

CLAIMS:

1. An indexing method for a secret encryption scheme having a first database and a second database, the first database comprises a list of keyword-data pairs and the second database comprises encrypted data-label pairs where the labels computed by keywords are associated to the encrypted data, the method comprising:
 - receiving a document containing a keyword;
 - determining a type of keyword in the document;
 - in response to the keyword being a search token,
 - searching the keywords in the first database that matches the keyword in the document and retrieving data paired with a keyword in the first database that matches the keyword in the document;
 - recording a new entry indicator data associated to the keyword in the first database that matches the keyword in the document as A;
 - searching the labels in the second database, for new added entry indicator associated to the labels greater than A, with the keyword in the document and retrieving encrypted data associated to label in the second database that matches the keyword in the document;
 - returning a search result containing the data and encrypted data retrieved from the first and second databases; and
 - updating the first and the second databases.
2. The indexing method according to claim 1 wherein the step of updating the first and the second databases comprises:
 - appending the first database with a new keyword-data pair that is revealed after the data is retrieved in the second database;
 - removing the label in the data-label pair this is revealed after the data is retrieved in the second database; and
 - setting a new added entry indicator associated to the new keyword data pair to current value.
3. The indexing method according to claim 2 wherein the new added entry indicator is a counter and the current value is identical to the value associated to the data-label pair this is revealed after the data is retrieved in the second database.
4. The indexing method according to claim 2 wherein the new added entry indicator is a timestamp and the current value is the current time.

5. The indexing method according to claim 1 further comprising:
in response to the keyword being an encrypted data, adding a new data-label pair in the second database and setting a new entry added entry indicator associated to the new data-label pair with a current value.
6. The indexing method according to claim 5 wherein the new added entry indicator is a counter and the current value is an increment of the counter.
7. The indexing method according to claim 5 wherein the new added entry indicator is a timestamp and the current value is the current time.
8. An indexing system for a secret encryption scheme having a first database and a second database, the first database comprises a list of keyword-data pairs and the second database comprises encrypted data-label pairs where the labels computed by keywords are associated to the encrypted data, the system comprising:
a processor, a non-transitory memory and instructions stored on the memory executable by the processor to:
receive a document containing a keyword;
determine a type of keyword in the document;
in response to the keyword being a search token,
search the keywords in the first database that matches the keyword in the document and retrieve data paired with a keyword in the first database that matches the keyword in the document;
record a new entry indicator data associated to the keyword in the first database that matches the keyword in the document as A;
search the labels in the second database, for new added entry indicator associated to the labels greater than A, with the keyword in the document and retrieving encrypted data associated to label in the second database that matches the keyword in the document;
return a search result containing the data and encrypted data retrieved from the first and second databases; and
update the first and the second databases.
9. The indexing system according to claim 8 wherein the instruction to update the first and the second databases comprises instructions to:
append the first database with a new keyword-data pair that is revealed after the data is retrieved in the second database;

remove the label in the data-label pair this is revealed after the data is retrieved in the second database; and

set a new added entry indicator associated to the new keyword data pair to current value.

10. The indexing system according to claim 9 wherein the new added entry indicator is a counter and the current value is identical to the value associated to the data-label pair this is revealed after the data is retrieved in the second database.

11. The indexing system according to claim 9 wherein the new added entry indicator is a timestamp and the current value is the current time.

12. The indexing system according to claim 8 further comprising instructions to:
in response to the keyword being an encrypted data, add a new data-label pair in the second database and set a new entry added entry indicator associated to the new data-label pair with a current value.

13. The indexing system according to claim 12 wherein the new added entry indicator is a counter and the current value is an increment of the counter.

14. The indexing system according to claim 12 wherein the new added entry indicator is a timestamp and the current value is the current time.