User Guide AUTODRM

17 June 1998

This users guide consists of three parts:

– Part 1 is about electronic mail to and from the AutoDRM
– Part 2 explains the complete command set understood by AutoDRM
– Part 3 gives illustrative examples of request mails in both the 'old' and new GSE2.0 format (this part is especially for those who do not want to read the whole text!).

1) Sending and receiving electronic mail from AutoDRM

In order to obtain data from the Swiss Seismological Service, you simply send an electronic request mail to the Automatic Data Request Manager (AutoDRM):

E-mail address of the AUTODRM:

* on Internet   : AUTODRM@SEISMO.IFG.ETHZ.CH

The request e-mail must contain commands (starting at column 1), depending on what you would like to receive.

Minimum requirements are:
* The first line must start with : BEGIN
* Any line in between starts with: EMAIL emailaddress
* The last line starts with   : STOP

where `emailaddress` is your e-mail address.

The return address (`emailaddress`) you submit depends, whether the
AUTODRM should send the response to you via Internet or another net:
* via Internet   enter: EMAIL user@host.domain
* via Bitnet   enter: EMAIL user@host.BITNET

NOTE: If you are not sure how your return address should look like for our machine, simply send a mail to the AutoDRM with the text 'HELP'; this text may be either in the subject or in the body of the request-mail. The AutoDRM will then send the correct return address back to you!

* The response of the AutoDRM is sent to you via electronic mail. For requests which result in large responses (> ~ 100 kilobytes), you must specify an option (FTP): If this option is set, AutoDRM sends the data automatically via FTP to you, OR, if you prefer, the response is stored at our computer and you only get a short e-mail, providing you with the filename of the response and a detailed description on how you may transfer the response file by yourself to your computer using FTP (File Transfer Protocol). A more detailed description about this option can be found in part 2 of this users guide.

* Precautions
In order to avoid endless loops and other inconvenient things, no response mails are sent to requestors with the name POSTMASTER, MAILER-DAEMON or AUTODRM. Furthermore, an iden-

tical request from the same user is not processed if the second request arrives within the same 10 minutes.

2) Description of the commands that are understood by AutoDRM

BEGIN   First line in every request to AutoDRM.
This command will cause the AutoDRM to respond in the 'old' AutoDRM-language. However, AutoDRM understands both request commands in the old and the new (GSE2.0) format.

BEGIN GSE2.0   First line in a GSE2.0-request.
This command causes this AutoDRM to respond in the 'GSE2.0-AutoDRM-language'. However, AutoDRM understands both request commands in the old and the new (GSE2.0) format.

MSG_TYPE request   Should be the second line of a request,
if user wants to follow GSE2.0 formats. This line is optional on *this* AutoDRM but not at others (as e.g. the GSETT-3 IDC).

MSG_ID your_msg_id source_id   Third line of a request message,
if user wants to follow GSE2.0 formats. The message_ID of the sender; may be up to 20 characters long. This message_id and the source_id will appear as the reference_id (REF_ID) in the response! The souce_id's are specified in the GSE2.0 documentation (max. 7chars) This line is optional on *this* AutoDRM but not at others (as e.g. the GSETT-3 IDC).

E-MAIL email@address.of.the.user   E-Mail address where response should be sent to.

E_MAIL email@address.of.the.use   same as E-MAIL command

EMAIL email@address.of.the.user   same as E-MAIL command

GUIDE   Send the information (User's Guide) printed
here.

INFOR   Same as command GUIDE.

HELP   Same as command GUIDE.

FTP email@address.of.the.user   Instead of the 'E-MAIL' command: Send only
short note via e-mail to the requestor and store the response locally on ftp-directory. (--> This is the new GSE2.0 format)

FTP filename   Note that command 'FTP' has two meanings,
depending whether the request is in the 'old' format or in GSE2.0 format (GSE2.0 format: see above). This command sets the ftp option. If you also give your internet-address (see command INTER, below), the response will be automatically transferred to you via FTP. It is assumed you have an anonymous ftp-account (user=ftp, password=ftp). Your 'filename' also may contain a path and should point to a directory/file with appropriate write-access (Example: FTP pub/response.fil). You will get a short note with the output of the FTP-command via e-mail. If you do NOT give your internet-address, the response will be archived on a special file; however, because there may already exist a file with your suggested name 'filename', AutoDRM will recognize this and give a unique name to the file. Only a short mail is sent to the user. This mail contains the filename of the archived response file and a description on how to transfer the file to the user's computer using FTP (File Transfer Protocol) via TCP/IP. (--> This is the old AutoDRM format)

FTP   Basically the same as FTP, but AutoDRM will choose a filename for you (because the filename is missing). (--> This is the old AutoDRM format)

INTER IP_number   If the option FTP is set, this command tells AutoDRM to automatically transfer the response to the FTP-account at the internet-address given here as 'IP_number'. This address should be given in the numerical form as in the /etc/hosts file on UNIX-machines (Example: INTER 129.132.53.4) (--> This is the old AutoDRM format)

TIME [StartDateTime] TO [EndDateTime]   Definition of Start- and End-DateTime Format: 1994/02/24 16:23:50.20 If EndDateTime is omitted, the current DateTime is assumed. Instead of the TIME command you may also use the DATE1 and DATE2 commands!

