BNU (by David Nugent):

BNU / R=1024 / T=1024 / M-

- in autoexec.bat

X00. SYS (by Ray Gwinn):

Device = X00. SYS E 1 T=1024 R=1024

- in config.sys

* notes: no sense make transmit buffer less 1024 bytes. slows down and can cause failures at use in multilinear systems or in non-productive environments. T-mail correctly reset buffers at transmition errors.

3. Agreement about addresses.

T-mail uses FidoNet addressing. Means, that each node of network is described by unique combination of forth integers:

Zone:net/node.point	(4-d address) or
Zone:net/node	(3-d address)

More detailed about addressing you can learned from appropriate documentation about FidoNet. Limits for component of address, to which you must subdue using T-mail are such:

Zone	- not more 1023
net	- not more 32767
node	- not more 32767
point	- not more 1023

If in given document You meet the concept "address", then it meaning just FidoNet-style address, for example, 2:5030/15.1

In majority of cases (that is, there, where not stipulate specially) T-mail understands reduced address recording. While decoding T-mail uses main address of node (variable "Address") as base address.

For example, if address of node 2:5030/15, then possible address 2:5030/15.1 record by following ways:

```
2:5030/15.1
  5030/15.1
       /15.1
        15.1
          .1
```

And address 2:5030/6.601 as:

```
2:5030/6.601
  5030/6.601
      /6.601
       6.601
```

At last, address 2:5030/8 (2:5030/8.0) as:

```
2:5030/8
2:5030/8.0
  5030/8
  5030/8.0
        /8
        /8.0
         8.0
```

* remark: many sysops accustomed, that /8 and simple 8 is the same for node of 8.0 our networks. For T-mail it is different addresses:

/8 mean 5030/8.0, and 8 mean 5030/15.8

Hereinafter similar construction shall designate as: **<address>**

Moreover, in most cases can be used addresses groups. For it using symbol '*****':

```
2:*/*.*          - All addresses in 2-nd zone
5030/*           - same, with 5030/*.0 - all 3-d the nodes in network 2:5030
/*               - same as above
*.0 - same as above
*:*/*.*          - All addresses.
```

Notes: everywhere instead of *:*/*.* possible to be written the word 'All'. (for example instead of Hold *:*/*.* was possible to be written Hold All). The word 'Boss' everywhere will be replaced with address myzone:mynet/mynode.0 for points (4-d nodes).

Hereinafter similar constructions shall designate as: **<address group>**

address groups can be united in address list, in which groups or addresses follow each to other separated by symbol "space", for example

5030/* 5040/*.* !5040/2 237:*/* !237:50/*

The symbol '!' is used to exclude addresses before it written from list. This example must be read as: "all nodes in network 5030, all nodes in network 5040, exclude 5040/2.0, and all nodes in zone 237 exclude nodes of network 50".

The address list can be contained in separate file. Then instead of address list necessary indicate the name of this file, with preceding '@' symbol. Inside of file with address list symbol 0xD (new string) also can be used as delimiter. For example:

@nodes.lst

Or

@c:\T-mail\dummy\nodes.lst

At last, the address list, can include some nodelist flags. For example:

5020/* CM !MNP

Will mean following: "all nodes of network 5020, as well as all CM nodes CM, exclude nodes, possessing MNP flags in nodelist".

Here the nodelist flags , which possible to be used in these construction:

CM,HST(includes HST,H14,H16),MNP,V42,V42B,V32,V32B,PEP,
ZYX(availability of this flag include also V42,V42B,V32,V32B).

Hereinafter similar constructions shall designate so: **<address list>**.

Therefore, if You meet the designation **<address>**, this should be mentioned as unique address, exactly defined. if **<address group>** , than can be defied "collective" address; If **<address list>**, than list of collective addresses can be defined or one name of file, which contained this list.

4. Configuration File (T-mail.ctl).

At start program reads out settings from file T-mail.ctl. If defined environment variable T-mail, than file searched in directory, defined by this variable. If it not defined, T-mail searched for T-mail.ctl in directory, from where run program T-mail.exe.

The configuration file is textual one. It's format is such:

[[<task ident>]] <variable> <the significance> [;<comment>]

Comments begin with ; and continue to end of line (symbol 0xD or 0xA).

5. Queue.

The concept of mail Queue is one of the most important for any mailer. Moreover, large part of time mailer serving Queue. Some mailers, as FrontDoor can create queue, by look up letters, which must be sent to destination,

some another, as BinkleyTerm, serve queue, which prepares for it - by external program (f.e. echoprocessor). T-mail combine both these approaches, which divide all mail programs on 2 groups - ArcMail-attach mailers and OutboundArea-style (or bink-style) mailers.

In case ArcMail-attach mode the base for Queue creation is netmail (network mail). It some area, which contained files in predefined format - letters (*.msg). The packer (usually built in) look up these letters and build outbound queue pursuant to routing rules and service attributes.

Each Queue "cell" join to address and contain information about what necessary sent to specified address - it id direct letters for this node, letters which routed via this node , files, which can be sent together with these letters (fileattached), as well as file requests on this node.

5.1 Serving Queue.

If the node "bring" in queue, it yet not means, that T-mail will call this node and try send mail there. Below I try explain algorithm, which is used for analysis of current position in Queue.

So, when T-mail will call node X in Queue?

- whether has at least one node in Queue the status priority? If yes, then analyzing whether has node X this status.
- analyzing , whether it is possible in present time call node X:
    ? value of Call_Time variable
    ? whether telephone of node X is known
    ? whether is not present Freeze statement for X
    ? whether X accepted call in present time:
        in nodelist - flags CM, OH

in subst.lst - time/htime
- If calls not accepted, then analyzing, whether the status immediate present for X.
? whether present Hold statement for X
? whether has not the node the status Hold (set by operator pressed Ctrl-H)
- analyzing, which type of mail present for node ò:
? whether is present simple mail
? whether is present file requests
If found out only file requests, than analyzing when node X serves file requests:
in nodelist   - flags FR
in subst.lst - ftime
in events.ctl - NoReq
- analyzing, whether reach the number of call attempts to this node the value of Call_Tries variable.
- in multiline system analyzing, whether call already another channel on this node at present time (busy flags).

Naturally, in reality this algorithm look some differently because it optimized, but all described steps present in them.

5.2 Queue control.

5.2.1 Look up Queue.

If queue is so large, that is not fit in allocated window in bottom half of main T-mail screen, it is possible to be taken advantage of By keys <up>,<down>,<PgUp>,<PgDown>,<Home>,<End> for Queue "scrolling". The key Alt-M "zoom" queue on whole screen.

5.2.2 Change current positions in Queue

Executed by keys <left>, <right> (or <Ctrl-up>,<Ctrl-down>), <Ctrl-PgUp>, <Ctrl-PgDown>, <Ctrl-Home>, <Ctrl-End>. The current position is marked by small triangle near address.

5.2.3 Change node status in Queue

The user has the opportunity to quick change the node status in Queue. The status displayed by appropriate letters:

H - hold status
I   - immediate status
P - priority status

If node has received the appropriate status in result of operator actions, this status will be valid during limited time interval, defined by CH_Interval variable (default 1 hour).

5.2.4 Hold status

In the event that the node has received the status Hold, will mean that on appropriate time interval will act Hold rule for this node. Simply, the calls to this nodes will be delayed. Temporary cancel hold status possible only by more strong device - by set immediate status.

	For list of nodes	For current in Queue
Hold status set	Ctrl-H (backspace)	H
reset	Ctrl-U	H

5.2.5 Immediate status

If node has received this status, T-mail will ignore during described time Hold rules, and time into which this node accept calls. However if acts Freeze rule for this node, anyway calls to this nodes will "frozen".

	For list of nodes	For current in Queue
Immediate status set	Ctrl-I (Tab)	I
reset	Ctrl-R	I

5.2.6 Priority status

Equal to action priority rule (in events.ctl). The nodes, possessing this status, will "to be served" at first. No any another node will be served until exist at least one queue entries with priority status.

	For list of nodes	For current in Queue
The priority status set	Ctrl-P	P
reset	Ctrl-C	P

6. Immediate crash-Poll mode

This mode need for extremely quick communicate with some node and establish mail session, ignore all: queue, priorities, work time of node and etc. When T-mail is in Crash-poll mode, it does not answer on incoming calls and does not makes pause between calls to specified node.

To enter this mode, necessary press keys <Shift-Tab> and write address. T-mail will call this address until the successful session. Operator has the opportunity escape from this mode to normal by second time press <Shift-Tab>. The number of attempts during crash-poll is not taken into account. Instead of address it is possible indicate phone number of node, with preceding '#' symbol.

In time of Crash-Poll mod T-mail continue work with packing new mail, completion of events and analyzing flags. In case of exit from program crash-poll mode is automatic switched off.

7. Phone number translation

Phone numbers, contained in nodelist, usually must be translated as far as there they represented in international form , including country code and city code. Translation performed in accordance with translation rules. These rules described in section Dial Control in file T-mail.ctl.

The syntax:

Dial <substring to be changed> [<new substring>] [|<suffix>]

Dial International <substring for international calls>

Whole can be defined not more 20 translation rules. If translating number contained appropriate fragment, described in one of fields <substring to be changed> translation rules, it will be replaced on <new substring>.

Notes: During search T-mail using first suitable rule, therefore you must use (for Petersburg) next order:

Dial 7-812-   ; Local calls

Dial 7-   8W   ; xUSSR calls

this number will translated as

7-812-123-4566 will translated in 123-4566;

7-095-123-4566 will translated in 8W095-123-4566.

Moreover, you can use "suffixes" for example if you phone station required dial own number at the end. Suffix string must be written after '|' symbol. using such record:

Dial 7- 8W|210-1222

will take effect that number 7-095-123-4566 will translated into 8W095-123-4566210-1222.

