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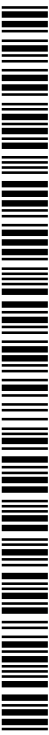
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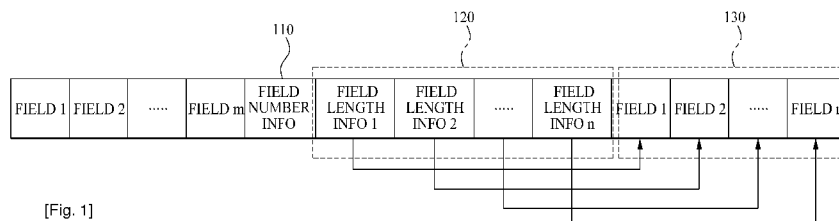
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(54) Title: METHOD FOR GENERATING VARIABLE FORMAT CODE



[Fig. 1]

(57) Abstract: A method of generating a variable format code, the method including: setting the entire length of a code and a length of each of fields constituting the code, based on field number information associated with a number of the fields constituting the code and field length information associated with a length of each of the fields; and constructing the code based on the set entire length of the code and the length of each of the fields constituting the code is provided.

Description

METHOD FOR GENERATING VARIABLE FORMAT CODE

Technical Field

- [1] The present invention relates to a method of generating a variable format code, and more particularly, to a method of generating a variable format code that may include information associated with defining an internal format of a code to thereby variably construct the format of the code.
- [2] This work was supported by the IT R&D program of MIC/IITA. [Development of Mobile and Next Generation RFID Technology Standard]

Background Art

- [3] A code denotes information that is recorded in a radio frequency identification (RFID) tag and the like, exists on a computer, or exists in a printed format.
- [4] The code may consist of at least one field. Generally, the code may be used to identify an object or to identify information related to an object with an assigned code.
- [5] Generally, the length of each of fields constituting the code may be set to a particular value in a design process. Specifically, the code may be constructed in a form that the length of each field is partially variable but the entire length of the code is fixed.
- [6] However, in the case of the conventional code, even when the length of each field is fixed or the length of each field is partially variable, the entire length of the code is fixed. Therefore, the code used in various types of fields may not be provided in an optimal format.

Disclosure of Invention

Technical Problem

- [7] An aspect of the present invention provides a method of generating a variable format code that can variably set the entire length of a code and the length of each field by inserting, into the code, information associated with an internal format of the code.

Technical Solution

- [8] According to an aspect of the present invention, there is provided a method of generating a variable format code, the method including: setting the entire length of a code and a length of each of fields constituting the code, based on field number information associated with a number of the fields constituting the code and field length information associated with a length of each of the fields; and constructing the code based on the set entire length of the code and the length of each of the fields constituting the code.
- [9] In this instance, when the field number information may be set to a particular value, at least one of the field length information and the number of fields is constructed

using the particular value.

[10] Also, a number of pieces of the field length information may be mapped with the number of fields.

[11] Also, the code may include the fields, the field number information associated with the number of fields, and the field length information associated with the length of each field.

[12] According to another aspect of the present invention, there is provided an electronic recording medium including: field number information associated with a number of fields constituting a code; and field length information associated with a length of each field, wherein the electronic recording medium stores a variable format code where the entire length of the code and the length of each field is stored based on the field number information and the field length information.

[13] In this instance, the electronic recording medium may include at least one of a computer-readable recording medium and a radio frequency identification (RFID) tag.

[14] Also, when the field number information is set to a particular value, at least one of the field length information and the number of fields may be constructed using the particular value.

[15] Also, a number of pieces of information associated with the length of each field may be mapped with the number of fields.

Advantageous Effects

[16] According to the present invention, it is possible to variably set the entire length of a code and the length of each of fields constituting the code by including, into the code, information associated with a format of the code. Therefore, it is possible to flexibly provide various types of optimal code formats.