DATE1 yyyymmddhhmm   Define start of the time interval
('yyyy': year, 'mm': month, 'dd': day, 'hh': hour, 'mm': minute; Example: 24 Feb 1992 15:46 is: DATE1 199202241546).

DATE2 yyyymmddhhmm   Define end of the time interval
('yyyy': year, 'mm': month, 'dd': day, 'hh': hour, 'mm': minute; Example: 24 Feb 1992 15:46 is: DATE2 199202241546).

STA_LIST ABC [,DEFG] [,HIJK]   Definition of stations desired
(multiple station codes must be separated by commas). No default.

CHAN_LIST SHZ [,SHN] [,SLZ]   Definition of channels desired (multiple channel IDs must be separated by commas). Default: *Z

AUX_LIST [aux1] [,aux2]   Definition of 'auxiliary' ID's
(multiple auxiliary IDs must be separated by commas).

WAVEFORM GSE2.0   Get waveforms for specified Time/Channels
Waveforms are supplied from our continous recordings - if no continous data is available, the event-file archive is searched for data.

WAVEF stn   Similar to command WAVEFORM GSE2.0,
but no STA_LIST is required (station stn' is defined on the command line). Valid station names may be obtained using the command SLIST (see there). Multiple lines with this command (for additional stations) are allowed. This command must be proceeded by either the command TIME or the commands DATE1 and DATE2.

STATION GSE2.0   Get station-info for specified stations
(specifiy by using STA_LIST and CHAN_LIST environment commands).

CHANNEL GSE2.0   Get channel-info for specified channels (specifiy by using STA_LIST and CHAN_LIST environment commands).

RESPONSE GSE2.0   Get response-data (calibration) of the
specified stations/channels (specifiy by using STA_LIST and CHAN_LIST environment commands).

BULLETIN GSE2.0   Get bulletin-data for the specified IME environment.

ORIGIN GSE2.0

Get origin-data for the specified TIME environment.

ARRIVAL GSE2.0

Get arrival-data for the specified TIME environment.

CALIB stn

Similar to command RESPONSE GSE2.0, but but no STA_LIST is required (station stn' is defined on the command line). The calibration is sent as poles and zeros (PAZ) plus a scale factor and allows you, to deconvolute the received waveform into displacement. If a DATE1 command is received, then the transfer function for this date is sent; otherwise the transfer function for the current date is used (Note: At the Swiss Seismological Service we keep track of any changes in the transfer functions with respect of time). Multiple lines with this command (for additional stations) are allowed.

OUTAGE GSE2.0

Get outage-info on specified channels (TIME and STA_LIST environment required).

TITLE your subject

The response mail returned to you will have the subject you specify here; if not specified, a default subject is used (Swiss AUTO_DRM Response).

SUBJE your subject

Same as command TITLE .

DETEC

Send a list of all detections (and locations, if the event was located) made within the specified time interval. (For each detection we store 180 seconds of data of all channels.) This command must be proceeded by either the command TIME or the commands DATE1 and DATE2.

AMI A

Send a list of the most recent locations of the 'Alert Message Informations' received. Locations possibly belonging to same event are grouped together. Optionally a time interval (TIME or DATE1 and DATE2) may be specified to filter the output. If no time interval is specified, the first 100 lines are sent.

SOURC CODECO

Send the FORTRAN source code of program CODECO, which allows the conversion between various GSE-formats. The program contains the compression and decompression routines used by the GSE (Group of Scientific Experts) at the CD (Conference on Disarmament, Geneva). Using this program makes it easy to read and decompress the data files received from the AUTODRM. Attention: GSE2.0 format is supported but has not yet been fully tested (please note, that the information contained in the waveform-headers of the old GSE- and the new GSE2.0 format is not the same and therefore some information might be either lost or be unknown when converting between the 2 GSE-formats). Compression and decompression routines are working in both formats and have been tested.

PPICK stn

Send the P-picks of station 'stn' for all the detected events within a time interval. The P-picks (arrival times) are marked as 'manual' or 'automatic' picks. This command must be proceeded by either the command TIME or the commands DATE1 and DATE2.

