

Scalable Vector Graphics

Author: Mihai Rotaru

Date: 1 Dec 2011

Scalable Vector Graphics (SVG) relies on text for describing an image. It also supports the inclusion of raster data, however the mainstay of SVG is textual description of graphic data. For example, the following SVG document contains a red circle with a black outline:

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<svg
xmlns:dc="http://purl.org/dc/elements/1.1/"
xmlns:cc="http://creativecommons.org/ns#"
xmlns:svg="http://www.w3.org/2000/svg"
xmlns="http://www.w3.org/2000/svg"
version="1.1"
width="100"
height="100"
id="svg2">
  <g
transform="translate(0,-952.36218)"
id="layer1">
    <path
d="m 90,50 a 40,40 0 1 1 -80,0 40,40 0 1 1 80,0 z"
transform="translate(0,952.36218)"
id="path2987"
style="fill:#ff0000;
fill-rule:evenodd;
stroke:#000000;
stroke-width:1px;
stroke-linecap:butt;
stroke-linejoin:miter;
stroke-opacity:1"
/>
  </g>
</svg>
```

As it is obvious from the document above, SVG is an application of XML - valid SVG documents are also validate as XML. It also showcases how graphical data is stored inside the SVG file - as XML elements, with graphical properties described via attributes. The circle is represented by the path element - the 'd' element is actually short for 'Path Data', and describes it's shape. (<http://www.w3.org/TR/SVG11/paths.html#PathData>). Other properties of the circle, such as it's fill colour and stroke width/colour are described via attributes, as visible in the above example.

The SVG specification has multiple profiles; for example, the SVG Mobile Recommendation (<http://www.w3.org/TR/SVGMobile/>) defines the SVG Tiny and SVG Basic mobile profiles. SVG Tiny is targeted at highly restricted mobile devices, while SVG Basic is meant to be suitable for higher level mobile devices.

One of the major issues concerning SVG is a reduced browser adoption rate. Although the most recent versions of all major browsers have at least some level of support for SVG images, some older, but still widely-used versions do not support SVG; Internet Explorer fully supports the SVG Basic specification only since version 9, released on March 14th 2011.