

APPENDIX 6

The following listing shows the output of dgate -? (always in progress) :

DGATE: UCDCMC/NKI DICOM server thread and PACS utility application 1.4.17b

Usage:

```
(1) DGATE <-!#|-v|-u#|-^#>      Report as in dicom.ini|stdout|UDP|File(#=port)
    [-p#|-qIP|-b]                Set port|Set target IP|run debug 1-thread mode
    [-wDIR]                       Set the working directory for dgate(ini,dic,...)
    [-i|-r|-arDEVICE]            Init|Init/regenerate DB|Regen single device
    [-d|-m|-k]                   List (-d) devices (-m) AE map (-k) DICOM.SQL
    [-t|-o]                      Test console|Test database
    [-sOpt|-esap d u p]          Create ODBC source (WIN32), database with SAPw
    [-nd|-nc#|-jd|-jc#]          NKI de-/compress#|JPEG de-/compress# FILE
    [-j*##|-j-##FILE]           Recompress FILE to ##
    [-as#,-N|-amFROM,TO]         Select#KB to archive of MAGN|move device data
    [-au|-aeFROM,TO]            Undo select for archiving|rename device
    [-av|-atDEVICE]             Verify mirror disk|Test read files for DEVICE
    [-abJUKEBOX1.2,N]           Make cacheset to burn JUKEBOX1,CD2 from MAGN
    [-acJUKEBOX1.2]             Verify JUKEBOX1,CD2 against cacheset
    [-adJUKEBOX1.2]             Verify and delete cacheset for JUKEBOX1, CD2
    [-f<p|t|s|i>ID]             Delete DB for Patient, sTudy, Series, Image
    [-f<e|d|z>file]             Enter/Delete DB of file, Zap server file
    [-faFILE<,ID>]              Add file to server<optionally change PATID>
    [-zID]                      Delete (zap) patient
    [-frDEVICE,DIR]             Regen single directory DIR on DEVICE
    [-f<c|k>PATID,file]          Change/Kopy PATID of file (irreversible/once)
    [-f?file|-fu|-c#]           get UID of file|Make new UID|UID helper(0..99)
    [-ff#]                      Delete old patients until #MB free
    [-gSERVER,DATE]             grab images from SERVER of date not on here
                                Otherwise: run as threaded server, port=1111

(2) DGATE FileMapping           Run server child; shared memory has socket#

(3) DGATE <-pPORT> <-qIP> --command:arguments
                                Send command to (this or other) running server
                                (works directly - use with care)

Delete options:
--deleteimagefile:file          Delete given image file from server
--deletepatient:patid           Delete given patient from server
--deletestudy:patid:studyuid     Delete given study from server
--deletestudies:date(range)     Delete studies from server on date
--deleteseries:patid:seriesuid  Delete given series from server
--deleteimagefromdb:file        Delete given file from db only
--deletesopfromdb:pat,study,series,sop Delete specified image from db only

DICOM move options:
--movepatient:source,dest,patid  Move patient, source e.g. (local)
--movestudy:source,dest,patid:studyuid Move study, patid: optional
--moveaccession:source,dest,patid:acc Move by Accession#, patid: optional
--movestudies:source,dest,date(range) Move studies on date
--moveseries:src,dst,patid:seruid,stuid Move series patid: optional

Modification of dicom objects:
--modifypatid:patid,file        Change patid of given file
--anonymize:patid,file          Anonymize given file
--modifystudy:p,s,script        Change items in patient or study
--modifyseries:p,s,script        Change items in series
--modifyimage:file,script        Change items in file
--mergestudy:uid,uid,..         Start merging studies with given studyuids
--mergestudyfile:file           Use to process all files to merge
--mergeseries:uid,uid,..        Start merging series with given seriesuids
--mergeseriesfile:file          Use to process all files to merge
--attachanytopatient:any,sample Modify uids to attach any object to
--attachanytostudy:any,sample   patient|study|series in sample file
--attachanytoseries:any,sample  Do not attach same at different levels
--attachrtplantortstruct:plan,struc Attach rtplan to rtstruct
```

Maintenance options:

```

--initializetables:      Clear and create database
--initializetables:1    Clear and create database without indices
--initializetables:2    Clear and create worklist database
--regen:                Re-generate entire database
--regendev:device       Re-generate database for single device
--regendir:device,dir   Re-generate database for single directory
--regenfile:file        Re-enter given file in database
--makespace:#           Delete old patients to make #MB space
--quit:                 Stop the server
--safequit:             Stop the server when not active

```

Logging options:

```

--debuglog_on:file/port Start debug logging
--log_on:file/port/pipe Start normal logging
--debuglevel:#          Set debug logging level
--display_status:file   Display server status
--status_string:file    Display status string of submit operation
--checklargestmalloc:   Estimates DICOM object size limit
--get_freestore:dev,fmt Report free #Mb on device
--testmode:#            Append # to dicom filenames
--echo:AE,file          Echo server; show response

