

**SPACE APPLICATION NOTE
ABOUT
MAKEGLN TOOLS
SOURCE FILES**

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1. INTRODUCTION

This report describes the files used for making one of the *makegln* tools. The tools are used for preprocessing the gln-data for the *space* extractor.

It are the files of the following four tools:

- *makegln*
- *makedela*
- *makemesh*
- *makesize*

This work is carried out for the SPACE project.

2. REFERENCES

- [1] N.P. van der Meijs, A.J. van Genderen, "Space User's Manual", report ET-NT 92.21, 1999.
- [2] N.P. van der Meijs, A.J. van Genderen, "Space Tutorial", report ET-NT 92.22, 1999.

APPENDIX A -- Compilation flags for HP700

```

-----
CFLAGS= -O
        -I/usr/include/X11R5 -I/usr/include/Motif1.2
        -I/usr/include/X11R5mit -I/usr/local/include
        -W p,-H1000000 +DA1.0 +DS1.0 -DLICENSE -O -DANNOTATE
        -I. -I/u/25/25/space2/Shadow/ddtc/src/eseLib
        -DSYSV
        -I/u/25/25/space2/Shadow/ddtc/lib/include
        -I..

LDFLAGS=-Wl,-a,archive
        -L/usr/lib/X11R5 -L/usr/lib/Motif1.2
        -L/usr/lib/X11R5mit -L/usr/local/lib -L/usr/local/lib/X11R5
        $(CFLAGS)
        $(OBJECTS)
        ../auxil/auxil.a
        /u/25/25/space2/Shadow/ddtc/lib/liblayfmt.a
        /u/25/25/space2/Shadow/ddtc/lib/libddm.a
        -ll -lm -lbsdipc -lBSD

MFLAGS= -bn
        OCFLAGS="-I/usr/include/X11R5 -I/usr/include/Motif1.2
        -I/usr/include/X11R5mit -I/usr/local/include
        -W p,-H1000000 +DA1.0 +DS1.0 -DLICENSE -O -DANNOTATE
        -I. -I/u/25/25/space2/Shadow/ddtc/src/eseLib"
        CC="cc"
        CACDSRCHOME=/u/25/25/space2/Shadow/ddtc
        ARCHITECTURE=ddtc
        ICDPATH=/u/25/25/space2/Shadow/ddtc
        OSTYPE=SYSV
        LDFLAGS="-Wl,-a,archive -L/usr/lib/X11R5 -L/usr/lib/Motif1.2
        -L/usr/lib/X11R5mit -L/usr/local/lib -L/usr/local/lib/X11R5"
        CACDCONFIG=/u/25/25/space2/Shadow/ddtc/CONFIG/M.ddtc
        OLIBS="-ll -lm -lbsdipc -lBSD"

-----
% make -n makegln

D=src/space/auxil; test -d $D || exit 0; cd $D; echo ===== $D ===== \
make $(MFLAGS) install
===== src/space/auxil =====

D=src/space/makegln; test -d $D || exit 0; cd $D; echo ===== $D ===== \
make $(MFLAGS) LIBESE="/u/25/25/space2/Shadow/ddtc/src/eseLib/libese.a" install
===== src/space/makegln =====

