

Claims:

What is claimed is:

- 1) A method for controlling access to a plurality of compartments of a storage and retrieval system without the need for a physical barrier to control access at each compartment comprising: indication to guide a user or users to access the selected compartment or compartments; detection of access of compartment or compartments by a user or users; and an alarm triggered if one or more user is detected accessing a compartment or many compartments that is not designated to be access by the said user or set of users.
- 2) The method of claim 1, wherein access can be simultaneous access by a plurality of sets of users to a plurality of sets of compartments.
- 3) The method of claim 1, wherein each user has a device attached which emits a signature detected by the detection system when the user access any compartment; allowing the detection system to distinguish if the user accessing the compartment belongs to the set of users selected to access that particular compartment.
- 4) A device for controlling access to a plurality of compartments of a storage and retrieval system without the need for a physical barrier to control access at each compartment comprising: indicator sub-system; sensor sub-system; and alarm sub-system.
- 5) The device of claim 4, wherein the indicator sub-system comprises indicator or indicators at the compartments; and a central indicator or a plurality of central indicators.
- 6) The device of claim 4, wherein the sensor sub-system comprises an electro-magnetic wave emitter or a plurality of electro-magnetic wave emitters; or ultra-sound emitter or a plurality of ultra-sound emitters; or both; working with the corresponding sensor sub-system at the compartment.
- 7) The device of claim 4, wherein the sensor sub-system further comprises an array of electro-magnetic emitters or ultra-sound emitters or both working with the corresponding array of sensors placed at the edge of a group of compartments so that through the pattern of which sensor or sensors receives the signals sent out by the emitters, is able to deduce which compartments are being accessed.
- 8) The device of claim 4, wherein the alarm sub-system comprises an audio module that will sound when the device detects a user or a plurality of users accessing any compartment that is not selected for access.
- 9) The device of claim 4, wherein the alarm sub-system further comprises signs at the compartments that will be switched on, switched off or flashed when the device detects a user or a plurality of users accessing any compartment that is not selected for access.
- 10) The device of claim 4, wherein the alarm sub-system further comprises symbols or messages on a computer that will indicate when the device detects a user or a plurality of users accessing any compartment that is not selected for access.

- 11) The device of claim 4, further comprises a signature generator attached to the user.
- 12) The signature generator of claim 11, wherein the signature generator sends out a signal to the sensor sub-system to allow the user to which this signature generator is attached to be identified.
- 13) The signature generator of claim 11 comprises a bracelet at the wrist.
- 14) The signature generator of claim 11 further comprises a ring or ring-like device on the user's finger.
- 15) The signature generator of claim 11 further comprises a glove or glove-like device on a user's hand.
- 16) The device of claim 4, further comprises a Near Field Communications (NFC) Tag reader attached to the user.
- 17) The reader of claim 16, wherein the reader reads the signature of the NFC Tag or plurality of NFC Tags attached to the compartment and sends the signature back to the central system.
- 18) The reader of claim 16 comprises a bracelet at the wrist.
- 19) The reader of claim 16 further comprises a ring or ring-like device on a user's finger.
- 20) The reader of claim 16 further comprises a glove or glove-like device on to a user's hand.