

## QGIS Application - Feature request #6894

### GRASS r.mapcalc cumbersome to use, issues on Windows

2012-12-18 09:56 AM - Pedro Venâncio

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------|
| <b>Status:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | In Progress      |                                      |
| <b>Priority:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | High             |                                      |
| <b>Assignee:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Victor Olaya     |                                      |
| <b>Category:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Processing/GRASS |                                      |
| <b>Pull Request or Patch Supplied:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No               | <b>Resolution:</b> fixed/implemented |
| <b>Easy fix?:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No               | <b>Copied to github as #:</b> 16019  |
| <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                                      |
| <p>Hi,</p> <p>I think it's very important to include GRASS r.mapcalc on Sextante. At this moment, is lacking on Sextante an advanced raster calculator, with the potential of r.mapcalc (with advanced operators and functions).</p> <p><a href="http://grass.osgeo.org/grass64/manuals/r.mapcalc.html">http://grass.osgeo.org/grass64/manuals/r.mapcalc.html</a></p> <p>Is there any limitation that prevents the inclusion of this tool? Right now it seems to me the biggest absence on Sextante.</p> <p>Thanks!</p> |                  |                                      |

#### History

##### #1 - 2012-12-18 10:04 AM - Victor Olaya

- Status changed from Open to Feedback

r.mapcalc takes the name of raster layers to use...which is a problem, since those names are temporary names, because layers have to be imported into the mapset. This could be changed, but will definitely take time.

The SAGA map calculator, which has the same functionality, takes the list of layers to be used, and then names them using a, b, c, d...etc, which is much easier to handle. The SAGA calculator should be working fine, so if you have time to try it, maybe you can get the functionality you need.

This is an important feature, and I will probably create a better interface for it soon, but relying on SAGA is a much safer bet (IMHO) than relying on GRASS for this. The GRASS mapset makes things much more difficult...

##### #2 - 2012-12-18 10:21 AM - Pedro Venâncio

Oh, now I understand Victor, it makes r.mapcalc very difficult to use.

So, Grid Calculator has all the functions of r.mapcalc (or most of them)? Is there any place where we can see the list of functions? In this case, it should be preferable to adopt Grid Calculator as the main Sextante raster calculator.

##### #3 - 2012-12-18 11:01 AM - Pedro Venâncio

Victor,

I think I've the answer for my question. The best source of information about Grid Calculator should be your great "A Gentle Introduction to SAGA GIS" - Chapter 7.5

<http://downloads.sourceforge.net/saga-gis/SagaManual.pdf>

- Addition (+)
- Subtraction ( - )
- Multiplication (\*)
- Division (/)
- Power (^)
- ln(x): returns natural logarithm of x. (but ln(e) will not return 1 !!!)
- sin(x): returns the sine of x. x must be in radians
- cos(x): returns the cosine of x. x must be in radians
- tan(x): returns the tangente of x. x must be in radians
- asin(x): returns the arcsine of x, in radians
- acos(x): returns the arccosine of x, in radians
- atan(x): returns the arctangent of x, in radians
- atan2(x,y): returns the arctangent y/x, in radians
- abs(x): return the absolute value of x. abs( - 5 )=5
- int(x): returns the integer part of x. int(5.4)=5
- mod(x,y): returns the modulus of x/y. mod(7,4)=3
- gt(x,y): true if x is greater than y
- lt(x,y): true if x is lower than y
- eq(x,y): true if x equals y. When using this function SAGA evaluates it in a per-cell basis. Therefore, eq(a,b) will not return 1 if grid a equals grid b. It will return 1 for those cells that have the same value in both grids, and zero otherwise.
- ifelse(condition, x, y) returns x if condition evaluates to true (condition=1) or y if it evaluates to false

It's a fairly comprehensive list, and from those functions that I regularly use, I'm just noting the lack of a round function:

- round(x): round x to nearest integer

Is there any other way to achieve the round function? We can always use: int((x+0.5))

Thanks!

