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Content Based Image Recovery Approaches Using Graphical Image Recovery Procedure (GIRP)

M. Senthil Kumar[1]* and A. Immaculate Mercy[2]

[1*,2]*Department of Computer Science, Marudupandiyar College, Bharathidasan University, India,*

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Abstract— This document stretches a transitory account of a scheme industrialized for redeemable images alike to an enquiry image after a big set of distinct images. It shadows an image division based tactic to excerpt the dissimilar topographies current in an image. These topographies are stowed in vectors called eye vectors and likened to the eye vectors of enquiry image and thus, the image catalogue is organized in lessening instruction of similarity. Dissimilar after outdated dimensionality discount procedures such as Principal constituent examination (PCA) and lined differentiate examination (LDA), which professionally see only the worldwide euclidean structure, GIRP is envisioned for knowledge the local various structure. Therefore, GIRP is probable to be additional appropriate for image retrieval, where adjacent national hunt is usually involved. After projecting the images hooked on an inferior dimensional subspace, the pertinent images become earlier to the enquiry image; thus, the recovery presentation can be enhanced.

Keywords—CBIR, Hyper media info system, Image retrival, Significaance reply image eye extraction, Image analysis, Image search, Image resemblance

I. INTRODUCTION

The cbir is interested by the debauched development of numerical image databases, which, in turn, need well-organized hunt schemes. Somewhat than telling an image by using text, in these systems, an image enquiry is branded using one or additional example images. The low equal visual topographies (color, texture, shape, etc.,) are automatically detached to signify the images. However, the low-level topographies may not accurately tag the high-level semantic concepts. The image recovery methods based on visual image gratified has remained in-focus for additional than a decade. Frequent web hunt engines but alike images by penetrating and corresponding written metadata associated with numerical images. The newspaper addresses and analyses examinations & subjects of cbir techniques/systems, changed through New Year's refuge various approaches for segmentation; edge, boundary, region, color, texture, and form based eye extraction; thing detection and identification. For healthier exactness of the protected following images, this type of hunt needs associating expressive image descriptive text tags as metadata with all images of the database. in real-world image recovery systems, the significance responses if by the user is frequently limited, typically less than 20, whereas the dimensionality of the image interplanetary can variety after numerous hundreds to thousands. Bodily image labeling, recognized as bodily image annotation, is almost problematic for exponentially cumulative image database. The image hunt results, appearing on the chief sheet for fired text enquiry rose dark for foremost web hunt engines Google, Yahoo and AltaVista. Frequent following images consume absence semantic corresponding with the query, presentation vast possibility of investigation foremost to developments in the state-of-art techniques.

The essential changed two answers involuntary image footnote and gratified based image retrieval. The gratified based image recovery methods aim to respond to an enquiry image (or sketch) with enquiry alike following images got after the image database. The catalogue images are preprocessed for removal and then storing indexing consistent image features. The enquiry image also becomes preserved for removal topographies which are likened with topographies of catalogue images by applying appropriate resemblance events for redeemable enquiry alike Images. In the area of CBIR, it overwhelms the difficulties of bodily comments by using visual eye based representations, such as color, texture, shape, etc. However, after over a retro of intensified.

The main blockage of this tactic is the hole among visual eye pictures and semantic ideas of images. Low-level fillings frequently don't tag the tall level. Semantic ideas in user's minds. GIRP researcher careful to recuperate this burden, one talented way in the direction of semantic recovery is the adoption of significance reply device [8]. Frequent investigators emphasis on these significance methods since they are important in attaining a healthier exactness degree [9]. The method is a variation of "query by example" that includes manifold connections with a user at hunt time [6]. It mentions to the reply after a user on exact substances concerning their significance to a board image, in all iteration, the urbane enquiry is re-evaluated.

Corresponding Author: *M.Senthil Kumar*

Fig 1. Image hunt consequences for enquiry – rose

Various methods for removal and picture of image topographies alike histograms local (corresponding to districts or sub-image) or worldwide, hue layouts, gradients, edges, contours, limits & regions, feels and forms consume remained stated in the literature. Histogram is one of the humblest image features. Notwithstanding being invariant to translation and revolution about viewing axis, absence of attendance of three-dimensional info is its main drawback. Frequent totally dissimilar images may consume alike histograms as three-dimensional info of pixels is not reflected in the histograms. Consequently, frequent histogram modification methods consume remained stated in the literature. Histogram connection based method for likening faultless and image histograms was future in [1] for thing identification.