* specific case: international calls. In order to define prefix for dialing numbers with country code not matched with defined Country variable in T-mail.ctl, the key word International should be used. For example:

Dial   7-812-   ; Translate Local numbers

Dial   7-   8W   ; Translate this country numbers

Dial   International 8W10 ; International calls prefix

8. Sessions protection. Passwords

Passwords checked before session. In the event that password for address defined and does not coincide with password transmitted during EMSI handshaking, than T-mail substitute in EMSI packet instead of password warning message and "hangs up" after receive EMSI_ACK.

Passwords described in file, defined by Security variable in T-mail.ctl. Example:

Security   password.lst   ; Security list

Each string of this file contain address and appropriate password. For addresses observe agreement about ADDRESS (see part 3).

Example:

2:5030/2 Password1

/6   Password2

Besides of file defined in Security variable , passwords can be given in field PASSWORD in substitution file subst.lst (see part 16)

9. Work up of incoming calls

9.1 Reactions on ring

When T-mail not calling and is not engaged by completion external programs, it is in state of expectation of incoming call. T-mail answers on incoming call only in case if in present time it permitted by Answer variable (in T-mail.ctl). The call recognition happen when 'RING' word received from modem. Besides that it is possible detect RI signal from serial interface if variable HardWare_Ring set to yes. On default this feature is switched off.

After answer (i.e. after sending in modem appropriate control string), T-mail begins to expect the connections. Time this expectation defined by Wait_Carrier variable. Operator can increase or to reduce this time by keys '+' or '-', or interrupt the expectation by pressing ESC. When the carrier occurs and string from modem, appropriated to one of connection speed or external program (all lines defined in file modem.ctl) is received, than T-mail begin logical connection phase.

In commercial version possible also switch on adaptive answer, and if incoming call will from fax-machine that causes the appropriate actions for receive facsimile messages (see part 27).

If is not found neither of appropriate external program and neither of external mailer than after EMSI handshaking (initial "handshaking", password check and etc.) T-mail begin WaZOO mail session - receive (Zmodem) files and mail, send mail/files for presented node addresses, processing file requests.

9.2 External connection processing - start by string from modem.

Besides standard messages from modem, about established connection, it is possible define some (up to 10) - answers from modem, which appearance will started external program. Such strings are described in file modem.ctl as below:

Extern <modem string> <dos command>

For example:

Extern CONNECT 2400   do2400.bat

Extern CONNECT VOICE do_voice.bat

* notes 1: strings, defined as Extern, analyzed before standard modem answers
* notes 2: the name of called external program should not contain spaces.

9.3 External mailers - start on key word.

When the connection is already established, T-mail begin "handshaking" - mailer identification procedure with EMSI protocol. Analysis addresses, passwords and another information preceded checking of fact, that on another side just EMSI-compatible mailer.

For that T-mail some time (defined by Wait_Mailer variable) expects the specific parcel from another side. If it will EMSI packet, further the connection will go as mail session.

If T-mail will receive "ESC-ESC" (2 symbol with hex code 01Bh), than BBS software (defined by Process BBS variable) will be run. Besides these cases, it is possible to set external programs, which will be started in case receiving an appropriate parcel or key word. These programs (Extern Mailers) defined in file T-mail.ctl:

ExternMail <login word> <dos command> [<parameters>]

for example:

ExternMail UUpc c:\uupc\uu.bat

ExternMail Guest c:\bbs\dobbs.bat *P *B

If during answer on call, will presented word (without spaces and terminated by EOL!), described as <login Word> than command file (.bat), appropriate to this word   or appropriate program will be run. Whole it possible to describe up to 10 External mailers.

<parameters> can contained specific constructions-macrosymbols , beginning from symbol '*'. Instead of them during start the program   will be placed current macro values described below:

Macro symbols:	What will placed:
*P	COM port number (1 for COM1 and etc.)
*B	connection baud rate
*T	T-mail task number)
*L	If port locked, value of lock_speed, otherwise will 0
* N	Count number (from 1) appropriate ExternMail description in file T-mail.ctl

Example:

ExternMail UUpc c:\uupc\uu.bat *P *B *N

For COM3 and 2400 bps will run c:\uupc\uu.bat 3 2400 1

9.4 Works with BBS.

T-mail can be used together with BBS (bulletin board system) programs. Author check work with known products Remote Access 2.X and Maximus 2.X, but I hope problem should not arise if using another programs.

In the event that the incoming call not from compatible mailer and not presented neither key words, defined ExternMail, during time, assigned to Wait_Mailer variable , as well as if received 2 symbols Esc (ASCII 27), then T-mail solving that it is terminal call , i.e. 'human caller'.

Variable BBS_Time define time intervals, when permitted give control to BBS. For example, if it is necessary permit enter to BBS at night on week-days and 24 hours in other days, you must set:

_BBS_Time   1.22:00-5.7:00,5.0:00-6.23:59_

Program, which starts by T-mail, defined in file T-mail.ctl by combination Process BBS:

Process BBS <dos command> [<parameters>]

<parameters> can contain macro symbols (similarly with, which are used in ExternMail). To it added one more: *H, which define maximal time in minutes, remaining to end of time, when enter in BBS permitted. examples:

*Process BBS   bbs.bat *P *B *H*

*Process BBS   max.exe -p*P -b*B -t*H -n*T*

10. Login in BBS after end of mail session

In time of session T-mail can receive request to start BBS on end of mail session. This request can be received in different ways. At first by letter. If during unpacking of mail T-mail meet letter, addressed 'to: BBS', it will be considered as BBS request.

Before will checked, whether permitted enter in BBS at present moment, and if not permitted, then field 'subj' will searched for password (variable T-password), and if found request will be satisfied in any case, and if not contain - in dependence on value of BBS_Time variable.

Request for BBS session possible to send direct from T-mail in time the mail session by press Alt-T. If request is sent from T-mail, on ending mail session will run program, defined by Terminal variable. When T-mail receive request for BBS and solve satisfy it, then after end mail session control will given to program, defined in Process BBS.

11. Chat during session.

In case if the session was established with T-mail you can   use chat mode. It is invoking by pressing Alt-C. After end of conversation for exit also press Alt-C (chat also will be finished automatically after end of session or if carrier lost.

12. Event after mail session.

Afterwards mailer session finished T-mail unpacking received .pkt the files and analyzing the names of another received files. In FTN technology used some "magic" file name extensions for specific cases. So, for example, echomail sending in packed files with extensions, appropriate to days of week, and should be believed, that the file xxxxxxxx.mo1 is echopacket created in Monday.

Echomail (ArcMail) worked up by special program called echoprocessor and T-mail can recognize that received file is ArcMail, and to start echoprocessor for tossing. Similarly, extension .?IC (.TIC, .ZIC etc.) characteristic for file echo mail and for processing it necessary run appropriate program i.e. simple TIC processor.

For these cases in T-mail defined concept 'Process'. It is not certainly program or command, which must be start.

Process can describe flag name , which must be created in order to make clear for external programs, that was received file, accorded to this category. So, in T-mail.ctl:

Process <macro> [<flag>]<dos command|desqview program|flag name>

Where

<macro>:

    ArcMail   - For case, when received archived mail;

NetMail	- If received mail (.pkt) and though one letter has appeared not empty (i.e. contain anything, beside symbols <space> and <cr>.
Tic	- If received file(s) with extension .?IC
Files	- If in general though one file was successfully received.

<flag>:

~	- Means, that after will gives the flag name, which necessary create in this case
!	- Means, that for start <dos command> it is not necessary to swap out, disposing all memory.
<dos command>	- This name .com, .exe or .bat of file and optional parameters.
<desqview program>-	full name of .dvp file describes which desqview window necessary open.
<flag name>	- The flag name. If the path not specified, flag created in directory, which defined by *<Flag_Dir>* variable in T-mail.ctl.

For example:

    Process ArcMail the_echo.exe -Toss -Scan

    Process Netmail msgedit.bat

    Process Tic   ~anytic.flg

    Process Files   c:\dv\tf-pif.dvp

If not defined Process for ArcMail or Tic, received files are considered not especial different and for them will be executed Process, defined for Files.

13. File requests.

In node need receive something file (or few), which present in one of file areas another node, then for this node can be send File request (Freq).

T-mail support WaZOO-style file requests. Means, that after mailer received .req file will be created list of files, which must be sent at the end of session. If during packing letters in mail packets was found letters (.msg) with Freq attribute, then will be created .req file, which will sent in session time.

The letter with file request can be created directly from T-mail by pressing Alt-R. You will asked about the name of requested file and address(es), where file will requested.

13.1 file request processing limits

Usually is many opportunities for limiting serving file requests - by time, size, number of simultaneously requested files and etc. Now describe limits (file T-mail.ctl).

Requests satisfied in time defined by Freq_Time variable:

_Freq_Time   0:00-5:00,8:00-10:00_

The maximal number of files, which will sent, defined by Freq_Number:

_Freq_Number   5_

Total files size limited by Freq_Size variable:

_Freq_Size 512   ; in kilobytes_

Maximal time which can used for sent requested files defined by Freq_MaxTime variable:

_Freq_MaxTime 120   ; in minutes_

Minimum connection baud rate for satisfy file requests defined by Freq_MinBaud variable:

_Freq_MinBaud   1200_

13.2 address limits during file requests

T-mail has the opportunity define addresses and/or address groups file requests from which will satisfy Requests from another nodes will ignored. Access mode to file areas defined by Freq_Mode variable:

_Freq_Mode Any_

The possible significance's:

Any	- Request possible for all
No	- Not permitted in general (similarly, for that possible use Freq_Time 00:00-00:00)
Nod	- Requests permitted only for addresses which contained in nodelist (listed only)
Reg	- Requests permitted only for addresses, which defined in Freq_Nodes variable.