Brief Description of the Drawings

[17] FIG. 1 illustrates a variable format code according to an embodiment of the present invention;

[18] FIGS. 2 and 3 illustrate tables for describing a method of generating a variable format code according to an embodiment of the present invention; and

[19] FIG. 4 is a flowchart illustrating a method of generating a variable format code according to an embodiment of the present invention.

Mode for the Invention

[20] Reference will now be made in detail to embodiments of the present invention, examples of which are illustrated in the accompanying drawings, wherein like reference numerals refer to the like elements throughout. The embodiments are described below in order to explain the present invention by referring to the figures.

[21] FIG. 1 illustrates a variable format code according to an embodiment of the present

invention. Hereinafter, the variable format code according to an embodiment of the present invention will be described with reference to FIG. 1.

- [22] As shown in FIG. 1, a code may include field number information 110 associated with a number of fields constituting the code, field length information 120 associated with the length of each field, and a field 130.
- [23] It is possible to set the entire length of a code and a length of each of fields constituting the code, based on the field number information 110 and the field length information 120.
- [24] Specifically, when the field number information 110 is set to a particular value, the field length information 120 and the number of fields 130 may be constructed using the particular value.
- [25] In this instance, the field number information 110, the field length information 120, and the field 130 may be determined according to a predetermined table value. Regardless of information associated with a code format, that is, a code format indicator, the code may be constructed to additionally include "m" fields.
- [26] For example, as shown in FIG. 1, when the field number information 110 includes n pieces of information, the field length information 120 and the field 130 may be n, respectively. More specifically, when the field number information 110 is four, four field length information 120 and four fields 130 may be provided.
- [27] As described above, a number of pieces of the field length information 120 may be mapped with the number of fields 130.
- [28] According to an aspect of the present invention, the code may be recorded in a computer-readable recording medium or a radio frequency identification (RFID) tag.
- [29] FIGS. 2 and 3 illustrate tables for describing a method of generating a variable format code according to an embodiment of the present invention. Hereinafter, the tables will be described in detail with reference to FIGS. 2 and 3.
- [30] As shown in a table of FIG. 2, field number information 210 may be designated according to the table.
- [31] When the field number information is designated as 2 bits, each piece of information may be defined as follows. Specifically, when the field number information 210 is "00", a length of field length information 220, a number of pieces of field length information 225, and a number of fields 230 may be "reserved for a later use". When the field number information 210 is 01, the length of field length information is 2 bits, the number of pieces of field length information is 1, and the number of fields 230 is also 1. Also, when the field number information 210 is "10", the length of field length information 220 is 4bits, the number of pieces of field length information 225 is 2, and the number of fields 230 is 2. When the field number information 210 is 11, the length of field length information 220 is 6 bits, the number of pieces of field length in-

formation 225 is 3, and the number of fields 230 is 3.

[32] As shown in a table of FIG. 3, when field length information 310 is 00, the length of field may be designated as eight bits. When the field length information 310 is 01, the length of field 320 may be designated as 16 bits. When the field length information 310 is 10, the length of field 320 may be designated as 32 bits. When the field length information 310 is 11, the length of field 320 may be designated as 64 bits.

[33] FIG. 4 is a flowchart illustrating a method of generating a variable format code according to an embodiment of the present invention. Hereinafter, the method of generating the variable format code will be described with reference to FIG. 4.

[34] In operation S410, the method may set the entire length of a code and a length of each of fields constituting the code, based on field number information associated with a number of the fields constituting the code and field length information associated with a length of each of the fields.

[35] When the field number information is set to a particular value, at least one of the field length information and the number of fields may be constructed using the particular value.

[36] In particular, a number of pieces of the field length information may be mapped with the number of fields.

[37] In operation S420, the method may construct the code based on the set entire length of the code and the length of each of the fields constituting the code.

