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About the Project

Anti-Grain Geometry (AGG) is an Open Source, free of charge graphic library, written in industrially standard **C++**. The terms and conditions of use **AGG** are described on [The License](#) page. **AGG** doesn't depend on any graphic API or technology. Basically, you can think of **AGG** as of a rendering engine that produces pixel images in memory from some vectorial data. But of course, **AGG** can do much more than that. The ideas and the philosophy of **AGG** are:


- **Anti-Aliasing.**
- **Subpixel Accuracy.**
- The highest possible quality.
- High performance.
- Platform independence and compatibility.
- Flexibility and extensibility.
- Lightweight design.
- Reliability and stability (including numerical stability).

Below there are some key features (but not all of them):

- Rendering of arbitrary polygons with **Anti-Aliasing** and **Subpixel Accuracy**.
- Gradients and Gouraud Shading.
- Fast filtered image affine transformations, including many interpolation filters (bilinear, bicubic, spline16, spline36, sinc, Blackman).
- Strokes with different types of line joins and line caps.
- Dashed line generator.
- Markers, such as arrowheads/arrowtails.
- Fast vectorial polygon clipping to a rectangle.
- Low-level clipping to multiple rectangular regions.
- Alpha-Masking.
- A new, fast **Anti-Alias** line algorithm.
- Using arbitrary images as line patterns.
- Rendering in separate color channels.
- Perspective and bilinear transformations of vector and image data.
- Boolean polygon operations (and, or, xor, sub) based on Alan Murta's [General Polygon Clipper](#).

Anti-Grain Geometry contains many interactive **Demo** examples that are platform independent too, and use a simple `platform_support` class that currently has two implementations, for **Win32 API** and **X11** (no Motiff, no other dependencies, just basic **X11**). One of the examples is an **SVG Viewer**.

For more information look at **News**, **Screenshots**, **Demo**, **Frequently Asked Questions**, and **Documentation**. Here is the **Download** page.

The collage on the **Main Page** is composed of real **AGG** examples with  **Xara X**. There is a fragment that wasn't rendered with **AGG**, it's a piece of Boris Valejo' artwork, but I really used it when I worked on the image transformation algorithms.

This site is created with a tool called **AGDoc Formatter**.

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