

CLAIMS:

1. A method as performed by a storage provider for storing first encrypted data associated with first meta tags from a first publisher and second encrypted data associated with second meta tags from a second publisher, the method comprising:
 - consolidating any duplications of the first meta tags and the second meta tags to determine unencrypted consolidated meta tags by minimizing the duplication of meta tag values that are associated with encrypted data;
 - storing the unencrypted consolidated meta tags;
 - storing the first encrypted data associated with the unencrypted consolidated meta tags; and
 - storing the second encrypted data associated with the unencrypted consolidated meta tags.
2. The method of claim 1, wherein storing the first encrypted data comprises storing the first encrypted data on a shared data store and storing the second encrypted data comprises storing the second encrypted data on the same shared data store.
3. The method of claim 1, further comprising:
 - decrypting the first encrypted data to obtain first decrypted data;
 - decrypting the second encrypted data to obtain second decrypted data;
 - determining a deduplicated data set based on the first decrypted data and the second decrypted data;
 - using a secure shared key to encrypt the deduplicated data set to obtain an encrypted deduplicated data set; and
 - sending the secure shared key to the first publisher and to the second publisher.
4. A data storage computer system comprising:
 - a data port to receive first encrypted data associated with first meta tags from a first publisher and second encrypted data associated with second meta tags from a second publisher; and
 - a processor

to consolidate any duplications of the first meta tags and second meta tags to determine unencrypted consolidated meta tags by minimizing the duplication of meta tag values that are associated with encrypted data,

to store the first encrypted data associated with the unencrypted consolidated meta tags; and

to store the second encrypted data associated with the unencrypted consolidated meta tags.

5. A method as performed by a data publisher for storing data at a storage provider, the data being associated with meta tags, the method comprising:

encrypting the data to obtain encrypted data; and

transferring the encrypted data associated with the meta tags to the storage provider, the meta tags being unencrypted meta tags, such that the storage provider consolidates any duplications of the unencrypted meta tags with other meta tags already stored by the storing provider by minimizing the duplication of meta tag values that are associated with encrypted data and stores the encrypted data associated with the unencrypted meta tags on a data store.

6. The method of claim 5, wherein the encrypted data includes an identity of a key used to encrypt the data.

7. The method of claim 5, further comprising:

normalising the meta tags at the data publisher with the meta tags at the storage provider to obtain normalised meta data; and

uploading the normalised meta data to shared storage at the storage provider.

8. The method of claim 1, wherein storing the encrypted data associated with the unencrypted meta tags comprises maintaining a link to the encrypted data.

9. A data publisher computer system for storing data at a storage provider, the data being associated with meta tags, the data publisher computer system comprising:

a processor to encrypt the data to obtain encrypted data; and

a data port to transfer the encrypted data associated with the meta tags to the storage provider, the meta tags being unencrypted meta tags, such that the storage provider consolidates any duplications of the unencrypted meta tags with other meta tags already

stored by the storing provider by minimizing the duplication of meta tag values that are associated with encrypted data and stores the encrypted data associated with the unencrypted meta tags on a data store.

10. A method for accessing encrypted data that is on a shared storage at a storage provider, the method comprising:

- searching for data using meta tags to find requested encrypted data, any duplications of the meta tags being consolidated by minimizing the duplication of meta tag values that are associated with the encrypted data;

- requesting access to an encryption key from a publisher;

- downloading the requested encrypted data; and

- completing the decryption and making the data available for use.

11. A computer system for accessing encrypted data that is on a shared storage at a storage provider, the computer system comprising:

- a processor

- to search for data using meta tags to find requested encrypted data, any duplications of the meta tags being consolidated by minimizing the duplication of meta tag values that are associated with the encrypted data;

- to request access to an encryption key from a publisher;

- to download the requested encrypted data; and

- to complete the decryption and to make the data available for use.