VECTORPIXELS

A New Way of Displaying Rich Images on Screen

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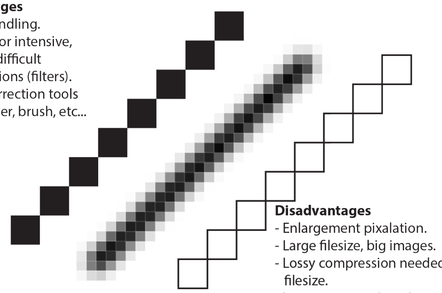
1. Current situation

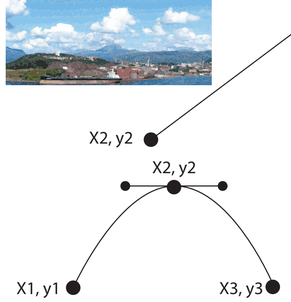
PIXELS FOR DISPLAYING RICH IMAGES, VECTORS FOR SIMPLE IMAGES.

Advantages
- Easy handling.
- Processor intensive, but no difficult calculations (filters).
- Easy correction tools like eraser, brush, etc...



Disadvantages
- Enlargement pixalation.
- Large filesize, big images.
- Lossy compression needed for smaller filesize.
- Large compression gives quality loss.

Figure 1: Classical image representation using pixels



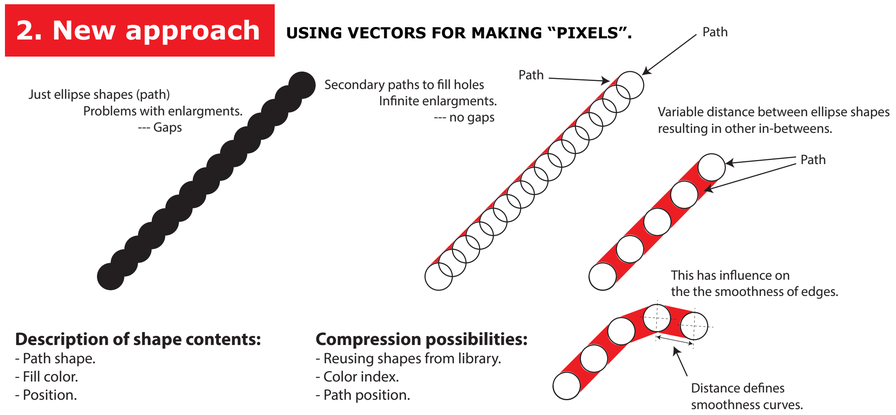
Advantages
- Small image size for large images.
- Infinite enlargements, no loss of image quality.
- No compression with image quality loss.

Disadvantages
- "Hard images".
- Use of handles to make curves.
- Much calculations for tracing.
- High processor load during processing.
- Results tracing moderate.

Figure 2: Image representation using vectors

2. New approach

USING VECTORS FOR MAKING "PIXELS".



Description of shape contents:
- Path shape.
- Fill color.
- Position.

Compression possibilities:
- Reusing shapes from library.
- Color index.
- Path position.

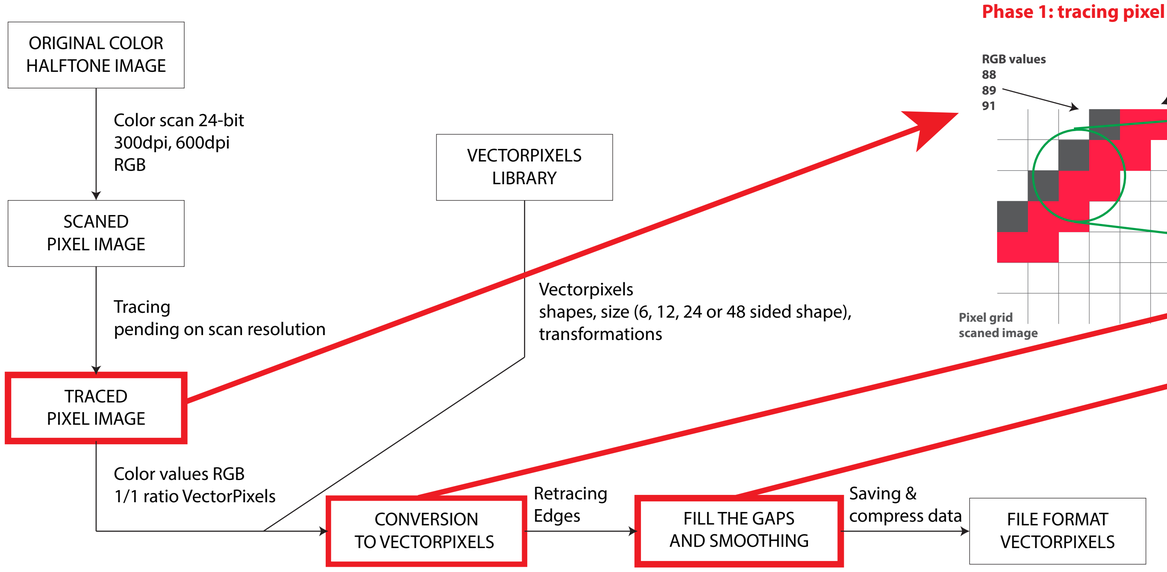
Figure 3: A proposed way of using VectorPixels.

