

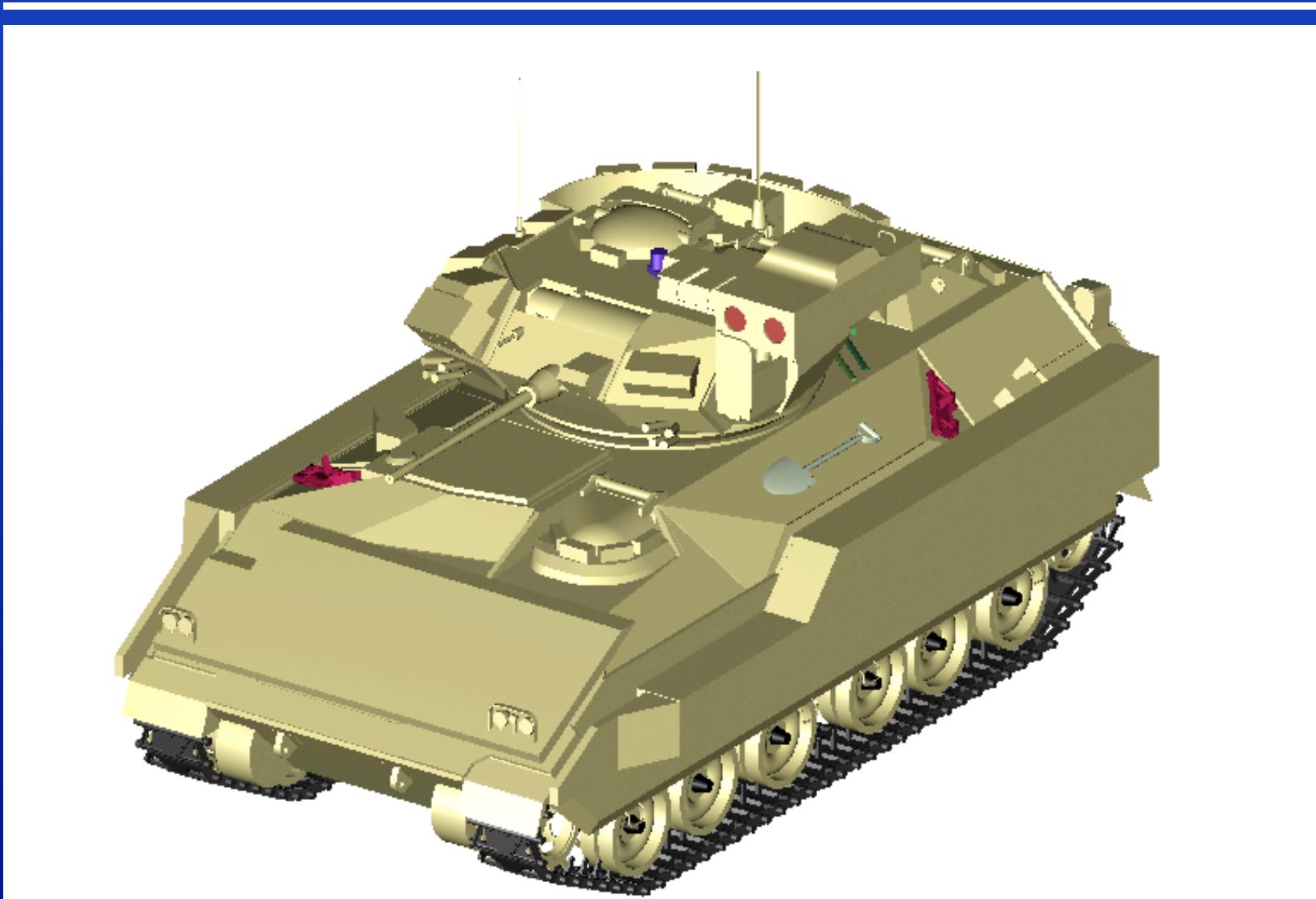


# Overview of RtWizard

Ronald A. Bowers  
U.S. Army Research Laboratory



# The Problem





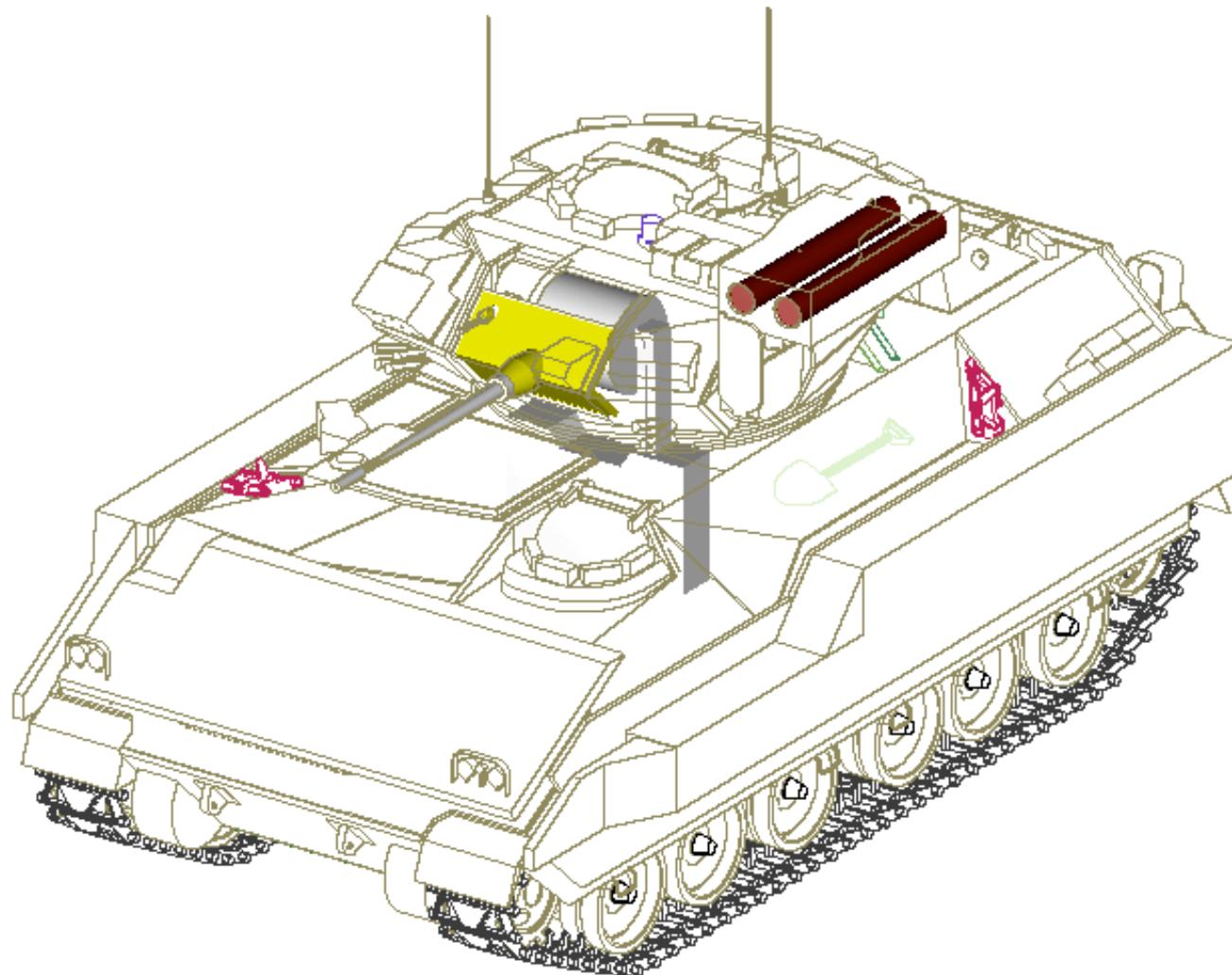
# The Problem

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```
