"flash-tree" (a.k.a. "SFAL" - Simple Flash Animation Language)

SFAL is a language designed for programming simple vector-graphic animation using Adobe Flash technology.

SFAL replaces my original language idea, "flash-tree".

SFAL Language Reference Manual

1. Tokens
SFAL tokens consist of: identifiers, keywords, constants, string literals and separators.

2. Comments
SFAL comments may be single line comments beginning with //, or multi-line comments beginning with /* and ending with */.

3. Keywords
The following identifiers are reserved for use as keywords and may not be used otherwise:

```plaintext
makestage  drawline  setcolor
makecircle drawcurve red
makeellipse yellow
makerectangle point green
makesquare rotate blue
makegroup move brown
maketext place black
addtogroup stop orange
bounce purple
reverse gray
sin
cos
```

4. Constants
SFAL supports integer constants and floating-point constants.

5. String Literals
SFAL supports string literals, also called string constants, which are sequences of characters enclosed by double quotes, e.g. "Hello World".

6. Assignment Expression
An assignment expression takes the form

```plaintext
ID = (makecircle
  | makeellipse
  | makerectangle
  | makesquare
  | makegroup
  | maketext) (arg | (arg,)+ arg) ;
```
7. Statements
Statements end with a semicolon and may take the form

assignment-expression or
function

8. Functions
SFAL includes a number of built-in functions which operate on or return objects.

function-name arg ; or
function-name (arg,)+ arg ;

Example code animating a group of graphic objects in a circle.

// make a 500 by 500 pixel drawing stage
makestage 500, 500;

// make a blue square with sides 20 pixels long
square = makesquare 20;
setcolor square, blue;

// put the square at point 100, 100 on the stage
p2 = point 100, 100;
place square, p2;

// make a red circle with a radius of 20
circle = makecircle 20;
setcolor circle, red;

// put the circle at point 100, 120 on the stage
p2 = point 100, 120;
place circle, p1;

// group the circle and square together
circlesquare = makegroup;
addtogroup circlesquare, circle;
addtogroup circlesquare, square;

// rotate the circlesquare group
spin circlesquare 100, 100, .15;