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**PRACTICAL PRIVACY-  
PRESERVING CONTENT-BASED  
RETRIEVAL IN CLOUD IMAGE  
REPOSITORIES**

# ABSTRACT

- Storage requirements for visual data have been increasing in recent years, following the emergence of many highly
- interactive multimedia services and applications for mobile devices in both personal and corporate scenarios. This has been a key
- driving factor for the adoption of cloud-based data outsourcing solutions. However, outsourcing data storage to the Cloud also leads to
- new security challenges that must be carefully addressed, especially regarding privacy. In this paper we propose a secure framework
- for outsourced privacy-preserving storage and retrieval in large shared image repositories. Our proposal is based on IES-CBIR, a novel
- Image Encryption Scheme that exhibits Content-Based Image Retrieval properties



## CONT..

- The framework enables both encrypted storage
- and searching using Content-Based Image Retrieval queries while preserving privacy against honest-but-curious cloud administrators.
- We have built a prototype of the proposed framework, formally analyzed and proven its security properties, and experimentally
- evaluated its performance and retrieval precision. Our results show that IES-CBIR is provably secure, allows more efficient operations
- than existing proposals, both in terms of time and space complexity, and paves the way for new practical application scenarios.



# EXISTING SYSTEM

- Previous proposals for supporting outsourced storage, search, and retrieval of images in the encrypted domain can be broadly divided in two classes: those based on Searchable
- Symmetric Encryption (SSE) techniques and those based on Public-Key partially-Homomorphic Encryption (PKHE).
- SSE has been widely used in the past by the research community, especially for text data

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## DISADVANTAGES

- Existing proposals in this domain remain largely unpractical, namely those requiring fully homomorphism encryption, which is still computationally too expensive.

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# PROPOSED SYSTEM

- we propose a new secure framework for privacy preserving outsourced storage, search, and retrieval of large-scale, dynamically updated image repositories.
- We base our proposal on IES-CBIR, a novel Image Encryption Scheme (IES) with Content-Based Image Retrieval (CBIR) properties.
- Key to the design of IESCBIR is the observation that in image processing, distinct feature types can be separated and encrypted with different cryptographic algorithms.



# ADVANTAGES

- Provably secure,
- Allows more efficient operations
- Security, privacy, and usability.

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# HARDWARE REQUIREMENTS

- System : Pentium IV 2.4 GHz.
- Hard Disk : 40 GB.
- Floppy Drive : 1.44 Mb.
- Monitor : 14" Colour Monitor.
- Mouse : Optical Mouse.
- Ram : 512 Mb.

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# SOFTWARE REQUIREMENTS

- Operating system : Windows 7 Ultimate.
- Coding Language : ASP.Net with C#
- Front-End : Visual Studio 2010 Professional.
- Data Base : SQL Server 2008.

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# CONCLUSIONS

- In this paper we have proposed a new secure framework for the privacy-preserving outsourced storage, search, and retrieval of large-scale, dynamically updated image repositories,
- where the reduction of client overheads is a central aspect. In the basis of our framework is a novel cryptographic
- scheme, specifically designed for images, named
- IES-CBIR.

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