#### #4 - 2013-04-10 08:55 AM - Markus Neteler

See also Feature #6372 - r.mapcalculator

#### #5 - 2013-10-16 04:32 PM - Pedro Venâncio

- *Status changed from Feedback to Closed*

Hi,

#6372 is now fixed and support r.mapcalc functions.

Thanks!

#### #6 - 2013-10-17 12:31 AM - Giovanni Manghi

- *Status changed from Closed to Open*

I will reopen this feature request because r.mapcalculator is limited to 6 inputs maps, to it would be anyway better to have also mapcalc, that anyway would require a special implementation as its logic is slightly different from the other common GRASS modules.

**#7 - 2013-10-17 11:36 AM - Pedro Venâncio**

Hi Giovanni,

I hope someone can find a solution, because this module is important and the limitation of r.mapcalculator to 6 input raster, makes its use very limited.

**#8 - 2014-04-17 07:13 AM - Paolo Cavallini**

I stress the importance of having GRASS mapcalc, as it is very flexible, and may be the only (easiest) way of doing proximity calculations.

**#9 - 2014-10-04 11:52 AM - Giovanni Manghi**

- Project changed from 78 to QGIS Application

- Category deleted (59)

**#10 - 2014-10-04 11:53 AM - Giovanni Manghi**

- Category set to Processing/GRASS

**#11 - 2015-04-26 11:17 AM - Giovanni Manghi**

Adding r.mapcalc becomes now paramount because in GRASS 7 there is no more r.mapcalculator

**#12 - 2015-11-25 10:50 PM - Giovanni Manghi**

there is hope see

<https://trac.osgeo.org/grass/ticket/2592>

**#13 - 2015-12-09 06:54 AM - Giovanni Manghi**

Giovanni Manghi wrote:

*there is hope see*

<https://trac.osgeo.org/grass/ticket/2592>

I'm not sure that this new flag in r.mapcalc can help us.

**#14 - 2016-03-05 07:53 AM - Médéric RIBREUX**

- Status changed from Open to In Progress

Hello,

there is a [PR for this](#) !

I need some help for MS-Windows tests before the merge...

Feel free to report bugs on r.mapcalc.

- File sample\_raster.tar.gz added

Médéric RIBREUX wrote:

*Hello,*

*there is a [PR for this](#) !*

*I need some help for MS-Windows tests before the merge...*

*Feel free to report bugs on r.mapcalc.*

Hi Médéric,

Thank you very much for this huge PR!! Thats impressive!!!

I can't test on Windows until Monday, but I've tested r.mapcalc on Linux wright now, and I've found something that seems a small bug (I don't know if this a more general bug, or exclusive of r.mapcalc, I've not tried other modules yet). To reproduce:

1) Load the raster\_1.tif file (attached) to QGIS canvas;

2) Open r.mapcalc;

3)

3.1) Select "raster\_1" on Multiple selection window;

3.2) Expression: raster\_2 = raster\_1 \* 2

3.3) Select results directory

LOG:

Algorithm r.mapcalc - Raster map calculator. starting...

g.proj -c proj4="+proj=tmerc +lat\_0=39.66825833333333 +lon\_0=-8.133108333333334 +k=1 +x\_0=0 +y\_0=0 +ellps=GRS80

+towgs84=0,0,0,0,0,0 +units=m +no\_defs"

r.in.gdal input=/home/pedro/SIG/MDT\_JAG/raster\_1.tif output=raster\_1 --overwrite -o

g.region -a n=137550.0 s=112250.0 e=100125.0 w=74200.0 res=25.0

r.mapcalc expression="raster\_2 = raster\_1 \* 2" --overwrite

for r in \$(g.list type=rast); do

r.out.gdal input=\${r} output=/home/pedro/SIG/MDT\_JAG/\${r}.tif createopt="TFW=YES,COMPRESS=LZW" --overwrite

done

Starting GRASS GIS...

