

[0003] The known system and the known method primarily serve for reducing the water consumption of sanitary facilities. For making the decision what to do and not to do in the individual case, there is however the need for at least one person, who evaluates statistics and for example decides, how to reduce the water consumption of a sanitary device at times of high usage, when to activate a cleaning mode or to initiate a service call. Particularly with larger sanitary facilities, this involves great effort which is hardly feasible, so that the resources which are generally available in a sanitary facility, for example with regard to water saving, cannot be used with the previous system and the corresponding method.

[0004] Embodiments of the present invention seek to advance the system and the method of that type in such a way that the efficiency regarding the water consumption of a sanitary facility can be further increased with the same or even less effort.

[0005] An aspect of the present invention provides a sanitary facility management system with at least one sanitary installation, which is coupled to a water supply and/or is included in a water circuit and on which at least one operating value of the at least one sanitary installation can be recorded, a sanitary facility control device connected to the at least one sanitary installation, comprising at least one data transmitter and at least one signal receiver, and a data processing and signal output system communicating with the sanitary facility control device via the at least one data transmitter and the at least one signal receiver, wherein the data processing and signal output system is a system learning by machine and/or a system comprising an artificial neuronal net and/or an expert system.

[0006] Preferably, the data processing and signal output system comprises at least one regulation and/or a classifier trained with methods of artificial intelligence.

[0007] The sanitary facility management system according to the invention can comprise a system as a data processing and signal output system that is machine learning or self-learning. The machine learning of the data processing and signal output system used according to the invention can take place supervised (described as supervised learning in English), wherein the data processing and signal output system is trained with pre-defined data, and/or it can take place unsupervised (described as unsupervised learning in English), wherein the data processing and signal output system continuously learns based on the transferred data during operation, and/or it can take place reinforced (described as reinforcement learning in English), wherein the data processing and signal output system receives a feedback or response from at least one other

as a mesh network. A wireless network such as a Bluetooth mesh can for example be used here. The network sensor can be a basic sensor, too. In these embodiments of the sanitary facility management system according to the invention, a decentralized system is used in which the basic sensors and the network sensors communicate directly among each other and decisions can be made in the net (mesh). That means, one of the basic sensors or one of the network sensors can make decisions based on the operating data captured by other basic sensors or network sensors situated in the net.

[00014] Another aspect of the present invention provides a sanitary facility management method, in which with a sanitary facility with at least one sanitary installation, which is supplied with water and/or through which water flows and on which at least one operating value of the at least one sanitary installation is recorded in the form of data, the at least one operating value is transmitted to a data processing and signal output system with at least one data transmitter of a sanitary facility control device connected to the at least one sanitary installation, the data processing and signal output system processes the at least one operating value, at least one signal is generated in accordance therewith and the at least one signal is transmitted to at least one signal receiver of the sanitary facility control device, and in which the data processing and signal output system learns by machine and/or generates the at least one signal by using an artificial neuronal net and/or an expert system.

[00015] The machine learning of the data processing and signal output system can take place supervised (supervised learning), wherein the data processing and signal output system is trained with pre-defined data, and/or it can take place unsupervised (unsupervised learning), wherein the data processing and signal output system continuously learns during operation based on the transmitted data, and/or it can take place reinforced (reinforcement learning), wherein the data processing and signal output system receives a feedback or response of at least another part and/or at least one user of the sanitary facility management system, whether the learning has led to a success.

[00016] In preferable embodiments of the method according to the invention, it works based on an artificial neuronal net. An expert system, that is a computer program which makes decisions based on a knowledge base, can be used alternatively or in addition thereto with the method according to the invention.