

# McDie Card / Tile / Cube Specification

## Goal

Add a system to handle systems where items are removed, like cards from a deck, tiles from a pool, or cubes from a bag.

## Definitions

The base of the system are **elements**. An element is analogous to a card, tile, or cube.

Elements are composed of one or more **attributes**. There are two types of attributes:

Numeric Attribute: A value that has a numeric value, that you might want to add or compare

Symbolic Attribute: A value that has no numeric representation.

### *Examples:*

Cubes in a bag might be represented by one attribute - color. Values might be blue, green, red, and yellow.

A playing card would be represented by two values: The 'rank', a numeric attribute, and the suit, a symbolic attribute.

Numeric attributes may also have a 'nickname' to allow for something like Jack, Queen, King to have values of 11, 12, and 13.

*Question: Do we want to allow for an Ace to be either value '1' or value '14'? Or something similar? Maybe use the 'multiple value' idea below.*

Elements are collected into *groups*. A Group represents a deck, pool, or bag.

Elements may be drawn randomly from a Group, in which case they are removed from that group.

Groups will also be used to represent 'hands' or racks. For example, if you have a deck (group) of cards, and deal 13 to four hands, each hand is represented by a group.

Groups may contain different types of elements (cubes and cards, for example). *Possibly may also include dice to simulate something like Quarriors?*

## Attributes are Global

Rather than have nodes on the sheet for attributes, or a 'creation' dialog like on symbol dice, the project will have global attributes for the project. These can be viewed/created/edited via a dedicated Project Attributes dialog.

### *Possible Element Unification*

It may be possible to unify dice with these 'elements'. A die could be defined as an element with a Randomly selected attribute from a set of possible values - again, either numeric or symbolic. Then a 'pool' becomes a 'group'. Currently symbol dice may contain multiple symbols per 'side', so that would need to be handled somehow.

## **Nodes**

### **Create Elements / Generation**

Groups may be created via a dialog or node. These will allow for basic combinations like one of each attribute (for single attribute element) or a combinatoric creation for elements with multiple attributes, creating one element with each unique combination of attributes, like creating a standard deck of playing cards (which would have a number attribute 1-13, and a symbol attribute with four elements. So 52 (13x4) elements could be autogenerated for the group. This combinatoric generation is not limited to two attributes. It could be done for any number.

The ability will also exist to create custom combinations of attributes, and specific quantities of each combination.

There may be multiple instances of a single attribute. For example, you can create a card which is both blue and red. For blackjack, perhaps an Ace could be 1 or 11, or for poker it could be 1 or 14, to allow for 'wheel' straights.

### **Other generator nodes:**

- Exploding draw
- Merge groups
- Split most duplicated attribute
- Split top N
- Split unique attributes
- Split by attribute
- Redraw group

### **Filter**

- Detect run (numeric attributes)
- Detect flush (every element has a specific attribute value)
- Drop highest N elements
- Drop lowest N elements
- Remove highest
- Remove lowest
- Select highest
- Select lowest
- Select highest N
- Select lowest N
- Select N Random

Select Symbol Attribute Pattern