Magic Macros and Layer Cheat Sheet
ECEN 4303 : Digital Integrated Circuit Design, Fall 2018
Oklahoma State University

I love the macros portion of Magic, but Tim Edwards who has been stellar at keeping up-to-date and relevant, got rid of it. I suggested he put it back. Subsequently, its back in Magic but only if you indicate you want macros (which I obviously do) when you install the program. I decided to document the macros as the Wiki got corrupted with my original section on macros.

I also decided to list the layer shortcuts. These can be seen in entirety if you type `:layers` in magic. There are probably many that I am missing and that's another great thing about Electronic Design Automation (EDA) tools. There are opportunities to make better tools and scripts. So, I apologize in advance for missing any - feel free to let me know of any added items.

Macro	Command	Macro	Command
Cntrl-D	erase	Cntrl-L	redraw
Cntrl-N	iroute route -dSelection	Cntrl-R	iroute route -dBox
Cntrl-X	expand toggle	Space	tool
,	center	.	repeat last command
?	help		
A	select more area	B	findbox
C	select clear	E	stretch up 1
G	grid 2	O	close window
Q	stretch left 1	R	strech right 1
S	select more	T	strech
U	redo	W	strech down 1
X	unexpand hierarchy	Z	Zoom 2
a	select area	b	box
c	copy	d	delete
e	move up 1	f	select cell
g	grid	o	open window
q	move left 1	r	move right 1
s	select	t	move
u	undo	v	view all
w	move down 1	x	expand
y	drc why	z	findbox zoom

Table 1: Magic Macros

Shortcut	Layer
p or poly or polysilicon or red	polysilicon
metal1 or m1 or blue	metal layer 1
metal2 or m2 or purple	metal layer 2
pw or powell	p-tub
nw or nwell	n-tub
ndiffusion or green or ndiff	n-diffusion
pdiffusion or brown or pdiff	p-diffusion
nnc or nwcontact or nwc	tub tie for n-tub (substrate contact)
ppc or pwcontact or pwc	tub tie for p-tub (substrate contact)
ndc or ndcontact	metal1 to n-diffusion contact
pdc or pdcontact	metal1 to p-diffusion contact
polycontact	metal1 to poly contact
m2contact or m2c	metal2 to metal1 contact (via)

Table 2: Layer Shortcuts