**IMPLEMENTATION**

**MODULES:**

1. Data owner Module
2. Data User Module
3. Encryption Module
4. Rank Search Module

**MODULES DESCRIPTION:**

**Data owner Module**

Protect different multimedia content types, including 2-D videos, 3-D videos, images, audio clips, songs, and music clips. The system can be deployed on private

and/or public clouds. Our system has two novel components: (i) method to create signatures of 3-D videos, and (ii) distributed matching engine for multimedia objects. The signature method creates robust and representative signatures of 3-D videos that capture the depth signals in these videos and it is computationally efficient to compute and compare as well as it requires small storage.

**Data User Module**

Matching engine achieves high scalability and it is designed to support different multimedia objects. We implemented the proposed system and deployed it on two clouds: Amazon cloud and our private cloud. Our experiments with more than 11,000 3-D videos and 1 million images show the high accuracy and scalability of the proposed system. In addition, we compared our system to the protection system used by YouTube and our results show that the YouTube protection system fails to detect most copies of 3-D videos, while our system detects more than 98% of them

**Encryption Module**

Multimedia content protection systems using multi-cloud infrastructures .The proposed system supports different multimedia content types and it can be deployed on private and/or public clouds. Two key components of the proposed system are presented. The first one is a new method for creating signatures of 3-D videos. Our method constructs coarse-grained disparity maps using stereo correspondence for a sparse set of points in the image.

**Rank Search Module**

Rank needs to store the whole reference dataset multiple times in hash tables; up to 32 times. On the other hand, our engine stores the reference dataset only once in bins. Storage requirements for a dataset of size 32,000 points indicate that Rank needs up to 8 GB of storage, while our engine needs up to 5 MB, which is more than 3 orders of magnitude less. These storage requirements may render Rank not applicable for large datasets with millions of points, while our engine can scale well to support massive datasets.