_Freq_Nodes <address list>_

For example:

Freq_Nodes   2:5030/.* 2:5010/*.* !5030/99 !5030/999*

Freq_Nodes @c:\T-mail\frq_nodes.lst   ;from file. (see "Agreement about addresses",
part 3)

13.3 Describing directories (file areas) for file requests

The list of directories, which accessible for file requests contained in textual file defined by Freq_Dir variable:

Freq_Dir   dir.frq

(if path not defined file will searched in system directory, where T-mail placed). Each line in this file contain one directory. For each directory can be given password and/or address list of nodes which have permission request files from these directories. The syntax:

<path> [!<password>] [<address list>]

Here example (file dir.frq):

c:\files\info

c:\files\area3 5030/.* !5030/4 5020/* 5000/*.**

c:\files\area4 ! password_of_4 5030/.* !5030/4 5020/* 5000/*.**

In first case simple defined the directory, in second - directory with address list, in third - additional password for requests from this directory.

If password for directory given, request file should writes differently - for example, for file labuda.ext from directory area4 you must write 'labuda.ext!Password_of_4'. Only then the file will sent.

* Limitation: whole no more than 70 directories for file requests
          can be defined.

13.4 Defining aliases.

Frequently file requested by alias not by name For example, widely used alias 'FILES' for sent file contained archived file list of all BBS file areas. At each node this file has the own unique name, but it is almost everywhere possible request 'FILES' and receive something like zeppall.arj in answer. The aliases listed in file defined by Freq_Ndx variable in T-mail.ctl.

Freq_Ndx   index.frq

Is the textual file and each string define one alias:

The syntax:

<Alias> <pathname> [<dos command>]

Where:

Alias   - The alias

Pathname   - The full file name which according
                       to alias. wildcard are allowed.

dos command   - name of .exe, .com or .bat file

If defined <dos command> then it will executed during creating list of files which necessary send as reply to file request be executed. <dos command> will get 3 parameters:

The alias, name of system operator of node which request file on this alias and address of node. In operator name symbols ' ' (space) will be replaced on symbol '_' (underscore)

For example:

Files c:\files\100 all.arj

T-mail c:\support\T-mail.zip do_reg.bat

For request on **T-mail** alias will be executed do_reg.bat, example of start:

do_reg.bat T-mail Anthony_Guetmansky 2:5030/6.0

As far as file requests executed in time of session, you must minimize execution time of <dos command>.

If necessity is present, in field <pathname> possible define the list of files, which will sent for request with alias. For example:

T-mail @c:\support\t-m.lst

For such request will be sent files which defined (each on one line) in t-m.lst.

* limitation: in file with can not be more 50 lines.

13.5 File requests with full path

If defined password in T-mail.ctl variable T-password then possible requests with full path to file, for example:

c:\support\reg.lst!my_password_no_5

for such request do not act time and size limitation.

13.6 transit file requests.

If received .req file (and appropriate to it letter in .pkt) has destination address "not for us" (that address does not coincide with main address nor with one of AKA), further action for this request defined by variable Freq_Transit. If Freq_Transit set to Yes then during packing will be created .req for destination address.

If Freq_Transit set to No letter with Freq attribute will be destroyed. If such request will satisfied then received files will remain on node which really requested and receive them. Is such doubtless limitation FTN which define only direct file requests. In order to solve that problem entered "remote request" concept.

13.7 Remote file requests.

This work in such manner: "I ask T-mail on remote machine to request for me file and, when it will be received, T-mail will send this one to me".

* How I can force T-mail to make this:

It is making by service letter, addressed to T-mail. So that letter was accepted, I should know and indicate password, which defined by Freq_Password variable in T-mail.ctl on remote machine:

Freq_Password Talon

Here example of such letter:

From: Andy Elkin 5030/15
To: T-mail!talon 5030/100
Subj: Freq labuda.ext 5030/5
[body letter is empty]

When this letter arrive to node 5030/100, T-mail will create file request "from self" and delivers in queue. However in special file will saved information about who force request this file.

If happens so, that file request will satisfied and really file labuda.ext will received then T-mail will create letter with fileattach attribute. This letter and file will sent to author of request.

13.8 File requests confirmation

If file request was refused T-mail send packet with motivation letter. body of this letter will be added text from file defined by Freq_Policy variable in T-mail.ctl:

Freq_Policy   policy.frq

If request was satisfied, letter will contain list of files, which was sent and additional information (file size, date etc.) You can switch off this feature using variable Freq_Confirm:

Freq_Confirm   No

14. Personal postal boxes (MailBoxes)

Frequently mailers are used with mail-robots, i.e. programs, which process letters to it. frequently used robots AreaFix, Filefix and similar ones.

Traditionally joint work look so: mailer on ending of session unpack mail and starts consistently some robots programs, which scanning mail directory and process "his own" letters. This variant possible in T-mail, as far as it is possible define process for work up incoming mail (Process Mail).

However if system enough complex was reasonably avoid the situation, when the some programs look up whole mail directory (sometimes all for nothing!), searching "it's own" letters. It is work for letter packer , which must be informed about the list of such "specific addresses" and directories where letters for this robots received on main address or AKA will be moved.

Sometimes happens it is wonderful automatically separate   somebody personal mail (for example, system operator) from   common one. The desire redirect this mail to something another node can arise.

For such operation with mail T-mail have MailBoxes (personal mail boxes) concept If addresser name matched with name of postal box owner T-mail move letter in directory defined for him.

When this directory has the answer (in kind of letter) from "owner" of this postal box, T-mail will move it in main mail directory and will send on destination address. The list of postal boxes is set in file T-mail.ctl:

The syntax:

MailBox <name>=<path> [<destination address>] [|<dos command>]

Each string contain "specific" addresser name, followed by character '=' and after it directory for MailBox and optional address if you desire destination address to be changed. It is possible to indicate program name which will be executed in case if in appropriate MailBox something has fallen.

During mail packing T-mail look up MailBoxes as well as main mail directory. If there the new letter (for example the answer from mail-robot) has occurred it will be moved in mail directory and is packed for sending.

Example (T-mail.ctl):

MailBox FileFix=c:\filefix\ | c:\filefix.bat -Scan -Toss -Hren

MailBox AreaFix=c:\areafix

MailBox Ivan Pupirin=c:\mail\ 5030/15.99 | echo Vanya! Wake up!

Most interesting latter example, where main T-mail mail directory is mentioned as target directory. Obviously, then the letter will simple readdressed to new address. This method can use "remote SysOp" for reception of his mail.

Limitation: Whole can be defined not more 50 MailBoxes.

Notes: When T-mail start nonexistent directories for MailBoxes will be created

Warning: if redirect mail to main mail directory you must mandatory change destination address, because you can looping T-mail when it will try process such letter

15. File addressed boxes (FileBoxes)

In difference from MailBoxes which designed for toss inbound mail, FileBoxes serve for optimize outbound flow. Usually, to send the file to some node, operator should create the letter with appropriate attribute (fileattached).

This letter gives information to packer about necessity to include file in queue and serves for routing purposes - you see file not contain information about destination node. However, on practice, majority of files send directly to destination node without routing. So, for example, files, contained echomail, always send directly.

In such cases letters not necessary if possible let understand mailer to which node this files must be sent This problem can solve FileBoxes. The idea is such: for each address we have appropriate directory - FileBox. If connection with these nodes is established T-mail will send all files from this directory and erase files after sent. For give T-mail task to send file to some node, enough place it in appropriate FileBox.

The unique considerable difference of such method from usual consists that the availability of files in FileBox is not reason for T-mail, that it will call this node. Moreover, T-mail does not know about that whether such files (and even is present the directory) until session with FileBox "owner" will established.

As far as FileBox linked to appropriate address its name "is calculated" from address of node. Root directory for FileBoxes is set by File_Boxes variable in T-mail.ctl:

File_Boxes   c:\T-mail\filebox

In this directory T-mail searches for the subdirectories, which names calculated from address zone:net/node.point with following rules:

zznnnfff.pp

where zz - 32-radix presentation of zone, nnn - 32-radix presentation of net, fff - 32-radix presentation of node, pp - 32-radix presentation of point.

For example, for address 2:5030/100.1 directory will have such name:

c:\T-mail\filebox\024T6034.01

In more details this gear is described in T-mail API. For T-mail it is unimportant, exist directory or not. If it exists and it has the files, they will sent and be remove.

Moreover default directories names it is possible obviously to deliver in conformity directory to address. It is done by define BOX in file Subst.lst (see chapter "Substitution list"). Then the default name is replaced with name defined in subst.lst.

16. Substitution list

The substitution list permits "redefine" and add data, which T-mail get from nodelist. It name defined by 'Substlist' variable in T-mail.ctl. By default   T-mail searched for name subst.lst in system directory. Each string this file contain address (wildcards are allowed '*') and then substituted parameters.

The syntax:

<address> <parameter name1> <value1> [<name2> <value2>..]

or

<address> <flag> [<name2> <value2> ...]

Where:

<address> can be address or address group in accordance with "agreement about addresses";

<value> parameter name and value.

* notes: in this string can be placed flags for example: V32, V32B, ZMO etc. Naturally, then
        <value> not needed.

parameter name	Values (examples)	Comments (equivalents)
Time	CM	same 0:00-23:59
	22:00-5:00 22:00-14:00	22:00-23:59,0:00-14:00

Speed	1200 2400 ... 24000	define for at which speed call this node
Phone	123-4567 8W123-22222	Replace phone number from nodelist. this number NOT translated
Dial	AT\N1DP	will be used this prefix for dialing (specific dial prefix)
BOX	c:\mybox\	Define different from default FileBox for this address
Wait	70	Individual time of carrier expectation for this node
Hidden	123-4568	phone of additional channel.
HTime	like for TIME	Work Time for additional channel.
FTime	like for TIME	Time when file request accepted by this node
Password	PASS1	Session password
External	copy *F c:\hole	Define address as external node (see chapter 28) and define DOS command which must "send" files to this address (available only in commercial version).
AKA	address according	Substitute this address with "agreement as main in sessions with about addresses" this node.
ZMO	-	Prohibit protocols ZedZap and Direct Zap
ZAP	-	Prohibit protocol Direct Zap
CM V32 V42 V32B ZYX V42B H16 H14 HST	-	Set appropriate flag for given address

Parameter AKA used as follows. If found string like:

66:66/*.*=Aka 66:66/1.0 Time CM SPEED 2400

then for all addresses in net 66 in zone 66 will be presented address 66:66/1 as main one.