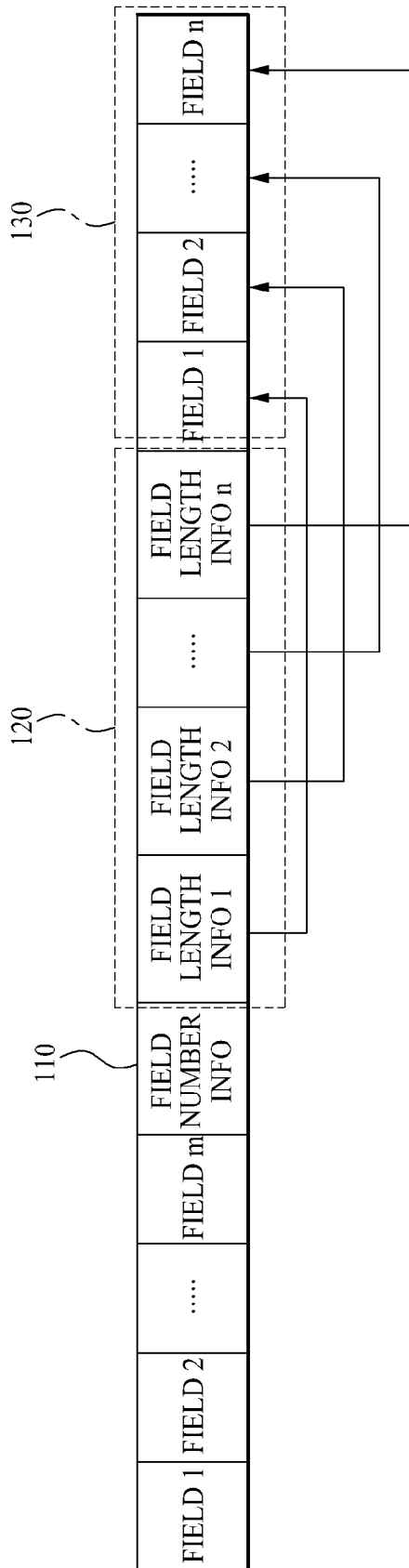
[38] As described above, according to the present invention, it is possible to variably set the entire length of a code and the length of each of fields constituting the code by including, in the code, information associated with a code format. Therefore, it is possible to flexibly provide various types of optimal code formats.

[39] Although a few embodiments of the present invention have been shown and described, the present invention is not limited to the described embodiments. Instead, it would be appreciated by those skilled in the art that changes may be made to these embodiments without departing from the principles and spirit of the invention, the scope of which is defined by the claims and their equivalents.

Claims

- [1] A method of generating a variable format code, the method comprising:
setting the entire length of a code and a length of each of fields constituting the code, based on field number information associated with a number of the fields constituting the code and field length information associated with a length of each of the fields; and
constructing the code based on the set entire length of the code and the length of each of the fields constituting the code.
- [2] The method of claim 1, wherein, when the field number information is set to a particular value, at least one of the field length information and the number of fields is constructed using the particular value.
- [3] The method of claim 1, wherein a number of pieces of the field length information is mapped with the number of fields.
- [4] The method of claim 1, wherein the code comprises the fields, the field number information associated with the number of fields, and the field length information associated with the length of each field.
- [5] An electronic recording medium comprising:
field number information associated with a number of fields constituting a code;
and
field length information associated with a length of each field,
wherein the electronic recording medium stores a variable format code where the entire length of the code and the length of each field is stored based on the field number information and the field length information.
- [6] The electronic recording medium of claim 5, wherein the electronic recording medium comprises at least one of a computer-readable recording medium and a radio frequency identification (RFID) tag.
- [7] The electronic recording medium of claim 5, wherein, when the field number information is set to a particular value, at least one of the field length information and the number of fields is constructed using the particular value.
- [8] The electronic recording medium of claim 5, wherein a number of pieces of information associated with the length of each field is mapped with the number of fields.