II. OPTIMAL *LINED* EMBEDDING

Histogram modification based on hue constancy vectors was future in [3]. the method reproduces three-dimensional info and classifies pixels of histogram buckets as intelligible if they fit to a minor area and incoherent otherwise. however being computationally expensive, the method recovers presentation of histogram based matching. hue correlogram eye for images was future in [2] which take hooked on explanation local hue three-dimensional correlation as well as worldwide distribution of this three-dimensional correlation. the correlogram stretches the alteration of three-dimensional correlation of couples of insignia with coldness and henceforth does well over classical histogram based techniques. A adapted histogram based method to join three-dimensional plan info of all hue with annular, angular and cross histograms has remained future in [4]. in [5], cumulative histogram and respective detachments for image resemblance measures, overwhelming quantization problematic of the histogram bins was proposed.

The picture of hue distribution topographies for all hue position based on average, variance and skewness, branded as moments, for image resemblance was also presented. Various division methods based on advantage detection, outline detection and area formation consume remained stated in the literature. these techniques, in general, procedure low equal signs for originating image topographies by next bottom-up approach. involuntary image division is a very vital phase as the general presentation of recovery consequences meaningfully be contingent on the exactness of the segmentation. the greatest problematic task for any involuntary image division procedure is to evade under and over division of images, possessing diversified characteristics. Hence, for obligatory gage of segmentation, limit tuning or threshold adjustment develops unavoidable for versatile image division algorithms. maneuvering vicissitudes in hue and feel consume remained recognized in [10], using predictive hue faultless to sign limits by iteratively propagating advantage flow.

This iterative method is computationally luxurious since of dispensation of low equal signs at all pixels for assumed scale's unique ranked group edge work based tactic for border removal with Ultrametric outline maps UCM - on behalf of geometric construction of an image has remained future in [7]. A general group procedure based on Oriented Watershed alter and UCM [7] has remained future in [6] to procedure a ranked area tree, lastly foremost to segmentation. the method enforces bounding outline closures, evading leaks aroot aim of under segmentation. Exhaustive exactness memory assessment of OWT-UCM method for dissimilar balances also has remained presented. area based image retrieval, joining graphs, manifold low equal tags and their propagation, multilevel semantic picture and provision vector machine has remained future in [14],implying competence of the method. in [14], the replicas and methods were used to combine written and image topographies to categorize images. lu [15] future the outline of significance reply method to take advantage of the semantic net on top of the Key-word connotation on the images in addition to the lowlevel features.

Chang [6]further better this outline using the probabilistic production of SVM to do footnote spread in instruction to updating unlabeled images in addition to branded images. [7] future a unified image recovery outline based on composed Key-word comments and image visual feature. for all keyword, a arithmetical faultless is trained by using visual eye of branded images. Moreover, an actual update Key-word replicas using newly branded images occasionally tactic is proposed. However, the communal curb of this outline is the Key-word replicas complete after visual eye of a set of images are branded with semantic keywords. in this paper, we utilize the hunt engine to but a big amount of images using a assumed text-based query. in the low-level image recovery process, the scheme delivers a alike image hunt drive for the user to update the input enquiry for image resemblance characterization.

III. PROPOSED GIRP PROCEDURE

The future arrangement is not the alike as the current outline of unifying Key-words and visual gratified systems. The key word replicas complete after visual eye of a set of images are branded with keywords. It joins an image examination procedure hooked on the text based image hunt engines. Moreover, it is applied on real-world image database. A

high-level semantic recovery can be complete by using significance images after Yahoo image hunt engine. For low-level feature, we current a debauched and healthy hue eye removal method exactly auto hue correlogram and correlation (ACCC) based on hue correlogram (CC) [7] and auto correlogram (AC) [7] algorithms, for removal and indexing low-level topographies of images. The recovery presentation is acceptable and advanced than the even exactness of the protected images using auto correlogram (AC). Moreover, it can decrease computational time after O (m2d) to O (md) [8]. The outline of multi-threaded dispensation is future to incorporate an image examination procedure hooked on the text based image hunt engines. It recovers the competence of an appeal when moving images, indexing, and likening the resemblance of protected images after varied sources.