Parameters Time and Speed in example say that all 66 zone ready accept calls 7 day per week 24h per day with speed 2400:-)

Flag ZAP must be used if necessary prohibit send or receive files by Direct ZedZap protocol.

Flag ZMO must be set if necessary to be used classical Z-modem 1 K.

17. T-mail server.

T-mail server can be used with assistance of service letters. This usual letters, but they addressed to T-mail. The field 'To: ' of such letter should contain construction:

T-mail | <T-password>,

Where <T-password> is T-mail server password defined by appropriate variable in file T-mail.ctl.

* notes: REQUEST task will be executed with using any of 2-th passwords defined by T-password and Freq_password variables.

For example:

From: Andy Elkin	5030/15.1
To: T-mail |my_password_no_5	5030/15
Subj: Send c:\T-mail\files\t-2300.arj /27 /51	

* notes : Space will be ignored.

The field subject of service letter contain the task for T-mail server. The type of task defined by key word which should be placed first. The task syntax is:

Poll <address>	- Forces T-mail create packet(s) and establish mail session with given addresses;
Request <file> <address>	- Forces T-mail request file from given nodes. information about it stored, and in case that file with conterminous name will be received, it will sent to author of request;
Attach <file> <address>	- send file to given nodes,
Send <file> <address>	- the same;
Post <file> <address>	- post textual file as letter and send to given nodes;
Exec	-To execute letter text as command file.
Set <variable> <value>	- set new value for <variable>. Is allowable to use any variable from file T-mail.ctl, however you must be careful with variables like Address, AKA, Port.

List <file area>	- Forces T-mail create answer message contained the list of file areas. The field <file area> should contain Last from parts of full path to file area. For example, if in file, defined by Freq_Dir variable is given path d:\Files\ Windows Request list should appear so: To: T-mail Subj: List Windows If in file area present file With name files.bbs, it is used As body of answer. In another case will executed command Dir and it result will sent as body of answer message. for receive list of file area which not password protected, no necessary use T-password, Enough in field 'to:' write simple T-mail. However users, aware T-password, Have the opportunity not only to receive The lists of files in directories, defined By file <Freq_Dir>, but also from any another. For it necessary in request indicate the full path, for example: To: T-mail | password Subj: List c:\files\private\ To receive the lists of all Accessible file areas, It is possible to use symbol '*': To: T-mail Subj List *

tasks examples for T-server:

To: T-mail | password
Subj: Poll /2 /3 /6

To: T-mail|password

Subj: Request filename.ext /3 /7 .1 33:36/*.3

To: T-mail|password

Subj: Write c:\txt\my_txt.doc /16 /18

To: T-mail|password

Subj: Set Answer 0:00-4:00

To: T-mail

Subj: List SUPPORT

wildcards using in addresses limited - can not be given more than one symbol '*'. Addresses are searched in nodelists, therefore if given address not present in nodelists then T-mail will ignore it task processed immediately after unpack letters, therefore you must be attentively when give EXEC task, because mail unpacking "on fly" and session can be aborted with time-out.

18. Confirmations about sent letters

In case if in sending transit letter set attribute RETRECREQUEST, T-mail will be create confirmation letter to author of original letter For that purpose will filled template contained in file audit.tpl. Instead of service fields T-mail substitutes the appropriate values so:

~U - name of letter author;
~P - name from 'TO:' field;
~N - original address;
~A - own address;
~L - address where the letter was sent;
~D - date;
~T - time.

Such confirmation will created only in case if in file T-mail.ctl variable Audit_Send_Msg (on default - No) set to Yes

Audit_Send_Msg Yes

19. Service lines in letters.

Some specific lines T-mail accept as service and causes non standard actions. Service lines should placed at beginning of body letter.

Hold letter

Hold to [hh:mm] [dd[-mm[-yy]]]

The occurrence lines of such kind forces hold packing of this letter until moment defined by fields time and date. examples:

Hold to 3:00 15/12/92

Hold to 16-12-92

Hold to 16/12

Hold to 4:00 16

Hold to 4:00

If date not given it assuming current one. If time not given but given date then letter hold until midnight of   given date

Redefining routing

Route to <address>

Forces T-mail ignore routing rules defined in events.ctl during packing and send letter via given address examples:

Route to 5030/2

Route to /2

20. Connection of keys generators

T-mail permits connect keys generators. Means, that if in session time the file with extension .REG was received then (immediately after receiving of files) will be executed file autokey.bat.
To it will be given 4 parameters

- full name of received .REG file;
- path, where need place "answer" from keys generator.
- name of system operator of calling node
- address of node

For example:

autokey.bat c:\files\raemail.reg e:\tmp\ Dmitry_Klimenkov 2:5030/1.0

Spaces in name system operator are replaced on symbols '_' the "answer" should represent by self the file with name autokey.lst, each string contained full file name, which necessary send to given address. For example:

c:\raemail\raemail.key

c:\support\raemail.pkt

c:\support\welcome.doc

Then control will returned to T-mail and files that referred in autokey.lst will sent in that session.

This gear possible to use not only for keys generation, but also for handle another requests "on fly". But you must remember that request processing should not be long, as far as session can be aborted. T-mail can wait about 1.5 minutes, but another mailers can have less time-out value.

21. Use T-mail in multichannel systems.

T-mail is not multichannel mailer in common sense, that is one copy of T-mail can serve only one modem. However, some T-mail copies can work simultaneously in multitask environment (local network or multitasker OS/2, DesqView, Windows and etc.).

If T-mail running under DesqView it can gives back timeslices CPU, and possibility output to screen via BIOS (variable Output) permits to use T-mail under DesqView even on AT/286.

21.1 Set task number. Scheme Master/Slave(s)

For normal "duty distribution" for each T-mail.exe, running in multiline system, should be given unique number of task. It is reached by use option -N at start T-mail.exe:

T-mail -N1   - task number 1 - on default
T-mail -N9   - task number 9

Further, mailers should be used in scheme Master/Slave(s) (leading/driven). For that in T-mail.ctl one task must be set as Master, and other as Slaves.

[1] Task_Mode   Master

[2] Task_Mode   Slave

[3] Task_Mode   Slave

...

That T-mail, which was running with option -N1 (Master) undertakes function of packer. Other will receive information about Queue via temporary file and by special flags will inform T-mail/master about necessity appropriate process queue. In such case, only one T-mail will look up letters and prepare it's for send building mail queue.

As far as files T-mail.ctl and evens.ctl are common for all tasks, then you must use field <task ident> for some variables. For example:

> *[1] Log   T-mail1.log*
>
> *[2] Log   T-mail2.log*
>
> **...**

21.2 Using "carried out" queue packer

Look up mail, creation of packets and another function, which executes T-mail/master, can take long time, for example, if for processing echomail T-mail starts echoprocessor.

It is then possible to use one from T-mail's only for these purposes, "without modem". Example (T-mail.ctl):

> *[1] Task_Mode   Master*
> *[2] Task_Mode   Slave*
> **...**
>
> *[1] Port 0*
> *[2] Port 1*
> **...**

In such case T-mail/master will execute only package functions, start external programs and etc.

21.3 Using flags in multiline configuration

In scheme Master/Slave(s) has the one more opportunity distribute functions between tasks. For it serve flags. It explained on example from life. Example (T-mail.ctl):

> *[1] Task_Mode   Master*
> *[2] Task_Mode   Slave*
> **...**
>
> *[1] Process_Flag anyarc.t-m c:\T-mail_echoes.bat*
> *[2] Process   ArcMail   ~anyarc.t-m*
> **...**

As it is visible, T-mail/slave after received echomail creates flag anyarc.t-m. When T-mail/master will see this flag then it starts appropriate process , defined by Process_Flag statement. Said true for other process functions (see part 11)

22. BinkleyTerm compatibility mode

Besides main ArcMail-attach mode T-mail can support Bink-style outbound area. T-mail have not devices for manage outbound area this task must completely performed by external programs, echoprocessors and etc.

To start T-mail in this mode necessary in T-mail.ctl set variable Bink_mode to Yes (by default No):

Bink_Mode Yes   ; Bink-style mode (no-ArcMail-attach)

It is possible define interval (sec) during which outbound directory will be rescanned:

Bink_Rescan_Time 100   ; Rescan period (sec)

also need define the directory for bink-style outbound:

Packets d:\outbound\out\   ; Outbound packets directory

In case of operation on multichannel systems still necessary to use the scheme Master/Slaves, as far as for functioning T-mail it is necessary create queue. T-mail/Master in described mode will rescan outbound and create queue for T-mail/Slave.

It's clear that Bink mode limiting T-mail features. In particular, routing rules (Mail, Files, Direct) lost the sense, as far as T-mail not packing mail.

Deny rule still acts, but with some differences: It causes not include node in queue, however it not influence for mail   packing.

23. Routing and events

File events.ctl define the 'events' list and routing rules for mails and files.

The common syntax is such:

[[<task_ident>]] [Critical] <keyword> <parameters> <time peroid>

Rules for <task_ident> same as for T-mail.ctl:

  [<task number>]   - act only for given task number (given by -N option)

  [M]   - only for T-mail/master.

  [S]   - for Slave

  [*]   - for all.

  [Critical]   -Describes event as critical. For all events is present risk, that it will skipped, if time interval, given for this event has expired, but mailer could not execute it (long session, completion external programs and etc.) If the event is described as Critical, it will be executed even then.

The key word	That it sets
	For 'events':
Poll	Poll node (in defined Time)
Send	send file to nodes (in defined Time)
Post	send the file in kind of letter to (in defined Time)
Freq	Request file (in defined Time)
Exit	exit from T-mail with given errorlevel
* Pack (or RePack)	repack mail (all or for given addresses)
Set	"overload" parameter in T-mail.ctl
Exec	execute given .exe,.com or .bat file
	For routing rules:
* Mail	mail routing rules
* File	files routing rules
Hold	prohibit call given addresses
Freeze	the same but ignored immediate status
Priority	service at first given addresses
NoReq	Prohibit send file requests to given addresses

Boss	Forces always call again if connection lost
* Dire	Cancels any routing for given addresses
* Deny	Prohibit create the packets for given addresses

* - for multichannel systems these key words render the action only on T-mail/master.