[Fig. 1]



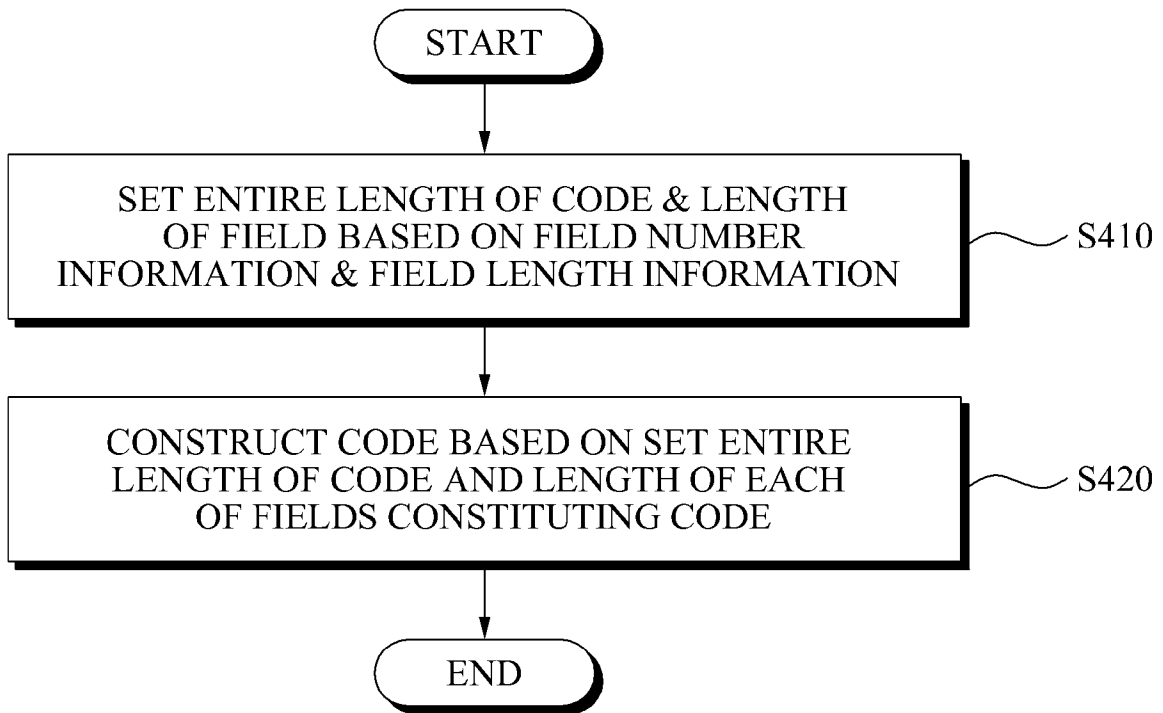
[Fig. 2]

210 FIELD NUMBER INFO	220 LENGTH OF FIELD LENGTH INFO	225 NUMBER OF PIECES OF FIELD LENGTH INFO	230 NUMBER OF FIELDS
00	RESERVED FOR A LATER USE		
01	2 BITS	1	1
10	4 BITS	2	2
11	6 BITS	3	3

[Fig. 3]

310 FIELD LENGTH INFO	320 LENGTH OF FIELD
00	8 BITS
01	16 BITS
10	32 BITS
11	64 BITS

[Fig. 4]



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2008/005882**A. CLASSIFICATION OF SUBJECT MATTER****G06K 19/06(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: G06K, G06F, H03M, H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models since 1975
Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKIPASS(KIPO Internal)

"Keywords": "variable", "code", "field"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-2003-0052803 A (SK TELECOM CO., LTD.) 27 June 2003 See abstract, and page 9, line 51- page 10, line 6	1-8
A	US 2006-0187096 A1 (ZHELTOV, S. N. et al.) 24 August 2006 See abstract, and figure 1	1-8
A	US 2008-0068235 A1 (NAKATA, H. et al.) 20 March 2008 See abstract, and figures 1 and 2	1-8
A	US 2004-0028140 A1 (SUDHARSANNAN, S.) 12 February 2004 See abstract	1-8

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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