

An Open Archive Tutorial: Why Raster Edit?

Definitions

Raster

Raster image files, produced by digital image capture devices, such as scanners and digital cameras, are composed of a series of dots or pixels. There are many different raster image formats in use. Photographic images frequently use GIF, JPEG, and PCX, while engineering drawings or scanned documents are typically saved in TIFF, CALS, and C4 formats.

A raster image is not directly compatible with vector-based graphics found in CAD systems. Vector files are defined by specific points in a coordinate system. A circle in CAD is defined by a center point and a radius. No such information exists for a circle in a raster file.

Raster Editing

Scanned engineering drawings require editing to keep drawings current. Raster editing is the process of making changes to raster images without converting them into another format.

Why Keep Drawings (Scans) In Raster

The advantages of scanning paper drawings are broad and well-known. But what may not be known are the advantages of maintaining your scanned drawings in a raster format. Raster is **universal**. It is **vendor, version, and rev level independent** and as **generic** as a .txt file. In fact, more engineering drawings are preserved in raster than vector.

- ♦ As software manufacturers update and improve their software, older versions become obsolete. Maintaining drawings in raster ensures that they will be usable well into the future.
- ♦ Raster data is easily viewed by any standard viewer which is usually included with the PC operating system.
- ♦ Raster files are 30 - 50% smaller than vector files. This can be particularly important for archival and transportability.
- ♦ Raster editing doesn't require conversion to vector which can be time consuming, cumbersome and requires special software and trained personnel.

What Can Raster Editing Do?

- ▶ Grid and ortho snap for accurate insertion
- ▶ Move, copy, scale and rotate selected or new raster
- ▶ Add basic geometry such as lines, circles, arcs and rectangles
- ▶ Insert raster drafting objects such as text, ellipses & polygons
- ▶ Support measurements, leaders, calibration & dimensions
- ▶ Fill patterns with cross hatch, translucency, border styles and pen widths
- ▶ Erase areas using rubout, rectangle area, polygon windows, and circle & ellipse fills
- ▶ Undo multiple levels to repair undesired results
- ▶ Enhance or clean up including deskew, despeckle and crop

Conventional thinking prescribes that you convert your scanned drawings into vector for editing. While this is true for complex changes that require the "smart" capability of CAD, many revisions can be done within the capability of raster. For more information, our [S.E.A.\(Scan, Edit, Archive\) Your Paper](http://www.openarchive.com) at www.openarchive.com provides more details about scanning, editing, and managing your engineering drawings.

Raster Editing Solutions

GTXRaster CAD® Series provides raster editing and vector conversion for use within AutoCAD. It supports all current AutoCAD® versions.

rasterREnew, a Renew Series solution from Open Archive Systems, Inc. is a simple and fast raster editor which can meet most raster editing needs.