yi (xiT w x b) y1xyi ,xi y1...n (1)

A transitory swift of GIRP of the cbir schemes has remained obtainable in this section. qbic - enquiry by image gratified system, industrialized by IBM, brands visual gratified resemblance contrasts of images based on possessions such as hue percentages, hue layout, and feels occurring in the images. The enquiry can whichever be example images, user-constructed sketches and drawings or designated hue and feel designs [6] [7]. The ibm industrialized qbic skill based Multimedia boss creation for recovery of visually alike images [8]. Virage 35] and Excalibur are additional designers of profitable cbir systems. Visual Seek- a combined spatial-feature image hunt engine industrialized at Columbia university does image resemblance judgment by corresponding salient hue districts for their colors, sizes and whole & comparative three-dimensional locations[9][3]. Photo volume industrialized at television Laboratory, Massachusetts Institute of skill – MIT for image recovery based on image fillings where in color, form and feel topographies are coordinated for euclidean, mahalanob is, divergence, vector interplanetary angle, histogram, Fourier peak, and wavelet tree distances. The combination of communicating knowledge agent, called four Eyes for choosing & uniting feature-based replicas has remained a unique eye of photo volume [11]. MARS hypermedia examination and recovery schemes [12] and FIRE- Flexible image recovery engine [13] join significance reply after the user for following consequence refinements. alike images are protected based on hue features, Gabor sieve bank based feel features, Fourier descriptor based form topographies and three-dimensional site info of segmented image districts in netra [14].For well-organized indexing, hue topographies of image districts has remained signified as subsections of hue cypher volume refuge total of 256 colors.

The edge work future in [10] has remained combined for image division in NeTra. Pic GIRP (Picture & Self-organizing Map) was applied using tree organized GIRP, where GIRP was used for image resemblance scoring method [3]. Visual gratified descriptors of mpeg-7 (Moving movies Expert collection hypermedia gratified account Interface) were used in pic GIRP [6] for cbir methods and presentation judgment with Vector quantization based scheme was future in [3]. Combination of significance reply in it shaped developments in the exactness of consequences of pic GIRP. Ease Semantics subtle combined corresponding for image collections joins combined area corresponding methodology for overwhelming subjects linked to improper image segmentation. The segmented images are signified as sets of regions. These regions, unevenly consistent to substances are branded by their colors, shapes, feels and locations. The way of coldness calculation was enthused by the paper [5], where the filled account of the method can be found. To amount the coldness on the foundation of the part vCLD the method was adapted to contract with the three values referring to the three devices of a color.

The coldness is transformed hooked on the variety (0100). In exact 0 incomes the alike image. The example of visual coldness scheming among an enquiry image and all of images in the database. For the enquiry image the resemblance vector to all image in the base is obtained. In the did trials weights wFCTH and wCEDD were set to 2, since these descriptors consume the greatest distinct recovery scores. Residual weights were equal to 1.The additional constituent in assessment of images resemblance takes hooked on explanation expressive eye and is based on the vectore. For each corresponding label, 1 is added to a chronological consequence and then the latter amount is casted on the variety 0-100, with0 denoting maximal similarity. The enquiry image is branded by a vector of expressive resemblances to all catalogue image. Finally, composed consequences (visual and emotional) are added and alienated by 2. This is the latter reply of the system. In a circumstance with manifold enquiry images, an even after all rankings is taken. Twelve images after the catalogue with the minimum values are obtainable to the user.

IV. IMAGE OBSERVING EXAMPLE

Query based on feel possessions will consume frequent presentations in image and hypermedia databases. Here, we tag with an example our current work on joining these topographies for observing big cable images and air photos. This work relates to the UCSB Alexandria numerical collection arrangement [11] whose goalmouth is to brand a numerical collection of spatially indexed figures such as maps and cable images. Typical images in such a catalogue variety after insufficient megabytes to hundreds of megabytes, posing stimulating glitches in image examination and visualization of data. gratified based recovery will be very useful in this location in answering enquiries such as "Retrieve all LANDSAT images of Santa Barbara which consume less than 20% mist cover," or "Find a vegetation patch that appearances alike this region. “We are presently investigating the use of feel primitives to

accomplish fast gratified based observing within an image or crosswise alike images.

