BDFH of the object image match the information in the recognition dictionary **26**, as shown for example in FIG. **6***a*. If the number of small areas SR do match the information in the recognition dictionary **26**, flow proceeds to step **2300**. However, if there is no match flow proceeds to process E in FIG. **9***f*.

At step **2300**, the chromaticity and vector quantization histograms of the object image are compared against the information in the recognition dictionary **26**, as shown for example in FIGS. **7***a* and **7***b*. If the chromaticity and vector quantization histograms of the object image match the information in the recognition dictionary **26**, flow proceeds to step **2400**. However, if there is no match flow proceeds to process E in FIG. **9***f*. At step **2400**, since the chromaticity and vector quantization histograms of the object image match the information in the recognition dictionary **26**, the match determination device **28** generates a positive match result **30**, indicating that the scanned image has a match in the recognition dictionary **26**.

In FIG. **9***f*, the next quadrangle information from the recognition dictionary **26** is advanced at step **2500** and flow proceeds to step **2600** where the quadrangle information is read from the recognition dictionary **26**. At step **2600**, the match determination device **28** reads quadrangle information from the recognition dictionary **26** (e.g., a maximum length of a diagonal line and a length of a shortest side for an inscribing quadrangle) and flow proceeds to step **2700**.

At step **2700**, the match determination device **28** determines whether the size of the extracted quadrangle information of the object image matches the size of the quadrangle information from the recognition dictionary **26**. If the information obtained from the object image matches the information from the recognition dictionary **26**, flow proceeds to process F in FIG. **9***b*. If the size of the image information of the object image does not match the information from the recognition dictionary **26**, flow proceeds to step **2800**.

At step **2800**, the match determination device **28** determines whether all the information in the recognition dictionary **26** has been checked. If all the information in the recognition dictionary **26** has been checked, flow proceeds to step **2900**. However, if all the information in the recognition dictionary **26** has not been checked, transfer returns to step **2500**. At step **2900**, since all of the information in the recognition dictionary **26** has been checked, the match determination device **28** generates a negative match result **30**, indicating that the scanned image does not have a match in the recognition dictionary **26**.

Although in the preferred embodiment the image recognition apparatus includes a microprocessor **2** with RAM **6** and ROM **10**, this invention may be implemented using a conventional general purpose digital computer or microprocessor programmed according to the teachings of the present specification, as will be apparent to those skilled in the computer arts. Appropriate software coding can readily be prepared by skilled programmers based on the teachings of the present disclosure, as will be apparent to those skilled in the software arts. The invention may also be implemented by the preparation of application specific integrated circuits or by interconnecting an appropriate network of conventional component circuits, as will be readily apparent to those skilled in the electronic arts.

Although the image recognition apparatus is described in terms of recognizing a color image, the present invention may also be used for detecting and/or prohibiting illegal activities, such as the forgery of specific documents, such as notes, currency, or negotiable instruments, on a color image processing apparatus, such as a color copying machine or a personal computer system with an image scanner, as will be apparent to those skilled in the electronic arts. Once the specific image is detected in the object image as shown in steps **1600**, **2000** and **2400**, the color image processing apparatus prohibits copying of the object image if the object image matches image information in a recognition dictionary for the specific image. The reference data in the recognition dictionary is provided by sampling specific images such as currency, notes, or negotiable instruments. When a negative match result **30** is generated as shown in steps **700** and **2900**, copying of the object image is allowed and the printer **8** generates a copy of the scanned image. However, when a positive match result **30** is generated as shown in steps **1600**, **2000** and **2400**, copying of the object image is inhibited and a message such as an audible and/or visual message may be indicated which warns that an image was attempted to be copied which is prohibited from being copied. Also, the image may be copied but only one color or certain colors are used to clearly show that the copy is only a copy and is clearly not an original.

The present invention includes a computer program product which may be on a storage medium including instructions which can be used to program a computer to perform a process of the invention. The storage medium can include, but is not limited to, any type of disk including floppy disks, optical discs, CD-ROMs, and magneto-optical disks, ROMs, RAMs, EPROMs, EEPROMs, magnetic or optical cards, or any type of media suitable for storing electronic instructions.

Obviously, numerous modifications and variations of the present invention are possible in light of the above teachings. It is therefore to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described herein.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. An image recognition method for recognizing a specific image, comprising the steps of:

obtaining image signals from a scanned image;

extracting an object image from said image signals as a candidate for recognition of said specific image;

extracting feature values from said object image using said image signals;

obtaining features of said specific image from a reference dictionary including a rotation characteristic indicating an ease in ability to determine a rotation of said specific image;

comparing said extracted feature values from said object image with said obtained features of said specific image from said reference dictionary using an analysis which is based on said rotation characteristic of said specific image; and

generating a recognition result based on a result of said analysis of said comparing step.

2. The image recognition method according to claim **1**, wherein said step of extracting feature values from said object image further comprises:

extracting quadrangle data of said object image from said extracted feature values of said object image.

3. The image recognition method according to claim **1**, wherein said step of comparing said extracted feature values from said object image further comprises:

comparing said extracted feature values from said object image with features from a plurality of specific images from said reference dictionary.

4. The image recognition method according to claim **1**, wherein said step of comparing said extracted feature values from said object image further comprises: