

By today's standards you can search for an image using its name and possibly metadata associated with it; however this tends to be totally inadequate when it comes to detailing the individual components to any complicated image. Unless you have been incredibly meticulous in your file naming structure, the chances are searching for an image even on your own computer can be incredibly difficult, especially if your memory is of a certain picture and the computer only knows the image as 10004556.JPG.

On the web, images are associated with surrounding words, and words that have been specifically attached to them for example in the ALT tag or in a TITLE tag for a hyperlinked image. Anyone that has used for example Google image search will know how unsuccessful this method is, often having it retrieve completely irrelevant and nonsense results for what should be a very straightforward search.

Our killer application works on a predicted new semantic image format (just as HTML becomes XHTML or CSS, XCSS), a form of XJPEG taking the existing compression technology of the Joint Photographic Experts Group and adding more than just metadata, but rather a whole section of the file in a compatible XML/text form. Inside this there can be a standardised method of defining the contents of the image (similar to the way in which RSS is based on XML), which will require new programs or tools within existing programs to save to this format.

The image can be broken up into any number of rectangles containing a portion of the image, and also a title and description of the contents of the rectangle. The rectangles are not within a fixed grid but rather have a starting XY coordinate and finishing XY coordinate. There is nothing to say that rectangles can't overlap, and of course this should be the way, since pictures and photos will rarely be clearly broken into sections.

A good example of this might be a picture containing a lake, containing some swans. A section created for the swans will be within a section created for lakes inside a master section that describes the entire scene.

Tools could be developed to 'auto-tag' sections of photos, for example detecting sections of an image and creating rectangles ready to be written about, or even adding generic information about them itself.