

RANDOM NUMBER GENERATION USING BACK ELECTROMOTIVE FORCE (BEMF) VALUES

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Abstract of the Disclosure

Method and apparatus for generating a random number, such as for use in a security protocol to control access to a data processing system. A processor generates the random number in relation to a back electromotive force (BEMF) value. The

10 BEMF value is preferably obtained in response to application of current to a circuit. The circuit preferably comprises a coil and the application of current preferably induces a relatively small movement of the coil. The random number is preferably a multi-bit digital value, and each bit of the random number is determined in relation to whether the corresponding BEMF value is even or odd. The coil preferably comprises

15 a coil of a voice coil motor (VCM) used to position a transducer adjacent a rotatable storage medium, and the random number is preferably generated while the medium is in a non-rotatable state.

20 FIGURE 6