

CLOUD-BASED MULTIMEDI CONTENT COPY DETECTION SYSTEM

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Abstract- Web has million of multimedia contents such as videos and images. It may happen that each and every multimedia content has duplicated copies. There are lots of mechanism available that provides easy way for editing, publishing or uploading multimedia contents so that it may leads to security problem and also reduplicating the identity of content owner and also loss of revenue to the content owner. So that this system can be used to protect the Illegally redistributed multimedia contents such as 3D videos or images. The main goal of this system is to provide cost efficiency ,rapid development scalability and elasticity to accommodate varying workloads and improve the accuracy as well as computational efficiency and also the reliability. This system can be deploy on public cloud. And this System show high accuracy for more than 11,000 videos and one million of images.

Keywords: Reduplication, Signature, Video Copy Detection, Public cloud and Matching.

I. INTRODUCTION

Now a days, multimedia contents and availability of free online hosting sites have made it easy to duplicating copyrighted material, like images and videos for finding Illegally made copies over internet is complex. In this system, there are three methods which are present

1)Crawler to downloads the multimedia contents,2)Signature creation method for downloaded multimedia contents,3)Distributed matching engine to match the multimedia contents. This system can be deployed on public cloud. It is helpful for all content owner and also public cloud supports the different multimedia contents.

II. LITERATURE SURVEY

A.Paper Name: Effective and Scalable Video Copy Detection.

Author's Name: Zhu Liu, Tao Liu, David Gibbon, Behzad Shahraray .

Description: The main perspective of this is to locate the some segments from the query video and this segments are modified or changed from an reference video. There are different transformation are present which is applied on the copied segments such as cropping, dropping , changing the size of this video, re_encoding etc. In this paper, Two approaches are used and these are:1)digital video watermarking 2)content based copy detection. In the first approach ,we embed some information in the videos where the watermarking is present. and in the second approach,It uses some features to determine whether one video is copy of another video.And it provides good performance for reducing the cost and detect the accuracy.

B.Paper Name: Efficient Framework for Video Copy Detection Using Segmentation and Graph-Based Video Sequence Matching.

Author's Name: A.PerumalRaja ,B.Venkadesan, R.Rajakumar.

Description: In this paper video copy detection is done using SIFT algorithm.Initially number of videos are extracted from an hosting sites,after this matchinf of the video done on the basis of SIFT descriptor. But here computational cost required for this process is too high.Here number of keyframes are extracted from query video and then from this keyfram features are extracted.Later this extracted features are use during matching videos.But overall process is complex and also cost too high.

C.Paper Name: Content-based video copy detection using nearest neighbor mapping.

Author's Name: Vishwa Gupta,Parisa Darvish and Zadeh Varcheie.

Description: In this paper shows video copy detection,for that purpose they using video copy detection algorithm using fingerprint. The basic idea about copy detection is they map each test frame to the nearest query frame after that step using sliding window move query video over the test video and count the number of frame in the test segment. One drawback in this paper is that they apply on only videos not for the images and required time for matching and searching number of frames is more.

D.Paper Name:Fusion of Color, Shape and Texture Features for Content Based Image Retrieval.

Author's Name: Kaavya Sriskandaraja,Vahissan Nandakumar and Deegalla.

Description: The main goal of this paper is to provide content based image retrival based on the three types of information color,tecture and shapes.In which different areas like a military,architecture,art,crime prevention different digital images are created.when we need to access any information then we have to retrieve this images from the databases and image retrieval is become important issue.so to avoid these issue this system was developed.

E.Paper Name: Motion Vector Based Features For Content Based Video Copy Detection.

Author Name: K.Tasdemir

Description: In this paper, propose a motion vector based feature set for content based copy detection or

video clips. Motion vector of image frame are on of the signature of a given video. They are not descriptive image are used. Because most vector are too small.to overcome this problem we calculate motion vector in a lower frame rate then actual frame rate of the video. The CBCD and SIFT algorithm are used in this article. Motion in a copied video remains similar to the original video and captured video most motion vector are small. This paper not to develop complete CBCD method.

III. PROPOSED SYSTEM

In this paper, three main components are available hich are hosting sites, content owner and service provider.

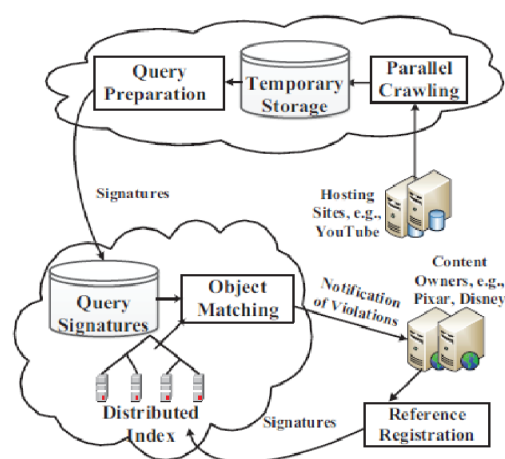


Figure 1: System Architecture[1]

Following Components are as follows:

1)**Hosting Site:** Now a days, there are number of online hosting sites available some of them slider share, Training videos, Confidential videos data, YouTube. From hosting sites downloads multimedia contents. Their is no any limitation for downloading multimedia contents.

2)**Temporary Storage:** All downloaded multimedia contents stored in temporary storage .The Map reduce algorithm is used for mapping and reducing the length of multimedia contents.

3)**Query Preparation:** Prepared the all multimedia contents which are stored in temporary storage and then

creates its signature. For creating the signature of multimedia contents 64-bit division algorithm used.

4) *Query Signature*: All created signature stored in the query signature.

5) *Object Matching*: Match the query signature versus reference signature in the distributed index to find the potential copies or videos and images, then it sends notification to content owner and malicious user if potential copies are found. Here DFS algorithm are used.

6) *Distributed Index*: Maintain the signature of object that need to be protected. It allows to stored more contents.

7) *Reference Registered*: Stored signature that content owner are interested for protecting in distributed index.

IV. WORKING

The main working or flow of the system is as follows:

Steps Involved

- 1) Selection Of Video/Images.
- 2) Signature Creation.
- 3) Upload.
- 4) Notification to Content owner and Malicious

User register on the hosting site, After successfully registration user got a OTP No. Then user select the multimedia contents. After that based upon selection multimedia content signature is created. If the query signature vs reference signature are matched, then notification is given to the both users such as content owner and malicious user. If signature is not matched then through the reference registration it is store in the distributed index. After signature matching user can upload the multimedia contents on the hosting sites.

V. FUTURE SCOPE

The proposed system helps to finding illegally copies over the multimedia content. Our system is only work on multimedia content that is video and images, it support only the mpeg, jpeg, mov, mp4 etc format. But the future work is to extend in such way that they would involve audio that is text file and voice file.

VI. CONCLUSION

In this paper, we present a content based copy detection system. When the copyrighted elements are uploading on the hosting site then there is lot's of loss to the

content owner so that to avoid this loss or to avoid the copyrighted elements we present this system for multimedia content protection. This system is based on creation of signature using 64 bit division algorithm which is help to finding duplicated multimedia contents over the web. This system is much effective than other existing system and it also provides the complexity accuracy, computation efficiency, scalability and reliability. This system supports all types of multimedia contents formats and formats including the jpeg, mpeg, mp4, FLA, But the future work is extended by making audio formats.

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