23.1 Poll

The syntax:

[task ident] Poll <address> <time period>

examples:

Poll   5020/35 1:00-6:00 ; Each day at 01:00

[1] Poll   /2   0.21:00   ; every Sunday at 21:00

Poll used for force T-mail call defined address and get (if exist) mail for you node.

This statement forces T-mail create the empty letter for appropriate addresses with attribute DIRECT (that excludes routing for this letter).

If <time> approach but T-mail engaged (for example the long session), letter will sent as soon as possible,   but not later than hour after <time>.

23.2 Send

The syntax:

[task ident] Send <filename> <address group> <time period>

Example:

[1] Send c:\info.zip /2 /5.6 5070/35 1:00 ; Each day at 1:00

This statement forces T-mail create letter with attribute Fileattached with given file for given addresses.

23.3 Post

The syntax:

[task ident] Post <filename> <address group> <time period>

Example:

Post c:\info.txt /2 /4 /5.6 5070/35 1:00 ; Each day at 1:00

This statement forces T-mail create letters for given addresses File defined in this statement makes the body of letter.

23.4 Freq

The syntax:

[task ident] Freq <filename> <address group> <time period>

Example:

[M] Freq files /2 /4 /5.6 5070/35 3.1:00 ; Every Wednesday

This statement forces T-mail create file requests to defined the nodes.

23.5 Exit

The syntax:

[task ident] Exit <errorlevel> <time>

examples:

[1] Exit 99 1:00   ; Daily per hour of night

Exit 92 1.2:00   ; Till Mondays in 2 night

Forces T-mail to finish work with mentioned <errorlevel> If T-mail is engaged when <time> approach (for example, long session), it happened as soon as it released, but not later than hour after <time>. Try no use this statement without necessity, as far as T-mail firing up it repack all mail, and can take long time for that process. More suit use 'Exec' statement (see below).

23.6 Pack

The syntax:

[task ident] Pack <time period>

[task ident] RePack <time period>

[task ident] Pack <address group> <time period>

examples:

Critical Pack 1:00

Pack /2 /4 5020/4 1:00

Forces T-mail to destroy all packets (or packets for given addresses) and build it again with accordance to routing rules. If T-mail is engaged when <time> approach (for example, long session), it happened as soon as it will released, but not later than the hour afterwards <time>.

23.7 Set

The syntax:

[task ident] Set <parameter=value> <time period>

examples:

[1] Set Time_Dial=100 5:00-9:00

[2]Set Freq_Number=10 5:00-7:00

Set Answer=0:00-12:00 5.20:00-0.22:00

Permits change "on fly" parameters and variable values defined in configuration file (T-mail.ctl). Is indicated time interval during which acts statement.

You must be careful, for example, does not try to change in such manner the significance of PORT, Address and AKA variables :-).

* notes: Old variable value will be lost forever. Time interval define only, that it is necessary to replace initial (value given during start in File T-mail.ctl). If You want restore old value, it is necessary restart T-mail, or (preferable) to use one more 'Set' for another time interval.

23.8 Exec

The syntax:

[task ident] Exec <[flag]dos command|desqview program> <time period>

examples:

[M] Exec morning.bat 5:00   ; daily at 5:00

[M] Exec weekly.bat 0.0:10   ; weekly in Sunday at 0:10

Exec mem /c >> T-mail.log 8:30-11:00 ;

[1] Critical Exec c:\dv\ec-pif.dvp 1.9:00

When <time> approach (but not later than after hour), T-mail starts the copy of Command.com and give to it <DOS command>   as parameter.

For .exe and .com files the copy command.com not loaded. In any case, T-mail makes swap on disk, free nearly all conventional memory.

* notes: with <DOS command> possible to use flags-modifiers:
    '!' - do not make swap;
    '%' - do not save screen;
    '+' - record Queue structures, events and routing in temporary files and to read after return;
    '?' - show string 'Type Exit to return to T-mail..' before command prompt;

Example:

Exec! Weekly.bat 0:10   ;weekly run without swap to disk

23.9 Mail/Files

The syntax:

[task ident] Mail <address list> <address> [<time period>]

[task ident] Files <address list> <address> [<time period>]

examples:

Mail 5020/* !5020/44.2 5040/* 5030/2 ; Time interval 0:00-;23:59 For nodes in ;nets 5020,5030 exclude ;5020/44.2 route mail ;via 5030/2

Mail 5030/1 5030/6 4:00-9:00   ; Time interval given ;explicitly; route ;mails for 5030/1 via ;5030/6 Mail 5030/1 ;5030/6 3.4:00-6.9:00; ;route mails for 5030/1 ;via 5030/6; since 4:00 ;Wednesday; to 9:00 ;Saturday

Files 5030/* 5030/6 6.4:00-6.23:59   ; since 4:00 to 23:59 ;every ; Saturday route ;files for ; net 5030 ;via 5030/6

Mail All   5030/2   ; since 0:00 to 23:00 ;route mails for ALL ;via 5030/2

Mail @nodes1.lst 5030/6   ; route mails for ;addresses from list ;via 5030/6

Files @nodelist\reg50.net 5030/2   ; files for R50 via 5030/2

Mail 5030/* 5020/* Hub   ; Hub routing for nets ;5030,5020

Predestination: sets routing rules for mails or files.

During packing T-mail analyzing destination address letters attributes. If the letter is not labeled as Direct, further T-mail look up route rules, acting in given time and if finds destination address in <address list>, then pack letter for <address>. If this letter with attribute FileAttach, then T-mail will look up routing rules with key word Files otherwise search in Mail statements.

You must remember following: T-mail look up rules from up downwards, (i.e. in that order in which they described in Events.ctl) until met suitable. Therefore more common rules must be placed at the end of Events file.

* notes: for 4-d addresses acts default routing.(if suitable rule was not found in events list):
    - If it is point own node (that is, address of node .0 and zone, net, node coincide), all mail send direct.
    - If "anther point", (that is, zone, net, node do not coincide or this node have 4-d address), all mail and files will sent via "boss-node" (same address as destination, but point field 0). For example, if given node address 5030/15.0, all mail for 5030/6.602 will sent via 5030/6.

* notes: as <address> can be used word Hub for example: Mail 5020/* Hub Then mail will sent to appropriate Hub. If Hub for node not defined, then first node from appropriate network is considered as hub.

23.10 Direct

The syntax:

[task ident] Direct <address list> [<time period>]

examples:

Direct 5030/* !5030/2 !CM 3:00-5:00

> ### *Direct 5030/6.**

> ### *Direct @nodes.lst 4:00-6:00*

Prohibit letters and files routing for given addresses.   Means, that the mail and files for given addresses will sent directly.

The specific case - points, i.e. 4-d addressed nodes. If present for example, rule

> ### *Direct 5030/6.**

mail and files for 5030/6.601will packed with mail to 5030/6.0 If You really want, that the mail for 5030/6.601 was allocated in separate packet, it is necessary obviously indicate 4-d address:

> ### *Direct 5030/6.601*

23.11 Hold and Freeze

The syntax:

> ### *[task ident] Hold   <address list> [<time period>]*

> ### *[task ident] Freeze <address list> [<time period>]*

examples:

> ### *Hold   5030/* 3:00-5:00*

> ### *Freeze 5030/6.**

> ### *Hold   @nodes.lst 4:00-6:00*

Prohibit calls to given addresses in given time . The difference Hold and Freeze consists that statement Hold will ignored if exist Immediate status for node (this status occurs during packing letters with attributes Crash, Immediate or if Immediate attribute given from console by operator by pressing Ctrl-I). Freeze - more "rigid" statement, if it acts for given node, T-mail will not there call "whatever has happened" (excepting given by operator Crash-poll mode from console by Shift-Tab).

  * notes: Crash-poll will not acts if call_time not permit.

23.12 NoReq

The syntax:

> ### *[task ident] NoReq <address list> [<time period>]*

examples:

> ### *NoReq 5030/* 3:00-5:00*

> ### *NoReq 5030/6.**

> ### *NoReq @nodes.lst 4:00-6:00*

Prohibit send file requests to given addresses in given time. Can be useful in the event that You know time when file request supported by given nodes. Also you can use it for prohibit freqs in ZMH.

23.13 Deny

The syntax:

[task ident] Deny <address list> [<time period>]

examples:

Deny 5030/   3:00-5:00*

Deny 5030/6. 22:00-24:00*

Deny @nodes.lst 4:00-6:00

Prohibit packets creation for given addresses in given time. If acts such rule, packets for given addresses will not be created nor put in queue. Can be useful for off loading Hubs in some time or if you have some fake point addresses (for example for gates or some robots like Galaxy game).

23.14 Priority

The syntax:

[task ident] Priority <address list> [<time period>]

examples:

Priority   5030/1 5030/6 3:00-4:00

Priority   @r50.net   7:00-9:00

This statement set for some nodes in given time priority status. Means, that if the mail for these nodes is present, T-mail will call it and try sent mail ignore all other queue entries. When all mail for nodes with priority status will sent then T-mail begins call to another nodes too.

   * notes: You must use this statement closely, as far as misusing T-mail will call in general
            nowhere :-(for example if you give priority status for node which holded or it's
            phone unknown As far as it should be served first, T-mail will call nowhere (while
            present mail for this node). Certainly, if this node get it's mail then situation
            become better, but not for long time.

23.15 Boss

The syntax:

[task ident] Boss <address list> [<time period>]

examples:

Boss 5030/   0.3:00-6.5:00*

Boss 5030/6.   22:00-24:00*

Boss @nodes.lst 4:00-6:00

This rule define T-mail strategy when connection lost during session. If during session with 'Boss' communication lost then T-mail will create Poll-packet irrespective of, in which phase disconnection happened. Can be useful when with another side acts 'Hold' rule for your address.