Executing '/home/pedro/.qgis2/processing/grass7\_batch\_job.sh' ...

Default region was updated to the new projection, but if you have multiple mapsets `g.region -d` should be run in each to update the region from the default

Projection information updated

ATENÇÃO: Over-riding projection check

Proceeding with import of 1 raster bands...

Importing raster map ...

0..3..6..9..12..15..18..21..24..27..30..33..36..39..42..45..48..51..54..57..60..63..66..69..72..75..78..81..84..87..90..93..96..99..100

Checking GDAL data type and nodata value...

2..5..8..11..14..17..20..23..26..29..32..35..38..41..44..47..50..53..56..59..62..65..68..71..74..77..80..83..86..89..92..95..98..100

Using GDAL data type

Exporting raster data to GTiff format...

2..5..8..11..14..17..20..23..26..29..32..35..38..41..44..47..50..53..56..59..62..65..68..71..74..77..80..83..86..89..92..95..98..100

r.out.gdal completo. File created.

Checking GDAL data type and nodata value...

2..5..8..11..14..17..20..23..26..29..32..35..38..41..44..47..50..53..56..59..62..65..68..71..74..77..80..83..86..89..92..95..98..100

Using GDAL data type

Exporting raster data to GTiff format...

2..5..8..11..14..17..20..23..26..29..32..35..38..41..44..47..50..53..56..59..62..65..68..71..74..77..80..83..86..89..92..95..98..100

r.out.gdal completo. File created.

Execution of '/home/pedro/.qgis2//processing/grass7\_batch\_job.sh' finished.

Cleaning up temporary files...

Converting outputs

Loading resulting layers

Algorithm r.mapcalc - Raster map calculator. finished

4) Load raster\_2.tif to QGIS canvas, without closing r.mapcalc window;

5) Run r.mapcalc again, with expression: raster\_3 = raster\_1 \* 3

LOG:

Algorithm r.mapcalc - Raster map calculator. starting...

g.proj -c proj4="+proj=tmerc +lat\_0=39.66825833333333 +lon\_0=-8.133108333333334 +k=1 +x\_0=0 +y\_0=0 +ellps=GRS80

+towgs84=0,0,0,0,0,0 +units=m +no\_defs"

r.in.gdal input=/home/pedro/SIG/MDT\_JAG/raster\_2.tif output=raster\_2 --overwrite -o

g.region -a n=137550.0 s=112250.0 e=100125.0 w=74200.0 res=25.0

r.mapcalc expression="raster\_3 = raster\_1 \* 3" --overwrite

for r in \$(g.list type=rast); do

r.out.gdal input=\${r} output=/home/pedro/SIG/MDT\_JAG/\${r}.tif createopt="TFW=YES,COMPRESS=LZW" --overwrite

done

Starting GRASS GIS...

Executing '/home/pedro/.qgis2//processing/grass7\_batch\_job.sh' ...

Default region was updated to the new projection, but if you have multiple mapsets `g.region -d` should be run in each to update the region from the default

Projection information updated

ATENÇÃO: Over-riding projection check

Proceeding with import of 1 raster bands...

Importing raster map ...

0..3..6..9..12..15..18..21..24..27..30..33..36..39..42..45..48..51..54..57..60..63..66..69..72..75..78..81..84..87..90..93..96..99..100

Invalid map

Parse error

ERROR:parse error

Checking GDAL data type and nodata value...

2..5..8..11..14..17..20..23..26..29..32..35..38..41..44..47..50..53..56..59..62..65..68..71..74..77..80..83..86..89..92..95..98..100

Using GDAL data type

Exporting raster data to GTiff format...

2..5..8..11..14..17..20..23..26..29..32..35..38..41..44..47..50..53..56..59..62..65..68..71..74..77..80..83..86..89..92..95..98..100

r.out.gdal completo. File created.

Execution of '/home/pedro/.qgis2//processing/grass7\_batch\_job.sh' finished.

Cleaning up temporary files...