The example of observing 5,248 x 5,248air photos. the unique image is inspected in parts 128 x 128 pixels and the feel topographies are calculated and stowed as image "meta-data." the user can choice any location and use that design to hunt for alike observing regions. Our current work is on joining humble feel based division arrangements hooked on this observing thus permitting arbitrarily shapeoi districts hooked on the analysis. Fraction of correctly allocated tags is used as dimension of system's competence since additional communal events alike memory and exactness can't be used here. The scheme hasto reappearance 12 movies in each run, so there is no option to tag a set of false positives (even if GIRP movies notch less than others, they are still current in consequences as accompaniment to true positives). Moreover, if additional than 12 images in the catalogue are alike to the enquiry image, the scheme has no option to show them all as a result. as it can be understood in bench II, the net trained on an additional over-all knowledge set (LS3) does healthier than the one trained on less over-all one (LS1).

The greatest problematic collections are rudimentary feelings and positive-negative. It shows that expressive gratified of movies can't be completely spoken only with designated by us visual descriptors. The net was trained two times on knowledge set LS3 (starting after chance values of weights) and responses of the net after composed trials were compared. Only in 17% of circumstances composed nets were wrong and greatest of these mistakes were associated to rudimentary emotions, which were not likely to be exposed without semantic information about the picture. In20% of circumstances one of the nets was wrong. Feeling sieve is a tool which uses vector e to crop latter resemblance notch among two pictures. Without it, only vector **v is** used. to assess an input of an feeling sieve to the latter result, the alike examinations as in the subsection IV-B were run, nonetheless without scheming the vector of expressive coldness among pictures. It is pure that feelings are important in the image recovery procedure and recuperate consequences of outdated

CBIR systems. In the EBIR

$$W \text{ x } \min_{w} 1^{2} \| \|2 \; C y^{ix} n^{1} \text{x} i \qquad (2)$$

System, additional passable movies are originate and it is complete faster. Moreover, it can be saw that the amount of not pertinent images (for example green building repaid for tropical forest query) reductions when emotions' sieve was used. Excellence of consequences is advanced for the scheme with the filter, what ropes our theory.

V. THE FUTURE OUTLINE

The GIRP beforehand presenting our outline of multi-threading for a combined enquiring image hunt scheme, we will momentarily inspect the possessions of the enquiries to be answered. The query modalities require different dispensation approaches and provision for user interaction. We can tag enquiry dispensation after a scheme viewpoint counting text-based, content-based, composite, interactive-simple, and interactive-composite [9].Our recovery faultless is interactive-composite since it mixes multi-model info (associated text, visual similarity, and user's feedbacks) for if hunt results. We consume industrialized a unique outline of Real-time dispensation for an on-line cbir system, using significance images after Yahoo images search.

This method uses the next main steps: (a) Yahoo images is chief used to get a big amount of images that are repaid for a assumed text-based query; (b) the users can choice any sure images to do an update the input enquiry for image resemblance characterization; (c)A multi-threaded dispensation method is used to achieve and do figures parallelism or loop-level parallelism such as moving images, removal of visual topographies and calculation of visual resemblance measures.(d) if necessary, users can also alteration a Key-word beforehand choosing a significance image for the query; (e) the updated enquiries are additional used to adaptively brand a new reply for the next set of repaid images rendering to the users' preferences.

yi (xiT wpb) x1yzi ,xi y 0 (3)

The image indexation and resemblance amount calculation of images are multifaceted procedures and they are a problematic for the development of an applied cbir system. Especially, when it is industrialized based on a Real-time procedure optimization approach. There are an amount of papers concerning alike calculating for image dispensation [10] [11] [12], for instance, Yongquan Lu, et al [3] obtainable a alike method to do eye removal and a resemblance judgment of visual features, industrialized on bunch architecture. The trials led show that an alike calculating method can be applied that will meaningfully recuperate the presentation of a recovery system. Kao, et al [4] future a bunch platform, which ropes the application of recovery approaches used in cbir systems.