Example Events.ctl:

24. Modem Control.

The section "Modem Control" in file T-mail.ctl sets some parameters, used by T-mail with modem. Variable Modem define file name which contained modem control string and modem answers for appropriate situation.

File modem.ctl, distributed with T-mail, contain comments which I hope enough for tuning modem. If you do not have enough experience I strongly recommend you leave all "as is" check only modem initialization string. For that see user manual for you modem and check whether all commands "understands" You modem. If some commands not present - remove it from initialization string.

Remember, that each command, sent in modem, should be finalized by symbol <cr>. It showed in file modem.ctl by symbol '|'. Moreover, symbol '~' can be used for set half second delay between commands.

24.1 DTR signal control

The many modems can have response reaction to level of DTR signal. This feature permits more reliably modem control. The different models of modems need different "fall" time of signal DTR. DTR transition time tuned by Dtr_Delay variable (in 10-th of second).

Dtr_Delay   10

24.2 Tuning COM ports

The section "Port definitions" define COM port parameters, which T-mail will use. Before all set number of COM port (variable Port), for example:

Port 1   ; for COM1

Variable Baud set maximum baud rate in accordance with you modem. If you modem permit using fixed port speed then you can set locked port speed in variable Lock_Baud. Remember that you must read before manual to you modem and FOSSIL driver for appropriate tuning they.

If you modem accept data flow control by RTS/CTS signals   then set in T-mail.ctl variable HardWare_Flow to Yes:

HardWare_Flow   Yes   ; Allow RTS/CTS

In case using Lock_Baud, RTS/CTS data flow control necessary for successful functioning.

24.3 Modem initialization.

Variable Init_After_Dial (values Yes/No) permit or not to T-mail initializing modem after each number dialing. Usually it not necessary, however if you using individual dial prefixes for dialing numbers it can appear necessary one.

Modem_Delay define delay (in 10-th of second)   before by parcel of any command in modem.

Time to time T-mail try initialize modem. As frequently it happened set by variable Init_Interval (in minutes). In modem will sent one or 2 strings, defined by key words Init1 and Init2 in file modem.ctl. If on any reason the modem does not answer 'OK' (or anything else, that T-mail finds clever:) after initialization attempt then T-mail will tried yet twice and, if no positive result got then T-mail will exit with errorlevel 5.

24.4 Hang off during run external programs

If needed long temporary exit from T-mail, it is possible say to modem to "hang off" in order to calling modems received signal "busy" and not spend time for carrier expect. Variable Busy_Hang_off (values yes/no) enable or disable this feature.

By this opportunity must be used with care, as in case you external program "hanged", modem can remain connected to line ("off hook"), that can cause the problems on your phone station.

24.5 Carrier monitor

Happens, that on line with bad signal quality carrier flashing. For program it can appear as lost carrier and session can be aborted. However, carrier often restored after several second or part second and session can be continued. Variable Carrier_Monitor sets (in seconds) time interval, during which T-mail will ignore absence of CD signal (carrier detected) from modem. For disable carrier monitor set this variable to 0.

25. terminal mode.

According to tradition, T-mail has built-in terminal support. Terminal called in following cases:
- Pressed Alt-T key
- was BBS call during mail session (Alt-T pressed)

- T-mail was running with -TT option

Variable Terminal define external terminal program, which will fired up in all these cases. If it not defined, will be used built-in terminal.

You has opportunity to define the command for modem, which will be sent when you enter in terminal. It defined in file modem.ctl:

Example:

Init_Terminal   ATE1|

Terminal automatically recognize ANSI and Avatar sequences. Some common terminal activities (start protocols, transmitting/receiving and etc.) are recorded in log-file, defined by Term_Log variable. Further you see keys, acting in terminal:

Alt-D	- Dialing number. If address given, phone will searched in nodelist. If should given phone number instead address, It is must precedence by symbol '#'. Number will dialing until connection will established or ESC key pressed.
PgUp	-send file(s)
PgDn	-receive file(s)
Esc	- Abort file transfer
Alt-I	- Initialize modem
Alt-H	- Hang up
Alt-=	- Toggle doorway mode
Alt-L	- Toggle capture log
Alt-B	- set baudrate
Alt-7	- Set 7-bit in byte
Alt-8	- Set 8-bit in byte (default)
Alt-O	- Dos shell
Alt-Q	- exit from terminal

Moreover, all keys, defined by Key statements in file T-mail.ctl, will act (exclude Doorway mode).

25.1 External protocols connection

If not defined external protocols, and PgUp, PgDn key pressed or revealed auto download sequence then will starts internal Zmodem. Otherwise will started appropriate external program defined by Term_Download or Term_Upload variable in file T-mail.ctl:

Term_Download   c:\gsz\gsz.exe   port *P speed *B rz -rr

Sets external protocol for receive files.

Term_Upload   c:\gsz\gsz.exe   port *P speed *B sz

Sets external protocol for sending files.

Macrosymbols which can be used as protocol parameters:

*B - DCE baudrate
*L - locked port baud rate (or 0)
*P - COM port number
*T - task number

Received files will placed into directory, defined by Term_DownDir variable (it's concerning only built-in protocol).

When you give file name to be send and if full path not given files will be searched in directory defined by Term_UpDir variable:

Term_UpDir   C:\T-mail\files

Term_DownDir   C:\T-mail\files

25.2 Exit from terminal.

The exit from terminal is executed by pressing Alt-Q. If terminal was fired up by T-mail -TT option, then you will exit from T-mail terminal to operating system.

You Should the opportunity set operator inactivity interval in Term_Inactivity variable.

Term_Inactivity   60   ; Terminal inactivity time-out (min)

Sets maximal operator inactivity time (in minutes) in terminal mode If operator does not press neither key during this time then you will returned back in T-mail. If value set to 0 this feature switched off (default). after file sent or received time counter will automatically reset. If capture log was opened (Alt-L) it will be automatically closed on exit from terminal.

26. T-Mail semaphores

26.1 Exit flag

In the event that you need force T-mail shutdown it is possible to use flag defined by Flag_Exit variable. It forces T-mail exit with errorlevel 0.

26.2 Sleep flag

If you necessity temporary stop "freeze" T-mail "externally" for example under multitask environment from another programs. It can be made, after creating flag, defined by Flag_Sleep variable in file T-mail.ctl. If T-mail found this flag it will switch to sleep mode and will not call, to answer on rings, no pack mail. However all T-mail keys will functioning properly.

The difference this semaphores from all another that Flag_Sleep is never destroyed by T-mail, is obliged to do external programs, otherwise T-mail "sleep" for ever.

26.3 Alive flag

This flag permits understood to external program "whether T-mail alive". If is created flag, defined by Flag_Alive variable then T-mail will destroy it as soon as detect. However external programs should not require immediate flag removal, as far as flags checked during waiting call or event cycle and not does during session.

26.4 Session flag

This flag permits understood to external programs whether is T-mail in session. Flag created when connection established and erased when connection terminated. The flag name set by Flag_Session variable.

26.5 Repack flag

At last, the one more file, which existence causes some actions. The name of this flag file fixed - repack.t-m in system directory of T-mail. This semaphore force T-mail pack all mail anew. Its name fixed, as far as system has only one packer and this flag concerns only it.

* notes: All flags, described above, except flag repack.t-m, And flag <Flag_Session> Can have "inverted significance". By other words, as flag can serves as file availability ,as its absence. In the latter case The flag filename should begin from symbol '!' See examples.

Flag_Alive   c:\alive.tm

flag meaning existence of file. It will be removed.

Flag_Alive   !ß:\alive.t-m

flag meaning absence of file. It will be created.

In accordance with this "exhibit flag" means "create the file" or "remove the file " For direct and inverted flags definition.

26.6 Flags for start external programs

Additionally you can define up to 16 flags, which will cause start external programs, appropriate with flag. In T-mail.ctl are set constructions Process_Flag:

The syntax:

Process_Flag <flag_name> [!]<dos command>|<dvpname>

where

<flag_name>   - flag name for run this process. If not defined the full path, flag will searched for in flags directory (see Flag_Dir)

<dos command>   - program name which will start (.exe, .com, .bat) and it's parameters.

<dvp name>   - DesqView program name (with path), means .dvp which describe appropriate DV window

examples (t-mail.ctl):

Process_Flag anyarc.t-m   c:\squish\squish -In -Out

Process_Flag c:\anytic.000   anytic.bat -Debug

Process_Flag doswap.t-m   doswap.bat

The use of Process_Flag permits, for example, build more effectively multilinear node. See chapter 21.

27. Work with faxmodems

(available only in commercial version)

T-Mail has some built-in feature for operate with faxmodems (modems, which can send of message on fax-machine and receive facsimile messages). At first, if incoming call will interpreted as fax call then T-mail will receive the facsimile message (any page number). At second, letters contained specific information can be processed by internal FAX-gate and converted to TIFF v5.0 Gr.3 format together with graphics files, "applied" to this fax message, and facsimile messages queue will be created.

This queue served similarly usual mail Queue. Bottom T-mail window T-mail show mail queue, or fax queue. These modes toggles by Alt-F key. T-mail serve mail and fax-queue during incoming calls.

27.1 Hardware requirements

Present T-mail version (2300) can maintaince faxmodems which support industrial standard Fax Class 2 operation. All key words in file T-mail.ctl for Fax Class 1 for further development.

-------------------- Quote T-mail.ctl ---------------------

Fax_Class   2   ; Fax Class operations

;Define the type of faxboard. The value 1 and 2 for Fax Class 1 ;and 2 are allowable.

Fax_Baud   9600; Max fax bit rate

;Define maximal fax speed. For Fax class 2 not important.

