Key.net: a system and method for accessing offline lock system by the internet- made key using barcode technology

ABSTRACT

Regarding to Key.net, Clients can apply for their desired room key, which is available for a specific duration using an online booking system. The key can be printed at home without utilizing any special peripheral equipment. The issued key is recognizable by offline and the standalone lock system. Barcode as a code carrier has been chosen, according to its advantages, such as reduced cost of key production, ease of generating, and itøs highly resistant. The Verifier Machines can be located at each entry point are standalone devices, and are not connected in any way neither between them nor to any central database, server or portal. The Key.net is generally designed for places where some people make use of it of a particular time and location like remote lodgings/hotels, vacation homes, clubs, some departments of factories, parking entrances and so on. Clients can create their own access code from anywhere at any time using the online portal. Thanks to proposed encryption / decryption scheme, Key.net gives a reliable solution to design a method and system for generating access codes and authenticating the key or ticket/coupon with offering a safe and fast way. The major contributions of Key.net are user convenience in making desired key, cost reduction in producing the barcoded-key and to empower remote and disconnected lock systems for using the Internet- made keys.

Keyword: Electronic lock system; Encryption; Verification; Barcode; Key; Internet; Offline machine