rt -M -R -F fullColor.pix -w 768 -n 512 -V768:512 -A
    0.9 -C 255/255/255 m2-m3.a2.g5 m2.radar
<<EOF
viewsize 7.8000000000000e+03;
orientation 2.480974221557126e-01 4.765907755349633e-01
7.480972530359939e-01 3.894349950059002e-01;
eye_pt 2.674874786376953e+03 4.331974528555660e+03
    5.124492968853961e+03;
start 0;
end;
EOF
```



# The Problem



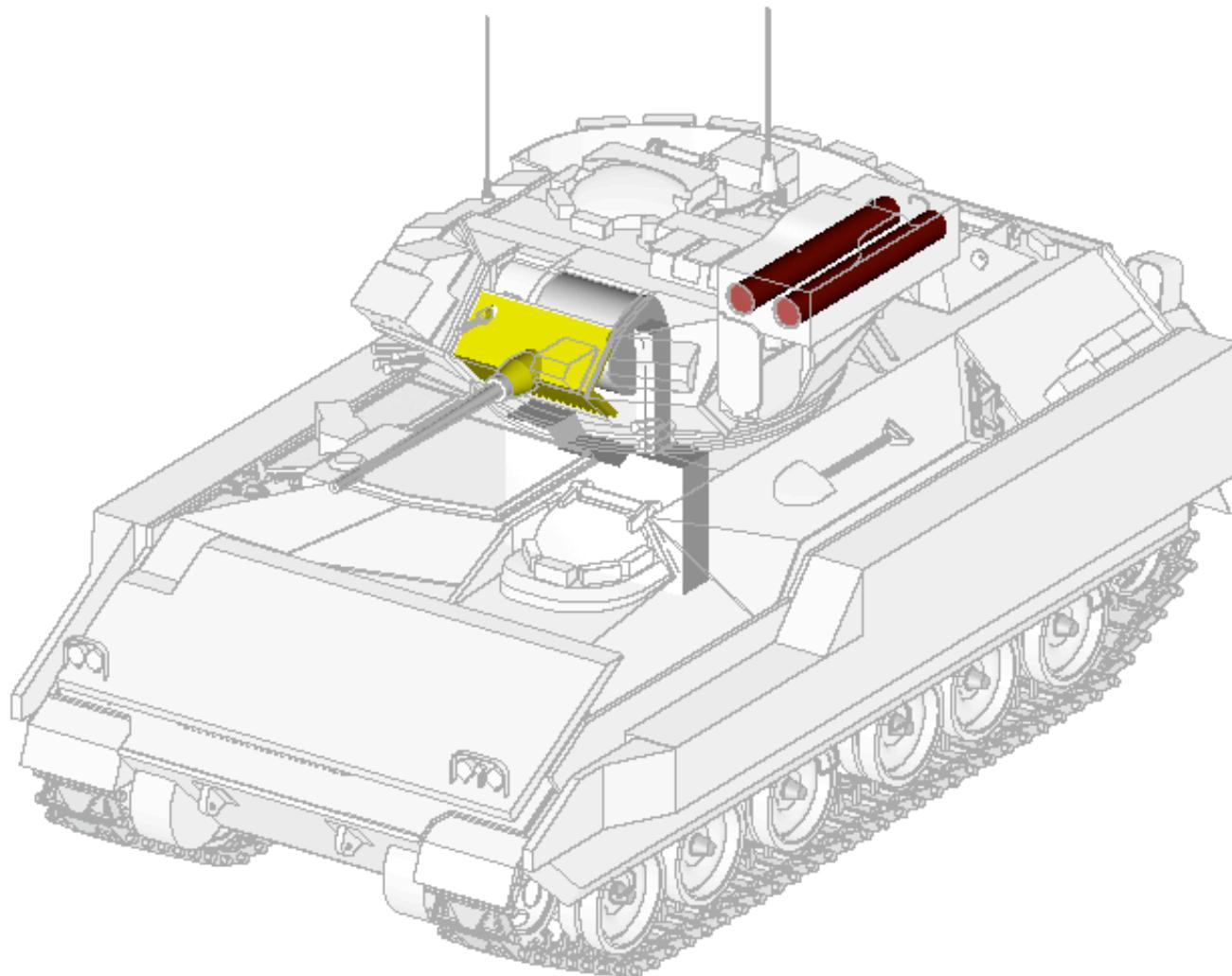


# The Problem