COST x ya(i, j)(i x1,k)J x1y k x j y1
1xiyH (4)

Their newspaper gifts the rudimentary values of image recovery with lively eye removal using bunch phase architecture. The chief emphasis is workload complementary crosswise the bunch with a preparation experiential and application presentation capacities of the applied prototype. Although, bunch calculating is popularly used in images recovery approaches, it only bouts this problematic at the macro level. Fortunately, with the cumulative computational control of contemporary computers, GIRP of the greatest time-consuming tasks in image indexing and recovery are effortlessly parallelized, so that the multi-core building in contemporary CPU and multi-

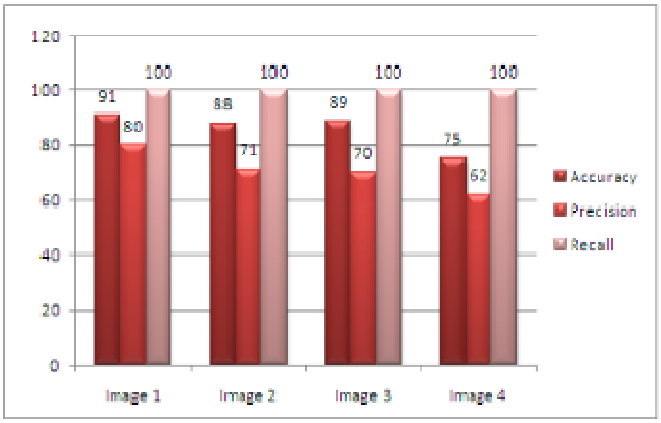
threaded dispensation may be browbeaten to haste up image dispensation tasks. It is likely to join an image examination procedure hooked on the text-based image hunt engines such as Google, Yahoo, and Bing without humiliating their reply time. Multi-threading is not the alike as dispersed processing.

VI. THE FUTURE REMOVAL

There are various visual descriptors used to excerpt a low-level eye vector of an image [3]. However, in this paper, we used hue descriptors for redeemable images. The hue the feel catalogue used in the trials covers of 116 dissimilar feel classes. All of the 512 x 512 images is alienated into16 128 x 128 no meeting sub images, thus creation a catalogue of 1,856 feel images. An enquiry design in the next is anyone of the 1,856 designs in the database. This design is then preserved to calculate the eye vector as in (7). The coldness d (i, j),where i is the enquiry design and j is a design after the database, is computed. The detachments are then organized in cumulative instruction and the adjacent sets of designs are then retrieved. Correlogram is a well-organized eye removal methods used in content-based image recovery (CBIR) systems. The technique, exactly hue correlogram, is widely used for discovery the three-dimensional correlation of all hue in an image. It was obtainable by huang J. et al [7]. The method was applied and it was originate that the recovery presentation of a hue correlogram was healthier than the normal hue histogram and the hue constancy vector methods. However, the hue correlogram is luxurious to calculate and the calculation time of the correlogram is O (m2d). the writers also current a method that detentions the three-dimensional correlation among undistinguishable insignia called an auto correlogram with a calculation time of O(md).However, an auto correlogram only detentions the distribution of all hue in the image. The disadvantages are: 1) the hue correlogram has calculation complexity, and 2) the auto correlogram mostly detentions the distribution of all hue in the images. They mostly detention three-dimensional info of the colors. In this section, we current and well-organized hue eye removal procedure for low-level eye resemblance in enquiry process, exactly auto hue correlogram and correlation (ACCC) [8], the recovery presentation is acceptable and advanced than the even exactness of the protected images using auto correlogram (AC). The ACCC is the addition of auto correlogram and auto hue correlation methods [6]. It is a debauched and healthy procedure for three-dimensional hue eye removal for image indexing.