Converting outputs

Loading resulting layers

Algorithm r.mapcalc - Raster map calculator. finished

It does not create raster\_3.tif because, if you see in the log, it imports raster\_2 instead of raster\_1:

```
r.in.gdal input=/home/pedro/SIG/MDT_JAG/raster_2.tif output=raster_2 --overwrite -o
```

So, you need to close r.mapcalc window anytime you run an expression, otherwise it imports the last raster layer loaded in QGIS canvas.

Anyway, this is a really small problem.

Thank you very much for your work Médéric!!

**#16 - 2016-03-08 06:22 AM - Pedro Venâncio**

Hi Médéric,

I've tested this in Windows (QGIS 2.14 OSGeo4W 64bits, with GRASS 7.0.3)

1) Load the raster\_1.tif file (attached) to QGIS canvas;

2) Open r.mapcalc;

3)

3.1) Select "raster\_1" on Multiple selection window;

3.2) Expression:  $\text{raster\_2} = \text{raster\_1} * 2$

3.3) Select results directory

and I get

```
Algorithm r.mapcalc - Raster map calculator. starting...
g.proj -c proj4="+proj=tmerc +lat_0=39.6682583333333 +lon_0=-8.13310833333334 +k=1 +x_0=0 +y_0=0 +ellps=GRS80
+towgs84=0,0,0,0,0,0 +units=m +no_defs"
r.in.gdal input=D:\\Testes\\sample_raster\\
aster_1.tif output=raster_1 --overwrite -o
g.region -a n=137550.0 s=112250.0 e=100125.0 w=74200.0 res=25.0
r.mapcalc expression="raster_2=raster_1*2" --overwrite
for r in $(g.list type=rast); do
r.out.gdal input=${r} output=D:\\Testes\\sample_raster\\${r}.tif createopt="TFW=YES,COMPRESS=LZW" --overwrite
done
```

```
C:\\OSGeo4W64\\bin>set HOME=C:\\Users\\pedro
```

```
C:\\OSGeo4W64\\bin>set GISRC=C:\\Users\\pedro\\.qgis2\\processing\\processing.gisrc7
```

```
C:\\OSGeo4W64\\bin>set GRASS_SH=C:\\OSGeo4W64\\apps\\msys\\bin\\sh.exe
```

```
C:\\OSGeo4W64\\bin>set
```

```
PATH=C:\\OSGeo4W64\\apps\\msys\\bin;C:\\OSGeo4W64\\apps\\msys\\lib;c:\\osgeo4~1\\apps\\python27\\lib\\site-packages\\shapely-1.2.18-py2.7-win-amd64.egg\\shapely\\DLLs;C:\\OSGEO4~1\\apps\\Python27\\DLLs;C:\\OSGEO4~1\\apps\\Python27\\lib\\site-packages\\umpy\\core;C:\\OSGEO4~1\\apps\\qgis-rel-dev\\bin;C:\\OSGEO4~1\\apps\\grass\\grass-7.0.3\\lib;C:\\OSGEO4~1\\apps\\grass\\grass-7.0.3\\bin;C:\\OSGEO4~1\\apps\\Python27\\Scripts;C:\\OSGEO4~1\\bin;C:\\Windows\\system32;C:\\Windows;C:\\Windows\\WBem;C:\\OSGEO4~1\\apps\\msys\\bin
```

ys\\bin

C:\\OSGeo4W64\\bin>set WINGISBASE=C:\\OSGeo4W64\\apps\\grass\\grass-7.0.3

C:\\OSGeo4W64\\bin>set GISBASE=C:\\OSGeo4W64\\apps\\grass\\grass-7.0.3

C:\\OSGeo4W64\\bin>set GRASS\_PROJSHARE=C:\\OSGeo4W64\\apps\\grass\\grass-7.0.3\\share\\proj

