SwingStates – Example

Theophanis Tsandilas
windows & drag-and-drop
window

Bar for holding & moving the window

Body of the window

```
WindowComponent extends CRectangle
  WindowBar
    windowBar
  WindowBody
    windowBody
Window extends CShape
```

windows – state machine

- Press on the body of the window
- Press on the window bar
- Press on empty space
- Drag
- Release mouse
windows – state machine

```
action1() {
    WindowBody wbody = (WindowBody) getShape();
    activateWindow(wbody.getWindow());
}

action2() {
    WindowBar wbar = (WindowBar) getShape();
    activateWindow(wbar.getWindow());
    p_ = getPoint();
}

action3() {
    Point2D p = getPoint();
    activeWindow.translateBy(p.getX() - p_.getX(), p.getY() - p_.getY());
    p_ = p;
}

action4() {
    if (activeWindow != null) activeWindow setActive(false);
    activeWindow = null;
}
```
CStateMachine m1 = new CStateMachine(){
    private Window activeWindow = null;
    private Point2D p_;

    public State s1 = new State(){

        // Press on the bar of the window
        Transition t11 = new PressOnShape(BUTTON1, "=> s2"){
            public boolean guard(){
                return (getShape() instanceof WindowBar);
            }

            public void action(){
                WindowBar wbar = (WindowBar)getShape();
                activateWindow(wbar.getWindow());

                p_ = getPoint();
            }
        }
    }

    ...}
};
CStateMachine m1 = new CStateMachine(){
    private Window activeWindow = null;
    private Point2D p_;

    public State s1 = new State(){
        // Press on the bar of the window
        Transition t11 = new PressOnShape(BUTTON1, "=> s2"){
            public boolean guard(){
                return (getShape() instanceof WindowBar);
            }
            public void action(){
                WindowBar wbar = (WindowBar) getShape();
                activateWindow(wbar.getWindow());
                p_ = getPoint();
            }
        }
    };

    ...};
    ...};
};
complete interaction

Press on the body of the window

Press on the window bar

Press on empty space

Press on an icon

Drag & Delta > min

Drag

Release

S1 -> S2

S2 -> S1

S3 -> S1

S1 -> S4

S4 -> S1

Java code is available online