

GRAS

GRASS 가 ,
GRASS ,
GRASS (grass4.1 grass5.0),

Display 1 - GRASS , Location, Mapset, Database

```
GRASS 4.1
LOCATION : leics_ _ _ _ _ ( list )
MAPSET : username_ _ _ _ ( Mapset)
DATABASE : /home/grass/grass4.1/data_ _ _ _ ( 가 )
<ESC>
<Ctrl-C>
```

Location,
Mapset, Database
<ESC> GRASS

Location
Leicestershire
Location 가 , leics ,

Mapset . GRASS Mapset
Location
가 ,
location mapset ,
(User name) .(PERMANENT)
location 가
)

DATABASE
<ESC> GRASS가

GRASS

d.mon start=x0 select=x0

C:

:

GIS

:

-

-

-

-

-

-

-

(aspect)

(Perspective)

, 3

Display 2

| GRASS | |
|--------------|----------------|
| g.region | d.frame |
| d.rast | r.slope.aspect |
| d.his | r.rescale |
| r.mapcalc | r.reclass |
| i.grey.scale | r.cost |
| r.drain | r.patch |
| d.colormode | d.erase |
| d.colors | d.3d |

Display 3

| | | |
|---------|---------------------|---|
| landcov | Land cover/land use | / |
| plant | Sewage Plant | |
| source | Sewage source | |
| topo | DEM | |

1 :

A B
 1/4 () 가
 2 'd.zoom' 가
 'g.region'
 (region)

: **g.region**
 :
 > 1 ()

North Edge **316000**
 West edge **444000** East edge **450000**
 South edge **310000**

GRID RESOLUTION

East-West **50**
 North-South **50**

<ESC>

가 120

<ENTER><ENTER>

d.frame - e

: 가 GIS
 가 . GRASS
 가 , 가 0,0
 , 가
 g.region

d.frame -e

가 (image, landcov)

2 :

source plant , d.rast (-o)

: d.rast image

A

가?

, 'r.color image color=grey'

d.rast -o source

d.rast -o plant

가? GRASS

'sites'

d.what.rast

B

Display 4

| | Easting | Northing |
|---------------|----------------|-----------------|
| Source | _____ | _____ |
| Plant | _____ | _____ |

3

:

()

가 . ,

가 .

, ,

. GRASS

가
(DEM)

(, aspect)

: r.slope.aspect elevation=topo aspect=asp1

: asp1 . (

1) 1 가 ,
0 .

d.rast asp1 .

가?

(*r.colors*) .

가 ?

r.colors asp1 color=aspect

: d.rast landcov

d.his h_map=landcov i_map=asp1

d.his landcov (hue) asp1 (intensity)

4 :

```

      . r.rescale r.mapcalc
      ( ° , degree) asp1
      . asp1
가
r.rescale
: r.rescale input=asp1 from=0,180 output=asp_ north to=1,1
1
10
: r.rescale input=asp1 from=182,360 output=asp_ south to 10,10
r.mapcalc
: r.mapcalc
:
mapcalc > asp_cost = asp_north+asp_south
<ENTER>
d.rast asp_cost
1 10 가
d.what.rast
:
1
가
10 , 10

```

landcov

: r.reclass

:

Enter name of data layer to be classified

>landcov

Enter name of NEW RECLASSIFIED map

>lan_cost

<ESC>

| LABEL | OLD VALUE | NEW VALUE |
|----------------|-----------|-----------|
| Industry() | 1 | 8 |
| Residential() | 2 | 8 |
| Quarry() | 3 | 1000 |
| Woodland() | 4 | 8 |
| Arable() | 5 | 4 |
| Pasture() | 6 | 1 |
| Scrub() | 7 | 1 |
| Water() | 8 | 1000 |

<ESC>

(1000)

<ENTER> 'Next Category'

end , <ESC> , 1000

()가

가

1

4

4

8

r.mapcalc

: r.mapcalc

:

mapcalc > cost=lan_cost+asp_cost

<ENTER>

d.rast

가

20

1000

GRASS

(

)

가

20

1000

1

'histogram equaise(

)'

가

: i.grey.scale

:

which layer needs a grey scale?

()

cost

<ENTER>

d.rast cost

(Histogram equalisation)

가

d.what.rast cost,landcov,asp1

7 : ' - '

(,) ' - '

r.buffer 가 ,

. GRASS r.cost ' - '

r.cost - (

source) . Display4

: r.cost input=cost coord=445775,310875 output=cost_dist

d.rast

:

) , ()

, 가 -

8 :

가 GRASS r.drain ()
() 가
' - ' cost_dist .

, 가 Display4

: r.drain input=cost_ dist coord=444525,313875 output=pipe line

d.rast pipeline

: pipeline GRASS가

r.drain

가

pipeline

가

가?

가?

```

pipeline
landcov

```

```

: r.reclass
:
Enter name of data layer to be classified
> pipeline
Enter name of NEW RECLASSIFIED map
> pipeline2
<ESC>

```

```

1 9

```

```

: r.patch pipeline2, landcov output=pipe_final
d.rast pipe_final

```

가

```

: d.colormode mode=float
d.erase
d.rast pipe_final
d.colors pipe_final

```

:

```

가 9 가 d
(Red) r
(green) (blue)
g b

```

, c

가

가

Q

```

, d.colormode mode=fixed

```

```

GRASS          가   3
DEM
3

```

: d.3d

: Enter raster file to be displayed.

>**pipe_ final**

Enter raster file to be used for elevation. z

>**topo**

Enter name of 3-D viewing options to be used.

<ENTER><ESC>

가

| | | |
|-------------------------------|----------------------|--------------|
| Eye Position:() | Run Y/N | y |
| 310000 <- Northing(y) | Erase color() | black |
| 444000 <- Easting(x) | Vertical Exag.() | 4 |
| 2500.0 <- Height(z) | Field of View() | 68.00 |
| | Lines only Y/N(가?) | n |
| Center of view:() | Line color () | Brown |
| 312000 <- Northing(y) | Line frequency () | 5 |
| 445800 <- Easting(x) | Resolution () | 50.00 |
| 0.0 <- Height(z) | Plot Zero Elvn (0) | n |
| | Box color | none |
| | Average elevs | y |

<ESC>

, 'Run Y/N'

n

<ESC>

<ENTER>

: GIS

. GIS

가

가

(1) d.3d
landuse
가
가?
가?
가
?

(2) 4 5 가 가
가

5 가 lancost 가
, alt_

| | |
|------------------------|-------------|
| Industry () | 8 |
| Residential () | 8 |
| Quarry () | 1000 |
| Woodland () | 4 |
| Arable () | 16 |
| Pasture () | 1 |
| Scrub () | 1 |
| Water () | 1000 |

6 , 7 , 8 , alt_cost alt_pipeline

pipeline alt_pipeline

가 , ' - '

:

```

. . . . . , g.list
. . . . . . PETMANENT
가 . . . . . mapset
. . . . . g.remove
. . . . . g.remove

```

: d.mon stop=x0

GRASS

: exit

: shall the mapset <username> be saved? 가?

>y

(n)

Do you wish to selectively remove date files ?

가 ?

>y

1. raster files ()

> 1

()

<ENTER><ENTER>

Good bye from GRASS ?

" ."