Scalable Vector Graphics (SVG) - A Hands-on Introduction
Practical Session 1A - Paths

Introduction

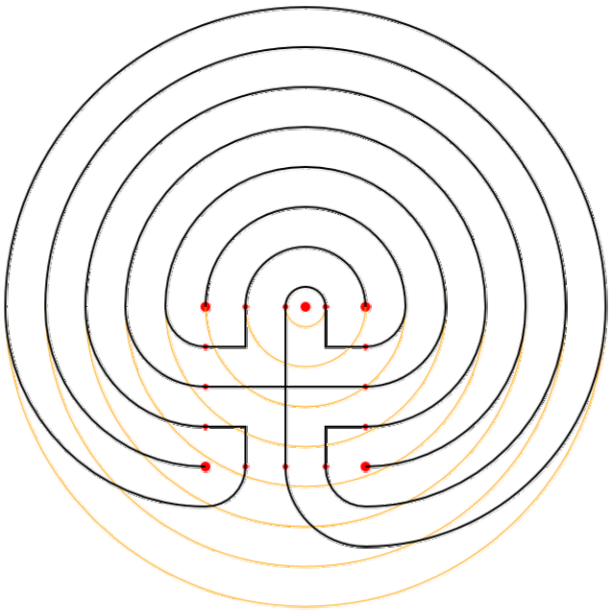
The aim of this exercise is to use arcs and lines to draw a more complex shape - the outline of a labyrinth.

If you are interested in labyrinths in general, the University of Kent have two, their web pages (http://www.kent.ac.uk/UELT/ced/themes/labyrinth/index.html) are very informative and contain good links to sites for further information.

Classical Labyrinth

One of the simplest labyrinths is the so-called 7-circuit labyrinth. For an animation of one way to draw this labyrinth, see http://www.labyrinthsociety.org/make-a-labyrinth-detail/detail/1317-overview. See also "Laying out labyrinths" at http://www.labyrinthos.net/f_intro.htm.

An interpretation of this design drawn using SVG is shown below.



The orange lines and red circles mark circles and points used in the construction of the labyrinth. This labyrinth was drawn on a grid 660 units by 660 units; the centre. The first orange circle has radius 20 units, the radii of the remaining circles increase by 40 units. The points on the basic rectangular grid are 40 units apart. It is suggested that you start by drawing the elements in orange, then draw the labyrinth proper.

You might find the following style element useful.

```
<style type="text/css">
<![CDATA[
circle {stroke:none;fill:red;}
circle.construction {stroke:orange; stroke-width:1;fill:none;}
path {stroke:black; stroke-width:6; fill:none}
]]>
</style>
```

Circles with attribute class="construction" will be drawn in orange. Other circles will be red.

Abingdon Labyrinth

This is loosely based on a design that appears in a medieval manuscript from Abingdon Abbey. (Abingdon is a town on the river Thames, about 5 miles from Oxford.) It was drawn in SVG using arc and line primmitives in the path element. This was drawn using a 700 x 700 grid. The inner circle has radius 90 units, the radii of the other 6 circles increase by 40 units. You may need to use some trigonometry (r cos(theta) and r sin(theta)) to work out the

positions of the end points of the arcs. The separation of the horizontal and vertical orange lines is 15.4 units, but you could use other dimensions.