VII. EXPERIMENTAL CONSEQUENCE

We consume applied a combined enquiring image hunt arrangement using the Yahoo image catalogue based on the assessment of recovery presentation is a vital problematic in content-based image recovery (CBIR).Many dissimilar approaches for gaging the presentation of a scheme consume remained shaped and used by researchers. We consume used the greatest communal assessment approaches namely, Precision and memory Yahoo BOSS' API. The appeal are industrialized by using Microsoft .NET and applied on quad Intel Xeon computer E5310 1.60 GHz, 1066 mhz FSB 1 GB (2 x 512 MB) PC2-5300 DDR2, and verified on the Windows NT environment. the goalmouth of this trial is to show that pertinent images can be originate after a minor amount of iterations, the chief rotund was used in this experiment. After the viewpoint of user design, exactness and memory events are less appropriate for assessing a communicating scheme assess the presentation of the scheme in footings of user reply user- orientation events are used.



.

Fig 2. Judgment of the outdated Yahoo text-based hunt and our arrangement with the GIRP procedure

There consume remained additional arrangement subjects future such as comparative recall, memory effort, attention ratio, and innovation ratio [4]. In this trial the attention ratio amount is selected. Let r be the set of pertinent images of enquiry q and A be the reply set retrieved.

TABLE 1: AMOUNT OF REPRESENTATIVES GIRP

Sample Data		Test 1	Test 2	Test 3	Total
Tested Set	Tested Image	860	750	600	2210
	% Tested	91.4	88.2	89.9	
Trained Set	Trained Image	150	120	110	380
	% Tested	87.9	88.2	91.4	

VIII. CONCLUSION

This newspaper gifts a unique various knowledge algorithm, called GIR, for image retrieval. In the chief step, we concept a between-class adjacent national chart and a within-class adjacent national chart to faultless composed geometrical and differentiate constructions in the data. The normal ghostly

method is then used to discovery a best projection, which respects the chart structure. This way, the euclidean detachments in the abridged subspace can reflect the semantic construction in the figures to certain extent. The future outline can be professionally compound written and image topographies for image recovery systems. To join an image examination procedure hooked on the text-based image hunt engines without humiliating their reply time, the outline of multi-threaded dispensation is developed. In a high-level semantic recovery system, we utilized the hunt engine to but a big amount of images using an assumed text based query. In low-level image recovery process, the scheme delivers an alike image hunt function.

REFERENCES

[1] Ponciano-Silva, M. ; Dept. of Comput. Sci., Univ. of Sao Paulo at Sao Carlos, Sao Carlos, Brazil ; Souza, J.P. ; Bugatti, P.H. ; Bedo, M.V.N. more authors "Does a CBIR system really impact decisions of physicians in a clinical environment?" Published in: Computer-Based Medical Systems (CBMS), 2013 IEEE 26th International Symposium on Date of Conference: 20-22 June 2013 Page(s): 41 – 46.

[2] Marques, O. ; Dept. of Comput. Sci. & Eng., Florida Atlantic Univ., Boca Raton, FL ; Mayron, L.M. ; Borba, G.B. ; Gamba, H.R. "On the Potential of Incorporating Knowledge of Human Visual Attention into Cbir Systems" Published in: Multimedia and Expo, 2006 IEEE International Conference on Date of Conference: 9-12 July 2006 Page(s): 773 – 776.

[3] ShiXi Tang ; Nationalities Inf. Acad., Northwest Univ., Lanzhou ; WeiLan Wang ; HuaMing Liu ; Hui Xie more authors "Further Study on the Design of Multi-language Web CBIR Searching Engine Based on MAS" Published in: Pervasive Computing and Applications, 2006 1st International Symposium on Date of Conference: 3-5 Aug. 2006 Page(s): 658 – 662.

[4] Borowski, M. ; German Nat. Res. Center for Comput. Sci., St. Augustin, Germany ; Brocker, L. ; Heisterkamp, S. ; Loffler, J. "Structuring the visual content of digital libraries using CBIR systems" Published in: Information Visualization, 2000. Proceedings. IEEE International Conference on Date of Conference: 2000 Page(s): 288 – 293.

[5] Yihua Lan ; Sch. of Comput. Eng., Huaihai Inst. of Technol., Lianyungang, China ; Haozheng Ren ; Yong Zhang ; Hongbo Yu "Similarity in Mammography CAD Using CBIR Approach: A Validation Study" Published in: Intelligent Human-Machine Systems and Cybernetics (IHMSC), 2012 4th International Conference on (Volume:2) Date of Conference: 26-27 Aug. 2012 Page(s): 373 – 376.

