

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

- 1) Apparatus for performing searching of a plurality of reference images, the apparatus including one or more electronic processing devices that:
 - a) search the plurality of reference images to identify first reference images similar to a sample image;
 - b) identify image tags associated with at least one of the first reference images;
 - c) search the plurality of reference images to identify second reference images using at least one of the image tags; and,
 - d) provide search results including at least some first reference images and at least some second reference images.
- 2) Apparatus according to claim 1, wherein the one or more electronic devices:
 - a) determine a first image ranking in accordance with a similarity of the first reference images with the sample image; and,
 - b) select the at least one first reference image at least partially in accordance with the first image ranking.
- 3) Apparatus according to claim 1 or claim 2, wherein the one or more electronic devices:
 - a) present at least some first reference images to a user;
 - b) determine at least one selected first reference image in accordance with user input commands; and,
 - c) identify image tags associated with the at least one selected first image.
- 4) Apparatus according to claim 3, wherein the one or more electronic devices present first reference images to the user in accordance with a first image ranking.
- 5) Apparatus according to any one of the claims 1 to 4, wherein the one or more electronic devices:
 - a) determine an image tag ranking in accordance with a frequency of occurrence;
 - b) select the at least one image tag at least partially in accordance with the image tag ranking.
- 6) Apparatus according to any one of the claims 1 to 5, wherein the one or more electronic devices:
 - a) present a plurality of image tags associated with the at least one first reference image to the user;
 - b) determine at least one selected image tag in accordance with user input commands; and,

- c) search the plurality of reference images using the at least one selected image tag.
- 7) Apparatus according to claim 6, wherein the one or more electronic devices present image tags in accordance with an image tag ranking.
- 8) Apparatus according to any one of the claims 1 to 7, wherein the image tags include metadata tags.
- 9) Apparatus according to any one of the claims 1 to 8, wherein the one or more electronic devices:
 - a) determine a results ranking of the first and second reference images; and,
 - b) provide the search results in accordance with the results ranking.
- 10) Apparatus according to claim 9, wherein the one or more electronic devices determine the results ranking in accordance with at least one of:
 - a) a first image ranking;
 - b) a second image ranking; and,
 - c) combined first and second image rankings.
- 11) Apparatus according to claim 10, wherein the one or more electronic devices determine a second image ranking in accordance with a similarity of the second reference images with the image tags.
- 12) Apparatus according to any one of the claims 1 to 11, wherein the one or more electronic devices receive the sample image from the user.
- 13) Apparatus according to any one of the claims 1 to 12, wherein the one or more electronic devices process the sample image.
- 14) Apparatus according to claim 13, wherein the one or more electronic devices process the sample image by:
 - a) segmenting the sample image to form sample sub-images; and,
 - b) search the plurality of reference images using the sample image and sample sub-images.
- 15) Apparatus according to claim 14, wherein the one or more electronic devices segment the sample image by:
 - a) determining clusters of image features; and,
 - b) segmenting the image in accordance with clusters.
- 16) Apparatus according to claim 15, wherein the one or more electronic devices segment the sample image by:
 - a) converting the sample image to a greyscale image;

- b) filtering the greyscale image to generate a filtered greyscale image;
 - c) normalising an image intensity of the filtered greyscale image to generate a normalised image; and,
 - d) determining clusters within the normalised image.
- 17) Apparatus according to claim 13 or claim 14, wherein the one or more electronic devices process the sample image by at least one of:
- a) scaling the sample image and the sample sub-images;
 - b) determining image features from the sample image and sample sub-images; and,
 - c) remove at least one of:
 - i) an image background;
 - ii) noise; and,
 - iii) text.
- 18) Apparatus according to claim 15, wherein the one or more electronic processing devices scale the sample image and sample sub-images by:
- a) cropping the images and sub-images to remove background and form cropped images; and,
 - b) resizing the cropped image to a defined image size.
- 19) Apparatus according to any one of the claims 13 to 18, wherein the one or more electronic processing devices process the sample image by:
- a) performing optical character recognition to detect text; and,
 - b) removing text from the image.
- 20) Apparatus according to any one of the claims 13 to 19, wherein the one or more electronic processing devices:
- a) process at least one of the sample image and sample sub-images to determine sample image features; and,
 - b) use the sample image features to determine a sample feature vector.
- 21) A method for performing searching of a plurality of reference images, the method including:
- a) searching the plurality of reference images to identify first reference images similar to a sample image;
 - b) identifying image tags associated with at least one of the first reference images;
 - c) searching the plurality of reference images to identify second reference images using at least one of the image tags; and,

- d) providing search results including at least some first reference images and at least some second reference images.