```

APPENDIX B -- Files for the tools

```
-----
make -n makegln
-----
```

```
    SRC/regress.sh (Shell procedures for regression testing)
    SRC/config.h
    SRC/makegln.h
    SRC/proto.h
```

```
cc $(CFLAGS) -DPACK -c input.c
cc $(CFLAGS) -DPACK -c edge.c
cc $(CFLAGS) -DPACK -c main.c
cc $(CFLAGS) -DPACK -c scan.c
cc $(CFLAGS) -DPACK -c output.c
cc $(CFLAGS) -DPACK -c slant.c
cc $(CFLAGS) -DPACK -c gln.c
cc $(CFLAGS) -DPACK -c sort.c
cc $(CFLAGS) -DPACK -c qsort.c
cc $(CFLAGS) -DPACK -c pqueue.c
cc $(LDFLAGS) -o makegln
```

```
*) ../makegln/*.c (SRC)
-----
```

```
make -n makesize
-----
```

```
    SRC: extern.h, makesize.h, mkglnexp.h, rscan.h
    ../makegln/config.h
    ../makegln/makegln.h
    ../makegln/proto.h
```

```
1) cc -DMAKESIZE $(CFLAGS) -DPACK -c redge.c
1) cc -DMAKESIZE $(CFLAGS) -DPACK -c rscan.c
1) cc -DMAKESIZE $(CFLAGS) -DPACK -c tile.c
1) cc -DMAKESIZE $(CFLAGS) -DPACK -c stubs.c
1) cc -DMAKESIZE $(CFLAGS) -DPACK -c hier.c
1) cc -DMAKESIZE $(CFLAGS) -DPACK -c rslant.c
1) cc -DMAKESIZE $(CFLAGS) -DPACK -c input.c
1) cc -DMAKESIZE $(CFLAGS) -DPACK -c update.c
1) cc -DMAKESIZE $(CFLAGS) -DPACK -c makesize.c
1) cc -DMAKESIZE $(CFLAGS) -DPACK -c main.c
1) cc -DMAKESIZE $(CFLAGS) -DPACK -c extract.c
2) cc -DMAKESIZE $(CFLAGS) -DPACK -c gettech.c
2) cc -DMAKESIZE $(CFLAGS) -DPACK -c recog.c
   cc -DMAKESIZE $(CFLAGS) -DPACK -c sort.c
   cc -DMAKESIZE $(CFLAGS) -DPACK -c scan.c
   cc -DMAKESIZE $(CFLAGS) -DPACK -c gln.c
   cc -DMAKESIZE $(CFLAGS) -DPACK -c edge.c
   cc -DMAKESIZE $(CFLAGS) -DPACK -c output.c
   cc -DMAKESIZE $(CFLAGS) -DPACK -c pqueue.c
   cc -DMAKESIZE $(CFLAGS) -DPACK -c qsort.c
   cc -DMAKESIZE $(CFLAGS) -DPACK -c slant.c
cc -DMAKESIZE $(LDFLAGS) -o makesize
```

```

1) ../makesize/*.c (SRC)
2) ../extract/*.c
*) ../makegln/*.c
-----

make -n makedela
-----
SRC/dproto.h
SRC/makedela.h
../makegln/config.h
../makegln/makegln.h
../makegln/proto.h

cc -DMAKEDELA $(CFLAGS) -c main.c
cc -DMAKEDELA $(CFLAGS) -c edge.c
cc -DMAKEDELA $(CFLAGS) -c slant.c
cc -DMAKEDELA $(CFLAGS) -c sort.c
cc -DMAKEDELA $(CFLAGS) -c qsort.c
cc -DMAKEDELA $(CFLAGS) -c pqueue.c
2) cc -DMAKEDELA $(CFLAGS) -c input.c
1) cc -DMAKEDELA $(CFLAGS) -c scan.c
1) cc -DMAKEDELA $(CFLAGS) -c output.c
cc -DMAKEDELA $(LDFLAGS) -o makedela

1) ../makedela/*.c (SRC)
2) ../makemesh/*.c
*) ../makegln/*.c
-----

make -n makemesh
-----
../makegln/config.h
../makegln/makegln.h
../makegln/proto.h

1) cc -DMAKEMESH $(CFLAGS) -c input.c
cc -DMAKEMESH $(CFLAGS) -c edge.c
cc -DMAKEMESH $(CFLAGS) -c main.c
cc -DMAKEMESH $(CFLAGS) -c scan.c
cc -DMAKEMESH $(CFLAGS) -c output.c
cc -DMAKEMESH $(CFLAGS) -c slant.c
1) cc -DMAKEMESH $(CFLAGS) -c gln.c
cc -DMAKEMESH $(CFLAGS) -c sort.c
cc -DMAKEMESH $(CFLAGS) -c qsort.c
cc -DMAKEMESH $(CFLAGS) -c pqueue.c
cc -DMAKEMESH $(LDFLAGS) -o makemesh

1) ../makemesh/*.c (SRC)
*) ../makegln/*.c
-----

```

Note that *makegln* and *makesize* use the `PACK` flag during compilation, but this is not more needed. There is no local read/write function which is using this define.

APPENDIX C -- Control flow of the tools

```

        info3 -> +-----+
        LC_bxx --> | makegln | --> LC_gln
        t_LC_bxx      +-----+

1)      info3 -> +-----+
        cont_aln --> | makedela | --> delaunay (for "substr/subcont.c")
                  +-----+ --> delgraph (for "X11/draw.c")
                  --> delaunay.pic

2)      info3 -> +-----+
        mesh_aln --> | makemesh | --> mesh_gln
                  +-----+

3)      info3 -> +-----+ -> info3
        LC_gln --> | makesize | --> resize.t
                  +-----+ --> makesize_gln --> LC_gln

1) Written by "extract/contedge.c".
2) Written by "extract/meshedge.c".
3) Written by "makegln".

```

Note that all the tools can use a temp. disk file for storage during sorting of the gln-edges. This disk file is possibly compressed.

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