# SVG Experimental Branch Changes

I tried to break the code out into smaller logical blocks. The process flow is still roughly the same as before. Things are just renamed and moved around a bit.

I merged the classes SVGRoot and SVGSVGNode to try to handle ID collisions in nested SVGs. Each SVGSVGNode is responsible for maintaining its own list of child IDs. I'm not sure if this is the proper approach or if all IDs are supposed to be registered with the root SVG node.

```
<svg id=”svg1”>
        <node id=”commonID”/>
        <svg id=”svg2”>
                <node id=”commonID”/>
        </svg>
        <svg id=”svg3”>
                <node id=”commonID”/>
        </svg>
</svg>
```

So if you want the child node of svg3 are you supposed to do something like “svg1.getElementById('svg3').getElementById ('commonID')”?

## Changes:

SVG Constructor SVGNode(svgRoot:SVGSVGNode, xml:XML = null, original:SVGNode = null)

- If the new node is a clone, the original node is passed to its constructor.
- Two event listeners are added in the constructor
    1. this.addEventListener(Event.ADDED_TO_STAGE, onAddedToStage);
    2. this.addEventListener(Event.REMOVED_FROM_STAGE, onRemovedFromStage);

parseNodes()

- Now called when XML is set.

getNode()

- Replaces getElement()

getAttribute(name:String, defaultValue:* = null, inherit:Boolean = true):*

- All styles and attributes are now retrieved using this function. There is no longer a getStyle() function.
- Automatically handles attribute inheritance for cloned children of Use Node.
- Automatically handles 'inherit' value
- Automatically handles 'currentColor' value
- Checks the array SVGNode.ATTRIBUTES_NOT_INHERITED for attributes not to inherit.

generateGraphicsCommands()

- Tracks the max/min values of x and y of the node for use in gradients.

SVGSVGNode

- Contains all of the SVGRoot functionality.  SVGRoot no longer exists.

SVGViewer

- Contains function prototypes to be overridden by web, Flash, and Flex viewers.

transformNode()

- The viewbox transformations are now contained in applyViewBox()
- The matrix parsing is handled by parseTransformation

isClone attribute

- Set when original != null in the constructor.
- Children inherit the value of isClone

original attribute

- Set in constructor
- If original != null then the node is the top level of a clone

SVGScriptNode

- Sends the script data to the SVGViewer class. SVGViewerWeb overrides the empty handler function.

## Things not yet done:

- Trigger a node change event that bubbles so updateClones() will be called if a child is updated
- Fix gradient transformations
- Integrate JavaScript support
- Make setAttributes() smarter.  We don't need to do a redraw when setting x, y, rotate, opacity, or transform.