Salt and Pepper: tangible hypermedia using the artoolkit

As users pick up a spice pile and shake it...
Sprinkling is used to add labels that are relevant to users' interests.

Small particles drop from it and fly onto the visible objects.
As particles land on an object, information labels pop up.
Evolving information: labels can change and might even disappear.
Each spice pile represents a different concept or context.

If too many labels have been added, users can pick up the object and shake it, causing the labels on the object to fly off and disappear.

There are also link labels, which act as link anchors that users can select and follow. Descriptive labels are drawn with white backgrounds, while link labels have yellow backgrounds.

Users select a link to follow by rotating the object so that the link label they are interested in is the one closest to them.

The currently selected label is highlighted by a blue border. Labels with several lines of text are unfurled so that the whole label can be seen.

Links between visible objects are shown by drawing an elastic line between the two anchors. This line has a text label in the middle describing the link.

When several object marker cards are visible, users can still sprinkle links and labels onto them by shaking the spice pile.
As particles fall from the spice piles, they are distributed evenly amongst all of the visible objects.

The ARToolKit [1] tracks marker cards so that virtual 3D objects can be overlaid on the cards.
Labels are stored in the Fundamental Open Hypermedia Model (FOHM) [2] linkbases served by the Auld Linky link server [3].
Labels are attached to objects, providing information about specific details about objects' features.

There are two types of markers used - object markers and spice pile markers.

Object markers are used to display objects.
Each spice pile represents a different concept or context.

Links between markers are shown by drawing an elastic line between the two anchors. This line has a text label in the middle, describing the link.

The wings were made.


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