

## CLAIMS:

1. A vehicle identification system comprising:

a registration plate (16) mountable on a vehicle (100) and having alphanumeric characters indicating a vehicle registration number (18);

5 a barcode (14) mountable on a vehicle, the barcode (14) encoding the vehicle registration number (18) of the registration plate (16), and including a checksum (36, 38) to verify that the vehicle registration number (18) has been correctly read from the barcode (14); wherein the barcode (14) is a two-dimensional barcode;

10 a camera (100) arranged to record in one or more image(s) the registration plate (16) and the barcode (14); and

an analyser arranged to receive the one or more images and automatically extract the vehicle registration number (18) from the registration plate (16) shown in the one or more images, to automatically extract the vehicle registration number (18) from the barcode (14) shown in the one or more images; and to use the checksum (36, 38) to verify that the vehicle registration number (18) has been correctly read from the barcode (14),

15 the analyser comparing the vehicle registration number (18) extracted from the registration plate (16) with the vehicle registration number (18) extracted from the barcode (14) to thereby determine whether the vehicle registration number (18) indicated on the registration plate is the same as the vehicle registration number (18) encoded on the barcode (14),

20 wherein:

the barcode (14) includes error correction bits for error correction of both the vehicle registration number (18) and the checksum (36, 38);

25 the analyser is arranged to error correct both the vehicle registration number (18) and the checksum (36, 38) using the error correction bits

the encoded vehicle registration number (18) is split into two or more words, each word including separate error correction, and the words arranged over two or more lines of the two-dimensional barcode;

30 at least one word is split between two lines of the two-dimensional barcode and arranged such that no part of that word is vertically aligned with a part of itself; and

the barcode (14) is separate from the registration plate (16).

~~2. A vehicle identification system as claimed in claim 1 wherein the barcode (14) is a two-dimensional barcode.~~

~~3-2.~~ 3-2. A vehicle identification system as ~~claimed in any one of the preceding claims~~ 1 wherein the vehicle registration number (18) is encoded in the barcode (14) by a reversible algorithm which assigns a unique identifying number to each vehicle registration number (18), wherein that unique identifying number is encoded in the barcode (14),  
5 and the analyser is arranged to use the algorithm on the unique identifying number extracted from the barcode (14) to generate the vehicle registration number (18).

~~4-3.~~ 4-3. A vehicle identification system as claimed in claim ~~3-2~~ 3-2 wherein the identifying number is 32 bits.  
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~~5-4.~~ 5-4. A vehicle identification system as claimed in any one of the preceding claims wherein the barcode (14) includes a plurality of clock sections.

~~6-5.~~ 6-5. A vehicle identification system as claimed in any one of the preceding claims  
15 wherein the barcode (14) also encodes a geographical identifier indicating a place of registration and/or a vehicle class identifier indicating a class of the vehicle (100).