```
rt -M -R -F lines.pix -w 768 -n 512 -V768:512 -A 0.9 -C 255/255/255 m2-
m3.a2.g5 m3.component/m3.turret/m3.tur.ext/u.tow_launcher/readytowl
m3.component/m3.turret/m3.tur.ext/u.tow_launcher/readytow2
m3.component/m3.turret/m3.tur.ext/gun_25mm << EOF
viewsize 7.8000000000000e+03;
orientation 2.480974221557126e-01 4.765907755349633e-01 7.480972530359939e-01
3.894349950059002e-01;
eye_pt -4.774811629416143e+01 2.425572998046875e+03 3.574623294281812e+03;
start 0; end;
EOF
rtedge -M -R -F lines.pix -w 768 -n 512 -V 1.5 -A 0.9 -c {set rc=1} -c {set
bg=255,255,255} -c {set om=1} -c {set
oo="m3.component/m3.turret/m3.tur.ext/u.tow_launcher/readytowl
m3.component/m3.turret/m3.tur.ext/u.tow_launcher/readytow2
m3.component/m3.turret/m3.tur.ext/gun_25mm"} m2-m3.a2.g5 m2.radar << EOF
viewsize 7.8000000000000e+03;
orientation 2.480974221557126e-01 4.765907755349633e-01 7.480972530359939e-01
3.894349950059002e-01;
eye_pt -4.774811629416143e+01 2.425572998046875e+03 3.574623294281812e+03;
start 0;
end;
EOF
```



# The Problem





# The Problem

```
rt -M -R -F ghost.pix -w 768 -n 512 -V768:512 -A 0.9 -C 255/255/255 m2-m3.a2.g5 m2.radar
viewsize 7.80000000000000e+03;
orientation 2.480974221557126e-01 4.765907755349633e-01 7.480972530359939e-01 3.894349950059002e-
01;
eye_pt -4.774811629416143e+01 2.425572998046875e+03 3.574623294281812e+03;

pix-bw $tgi > $tbw

bwmod -a 4 -d259 -r$gamma -m255 < $tbw > $tmod

bw-pix < $tmod > $tbwpix

pixmatte -e $tfci $bgl $tbwpix $tfci > $tmi

rt -M -R -F ghost.pix -w 768 -n 512 -V768:512 -A 0.9 -C 255/255/255 m2-m3.a2.g5
    m3.component/m3.turret/m3.tur.ext/u.tow_launcher/readytowl
    m3.component/m3.turret/m3.tur.ext/u.tow_launcher/readytow2
    m3.component/m3.turret/m3.tur.ext/gun_25mm
viewsize 7.80000000000000e+03;
orientation 2.480974221557126e-01 4.765907755349633e-01 7.480972530359939e-01 3.894349950059002e-
01;
eye_pt -4.774811629416143e+01 2.425572998046875e+03 3.574623294281812e+03;

