

The Painting Fool Teaching Interface

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The Painting Fool is software that we hope will be taken seriously as a creative painter in its own right – one day. As we are not trained artists, a valid criticism is that we are not equipped to train the software. For this reason, we have developed a teaching interface to The Painting Fool, which enables anyone – including artists and designers – to train the software to generate and paint novel scenes, according to a scheme they specify. In order to specify the nature and rendering of the scene, users must give details on some, or all, of seven screens, some of which employ AI techniques to make the specification process simpler. The screens provide the following functionalities: *(i) Images*: enables the usage of context free design grammars to generate images. *(ii) Annotations*: enables the annotation of digital images, via the labelling of user-defined regions. *(iii) Segmentations*: enables the user to specify the parameters for image segmentation schemes, whereby images are turned into paint regions. *(iv) Items*: enables the user to hand-draw items for usage in the scenes, and to specify how each exemplar item can be varied for the generation of alternatives. *(v) Collections*: enables the user to specify a constraint satisfaction problem (CSP) via the manipulation of rectangles. The CSP is abduced from the rectangle shapes, colours and placements, and when solved (either by a constraint solver or evolutionary process), generates new scenes of rectangles, satisfying the user constraints. *(vi) Scenes*: enables the specification of layers of images, items, segmentations and collections, in addition to substitution schemes. *(v) Pictures*: enables the specification of rendering schemes for the layers in scenes. In the demonstration, I will describe the process of training the software via each of the seven screens. I will use two running example picture schemes, namely the *PresidENTS* series and the *Fish Fingers* series, exemplars of which are portrayed in figure 1.



Fig. 1. Exemplar pictures from the *PresidENTS* and the *Fish Fingers* series of pictures