```

Configuration options:

```

--get_param:name,fmt    Read any parameter from DICOM.INI
--get_ini_param:name,fmt Read any parameter from DICOM.INI
--get_ini_num:index,fmt List any entry from DICOM.INI
--get_ini:fmt           List all entries from DICOM.INI
--put_param:name,value  Write any parameter to DICOM.INI
--delete_param:name     Delete any parameter from DICOM.INI
--read_ini:             Re-read all parameters from DICOM.INI
--get_amap:index,fmt    List any entry from ACRNEMA.MAP
--get_amaps:fmt         List all entries from ACRNEMA.MAP
--put_amap:i,AE,ip,p#,cmp Write entry in memory for ACRNEMA.MAP
--delete_amap:index     Delete entry in memory for ACRNEMA.MAP
--write_amap:           Write ACRNEMA.MAP from memory to disk
--read_amap:           Re-read ACRNEMA.MAP from disk to memory
--get_sop:index,fmt     List any accepted service class UID
--put_sop:index,UID,name Write/add accepted service class UID
--delete_sop:index      Delete accepted service class UID
--get_transfer:index,fmt List any accepted transfer syntax
--put_transfer:in,UID,nam Write/add accepted transfer syntax
--delete_transfer:index Delete accepted transfer syntax
--get_application:idx,fmt List any accepted application UID
--put_application:i,U,n Write/add accepted application UID
--delete_application:inde Delete accepted application UID
--get_localae:index,fmt List any accepted local AE title
--put_localae:in,AE,name Write/add accepted local AE title
--delete_localae:index Delete accepted local AE title
--get_remoteae:index,fmt List any accepted remote AE title
--put_remoteae:in,AE,name Write/add accepted remote AE title
--delete_remoteae:index Delete accepted remote AE title
--get_dic:index,fmt     List any dicom dictionary item
--get_sqldef:level,in,fmt List any database field definition

```

Communication options:

```

--addimagefile:file,patid Copy file into server, optionally new patid
--addlocalfile:file,patid Copy local file into server, opt. new patid
--loadanddeletedir:dir,patid Load folder and delete its contents
--loadhl7:file            Load HL7 data into worklist
--dump_header:filein,fileout Create header dump of file
--forward:file,mode,server Send file with compr. mode to server
--grabimagesfromserver:AE,date Update this server from other
--prefetch:patientid      Prefetch all images for improved speed
--browsepatient:searchstring Select patient in windows GUI
--submit:p,s,s,s,target,pw,scr Immediate sftp submit of data
--submit2:p,s,s,s,target,c,scr Immediate submit with command line c
--export:p,st,ser,sop,file,scr Immediate process and zip/7z data
--scheduletransfer:options Background sftp transfer as above

```

Test options:

```

--genuid:                Generate an UID
--changeuid:UID           Give new UID as generated now or before
--changeuidback:UID       Give old UID from one generated above
--checksum:string         Give checksum of string

```

```
--testcompress:file      Enter file in server with many compressions
--clonedb:AE             Clone db from server for testing
```

Conversion options:

```
--convert_to_gif:file,size,out,l/w/f Downsize and convert to mono GIF
--convert_to_bmp:file,size,out,l/w/f Downsize and convert to color BMP
--convert_to_jpg:file,size,out,l/w/f Downsize and convert to color JPG
--convert_to_dicom:file,size,comp,f Downsize/compress/frame DICOM
--extract_frames:file,out,first,last Select frames of DICOM file
--count_frames:file      report # frames in DICOM file
--uncompress:file,out    Uncompress DICOM
--wadorequest:parameters Internal WADO server
```

Database options:

```
--query:table|fields|where|fmt|file Arbitrary query output to file
--query2:tab|fld|whe|fmt|max|file   Same but limit output rows to max
--patientfinder:srv|str|fmt|file    List patients on server
--studyfinder:srv|str|fmt|file      List studies on server
--seriesfinder:srv|str|fmt|file     List series on server
--imagefinder:srv|str|fmt|file      List images on server
--serieslister:srv|pat|stu|fmt|file List series in a study
--imagelister:srv|pat|ser|fmt|file  List (local) files in a series
--extract:PatientID = 'id'         Extract all dbase tables to X..
--extract:                          Extract patient dbase table to XA..
--addrecord:table|flds|values       Append record, values must be in ''
--deleterecord:table,where          Delete record from table
```

For DbaseIII without ODBC:

```
--packdbf:                  Pack database, recreate memory index
--indexdbf:                 Re-create memory index
```

Archival options:

```
--renamedevice:from,to      Rename device in database
--verifymirrordisk:device    Verify mirror disk for selected device
--testimages:device          Test read all images on device
--movedatatodevice:to,from   Move patients from one device to another

--moveseriestodevice:to,from Move series from one device to another
--selectlruforarchival:kb,device Step 1 for archival: to device.Archival
--selectseriestomove:device,age,kb Step 1 for archival: to device.Archival
--preparebunchforburning:to,from Step 2 for archival: moves to cache
--deletebunchafterburning:deviceto Step 3 for archival: deletes from cache
--comparebunchafterburning:deviceto Part step 3 - compare jukebox to cache
--restoremagflags:           Undo archival sofar
```

Scripting options:

```
--lua:chunk                Run lua chunk in server, wait to finish
--lua:chunk                 Run lua chunk in server, retn immediate
--dolua:chunk               Run lua chunk in this dgate instance
--dolua:filename            Run lua file in this dgate instance
```