rtedge -M -R -F ghost.pix -w 768 -n 512 -V 1.5 -A 0.9 -c {set fg=153,153,153} -c {set
    bg=255,255,255} -c {set om=1} -c {set oo="m2.radar"} m2-m3.a2.g5 m2.radar
viewsize 7.80000000000000e+03;
orientation 2.480974221557126e-01 4.765907755349633e-01 7.480972530359939e-01 3.894349950059002e-
01;
eye_pt -4.774811629416143e+01 2.425572998046875e+03 3.574623294281812e+03;
```



# The Unfortunate Result

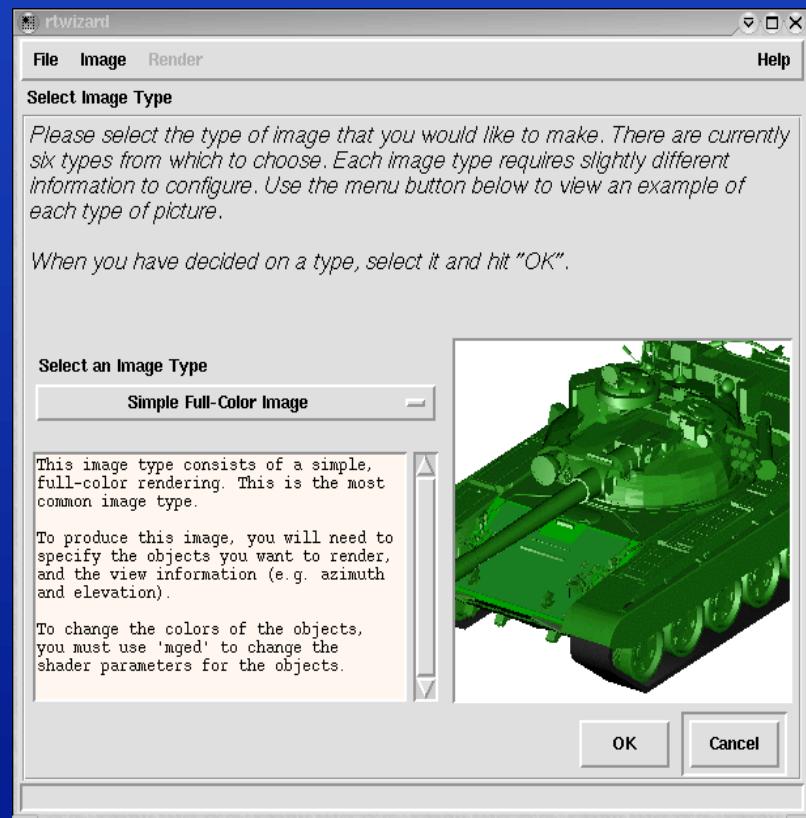
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Users become frustrated.





# The Solution



RtWizard is a graphical tool for rendering BRL-CAD geometry.



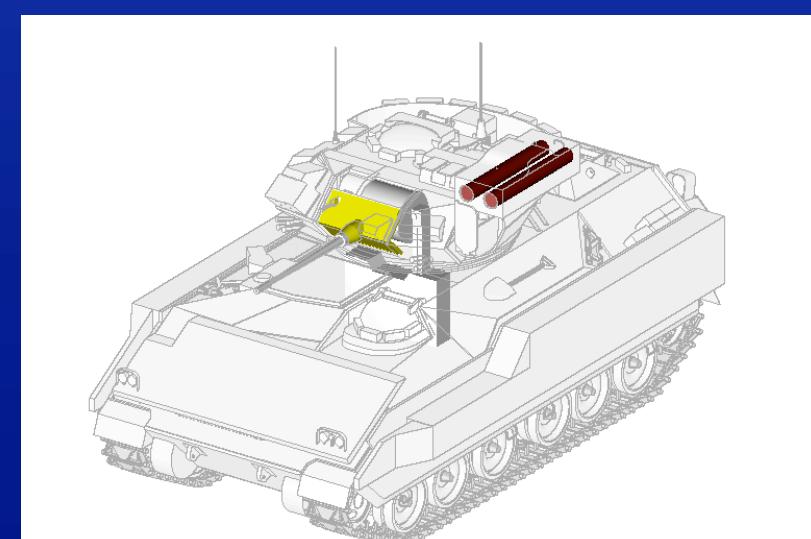
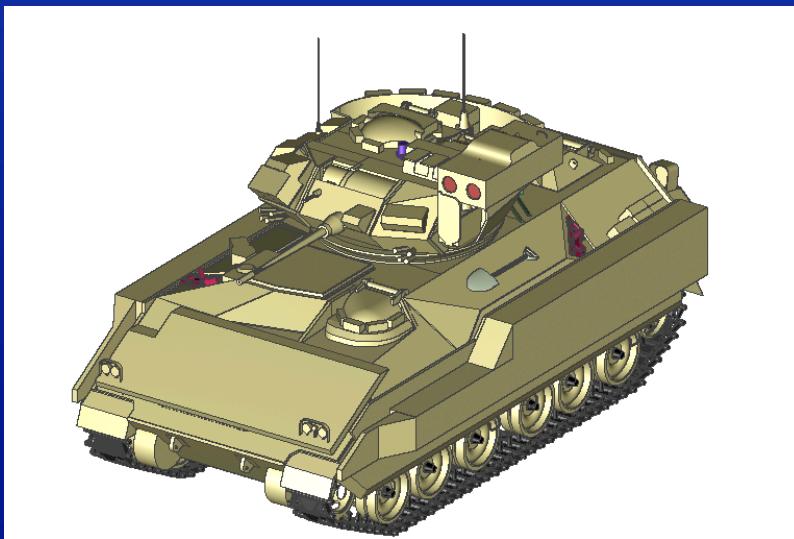
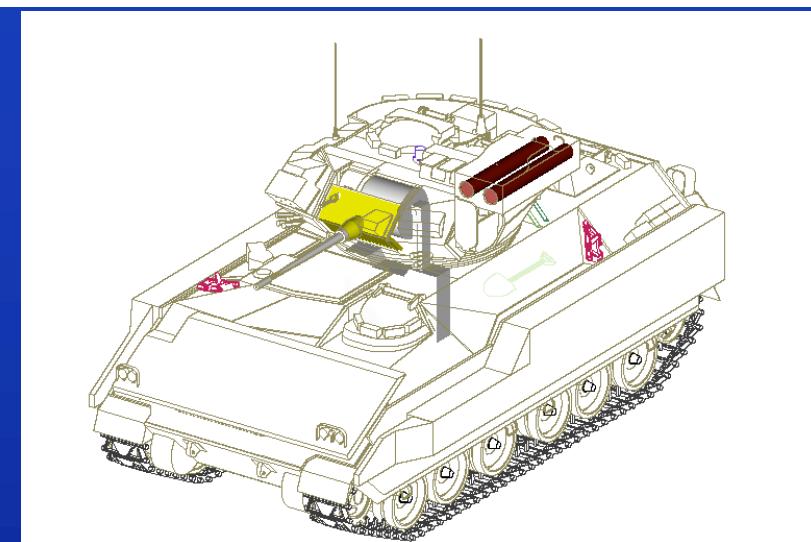
