



# Guidelines for Author– Supplied Electronic Text and Graphics

ELECTRONIC TEXT FILES: PAGE 2

ELECTRONIC GRAPHICS FILES: PAGE 2

SENDING FILES: PAGE 3

## Guidelines for electronic text files

---

IEEE Magazines and Newsletters can accept text in the formats listed below. Microsoft Word is the preferred file format. If your text processor is not listed below, Rich Text Format is the preferred alternative; if not available, you may save your file as ASCII. (ASCII files need two paragraph returns between paragraphs.) In all cases, you also must submit hard copy. In cases where an electronic file and the printed copy differ, the printed version will prevail.

When preparing your paper, the fewer layout specifications (such as multiple columns, font changes, type size, page parameters, etc.) the better. Please use italic, sub- and superscript, and special characters as needed. You should not mimic the pages of the publication in which your paper will be published, nor should you include graphics within the document file. Guidelines for graphics files are also available at this site.

Avoid automatic numbering for heads, references, or numbered lists.

## Preferred text formats

---

Microsoft Word  
Rich Text Format

## Acceptable text formats

---

Ami Pro  
ANSI text  
ASCII text  
HTML  
Microsoft Word (for Windows or Macintosh)  
Rich Text Format  
WordPerfect

Do not provide your paper in the format of desktop publishing software, such as QuarkXpress or Framemaker. Do not provide your paper in PostScript form.

## Guidelines for electronic graphic files

---

There are two types of graphic files, bitmaps and vectors. A bitmap image is defined in terms of (colored or black) dots; it fol-

lows that such an image is fixed with respect to both size and resolution. Since a bitmap's resolution is fixed, printing a bitmap at a larger size results in a loss of resolution. It is therefore important that bitmap images be created in the right size, and at the highest resolution possible (see below). Vector graphic files define an image as lines and curves and can be scaled up or down with little or no loss of definition.

Scanned images are always bitmaps. Drawing programs, such as Adobe Illustrator or CorelDraw, usually produce vector files. Presentation programs, such as PowerPoint produce vector files.

In all cases, hard copy of images must be submitted along with the electronic version. This hard copy should be of the highest possible quality; in the event that an electronic file is unusable, the IEEE may scan the hard copy to create an electronic image. Thus, printer resolution, toner quantity, and even paper quality can affect the final result.

Photo images may be supplied as photographs, slides, or transparencies. Laser proofs or magazine cutouts are unacceptable.

Graphics files should not be provided from within a word processing program such as Microsoft Word or WordPerfect. Graphics files are ideally supplied in the format that is produced by your graphics software, as listed below.

Identify what graphic program produced the file as well as what format the file is in. Figures should be numbered as they will appear in the article and contain the appropriate 3- or 4-character extension to identify the format.

### Bitmap Format

Acceptable formats are TIFF (\*.TIF), PCX, JPEG (\*.JPG), Kodak Photo-CD (\*.PCD), Scitex (\*.CT), and GIF files.

Bitmaps are measured in dots per inch (dpi). They should be at least 300 dpi (600 dpi is preferred) at the final printed size. In other words, if your image is to be printed 3.5 inches wide, it should contain at least 1050 (300 dots x 3.5 inches) dots horizontally and preferably 2100 (600 dots x 3.5 inches) dots horizontally. When in doubt as to proper size, it is best to error on the larger size rather than making a graphic too small. Check the settings of your graphics software. Do not try to use the file size to guess the resolution, since compression and color and other information encoded in the file makes this unreliable.

Since magazines are printed at a resolution that is much greater than that of a computer screen, images of lesser resolution will appear to be out of focus, or show evidence of "bitmapping." For example, diagonal lines will look like a flight of stairs. Files created for the web are optimized for viewing on a computer monitor which can show images at 72 dpi thus are too small by a factor of at least 4 and therefore images created for or captured from the web are generally unacceptable for publication. GIF images are generally automatically optimized for use on the web and are therefore rarely acceptable for publication and should be avoided. Screen captures will also be low resolution and should be avoided.

