multiple entities are involved. For example, two companies may have a need to exchange sets of documents stored in internal storage. Each company may use the same numbering system for identification, which may result in multiple documents having conflicting identifiers. As a result, either the documents must be stored in separate tables and/or databases, or identifiers must be modified for one or both of the sets. In the former instance, it may be difficult to make adjustments to both tables/databases at once and may be inconvenient for the purposes of sorting and storage. In the latter instance, the two parties must both agree on the alternative identification with one or both parties modifying their previous identification system accordingly, which can be highly inconvenient and potentially detrimental due to the prevailing use of the identifiers in the rest of their business. In addition, any future changes to identifiers, such as due to changing in business practices, or in an instance where a deal is struck with a third entity with whom there are conflicting identifiers, must be propagated to the other entity. As entities communicate and deal with more and more entities, the conflicts may compound where changes to identifiers may occur at an unreasonable rate and negatively affect each entity's ability to do business.

Thus, there is a need for a technical solution to enable a universal distributed data storage where every data set, regardless of entity, type of data, method of storage, etc. can be combined without any collisions in identification, and where the integrity is not affected by future additions of data to the data set.

SUMMARY

The present disclosure provides a description of systems and methods for generation of a universal distributed data storage. The use of collision-resistant hashing to develop identification values for disparate data sets may enable the combination of data sets without collisions and may preserve integrity of the data sets and their identification following any future combination of additional data sets into the universal data storage.

In a first aspect, the present disclosure provides a method for generating a universal distributed data storage includes: receiving, by a receiving device of a processing server, a data signal superimposed with a plurality of data values; generating, by a hashing module of the processing server, a key for each of the plurality of data values, wherein the respective key is generated via application of a

hashing algorithm to the associated data value; executing, by a querying module of the processing server, a first query on a database

of the processing server to store each of the plurality of data values and the associated generated key as a plurality of key-value pairs; receiving, by the receiving device of the processing server, a data signal superimposed with a plurality of additional key-value pairs, wherein each value of the plurality of additional key-value pairs is not included in the plurality of data values; and executing, by the querying module of the processing server, a second query on the database of the processing server to store each of the plurality of additional key-value pairs, wherein each key included in the plurality of additional key-value pairs is generated via application of the hashing algorithm to the associated value and is not included in the keys generated for each of the plurality of data values.

In a second aspect, the present disclosure provides a system for generating a universal distributed data storage includes: a database of a processing server; a receiving device of the processing server configured to receive a data signal superimposed with a plurality of data values; a hashing module of the processing server configured to generate a key for each of the plurality of data values, wherein the respective key is generated via application of a hashing algorithm to the associated data value; and a querying module of the processing server configured to execute a first query on a database of the processing server to store each of the plurality of data values and the associated generated key as a plurality of key-value pairs, wherein the receiving device of the processing server is further configured to receive a data signal superimposed with a plurality of additional key-value pairs, wherein each value of the plurality of additional key-value pairs is not included in the plurality of data values, the querying module of the processing server is further configured to execute a second query on the database of the processing server to store each of the plurality of additional key-value pairs, and each key included in the plurality of additional key-value pairs is generated via application of the hashing algorithm to the associated value and is not included in the keys generated for each of the plurality of data values.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

The scope of the present disclosure is best understood from the following detailed description of exemplary embodiments when read in conjunction with the accompanying drawings. Included in the drawings are the following figures: