

CLAIMS:

1. A method for detecting abnormal usage of a physical consumable in a physical consumable usage environment, wherein the method comprises the steps of:
monitoring detected usage data associated with the provision of at least one physical consumable in a physical consumable usage environment using at least one physical consumable provisioning device that is arranged to provide the physical consumable;
and
detecting abnormal usage of the physical consumable based on the monitoring of the detected usage data.
2. The method of claim 1 further comprising the step of wirelessly transmitting the detected usage data to at least one abnormal usage monitoring device, wherein the step of detecting the abnormal usage is performed by the monitoring device.
3. The method of claim 2, wherein the abnormal usage monitoring device is a gateway device or a server in a building management system.
4. The method of claim 1, wherein the step of detecting the abnormal usage are performed by a physical consumable monitoring device associated with the physical consumable provisioning device.
5. The method of claim 1 further comprising the step of generating an alert based on the detection of the abnormal usage.
6. The method of claim 5 further comprising the step of sending the generated alert to one or more registered devices associated with the usage of the physical consumable.
7. The method of claim 1 further comprising the steps of comparing the detected usage data with prior usage data associated with prior use of the physical consumable by the physical consumable provisioning device, and detecting the abnormal usage of the physical consumable based on the comparison of the detected usage data with the prior usage data.
8. The method of claim 7, wherein the step of comparing the detected usage data with the prior usage data comprises detecting whether the detected usage data matches a usage pattern associated with the prior usage data.

9. The method of claim 7, wherein the step of comparing the detected usage data with the prior usage data comprises detecting a maximum and/or minimum prior usage value in the prior usage data and comparing the detected maximum and/or minimum prior usage value with maximum and/or minimum values in the detected usage data.
10. The method of claim 7, wherein the step of comparing the detected usage data with the prior usage data is based on an amount the physical consumable has been used in a defined usage period.
11. The method of claim 10, wherein the step of comparing comprises the step of comparing a current usage amount of the physical consumable with a previously detected usage amount of the physical consumable and generating an alert if the current usage amount is below or above a defined threshold associated with the previously detected usage amount.
12. The method of claim 7, wherein the step of comparing the detected usage data with the prior usage data is based on a time that the physical consumable was or is being used in a defined usage period.
13. The method of claim 12, wherein the step of comparing comprises the step of comparing a current usage time of the physical consumable with a previously detected usage time of the physical consumable in the usage period and generating an alert if the current usage time is below or above a defined threshold associated with the previously detected usage time.
14. The method of claim 7 further comprising the step of monitoring and recording the prior usage data.
15. The method of claim 1, wherein the physical consumable is one consumable in a group of consumables comprising: water; gas; electricity.
16. The method of claim 1, wherein the physical consumable usage environment is one usage environment in a group of usage environments comprising: a water usage environment; a gas usage environment; an electricity usage environment.
17. A physical consumable monitoring device comprising a processor and memory, wherein the memory comprises software code arranged to cause the processor to implement the method according to claim 1.

18. The physical consumable monitoring device of claim 17, wherein the physical consumable monitoring device is part of or integrated with one or more of an electrical, gas or water provisioning device.
19. The physical consumable monitoring device of claim 17, wherein the physical consumable monitoring device is part of or integrated with one or more of an item of tap ware, a shower unit and a flush unit.
20. A central gateway device in a building management system, wherein the central gateway device comprises a processor and memory, wherein the memory comprises software code arranged to cause the processor to implement the method according to claim 1.
21. A server in communication with a building management system, wherein the server comprises a processor and memory, wherein the memory comprises software code arranged to cause the processor to implement the method according to claim 1.