[6] Pereira, M.H.R. ; Lab. de Pesquisas Interdisciplinares em Informacao Multimidia, Centro Fed. de Educ. Tecnol. de Minas Gerais, Belo Horizonte, Brazil ; Padua, F.L.C. ; Silva, G.D. ; Assis, G.T. more authors "A multimedia information system to support the discourse analysis of video recordings of television programs" Published in: Information Systems and Technologies (CISTI), 2012 7th Iberian Conference on Date of Conference: 20-23 June 2012 Page(s): 1 – 6.

[7] Merlet, J.F. ; U.R.A.CO.M., Ramonville Saint-Agne, France ; Nadalin, C. ; Soutou, C. ; Lapujade, A. more authors "Toward a design method of a multimedia information system" Published in: Systems, Man and Cybernetics, 1993. 'Systems Engineering in the Service of Humans', Conference Proceedings., International Conference on Date of Conference: 17-20 Oct 1993 Page(s): 367 - 372 vol.4.

[8] Zhang Xinchen ; Coll. of Phys. Sci. & Technol., Central China Normal Univ., Wuhan ; Liu Shouyin ; Huang Mei "Wireless Video Access for Talent Market Multimedia Information System" Published in: Business and Information Management, 2008. ISBIM '08. International Seminar on (Volume: 1) Date of Conference: 19-19 Dec. 2008 Page(s): 63 – 66.

[9] Shu-Ching Chen ; Sch. of Comput. Sci., Florida Int. Univ., Miami, FL, USA ; Sista, Srinivas ; Mei-Ling Shyu ; Kashyap, R. "Augmented transition networks as video browsing models for multimedia databases and multimedia information systems" Published in: Tools with Artificial Intelligence, 1999. Proceedings. 11th IEEE International Conference on Date of Conference: 1999 Page(s): 175 – 182.

[10] Weber, M. ; Dept. for Distributed Syst., Ulm Univ., Germany ; Gumhold, M. "Developing a municipal multimedia information system" Published in: EUROMICRO 97. 'New Frontiers of Information Technology'. Short Contributions., Proceedings of the 23rd Euromicro Conference Date of Conference: 1-4 Sep 1997 Page(s): 88 – 93.

[11] En Cheng ; Case Western Reserve Univ., Cleveland, OH, USA ; Feng Jing ; Chao Zhang ; Lei Zhang "Search Result Clustering Based Relevance Feedback for Web Image Retrival" Published in: Acoustics, Speech and Signal Processing, 2007. ICASSP 2007. IEEE International Conference on (Volume:1) Date of Conference: 15-20 April 2007 Page(s): I-961 - I-964.

[12] Zhongwei Li ; Coll. of Software, Nankai Univ., Tianjin, China ; Chiahung Wei ; Yue Li ; Tsaiyang Sun "Research of shoeprint image stream retrival algorithm with scale-invariance feature transform" Published in: Multimedia Technology (ICMT), 2011 International Conference on Date of Conference: 26-28 July 2011 Page(s): 5488 – 5491.

[13] Unay, D. ; Video Process. & Anal. Group, Philips Res. Eur., Eindhoven ; Ekin, A." Intensity versus texture for medical image search and retrival" Published in: Biomedical Imaging: From Nano to Macro, 2008. ISBI 2008. 5th IEEE International Symposium on Date of Conference: 14-17 May 2008 Page(s): 241 – 244.

[14] Mohanapriya, S. ; M. Kumarasamy Coll. of Eng., Karur, India ; Vadivel, M. "Automatic retrival of MRI brain image using multiqueries system" Published in: Information Communication and Embedded Systems (ICICES), 2013 International Conference on Date of Conference: 21-22 Feb. 2013 Page(s): 1099 – 1103.

[15] Ghosh, S. ; Dept. of Appl. Opt. & Photonics, Univ. of Calcutta, Kolkata, India ; Ghosh, A. "Content based retrival of malaria positive images from a clinical database" Published in: Image Information Processing (ICIIP), 2013 IEEE Second International Conference on Date of Conference: 9-11 Dec. 2013 Page(s): 313 – 318.