3. How To

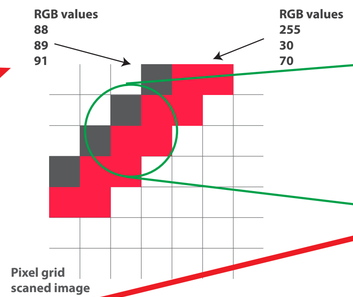
STARTING FROM EXISTING IMAGES, NO DEVICES AVAILABLE TO CAPTURE OR GENERATE VECTORPIXELS.

ALGORITHM CREATING VECTORPIXELS

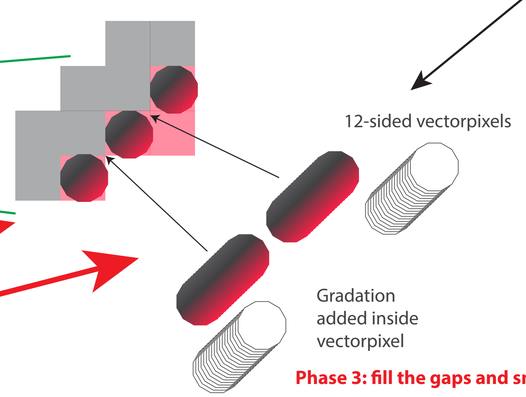
Version1.0



Phase 1: tracing pixel image

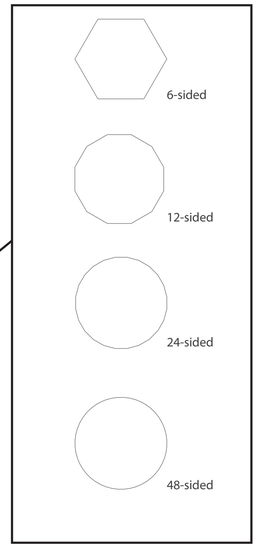


Phase 2: conversion to VectorPixels

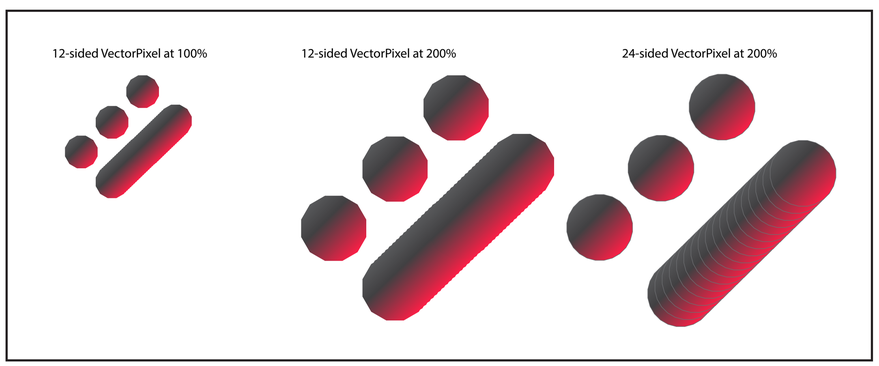


Phase 3: fill the gaps and smoothing

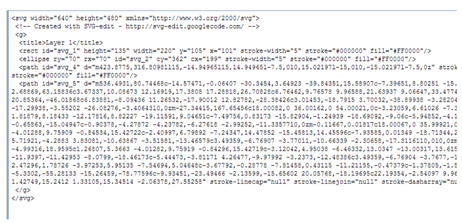
VECTORPIXELS STANDARD SIZES



QUALITY VARY ACCORDING TO NUMBERS OF SIDES



.SVG File Format



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