C:\\OSGeo4W64\\bin>set GRASS\_MESSAGE\_FORMAT=plain

C:\\OSGeo4W64\\bin>if "" == "" set

PATH=C:\\OSGeo4W64\\apps\\grass\\grass-7.0.3\\bin;C:\\OSGeo4W64\\apps\\grass\\grass-7.0.3\\lib;C:\\OSGeo4W64\\apps\\msys\\bin;C:\\OSGeo4W64\\apps\\msys\\lib;c:\\osgeo4~1\\apps\\python27\\lib\\site-packages\\shapely-1.2.18-py2.7-win-amd64.egg\\shapely\\DLLs;C:\\OSGeo4~1\\apps\\Python27\\DLLs;C:\\OSGeo4~1\\apps\\Python27\\lib\\site-packages\\umpy\\core;C:\\OSGeo4~1\\apps\\qgis-rel-dev\\bin;C:\\OSGeo4~1\\apps\\grass\\grass-7.0.3\\lib;C:\\OSGeo4~1\\apps\\grass\\grass-7.0.3\\bin;C:\\OSGeo4~1\\apps\\Python27\\Scripts;C:\\OSGeo4~1\\bin;C:\\Windows\\system32;C:\\Windows;C:\\Windows\\WBem;C:\\OSGeo4~1\\apps\\msys\\bin [?]C:\\ys\\bin

C:\\OSGeo4W64\\bin>if not "" == "" set

PATH=C:\\OSGeo4W64\\apps\\grass\\grass-7.0.3\\bin;C:\\OSGeo4W64\\apps\\grass\\grass-7.0.3\\lib;C:\\OSGeo4W64\\apps\\grass\\grass-7.0.3\\bin;C:\\OSGeo4W64\\apps\\grass\\grass-7.0.3\\lib;C:\\OSGeo4W64\\apps\\msys\\bin;C:\\OSGeo4W64\\apps\\msys\\lib;c:\\osgeo4~1\\apps\\python27\\lib\\site-packages\\shapely-1.2.18-py2.7-win-amd64.egg\\shapely\\DLLs;C:\\OSGeo4~1\\apps\\Python27\\DLLs;C:\\OSGeo4~1\\apps\\Python27\\lib\\site-packages\\umpy\\core;C:\\OSGeo4~1\\apps\\qgis-rel-dev\\bin;C:\\OSGeo4~1\\apps\\grass\\grass-7.0.3\\lib;C:\\OSGeo4~1\\apps\\grass\\grass-7.0.3\\bin;C:\\OSGeo4~1\\apps\\Python27\\Scripts;C:\\OSGeo4~1\\bin;C:\\Windows\\system32;C:\\Windows;C:\\Windows\\WBem;C:\\OSGeo4~1\\apps\\msys\\bin [?]C:\\ys\\bin

C:\\OSGeo4W64\\bin>set GRASS\_VERSION=7.0.0

C:\\OSGeo4W64\\bin>if not "" == "" goto langset

C:\\OSGeo4W64\\bin>FOR /F "usebackq delims==" %i IN ("C:\\OSGeo4W64\\apps\\grass\\grass-7.0.3\\etc\\winlocale") DO @set LANG=%i

C:\\OSGeo4W64\\bin>set PATHEXT=.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC;.PY

C:\\OSGeo4W64\\bin>set

PYTHONPATH=C:\\OSGeo4W64\\apps\\grass\\grass-7.0.3\\etc\\python;C:\\OSGeo4W64\\apps\\grass\\grass-7.0.3\\etc\\wxpython\\

C:\\OSGeo4W64\\bin>g.gisenv.exe set="MAPSET=PERMANENT"

C:\\OSGeo4W64\\bin>g.gisenv.exe set="LOCATION=temp\_location"

C:\\OSGeo4W64\\bin>g.gisenv.exe set="LOCATION\_NAME=temp\_location"

C:\\OSGeo4W64\\bin>g.gisenv.exe

set="GISDBASE=C:\\Users\\pedro\\AppData\\Local\\Temp\\processinga01588b329db4c8ca1aaf4c7a1bce49a\\grassdata"

