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Automated secure room system (Conference Paper)

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Abstract

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Automated security systems are a useful addition for today's home where safety is essential. Vision-based security systems have the greater advantages over the traditional security systems such as using the lock, observing by the security guard, using alarm signal etc. This paper proposed an integrated dual-level vision-based home security system, which consists of two subsystems - a) movement detection and b) hand verification system. The primary movement detection technique is used to detect any movement first and the system verifies the authorized person for any secured place. It will check the threshold value where if the threshold level exceeds and the verification flag is off, the alarm will be triggered. Otherwise, if verification flag is on, it means the person is authorized and movement detection will be turned off for this person. On an event of a failure in the primary system, the secondary hand geometry verification module can act as a reliable backup to detect authorized person in a restricted area. Several experiment results have shown good performance and feasible implementation in both cases. © 2015 IEEE.

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