Shopping Presentation (Mathematical Resilience Conference) – March 2016

Go to URL `jseden.dcs.warwick.ac.uk/scifest/`
It opens with three windows: Canvas 2D, Script Input and Project List under a black bar with white menu headings. Click anywhere in the grey box headed 'Shopping' in the Project List and a new window 'JSPE Slides' appears. Click on the coins and fruits and click on them again after they have moved. You will need to arrange the windows taking account of the 'zoom' factor in your browser and fontsize button at the top of the slides.

The slides introduce the main features of a construal but there is not time in the presentation to read them all (there are 5 main ones). We rehearse here only the shortcuts to key features shown in the presentation. If you are reading this after the presentation you may do better to follow the instructions in the slides rather than these shortcuts.

Go to the New Window menu, choose Observable List and scroll down to have the green observables 'basket' and 'totalcost' about the (vertical) middle of your window. Hover your cursor over them and they show a *definition* (yellow background) written with an 'is': this means it is like a spreadsheet formula and will automatically be maintained when values on the right-hand side change (unlike an assignment in procedural programming). In the Observable List the current *value* of the observable is given. Note that any fruits in your basket on the Canvas will be in the observable 'basket' list. The Observable List and the visualisation reflect each other. Have a look at the observable 'totalcost', it makes use of function 'costitems()' find this in the Function List. The movements of coins and fruits are caused by agents – find them in the Agent List. Choose Dependency Map from New Window and put in 'totalcost' to examine the relationships between the relevant observables and function.

Though the construal does not do much – it is not tied to any particular functionality or program – it embodies a conceptual network of dependencies and agencies relating a few of the observables that we have in mind when shopping. So it does a good deal of the 'work' involved in making a 'program' for purposes to do with shopping.

Shopping Game – Presentation
Get the Project List again (if lost you can always get another one from the New Window menu), and choose Shopping Game. This is self-explanatory and clearly derived from the Shopping construal by adding some buttons for functionality and selecting fruits and coins to make a certain level of diffculty. Naturally we could then add features to make it interesting (showing 'tails' side of coin with its value, other currencies, asking about change etc) and enjoyable (keeping scores, adding sounds, colour, timing constraints etc).

Giving Change – Presentation
This construal uses a new, rather different, environment and requires slightly more explanation. You can download the steps of the presentation linked from here

http://www2.warwick.ac.uk/fac/sci/dcs/people/steve_russ