

Claims

1. A barcode associated with an article, the barcode comprising:

- (a) an encoded identifier that allows an authorized user to access a database using a private key; and
- (b) an encoded reference that is accessible to an unauthorised general public, the encoded reference and encoded identifier forms a single string

wherein the encoded identifier is associated with the article and, is compared with entries in a table in the database to determine private information associated with the article, each entry in the database contains the identifier and a corresponding set of private information associated with the article, and the barcode is configured such that, when read, it allows a device of an authorized user reading the barcode to omit the encoded reference.

2. The barcode according to any one of the preceding claims, wherein the identifier is encrypted.

3. The barcode according to any one of the preceding claims, wherein the identifier further allows a consumer of the article access to consumer information associated with the article.

4. The barcode according to any one of the preceding claims, wherein the identifier is an integer equal or greater than 1.

5. The barcode according to any one of the preceding claims, wherein the identifier is unique to the article.

6. The barcode according to any one of the preceding claims, wherein the private information is any one selected from the group comprising: the location of manufacturing of the article, the time and date of manufacturing of the article, any restriction of sales of the article in respect of geographical locations, the total

- number of manufactured articles in a batch, identity of the manufacturer, the identity of at least one customer who ordered the manufacturing of the article, the identity of at least one distributor of the article, the identity of at least one retailer selling the article, the time and date of shipment of article, name of the shipment vendor, size of the article, weight of the article, weight of the shipment containing the article and, in the case where the article is a book, the title and ISBN number of the book.
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7. The barcode according to any one of the preceding claims, wherein the reference is a resource on the Internet.
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8. The barcode according to any one of the preceding claims, wherein the barcode is a two-dimensional barcode.
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9. The barcode according to claim 8, wherein the two-dimensional barcode is any one selected from the group comprising: data matrix, quick response (QR) code, Aztec code, EZcode, High Capacity Colour Barcode, MaxiCode, NexCode, PDF417, Qode, and Shotcode.
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10. A method for preparing and printing a barcode associated with an article, the method comprising:
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- (a) assigning the article with an identifier;
- (b) encoding the identifier that allows an authorized user to access a database using a private key, the identifier is compared with entries in a table in the database to determine private information associated with the article;
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- (c) encoding a reference that is accessible to an unauthorised general public, wherein the identifier and reference forms a single string, and the barcode is configured to allow a device reading the barcode to omit the encoded reference;
- (d) positioning the barcode for printing on a surface of the article, or within the contents of the article or on a label separate from but associated with the article; and
- (e) printing the barcode.

11. The method according to claim 10, further comprising encrypting the identifier.
- 5 12. The method according to any one of claims 10 or 11, wherein the identifier further allows a consumer of the article access to consumer information associated with the article.
- 10 13. The method according to any one of claims 10 to 12, wherein the private information is any one selected from the group comprising: the location of manufacturing of the article, the time and date of manufacturing of the article, any restriction of sales of the article in respect of geographical locations, the total number of manufactured articles in a batch, identity of the manufacturer, the identity of at least one customer who ordered the manufacturing of the article, 15 the identity of at least one distributor of the article, the identity of at least one retailer selling the article, the time and date of shipment of article, name of the shipment vendor, size of the article, weight of the article, weight of the shipment containing the article and, in the case where the article is a book, the title and ISBN number of the book.
- 20 14. The method according to any one of claims 10 to 13, wherein the article is any one selected from the group comprising: a printed matter, a luxury good, a pharmaceutical product, and a food product.
- 25 15. The method according to claim 14, wherein the printed matter is any one selected from the group comprising: a book, a magazine, a journal, a publication, a document, and a manual.
- 30 16. The method according to claim 15, wherein the barcode is printed within the contents of the book.

17. A method of determining private information associated with an article, the method comprising:
- 5 (a) reading a barcode, the barcode comprising an encoded identifier that allows an authorised user to access a database using a private key, an encoded reference that is accessible to an unauthorised general public, and the identifier and the reference forming a single string;
- (b) omitting the encoded reference;
- (c) decoding only the encoded identifier;
- (d) accessing the database using the private key; and
- 10 (e) obtaining the private information by comparing the identifier associated with the article with entries in a table in the database.
18. The method according to claim 17, wherein each entry in the database contains the identifier and a corresponding set of private information associated with the article.
- 15 19. The method according to any one of claims 17 or 18, wherein the identifier is encrypted and the method further comprising the step of decrypting the identifier.
- 20 20. The method according to any one of claims 17 to 19, wherein obtaining the private information determines the source of the article, the private information is any one selected from the group comprising: the location of manufacturing of the article, the time and date of manufacturing of the article, any restriction of sales of the article in respect of geographical locations, the total number of manufactured articles in a batch, identity of the manufacturer, the identity of at least one customer who ordered the manufacturing of the article, the identity of at least one distributor of the article, the identity of at least one retailer selling the article, the time and date of shipment of article, name of the shipment vendor, size of the article, weight of the article, weight of the shipment containing the
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article and, in the case where the article is a book, the title and ISBN number of the book.

21. The method according to any one of claims 17 to 20, wherein the article is a book
5 and the barcode is contained within the contents of the book.

22. The method according to any one of claims 17 to 21, wherein the barcode is read with a mobile device.

10 23. A system for determining private information associated with an article, the system comprising:

(a) a device adapted to read a barcode associated with the article, the barcode comprising an encoded identifier that allows an authorized user to access a database using a private key, an encoded reference that is accessible to an
15 unauthorised general public, and the identifier and the reference forming a single string, the barcode configured to allow the device reading the barcode to omit the encoded reference and only decode the encoded identifier;

(b) a means for receiving the identifier associated with the article; and

(c) a processing unit for comparing the identifier associated with the article
20 with entries in a table in a database,

wherein each entry in the database contains the identifier and a corresponding set of private information associated with the article.

24. The system according to claim 23, wherein the device for reading the barcode is a
25 mobile device.

25. The system according to any one of claims 23 to 24, wherein obtaining the private information determines the source of the article, the private information is any one selected from the group comprising: the location of manufacturing of the
30 article, the time and date of manufacturing of the article, any restriction of sales of the article in respect of geographical locations, the total number of manufactured articles in a batch, identity of the manufacturer, the identity of at

least one customer who ordered the manufacturing of the article, the identity of at least one distributor of the article, the identity of at least one retailer selling the article, the time and date of shipment of article, name of the shipment vendor, size of the article, weight of the article, weight of the shipment containing the article and, in the case where the article is a book, the title and ISBN number of the book.

26. The system according to any one of claims 23 to 25, wherein the article is a book and the barcode is contained within the contents of the book.

27. The system according to any one of claims 23 to 26, further comprising a communication means for transmitting data between the device and the database.

28. A computer program encoding a set of computer instructions for determining private information associated with an article, which when running on a data processing system is adapted to perform the method as claimed in any one of claims 17 to 22.

29. A computer usable storage medium having encoded thereon data and computer instructions for determining private information associated with an article, for causing a data processing system to implement the method as claimed in any one of claims 17 to 22.