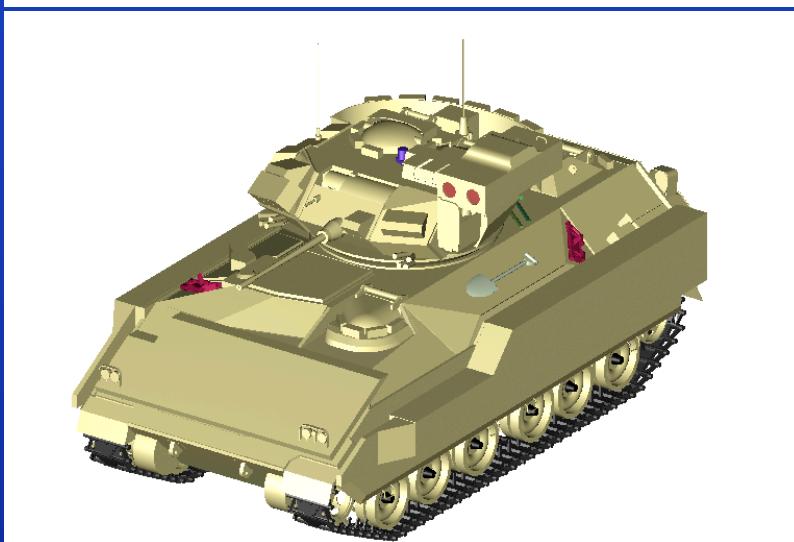
# About RtWizard

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- RtWizard uses the “Wizard” metaphor.
  - RtWizard provides sample images.
  - The user selects an image type.
  - RtWizard walks the user through the steps necessary to produce that image.
- Written in [incr Tcl].
- Currently supports six image types.
- Easily extensible to new image types.



# Supported Image Types





# *Demo*



# RtWizard Status

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- RtWizard is available in the current release of BRL-CAD.
- The current version of RtWizard should be considered a Beta release.
- Possible enhancements:
  - Improved view manipulation interface
  - Additional image types
  - Support for cutaway views