C:\\OSGeo4W64\\bin>g.gisenv.exe set="GRASS\_GUI=text"

C:\\OSGeo4W64\\bin>g.proj -c proj4="+proj=tmerc +lat\_0=39.66825833333333 +lon\_0=-8.133108333333334 +k=1 +x\_0=0 +y\_0=0 +ellps=GRS80 +towgs84=0,0,0,0,0,0 +units=m +no\_defs"

Default region was updated to the new projection, but if you have multiple mapsets `g.region -d` should be run in each to update the region from the default

```
C:\OSGeo4W64\bin>r.in.gdal input=D:\Testes\sample_raster\
aster_1.tif output=raster_1 --overwrite -o
ATENÇÃO: Over-riding projection check
Proceeding with import of 1 raster bands...
Importing raster map ...
0..3..6..9..12..15..18..21..24..27..30..33..36..39..42..45..48..51..54..57..60..63..66..69..72..75..78..81..84..87..90..93..96..99..100
```

C:\OSGeo4W64\bin>r.mapcalc expression="raster\_2=raster\_1\*2" --overwrite

```
C:\OSGeo4W64\bin>set HOME=C:\Users\pedro
```

```
C:\OSGeo4W64\bin>set GRASS SH=C:\OSGeo4W64\apps\msys\bin\sh.exe
```

```
C:\OSGeo4W64\bin>set WINGISBASE=C:\OSGeo4W64\apps\grass\grass-7.0.3
```

```
C:\OSGeo4W64\bin>set GRASS_PROJSHARE=C:\OSGeo4W64\apps\grass\grass-7.0.3\share\proj
```

```
C:\OSGeo4W64\bin>if "" == "" set
PATH=C:\OSGeo4W64\apps\grass\grass-7.0.3\bin;C:\OSGeo4W64\apps\grass\grass-7.0.3\lib;C:\OSGeo4W64\apps\msys\bin;C:\OSGeo4W64\apps\msys\lib;c:\osgeo4~1\apps\python27\lib\site-packages\shapely-1.2.18-py2.7-win-amd64.egg\shapely\DLLs;C:\OSGEO4~1\apps\Python27\DLLs;C:\OSGEO4~1\apps\Python27\lib\site-packages\umppy\core;C:\OSGEO4~1\apps\qgis-rel-dev\bin;C:\OSGEO4~1\apps\grass\grass-7.0.3\lib;C:\OSGEO4~1\apps\grass\grass-7.0.3\bin;C:\OSGEO4~1\apps\grass\grass-7.0.3\lib;C:\OSGEO4~1\apps\grass\grass-7.0.3\bin;C:\OSGEO4~1\apps\Python27\Scripts;C:\OSGEO4~1\bin;C:\Windows\system32;C:\Windows;C:\Windows\WBem;C:\OSGEO4~1\apps\msys\bin;C:\OSGEO4~1\apps\msys\bin
```

8/13

```
C:\OSGeo4W64\bin>set GRASS_VERSION=7.0.0
```

```
C:\OSGeo4W64\bin>if not "" == "" goto langset
```

```
C:\OSGeo4W64\bin>FOR /F "usebackq delims==" %i IN ("C:\OSGeo4W64\apps\grass\grass-7.0.3\etc\winlocale") DO @set LANG=%i
```

```
C:\OSGeo4W64\bin>set PATHEXT=.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC;.PY
```

```
C:\OSGeo4W64\bin>set
```

```
PYTHONPATH=C:\OSGeo4W64\apps\grass\grass-7.0.3\etc\python;C:\OSGeo4W64\apps\grass\grass-7.0.3\etc\wxpython\
```

```
C:\OSGeo4W64\bin>g.gisenv.exe set="MAPSET=PERMANENT"
```

```
C:\OSGeo4W64\bin>g.gisenv.exe set="LOCATION=temp_location"
```

```
C:\OSGeo4W64\bin>g.gisenv.exe set="LOCATION_NAME=temp_location"
```

```
C:\OSGeo4W64\bin>g.gisenv.exe
```

```
set="GISDBASE=C:\Users\pedro\AppData\Local\Temp\processinga01588b329db4c8ca1aaf4c7a1bce49a\grassdata"
```

```
C:\OSGeo4W64\bin>g.gisenv.exe set="GRASS_GUI=text"
```

r n/Eo era esperado nesta altura.

```
C:\OSGeo4W64\bin>for r in $(g.list type=rast); do
```