27.2 How fax-gate work

To send the facsimile message necessary create it. T-Mail transform of letters (.msg) addressed to user 'FAX' in fax-messages, using service information contained in letters. Before transformation T-Mail access rights for author of letter to use gate. The access to gate defined by Fax_Mode variable in file T-mail.ctl:

-------------------- Quote T-mail.ctl ---------------------
Fax_Mode   Any   ; Access level to fax-gate
;
;Fax_Mode define user group which can access fax-gate. Possible ;values is next:
;   Any - free access to fax-gate for all
;   Reg - only nodes listed in fax_nodes variable can access
;   fax-gate
;   Nod - only nodes listed in nodelists can access fax-gate
;   Psw - only messages which have a password (in subject field) ;defined by Fax_password variable will be transferred
;
Fax_Nodes   5030/100. !.3 !.4*
;
;Define address list of nodes which can access fax-gate. (If ;Fax_Mode variable set to Reg).
;It is possible to use the filename preceded by symbol '@' and ;contained addresslist.
;examples:
;Fax_Nodes   5030/.* !CM !5030/101*
;Fax_Nodes   @c:\t-mail\f_list.txt
;If Fax_Mode variable set to Psw, this word should present in ;subject field of each gated letter
;
Fax_Password   Fax_it!   ; Fax-gate password
;
So that the letter was transformed, it should be addressed to This node, i.e. to be not transit. Here example:

From: John Smith	2:245/76	
To: Fax	2:5030/15	
Subj: Fax_It!		
Phone (095)123-4567		

Time   0:00-6:00

Hello, dear friend!
[message body]

First 2 lines this letter - service ones. They inform telephone, where necessary sent message and time, when it is possible to send fax to this telephone.

All lines beginning with one of service words, listed below, assumed as service lines. These lines will be ignored during transforming letter body to fax-message.

Phone <number>   - destination fax phone number

Time <time period>   - work time of remote fax for this message (default 0:00-24:00)

Length <page len>	- Page length (strings) default 50
Draft	- normal resolution (default)
Fine	- fine mode (double vertical resolution)
File <filename>	- graphics file which will be sent after this message. Can be defined up to 3 files File must be in Tiff v5.0 format for facsimile messages (Group 3). You can use tif2tif utility for converting simple tiff file to necessary format.

All lines except phone number are optional. Number can be defined by phone keyword, or directly in field 'To:', for example:

To: FAX (095)123-4567

Letter body can not contain keywords if phone number defined in message header. Here some examples for define phone numbers:

123-4567   *- local number*

(095)123-4566   *- number with city code*

1(800)345-444   *- international number.*

Telephone will transformed to international form (as in nodelist) and then will translated with accordance with translation rules defined by Dial variables in file T-mail.ctl. (see. chapter 7)

27.3 Sending facsimile messages

Converted letters will placed into sending queue. This queue is similar mail Queue and showed in bottom half screen. The key Alt-F toggle Queue "window" and You can lookup either mail or fax queue. Use arrow keys for scroll queue and choose current telephone, to which T-mail will dialing next time.

T-Mail lookup one by one mail and fax queue and switch faxmodem to appropriate mode.

Moreover time interval mentioned for each letter, can be defined global time interval when facsimile messages can be sent It defined by Fax_Call variable:

-------------------- Quote T-mail.ctl ---------------------
;
Fax_Call   17:38-8:00   ; Allow call as faxmachine
;
;Define time when T-Mail will call fax-machines.
;It is not exclude mailer functions, because Queue for faxes ;and E-mail will processed simultaneously.
;
Fax_Tries   25   ; Attempts to send fax message
;
;Define how many times T-mail will try send each fax-message.

;If try count will reach this value then T-mail will error ;message to author.

;If message was successfully sent then T-mail will sent ;confirmation letter to author.

27.4 Receiving facsimile messages

For Fax Class 2 operations it is possible define, whether faxmodem answer as data, data/fax (autodetect) or only as fax.

You can appropriate with this tune T-Mail. Variable Fax_Answer define time interval, where possible receiving faxes. In all other time T-mail accept only data call (if answer permitted in general).

Variable Fax_Adaptive define, whether T-mail will answer only as fax or the incoming calls or will try autodetect work mode. It is clear that preferable permit adaptive answer so that not interrupt mail station activity.

Fax_Answer   18:00-8:00   ; Allow answer as faxmachine

Define time, when T-Mail will analyze incoming calls and to try establish mail session or receive fax. If Fax_Adaptive No, T-Mail will answer only as fax.

Fax_Adaptive   Yes   ; Allow adaptive fax/data answer

Inform T-Mail, whether support your fax-modem adaptive answer. It is important for Fax Class 1 operations. (for class 2 adaptive answer always supported, but you can prohibit it) If your fax-modem not support this feature you set 'No' then T-mail will serve incoming calls only as fax call.

27.5 Fax cover page

Variable Fax_Cover permits define the file, which will be sent before each letter (cover page). This file should be in Tiff v.5.0 Gr3 format.

Fax_Cover   cover.gr3   ; filename of cover page

28. Users in local network (external nodes).

(only in commercial version)

T-Mail have possibility to deliver mail and files for defined nodes by alternative ways - for example via local network. If exist opportunity deliver the mail and files for some of system with assistance of operating system (for example LAN), then most reasonable way define this addresses as external nodes. External nodes described in file subst.lst as follow:

<address> External [!]<dos command>

Symbols after External keyword and for end of line assumed as Dos command which will executed for each "transferred" file. You can use some macro symbols in <dos command>:

* F - will be replaced with full filename.
* A - will be replaced with destination address.

<dos command> can begin with '!' symbol (it is not considered by part of command), then T-Mail will not swap out and the copy of command processor will started.

examples (subst.lst):

*5030/15.77 External !copy *F z:\points\77*

Before keyword "external" can be usual constructions, for example work time of node:

29. Keyboard control

Below listed keys and appropriate actions.

Key	When T-mail key active	Action
F1	while waiting for a call	Show help screen
Alt-X	while waiting for a call	exit with errorlevel 10
Space	while waiting for a call	Force next call
Alt-O	while waiting for a call	DOS Shell
Alt-Z	while waiting for a call	send string to modem
Alt-T	while waiting for a call	Enter to terminal
Shift-Tab	while waiting for a call	Toggle 'Crash poll' mode
Alt-P	while waiting for a call	Poll node or nodes**
Alt-S	while waiting for a call	Send files to node**
Alt-D	while waiting for a call	Send files directly to node**
Alt-R	while waiting for a call	Request files at node**
Alt-A	while waiting for a call	Force manual answer even if not permitted by 'Answer' variable
?	while waiting for a call	Get info about node
Alt-=	while waiting for a call	Change any T-Mail variable (beware: don't try on port etc. :-)
+	while waiting for a carrier	Increase wait interval
-	while waiting for a carrier	Decrease wait interval

T-Mail version 2300. The operator manual - Page 42

Esc Space	while waiting for a carrier	Hang up
Alt-H	while handshaking or file receiving/transmitting	Hang up(break session)
Ctrl-X	while receiving file	Skip current file
Alt-C	while receive/transmit files	Request 'Chat' mode
Alt-T	while receive/transmit files	Request BBS after mail session

for addresses in queue

Ctrl-H	while waiting for a call	hold* calls for given nodes*** for 1 hour
H	while waiting for a call	Toggle HOLD* status for current queue entry
Ctrl-U	while waiting for a call	Unhold calls for given nodes***
Ctrl-I	while waiting for a call	Set immediate* status for given nodes*** for 1 hour
I	while waiting for a call	Toggle immediate* status for current queue entry
Ctrl-R	while waiting for a call	Reset immediate* status for given nodes***
Ctrl-P	while waiting for a call	Set priority* status for given nodes*** for 1 hour
P	while waiting for a call	Toggle priority* status for current queue entry
Ctrl-C	while waiting for a call	Reset priority* status for given nodes***

* - status immediate, hold and priority is described in chapter "Queue control".

** - act agreement about addresses, including wildcards allowable to enter such line for example:

5030/6 567:667/4.5 1:3/3 5020/* /1

*** - the same, including <address list> format For example:

        1:3/3 5020/* !5020/3 HST !MNP

Also you can use keys described in tables, it is possible to use the arrow keys, Home, End, PgUp, PgDn for look up Queue, and in combination with Ctrl - for change current position in Queue.

Ctrl-Enter causes 'Node info' mode for current address in Queue. Enter run external program t-queue, Queue manager (it does not included in T-mail 2300 distribution set). Developers can use this opportunity with T-mail API.

30. Defining hot keys.

The user has the opportunity define up to 20 hot keys, which will run appropriate external programs. Keys defined by keywords 'Key' in file T-mail.ctl:

The syntax

    Key <hex scancode> [<flag>] <dos_command> [<parameters>]

Where

<hex scancode>	- key scancode (see table below)
<dos command>	- DOS command or program .exe, .com, .bat or full path and name to DesqView DVP file. <parameters> - optional program parameters
<flag>	- one or few modifier-symbols defining condition, for running <dos command>:
'!'	- no swap out;
'%'	- don't save screen;
'+'	- save queue structures, events and route rules and read after returning
'?'	- show string 'Type Exit to return to T-mail..';
'#'	- reserved
'*'	- reserved
'&'	- reserved

Examples:

> ***Key 1200 c:\gold\gold.bat***
> ***Key 5800 ?tst.bat***
> ***Key 5900 c:\dv\bc-pif.dvp***
> ***Key 2600 !+c:\command.com***
> ***Key 3100 !msgview.exe c:\T-mail\mail*.msg***
> ***Key 2600 c:\tools\view.exe c:\T-mail\T-mail.log***

Keyboard scan code table.

