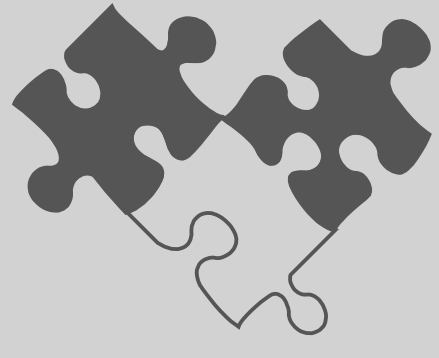
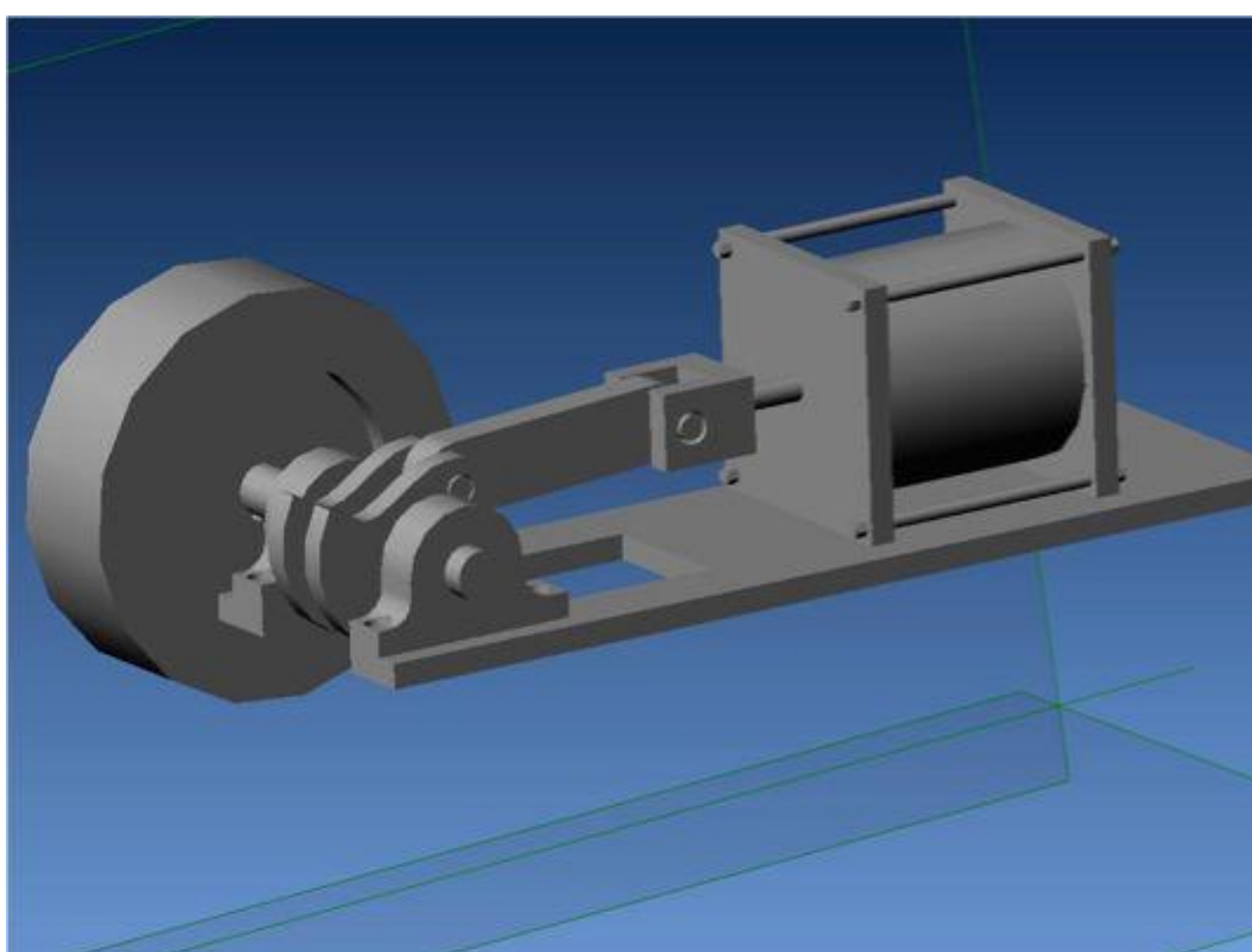


# A 3D Augmented Reality Integrated Environment for Turbine Assembly Process

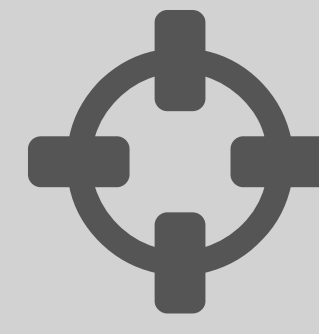
## BACKGROUND



- The Machine Design Department at LiU has augmented reality applications that enable the use of complex virtual environments for virtual prototyping and training process.



Virtual model



## GOALS

- Creation of 3-D models with integrated simulation/control software.
- Possibility of interfacing 3-D simulation with controlled peripherals



Augmented reality

## APPROACH



- In this project we intend to use Blender software for the creation of 3-D environments and integrate them with other simulation scripts through the Python program development language.

### Partners:

- Machine Design Department LIU
- Saab
- Faculty of Mech. Engineering - UNICAMP

```
GNU nano 2.2.6 File: usedspace.py
#!/usr/bin/python
import os, sys
used_space=os.popen("df -h / | grep -v Filesystem | awk '{print $5}'").readline().strip()

if used_space < "85%":
    print "OK - %s of disk space used." % used_space
    sys.exit(0)
elif used_space == "85%":
    print "WARNING - %s of disk space used." % used_space
    sys.exit(1)
elif used_space > "85%":
    print "CRITICAL - %s of disk space used." % used_space
    sys.exit(2)
else:
    print "UNKNOWN - %s of disk space used." % used_space
    sys.exit(3)
```

Python script