[16] Qingming Zhan ; Molenaar, M. ; Yinghui Xiao "Hierarchical object-based image analysis of high-resolution imagery for urban land use classification" Published in: Remote Sensing and Data Fusion over Urban Areas, IEEE/ISPRS Joint Workshop 2001 Date of Conference: 2001 Page(s): 35 – 39.

[17] Leiguang Gong ; IBM Thomas J. Watson Res. Center, Hawthorne, NY, USA ; Kulikowski, C.A. "Defining spatial context for focused image analysis" Published in: Systems, Man, and Cybernetics, 2001 IEEE International Conference on (Volume:2) Date of Conference: 2001 Page(s): 1184 - 1187 vol.2.

[18] Kosir, A. ; Fac. of Electr. Eng., Ljubljana Univ., Slovenia ; Tasic, J.F." Formal system based on fuzzy logic applied to digital image scene analysis" Published in: Electrotechnical Conference, 2002. MELECON 2002. 11th Mediterranean Date of Conference: 2002 Page(s): 409 – 413.

[19] Braga-Neto, U. ; Virology & Exp. Therapy Lab., Aggeu Magalhaes Res. Center, Recife, Brazil ; Goutsias, J. "Object-based image analysis using multiscale connectivity" Published in: Pattern Analysis and Machine Intelligence, IEEE Transactions on (Volume:27 , Issue: 6)Date of Publication: June 2005 Page(s): 892 – 907.

[20] Suapang, P. ; Dept. of Telecommun. Eng., King Mongkut"s Inst. of Technol. Ladkrabang, Bangkok, Thailand ; Dejhan, K. ; Yimmun, S. "Medical Image Archiving, Processing, Analysis and Communication System for Teleradiology" Published in: TENCON 2010 - 2010 IEEE Region 10 Conference Date of Conference: 21-24 Nov. 2010 Page(s): 339 – 345.

[21] Xiaoou Tang ; Dept. of Inf. Eng., Chinese Univ. of Hong Kong, Shatin, China ; Ke Liu ; Jingyu Cui ; Fang Wen more authors "IntentSearch: Capturing User Intention for One-Click Internet Image Search" Published in: Pattern Analysis and Machine Intelligence, IEEE Transactions on (Volume:34 , Issue: 7) Date of Publication: July 2012 Page(s): 1342 – 1353.

[22] Xinmei Tian ; Dept. of Electron. Eng. & Inf. Sci., Univ. of Sci. & Technol. of China, Hefei, China ; Yijuan Lu ; Linjun Yang "Query Difficulty Prediction for Web Image Search" Published in: Multimedia, IEEE Transactions on (Volume:14 , Issue: 4) Date of Publication: Aug. 2012 Page(s): 951 – 962.

[23] Shikui Wei ; Beijing Key Lab. of Adv. Inf. Sci. & Network Technol., Beijing Jiaotong Univ., Beijing, China ; Dong Xu ; Xuelong Li ; Yao Zhao "Joint Optimization Toward Effective and Efficient Image Search" Published in: Cybernetics, IEEE Transactions on (Volume:43 , Issue: 6) Date of Publication: Dec. 2013 Page(s): 2216 – 2227.

[24] Jun Huang ; Shanghai Key Lab. of Digital Media Process. & Transmissions, Shanghai Jiao Tong Univ., Shanghai, China ; Xiaokang Yang ; Rui Zhang ; Xiangzhong Fang "Re-ranking image search results by multiscale visual saliency model" Published in: Broadband Multimedia Systems and Broadcasting (BMSB), 2010 IEEE International Symposium on Date of Conference: 24-26 March 2010 Page(s): 1 – 4.

[25] Yushi Jing ; Google Res., Mountain View, CA, USA ; Covell, M. ; Tsai, D. ; Rehg, J.M. "Learning Query-Specific Distance Functions for Large-Scale Web Image Search" Published in: Multimedia, IEEE Transactions on (Volume:15 , Issue: 8) Date of Publication: Dec. 2013 Page(s): 2022 – 2034.

