CLAIMS

What is claimed is:

1. A method for generating a two-dimensional (2D) code, the method comprising:

obtaining original content; and

generating a 2D code corresponding to the original content based on a 2D code information structure and the original content, wherein the 2D code information structure comprises at least an identification field and a data field, and the identification field is used to indicate one or more data elements in the data field that need to be used in a specified service scenario, wherein:

the identification field comprises a bitmap field, and the bitmap field comprises one or more bits corresponding to the data element in the data field; and

the bit is used to indicate a data element corresponding to the bit.

2. The method according to claim 1, wherein the identification field comprises at least one of the following:

indicating existence of a data element in the data field;

indicating a service definition of the data element;

indicating a location of the data element in the data field; and

indicating a matching relationship between a service scenario and a data element.

3. The method according to claim 1, wherein:

when a value of a bit in the bitmap field is a first value, it indicates that a data element corresponding to the bit exists in the data field; or

when a value of a bit in the bitmap field is a second value different from the first value, it indicates that a data element corresponding to the bit does not exist in the data field.

4. The method according to claim 1, wherein the identification field further comprises a field used to define the bitmap field.

5. The method according to claim 1, wherein the 2D code information structure further comprises at least one of the following fields:

a code header field, used to identify a creator of the 2D code information structure;

a code version field, used to identify a version of the 2D code information structure; and

a verification field, used to perform content verification on a field comprised in the 2D code information structure.

6. The method according to claim 1, wherein content of the data element comprises a value of the data element and a length of the value of the data element.

7. The method of any one of claims 1 to 6, wherein the method further comprises processing the 2D code, comprising:

scanning and converting the generated 2D code, to obtain a character string represented by the 2D code;

parsing the character string based on the 2D code information structure of the 2D code, to obtain one or more data elements that need to be used in a current service scenario; and

executing a service in the current service scenario based on the obtained data element.

8. The method according to claim 1 or 2, wherein the identification field comprises an array or a linked list.

9. The method of any one of claims 1 to 8, wherein original content comprises data to be used in a service scenario when a corresponding service is executed, for example data representing a website, account, order number, promotion code, or business card.

10. The method of any one of claims 1 to 9, further comprising:

if a service upgrade needs to be performed, adding a corresponding data element or a value definition to the data field.

11. A two-dimensional (2D) code generation apparatus, comprising multiple modules configured to perform the method of any one of claims 1 to 10.

12. A two-dimensional (2D) code generation device, comprising:

at least one processor; and

a memory communicatively connected to the at least one processor, wherein the

memory stores an instruction that can be executed by the at least one processor, and the instruction is executed by the at least one processor to enable the at least one processor to perform the method of any one of claims 1 to 10.