Photographs, images with tints (use tints only when necessary,

never just for appearance), and other grayscale images should be of good quality with proper contrast. Too high contrast will cause your image to appear “washed out” when printed; too low contrast will appear to be a blob of black and/or gray. If text must be placed in the image make sure that it is of sufficient contrast with the surrounding area that it will be legible. Text should be 8 point Helvetica (or Swiss) when the image is at the final printed size. (If you are adding text in either Adobe PhotoShop or Corel PhotoPaint, please add text on a separate layer and send the file in native PhotoShop (\*.PSD) or PhotoPaint (\*.CPT) format.)

Color images should meet all the requirements of grayscale images and should be saved in CMYK format.

Bitmaps should not be saved in Encapsulated PostScript (EPS) or Postscript (PS) format.

### Vector Format

Acceptable formats are CorelDraw (\*.CDR), Corel Presentation Exchange (\*.CMX), Adobe Illustrator (\*.AI, \*.EPS) and other DRAW type programs (\*.EPS)

Unlike bitmapped images, vector graphics are resolution-independent and can be sized without any loss of resolution. However, if there are labels or other text in the image, the image should be sized appropriately to the publication and text should be 8 point Helvetica (or Swiss). Other fonts should be avoided as they will have to be changed to match the publication style. If other fonts are absolutely required (such as for advertising or trademarked material) they should be converted to curves before being saved.

All line weights and outlines should be 0.5 point in weight. All colors should be defined as CMYK, avoiding Pantone or spot colors. White boxes may not be used to “break” lines (or cover any unwanted aspect of your drawing), as this makes tinting a graphic impossible. Use two separate lines to draw a broken line. Avoid putting in your own tints if for appearance only; such decisions are

## Guidelines for sending files

better made by the design staff associated with the magazine.

Where possible, files should be saved and sent in native format, but where that is impossible, graphics may be saved in Encapsulated PostScript format.

Files may be transmitted by floppy disk (3½ in), Zip disk, writable CD, ftp, or email. A paper copy of the manuscript along with any original figures and photos must still be sent to the magazine’s managing editor.

### **Floppy Disk (3½ inch), Zip Disk, Writable CD Transmittal**

It is helpful if you note the operating system, software, and version number used to create your file(s). Write this information on the media label with a felt pen. Graphic files are best transmitted separate from text files. Make sure your files are self-contained, i.e., that there are no pointers to your system setup. Check that your files are complete. Include: text, references, footnotes, biographies, and figure captions. Package diskettes to protect them in mailing. Please include the best way to contact you (telephone number, email address, etc.) in case we have questions about the transmittal.

#### *Things Not To Do:*

DO NOT put the files in a page layout software (Ventura, Quark, Pagemaker, Frame, etc.).

DO NOT send output files (PostScript, PDF, DVI, etc.)

DO NOT embed macros, especially in Word files.

DO NOT use automatic numbering.

### **FTP Transmittal**

#### *To send a file using ftp:*

1. Connect to ftp.ieee.org
2. Log in with the user name: anonymous (no password needed)
3. Place file in directory: /uploads/magazine.

It is helpful to package your transmittal into a single file, using zip (pkzip, gzip, etc.), stuffit/binhex, or tar.

#### *Please be sure to:*

a) Include the magazine name in the filename(s). Indicate the article by using either the tracking number used in the review process or one of the authors’ names. Examples: CSM47-98.ZIP, SP0019.DOC. If you have to re-send an article and cannot overwrite an existing file in the ftp directory, modify the name slightly, e.g., CSM47-98new.ZIP.

b) Alert the magazine’s managing editor by phone or email that an ftp transmittal has been made.

### **Email Transmittal**

It is helpful to package your transmittal into a single file, using zip (pkzip, gzip, etc.), stuffit/binhex, or tar. Compression utilities have the advantage of reducing file size and transmission times.

The transmitted file should reflect the exact content of the final manuscript, including captions, references, and biographies.

The manuscript should be transmitted as a MIME-compliant attachment. The body of the email should indicate:

The name of the magazine

The author’s name

The software format of the manuscript

The name of each file being transmitted.

For answers to questions about the process, please contact IEEE Magazines (mag-webkeeper@ieee.org).