Design of a new search engine for the information search using image as an input key

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Abstract: - It's a long time we didn't actually think about this. Whenever we need an image or the information regarding an image to be searched, we have to give a hint or the keyword related to the image. But think of a situation when you don't have any idea of an image which is in your hand; what the image is.? This paper deals with above situation. The proposed search engine is designed such a way that the unknown image will be given as an input to the search engine. The image is been processed and the relevant information and the similar images are fetched. Here most of the functions are accomplished in c, c++ platform where as few complicated process such as recognition may need higher platform.

Keywords: **encoding, patter matching, image processing.**

I. Introduction

The information of the image need to be searched first subject to an encoding, converting the image to a text format defining the colour pattern, linings to the minute level through a specific algorithm. The text coded image is now sent to the

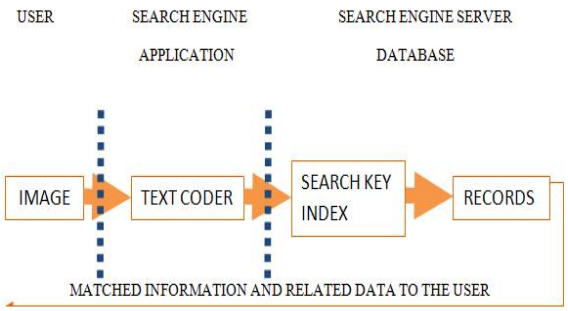
search engine server. The search engine server image database has images and all relevant information in its repository with the corresponding text coded form linked to it. Now the text coded image from the user is matched.

II. How does our info search differ from other search?

In existing search engine we need a related text key to search an image which restricts its use for absolutely unknown images.

In the proposed method even without knowing any idea about an image it's possible to retrieve the information about the image and related images. We can retrieve image by providing the image itself as input key.

A. Working illustration:



III. Image to text coding principle

The aim of this coding is to provide a detailed description of the image to the search engine server, so that searching it in the huge collection of records in the DB becomes easy.

The description must be in such a way that it can extract the maximum and most relevant data from the database. The description of an image are categorized as technical and non technical

Image is analyzed and coded in two ways:

1. Non technical description
2. Technical description

IV. Algorithm procedure:

The following algorithm procedure is framed to get a clear picture of what must be done for the suggested coding.

A. Non Technical Description

Non technical descriptions are obtained by analyzing the image colour, size ratio, number of colors present etc.

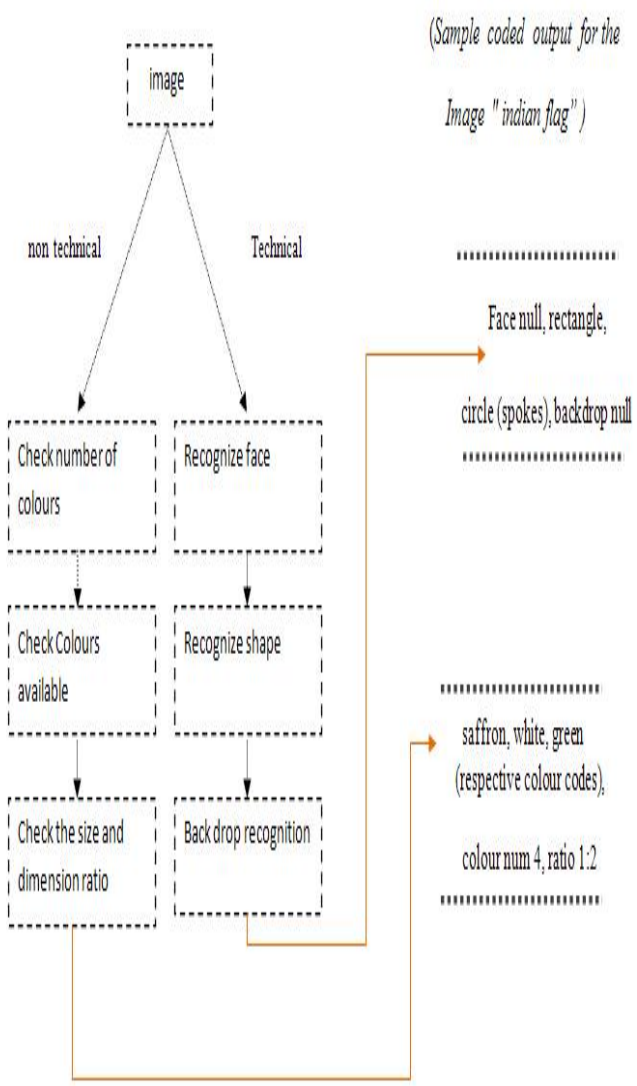
B. Technical Description

Technical descriptions are obtained by analyzing the minute details of the image comprising face detection, shape recognition, back drop recognition etc

To get both these technical and non technical descriptions (coding), the image whose information must be

searched is passed through a series of process with the help of respective search engine application, and which steps has been detailed and illustrated in the following content.

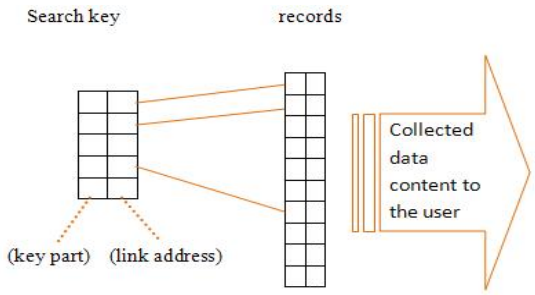
It must be noted that the records in the database itself is a collection of text code of images present in it. And thus the text code from the user is matched with the text code of data base and if found relevant and related all its associated content would be selected and sent to the output buffer to be sent to the respective user



A. *Extraction of relevant data from search engine database*

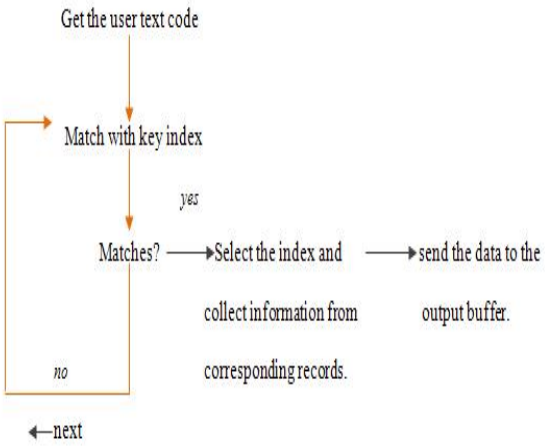
The coded image thus obtained is now sent to the server where the text codes are matched with the search key index that contains the primary keys of the information present in the records. The keys are linked to its respective record through an address. The matched keys are selected, all its respective information, related content are collected and sent to the requested user.

Illustration (database)



B. *Matching algorithm*

The process involved in the extraction of information from the database with respect to the coded text from the user is illustrated below.



V. *Conclusion*

This paper presents a novel search engine which helps to know about any image and also helps to fetch similar like images. We strongly believe that the methodology which we propose will help to develop an effective search engine. Even such application can be used in the fields like medical, geospatial etc.

Reference:

The record organization in the database could be found in **Computer Database Organization, 2nd Ed, 2nd edition, James Martin.**

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