Converting outputs

Loading resulting layers

Algorithm r.mapcalc - Raster map calculator. finished

without results.

The problem appears to be in the loop:

```
C:\OSGeo4W64\bin>r.mapcalc expression="raster_2=raster_1*2" --overwrite
```

r n/Eo era esperado nesta altura.

```
C:\OSGeo4W64\bin>for r in $(g.list type=rast); do
```

```
C:\OSGeo4W64\bin>g.gisenv.exe set="GRASS_GUI=text"
```

r n/Eo era esperado nesta altura.

```
C:\OSGeo4W64\bin>for r in $(g.list type=rast); do
```

Thanks!

**#17 - 2016-07-09 02:11 AM - Giovanni Manghi**

Hi,

I'm also struggling to get nay result (on both Windows and Linux) out of this new implementation of r.mapcalc. Or maybe is not yet completely ready?

**#18 - 2016-07-11 11:27 AM - Giovanni Manghi**

Giovanni Manghi wrote:

*Hi,*  
*I?m also struggling to get nay result (on both Windows and Linux) out of this new implementation of r.mapcalc. Or maybe is not yet completely ready?*

seems ok on linux after all (I didn't get immediately that the expression needs to be written in the form "output = ..."), but still not ok on Windows.

One question: is possible in expression to use letters instead of the input raster names?

**#19 - 2016-10-23 10:42 AM - Paolo Cavallini**

Currently the command is quite cumbersome:

- rasters have to be selected in the interface anyway (quite pointless from user perspective)
- raster names have to be entered by hand, with no clue (the names in the interface are the labels, not the real names)
- the output layer is not loaded automatically

Should I fill individual tickets for these issues?

**#20 - 2016-10-24 11:13 PM - Paolo Cavallini**

*- Subject changed from GRASS r.mapcalc to GRASS r.mapcalc cumbersome to use, issues on Windows*

**#21 - 2016-12-28 09:38 AM - Alexander Bruy**

*- Resolution set to fixed/implemented*

Closing this, as now Processing has front-end to QGIS native raster calculator and GRASS 6 was removed.

**#22 - 2016-12-29 01:26 AM - Giovanni Manghi**

Alexander Bruy wrote:

*Closing this, as now Processing has front-end to QGIS native raster calculator and GRASS 6 was removed.*

Hi Alexander and Victor. I think if you agree that we should open a new bug ticket about GRASS7 r.mapcalc.

(native) GRASS6 had both r.mapcalc (the real raster calculator tool) and r.mapcalculator, the latter a python wrapper for r.mapcalc that made the use of the raster calculator very convenient, allowing refer to input maps with letters and to use any of the r.mapcalc operators.

r.mapcalculator was present in Processing GRASS6 provider but as it wasn't ported GRASS7 we have also lost access to GRASS raster calculator in Processing/GRASS7.

That was until Médéric RIBREUX implemented r.mapcalc in Processing/GRASS7. Problem is that this implementation is partly working (see above comments) and it would be nice to have the issues sorted, if possible.

#### #23 - 2017-02-11 04:10 PM - Olivier ATHIMON

Hi all,

I have seen your message about r.mapcalc and r.mapcalculator... Indeed, even if i have discovered GRASS in year 1996, i must say: **r.mapcalculator made the use of the raster calculator very convenient, allowing refer to input maps with letters and to use any of the r.mapcalc operators.**

I miss r.mapcalculator with QGIS/GRASS7...

I think i have found how to run "r.mapcalculator" inside Processing / GRASS 7 of QGIS 2.18.x under Windows 7 (64 bits)... I need some days to submit/transmit you my solution (my files).

I can study how to run again "r.mapcalc" if **necessary**, because i have the same error :

```
C:\OSGeo4W64\bin>r.mapcalc expression="raster_2=raster_1*2" --overwrite
```

r n/Èo era esperado nesta altura.

```
C:\OSGeo4W64\bin>for r in $(g.list type=rast); do
```

where : "r n/Èo era esperado nesta altura." give in my french language : "r tait inattendu..."

=====

For information, i can't load "Processing" with QGIS 2.99/Windows 7 (64 bits) <=> I have many errors... So, i will not be able to try r.mapcalc (and/or r.mapcalculator) with...

#### #24 - 2017-02-12 03:26 AM - Giovanni Manghi

| I miss r.mapcalculator with QGIS/GRASS7...

r.mapcalculator was not ported from GRASS6 to 7 (not a QGIS issue) and this is where the problem started. In GRASS6 that module/script provided a very convenient way to use r.mapcalc.

#### #25 - 2017-02-21 01:47 AM - Pedro Venâncio

Victor had created a new raster calculator using native QGIS classes, for QGIS 3:

<https://github.com/qgis/QGIS/pull/3779>

But in QGIS 2.x, r.mapcalc is still a must needed algorithm, and Vaclav Petras, in GRASS mailing list [0], pointed to the new -l flag introduced in GRASS72, to list inputs and outputs, which can solve the original problem of r.mapcalc:

<https://grass.osgeo.org/grass72/manuals/r.mapcalc.html>

<https://trac.osgeo.org/grass/ticket/2592>

<https://trac.osgeo.org/grass/changeset/67000>

What do you think?

[0] <http://osgeo-org.1560.x6.nabble.com/r-mapcalculator-and-r-mapcalc-td5308738.html>

**#26 - 2017-05-01 12:48 AM - Giovanni Manghi**

- *Easy fix? set to No*

**#27 - 2018-11-05 02:26 PM - Markus Neteler**

- *Description updated*

FYI: The new r.mapcalculator has been developed by Vaclav Petras:

<https://trac.osgeo.org/grass/ticket/3431#comment:7>

**#28 - 2018-11-05 04:39 PM - Giovanni Manghi**

Markus Neteler wrote:

*FYI: The new r.mapcalculator has been developed by Vaclav Petras:*

<https://trac.osgeo.org/grass/ticket/3431#comment:7>

I tested in QGIS/master/Processing and works ok! this is a very good news indeed!

**#29 - 2018-11-08 04:59 PM - Pedro Venâncio**

I've tested also in QGIS 2.18.25, both on Windows and Linux, and it works really well!

Thank you very much Vaclav Petras!

**#30 - 2018-11-08 08:27 PM - Giovanni Manghi**

- *Pull Request or Patch supplied changed from No to Yes*

<https://github.com/qgis/QGIS/pull/8444>

**#31 - 2018-12-11 07:33 AM - Markus Neteler**

FYI: r.mapcalculator moved as r.mapcalc.simple to GRASS GIS trunk (see <https://trac.osgeo.org/grass/ticket/3431> with change <https://trac.osgeo.org/grass/changeset/73791>).

After some testing it will go to GRASS GIS 7.6.

**#32 - 2018-12-11 10:36 AM - Pedro Venâncio**

Thank you very much Markus!

I've been testing it (still as r.mapcalculator plugin) in QGIS 2.18.26 and 3.4.2 and it works like a charm!

I've missed it so much for a long time!

**Files**

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|                      |         |            |                |
|----------------------|---------|------------|----------------|
| sample_raster.tar.gz | 1.19 MB | 2016-03-05 | Pedro Venâncio |
|----------------------|---------|------------|----------------|