Functional keys

<F1>3B00	<Shift F1>5400	<Ctrl-F1>5E00	<Alt-F1>6800
<F2>3C00	<Shift F2>5500	<Ctrl-F2>5F00	<Alt-F2>6900
<F3>3D00	<Shift F3>5600	<Ctrl-F3>6000	<Alt-F3>6A00
<F4>3E00	<Shift F4>5700	<Ctrl-F4>6100	<Alt-F4>6B00
<F5>3F00	<Shift F5>5800	<Ctrl-F5>6200	<Alt-F5>6C00
<F6>4000	<Shift F6>5900	<Ctrl-F6>6300	<Alt-F6>6D00
<F7>4100	<Shift F7>5A00	<Ctrl-F7>6400	<Alt-F7>6E00
<F8>4200	<Shift F8>5B00	<Ctrl-F8>6500	<Alt-F8>6F00
<F9>4300	<Shift F9>5C00	<Ctrl-F9>6600	<Alt-F9>7000
<F10>4400	<ShiftF10>5D00	<Ctrl-F10>6700	<Alt-F10>7100
<F11>8500	<ShiftF11>8700	<Ctrl-F11>8900	<Alt-F11>8B00
<F12>8600	<ShiftF12>8800	<Ctrl-F12>8A00	<Alt-F12>8C00

Alt-keys

<Alt-A> 1E00	<Alt-N> 3100	<Alt-1> 7800

<Alt-B> 3000	<Alt-O> 1800	<Alt-2> 7900
<Alt-C> 2E00	<Alt-P> 1900	<Alt-3> 7A00
<Alt-D> 2000	<Alt-Q> 1000	<Alt-4> 7B00
<Alt-E> 1200	<Alt-R> 1300	<Alt-5> 7C00
<Alt-F> 2100	<Alt-S> 1F00	<Alt-6> 7D00
<Alt-G> 2200	<Alt-T> 1400	<Alt-7> 7E00
<Alt-H> 2300	<Alt-U> 1600	<Alt-8> 7F00
<Alt-I> 1700	<Alt-V> 2F00	<Alt-9> 8000
<Alt-J> 2400	<Alt-W> 1100	<Alt-0> 8100
<Alt-K> 2500	<Alt-X> 2D00	<Alt--> 8200
<Alt-L> 2600	<Alt-Y> 1500	<Alt-=> 8300
<Alt-M> 3200	<Alt-Z> 2C00	

Control keys

<Home> 4700	<Ctrl-Home> 7700	<BackSpace> 0E08
<End> 4F00	<Ctrl-End> 7500	<Insert> 5200
<PgUp> 4900	<Ctrl-PgUp> 8400	<Del> 5300
<PgDn> 5100	<Ctrl-PgDn> 7600	<Ctrl-Ins> 9200
<Left> 4B00	<Ctrl-Left> 7300	<Ctrl-Del> 9300

Right> 4D00	<Ctrl-Right> 7400
<Up> 4800	<Ctrl-Up> 8D00
<Down> 5000	<Ctrl-Down> 9100
<5> 4C00	

Gray keys

<Gray /> E02F	<Gray -> 4A2D	<Gray Enter> E00D
<Gray *> 372A	<Gray +> 4E2B	

31. Sound effects.

T-mail can issue 9 different sounds in different situations. Each situation have key word and bit variable Sound.

Word	The situation	Mask
Connect	connection established	1
Begin	mail session began (after EMSI)	2
End	mail session end	4
Unpack	unpacking mail packet	8
Chat	Chat requested from another side	10H
Human	Human Caller (before run dobbs.bat)	20H
Abort	Session breaked or aborted by SysOp	40H

Error	error initializing modem or FOSSIL-driver , before exit with errorlevel 5 or 7.	80H
Tick	In different cases, for example when keyboard buffer overflow	100H
Ring	Incoming ring	200H

In file T-mail.ctl to each key word corresponds melody everyone can tune sounds on his tastes, using rules for record melodies. The utility testsnd used for test melodies described in T-mail.ctl.

The syntax:

SoundOf <the keyword> <repetition number> <pattern>

Each pattern contain one or some groups of 4 numbers, which interpreted so:

First number	- start tone (Hz) (-1 means silence)
2-nd	- tone increment per cycle
3-rd	- cycle duration (msec)
4-th	- number of cycles

Example:

SoundOf	_Chat_	_4_	_3500_	_100_	_50_	_1_
	case	repetition number	start tone (Hz)	tone increment(Hz)	cycle duration(ms)	number of cycles

Variable Sound in file T-mail.Ctl permits mask defined sound effects. The value YES corresponds 1FFH (all sounds permitted), value NO - 000 (sounds not permitted at all).

Example:

Sound 181
; permitted ONLY 'Tick', 'Connect' and 'Error' sounds

32. Color setup

If You not satisfied the colorful palette, used in T-mail as default or You use monochrome monitor, You can use T-Color utility for tune colors. Palette will recorded in file T-mail.exe. For set monochrome palette, it is necessary to start:

T-color Mono

For restore palette to default:

T-color Default

For set you own palette:

T-Color Custom

33. Command line options

    -L<file>   set alternative log-filename (instead T-mail.log)

-I	force T-mail ignore executed Poll, RePack, Exec and run it's again.
-S	switch off modem lights on screen (recommended, if you using computer IBM PC 4,77MHz :)or non-standard COM port addresses.
-D1	short log-file recording.
-TT	run built-in terminal immediately
-T[<n>]	set number of internal buffer items for queue stack. Default value 60. If parameter -T given without n then it assumed 5.
-Nn	Set task number to n

34. Errorlevels.

first 10 errorlevels, which can return T-mail reserved for some cases. They define what caused shutdown:

0	Was found file defined by Flag_Exit variable;
1	Reserved;
2	Configuration file T-mail.ctl not found or not enough memory for all variables;
3	Not enough free disk space (less 32 Kb)
4	Reserved;
5	Can not initialize modem;
6	Reserved;
7	Can not open FOSSIL driver;
8	Reserved;

9	Reserved;
10	Pressed Alt-X key (user break).

* notes: if during session while receiving file T-Mail define that insufficient free disk space, it will exit with errorlevel 3.

35. Thanks

Thanks to colleagues, which help me wrote this program T-mail, also for testing and debugging. Many ideas I get from discussions, in some FidoNet echo conferences. The collective experience of system operators on use FrontDoor, D'Bridge and BinkleyTerm has made possible appearance of T-mail.

Personal thanks:

Osckar Izenberg, Vadim Belman, Michael Bravo, Anton Getmanskiy, Alexey Dmitriev, Michael Drozdov, Dmitry Zavalishin, Andrew Ivanov, Oleg Karpenko, Shota Kasradze, Alex Korchmar, Konstantin Kuznetsov, Kiril Mendelev, Ilia Mikhailov, Vladimir Nikitin, Slava Olhovchenkov, Sergey Ohapkin, Pavel Pryazshintsev, Denis Saveliev, Michael Savchenko, Alexey Saminsky, Anatoly Skoblov, Dmitry Sudak, Petr Suchkov, Sergey Terehov, Alexey Farenbruh, Andrew Fridman, Vladimir Shalyapin, Andrew Yakovlev

Specific thanks:

Anton Getmanskiy - for screen design etc.
Alexey Dmitriev   - for FAX fonts design
Ludmila Elkina   - for editing this documentation
Alexey Saminsky   - for help with wrote nodelist compiler
Sergey Terehov   - for library for access file system
Andrew Fridman   - for hard testing and etc.

As well as many another, who was included in testing process necessarily :))

T-mail was compiled and debugged with Borland v2.0. All source texts are written in integrated BC 2.0 environment. All codes exclude SPAWNO procedures are written and debugged by author. Moreover are not used any kind of compiler libraries and additional modules.

This product uses the SPAWNO routines by Ralph Brown to minimize memory use while shelling to DOS and running other programs.

36. How you can get commercial T-mail version

1) In the event that You do not belong to non commercial users, as stipulate by rules, which you can read at beginning of document or You want to be taken advantage of additional features of commercial version, You must become registered T-mail user. If You have purchased T-mail at negotiator, You must fill in registration form contained in file order.frm and sent it to address 2:5030/100@fidonet After that You will receive from negotiator letter and personal key for T-mail.

2) If You want buy T-mail directly at author, please download from 2:5030/100 (request file TINFO) T-mail purchasing condition. After payment You must execute first items

37. Standards and documents

1. FTS-0001   A Basic FidoNet(r) Technical Standard Revision 15 Randy Bush, Pacific

Systems Group August 30, 1990

2. FTS-0005   The Distribution Nodelist Original by Ben Baker, 7:44/76@AlterNet
                        Amended by Rick Moore, 1:115/333@FidoNet February 5, 1989

3. FSC-0008   Fundamentals of FOSSIL implementation and use Draft Version 4
                        August 10, 1987 Vincent E. Perriello, VEP Software

4. FSC-0009   Nodelist Flag Draft Document Primary Author: Ray Gwinn Secondary
                        Author: David Dodell Version 1 (11-15-87)

5. FSC-0020   Alternate Nodelist Flag Proposal by Marshall Presnell, (109/639.106)
                        November 13, 1987

6. FSC-0025   AVATAR Advanced Video Attribute Terminal Assembler and
                                     Recreator George A. Stanislav, 129/39

7. FSC-0041   MSGID / REPLY A proposal for unique message identifiers and reply
                        chain linkage Jim Nutt, 1:114/30@fidonet

8. FSC-0046   A Product Identifier For FidoNet Message Handlers Draft II Joaquim
                        Homrighausen, 3:632/308@fidonet

9. FSC-0056   EMSI/IEMSI Protocol Definitions Joaquim H. Homrighausen, May 3,
                        1991

38. Trademarks

Fido, FidoNet   is a trademark of Tom Jennings and Fido Software

MS/DOS   is a trademark of Microsoft

PC/DOS   is a trademark of International Business Machines

Borland C++   is a trademark of Borland International

DesqView	is a trademark of Quarterdeck inc.
Remote Access	is a trademark of Continental Software
Maximus	is a trademark of Scott J. Dudley
FrontDoor	is a trademark of Joachim Homrichhausen
D'Bridge	is a trademark of Chris Irwin
BinkleyTerm	is a trademark of Bit Bucket Software Co.
Hayes	is a trademark of Hayes Microcomputer Products

39. Conclusion.

Certainly, 100%-bug-free products not exists naturally T-mail also contain some errors. However, I should hope that not very hard ones. For support T-mail is created echoconference T-mail.ru, where you can receive consultation and/or to state remarks and wishes.