AVAIL

Send a list of detections (without locations) of which (within the specified time interval) waveform data is available. This command must be proceeded by either the command TIME or the commands DATE1 and DATE2.

SLIST

Send a list of stations for which waveforms and/or calibration data is available. The station list also contains the coordinates of the stations.

STOP	This must be the last line of any request

3) Examples of AUTODRM request mails one may send to AUTODRM@SEISMO.IFG.ETHZ.CH

Example 1

Many users send this kind of mail regularly (usually on a daily basis) to us
(of course without the 'GUIDE' command).

Command line:	Meaning:
BEGIN	Start of a request
GUIDE	Send the information printed here
AMI A	Send a list of the associated 'Alert Messages'
EMAIL was@gsehub.css.gov	E-mail address where output should be sent to
STOP	End of a request

Example 2

The FTP and INTER commands in this example are not required; without them you
will recieve the full response via e-mail.

Command line:	Meaning:
BEGIN	Start of a new request
DATE1 199307180055	Start of time interval: 1993Jul18 00:55 GMT
DATE2 199307180056	End of time interval: 1993Jul18 00:56 GMT
DETEC	Send the detections made within time interval
PPICK OSS	\ Send all available P-picks of the stations
PPICK SLE	/ OSS and SLE for the specified time interval
FTP pub/incoming/out.fil	File-descr. to where response should be FTP'ed
INTER 192.12.25.18	Internet-address of the user's computer
EMAIL was@gsehub.css.gov	E-mail address where output should be sent to
STOP	End of the request

Example 3:

This sample mail shows how to retrieve waveform and calibration data.

Command line:	Meaning:
BEGIN	Start of a new request
DATE1 199307190800	Start of time interval: 1993Jul19 08:00 GMT
DATE2 199307192030	End of time interval : 1993Jul19 20:30 GMT
WAVEF OSS	\ Send all waveforms of the stations OSS and
WAVEF SLE	/ SLE recorded within the time interval
CALIB OSS	Send calibration data of station OSS
EMAIL was@gsehub.css.gov	E-mail address where output should be sent to
STOP	End of the request

Example 4:

this sample mail shows how to request data in GSE2.0 format.

Command-line sent to AutoDRM:	Meaning:
BEGIN GSE2.0	Begin of message
MSG_TYPE request	This is a request
MSG_ID your_specific_ID DEU_NDC	Your ID
TIME 1994/12/18 22:54:4.0 TO 1994/12/18 22:56:12.0 Define Start/End Time	
STA_LIST APL	Define station(s)
CHAN_LIST SHZ, SLZ	Define channel(s)
WAVEFORM GSE2.0	You want waveforms
STATION GSE2.0	Station-info needed
CHANNEL GSE2.0	Channel-info needed
RESPONSE GSE2.0	Send calibration-info
OUTAGE GSE2.0	Send outage info
E-MAIL fish@sdac.bgr.hannover.de	Your e-mail address
STOP	End of request

Instead of 'E-MAIL your@mail.address' you may also specify FTP your@mail.address; then you recieve only a short message and the actual response is stored locally (to be retrieved later via FTP).

Note: If 'BEGIN GSE2.0' is specified, the format-options of the commands WAVEFORM, STA-TION, CHANNEL, RESPONSE, and OUTAGE default to GSE2.0 and therefore the format-specification 'GSE2.0' is optional!

NOTE: - All command lines must start on column 1 - The BEGIN command is absolutely neces-sary (unless you send the HELP command)! - The commands WAVEF, DETEC, AVAIL, and PPICK m u s t be preceeded by either the TIME or the DATE1 and DATE2 commands. - AUTODRM response mails are limited to a size of approximately 100 kilobytes UNLESS the FTP-option is used. If your request would produce a larger response mail, the number of waveforms sent will automatically be reduced and an error message will appear. Therefore: use the FTP-option or SPLIT your requests (see below)!

– A request mail may contain several requests; each request must start with the command BEGIN, must end with the command STOP and should have the command EMAIL with the e-mail address. The response of each request is sent by a separate e-mail in order to keep the message size small.

– Only one time interval (DATE1 & DATE2) per request is allowed, if you use the old 'WAVEF stn'; if you use the STA_LIST and TIME environment, followed by the WAVEFORM command, you may use multiple TIME intervals!

– The presence of a SUBJECT in the incoming request mail is not necessary. However, if there is a subject, it is ignored.

The command set will be extended in the near future. It is recommended to use the command GUIDE from time to time in order to be up to date with the newest implementations of the Swiss AutoDRM.

Zurich, 17 Jun 1998 / uk