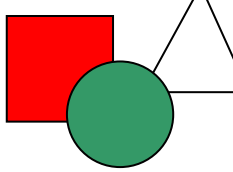
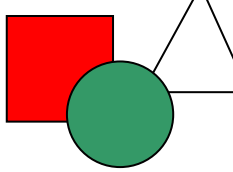


VRML

Virtual **R**eality **M**odeling **L**anguage

VRML

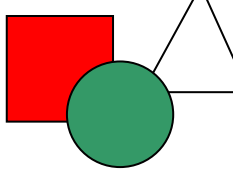


Man nehme:

- Editor
- Browser
- Plug-In (z. B. Cortona-Player)

VRML-Dateien plattformunabhängig

VRML



Literatur:

- Das Einsteigerseminar VRML, Rolf Däßler, bhv-Verlag 1999 (Buch)

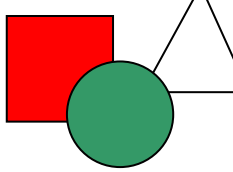
  oder:

  http://fabdq.fh-potsdam.de/bhv/ (Internet)

- 3D mit VRML von Uwe Debacher
  http://www.debacher.de/vrml/

- und viele andere Quellen

VRML



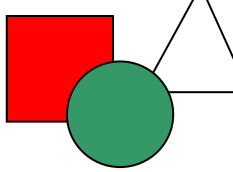
```
#VRML V2.0 utf8
Shape {                                          #Gestaltknoten

        appearance Appearance {   #Subknoten
                                                    #(Oberfläche)
                material Material {}  #Subknoten
                                                    #(Material)
        }

        geometry Box {}                          #Geometrieknoten
                                                    #(hier: Quader)

}
```

VRML

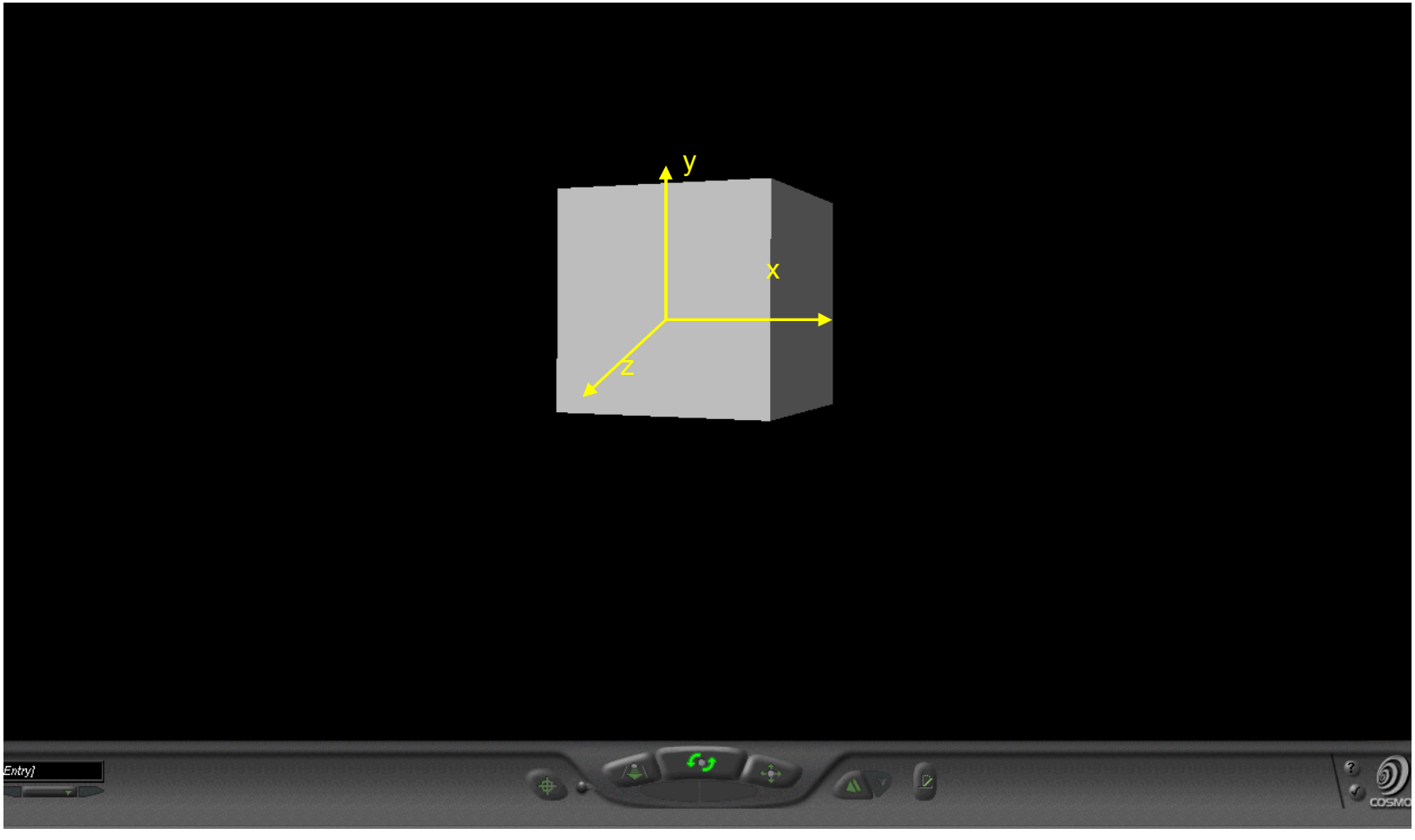


Vier vordefinierte Grundformen:

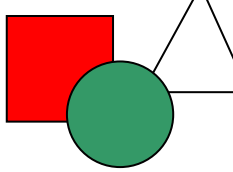
- Quader
- Kegel
- Zylinder
- Kugel

} Körper liegen mit ihrem Mittelpunkt in der Mitte des Bildschirms

VRML



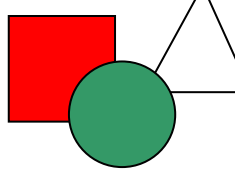
VRML



```
...
DEF Zylinder Shape { ...                    #Benennung Knoten
        geometry Cylinder {}
}

Transform {
        Children USE Zylinder               #Aufruf Knoten
        rotation 0.0 0.1 1.0 1.0472
}
```

VRML



```
...
DEF Uhr TimeSensor {                                    #Steuert Animation
        cycleInterval 5.0                               #Länge des Zeitintervalls
        loop TRUE                                       #Zeitschleife eingeschaltet
}
...
DEF PI_Quader PositionInterpolator {  #Berechnung Animation aus Schlüsselwerten,
        keyValue [                                      #wird durch Zeitgeber synchronisiert
            0.0 2.5 0.0,        #Schlüsselpositionen in x-, y-, z-Ebene, werden
            0.0 2.5 0.0                                 #nacheinander eingenommen
         ]
        key [0.25, 0.75]                                #relativer Zeitpunkt für jeweilige
}                                                       #Schlüsselposition

ROUTE Uhr.fraction_changed TO PI_Quader.set_fraction
                                        #Übergabe relativer Zeit an Interpolator
ROUTE PI_Quader.value_changed TO Quader.set_translation
                        #Übergabe interpolierter Positionswerte an Transform-Knoten
```