SCALABLE VECTOR GRAPHICS – WEB STANDARD FOR CARTOGRAPHY

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goal

Scalable Vector Graphics (SVG)

Cartography

Flash

APIs
about svg

- 2D graphic format
- Open W3C standard
- Version 1.0 – 2001
- XML-based markup language
- Incorporation with HTML 5
- Unicode
- Rasters
- Animations
- Graphic filters
- Linking
- Scripting
- Colour standards (ICC profiles)
- Compression
- Direct browser support
• Precision Graphics Markup Language (PGML) and Vector Markup Language (VML) → SVG (1998)

• SVG Mobile profiles – SVG Basic and SVG Tiny (1.2)

• 1.1 – Recommendation (2003)

• 1.2 / 2.0 – Working Draft (2005/ August 2014)

• SVG Open / Graphical Web conference (San Francisco 2013)
svg examples

The Pyramids of Giza

I don't think so. You?

VIDEO

Crime and Poverty in the USA, 2009

Vigilant in Ireland, 11-27th June 2010

Addy Osmani: 20 SVG uses that will make your jaw drop
how to create svg map?

Drawing

Hand-coding

Save as...

Generating
Draw (program, generate) elements step by step

Draw one element → parametrize and copy

Visual variables
simple shape

\[ \text{<circle cx="50" cy="50" r="50" fill="red"/>} \]
<defs>
  <symbol id="arrow"> 
  <path d="M 0 20 h 40 v -20 l 20 30 l -20 30 v -20 h -40 z"/>
  </symbol>

  <pattern id="tile" x="0" y="0" width="4" height="4"
        patternUnits="userSpaceOnUse">
    <path d="M 0 2 L 4 2" style="stroke: black; fill: none;"/>
  </pattern>
</defs>

... 

<use xlink:href="#arrow" x="150" y="50"
style="fill:url(#tile)"/>
<defs>...
...
<use xlink:href="#arrow" style="fill:url(#tile)"
transform="translate(100,150) scale(2) rotate(45)"/>
new variables

- Sound
- Motion – Animation, video
- Interactivity (scripts, links)
atlas of elections

Pavel Vlach, 2012
Interregional cargo transport

- Severní Amerika
- Evropa
- Afrika
- Blízký Východ
- Asie, Austrálie, Oceánie

Podíl meziregionálního obchodu

- Společenství nezávislých států
Conclusion: SVG maps

- APIs and mash-ups – limited possibilities of cartographic techniques
- Generating (programming) of maps from XML data by XSLT styles

Strong connection to HTML 5 (no scripts or external viewers)
SVG enables to use creativity of cartographers and large possibilities of common graphics and design.
Thank you for your attention

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