According to some embodiments, each top tree node and each tree node is a range extender. Every node will extend the network so as to make a tree of the network longer. A new trap device or monitor device thereby only has to be in range of any node in the pest control system making placement of devices easier.

According to some embodiments, each top tree node and each tree node comprises an address to its parent and a sub node database with addresses to all its direct children saved in the node memory. The nodes of the pest control system are thereby able to communicate with the closest nodes of the system, but not with other trees in the system. Communication in the system is thereby reduced which will reduce the energy consumption of the nodes. The battery of battery driven trap devices and monitoring devices will thereby last longer and the risk for animals suffering in powerless traps will decrease. Intervals between battery exchange will also be longer reducing costs for managing the pest control system.

According to some embodiments, the nodes in the pest control system are arranged in as small trees as possible and as many trees as possible. If all devices are in range of the gateway every device will be a top tree node and alone in its tree. Only if a device is not in range of the gateway, a tree will be extended with tree nodes. Communication paths will thereby be reduced to a minimum which will reduce the energy consumption of the nodes. The battery of battery driven trap devices and monitoring devices will thereby last longer and the risk for animals suffering in powerless traps will decrease. Intervals between battery exchange will also be longer reducing costs for managing the pest control system.

According to some embodiments, the gateway is arranged to communicate with a backend server so that the pest control system can be managed and monitored on distance by accessing the backend server, e.g. from an network connected computing device as a laptop or a smartphone.

According to some embodiments, all network traffic is encrypted to ensure integrity of the system and make the system harder to tamper with for anyone unauthorized. The system is thereby more reliable and less sensitive for disturbance from other equipment. This will reduce the risk for malfunction and thereby reduce the risk of an animal being trapped without the system reporting it. A safer system is also obtained. Problems associated with a third party intervening or eavesdropping are reduced.

According to a second aspect there is a method provided for building a network of pest control devices, the method comprising arranging a gateway, and a plurality of trap devices

and monitoring devices in an area for pest control purposes, wherein the gateway and each trap device and monitoring device comprises a memory with a sub node database and wherein the gateway and each trap device and monitoring device are turned on; sending a pairing signal from the gateway at a rendezvous frequency; at each trap device or monitoring device that is receiving the pairing signal: assigning the trap device or monitoring device as top tree node in a tree, storing the assignments in the sub node database of the gateway, and storing the address of the gateway in the memory of the assigned trap device or monitoring device; at the gateway, broadcasting on the rendezvous frequency to the top tree nodes a network communication frequency; at the gateway, broadcasting on the network communication frequency to the top tree nodes, individual dedicated slot times during a repeat cycle, wherein the individual dedicated slot times during a repeat cycle are used to avoid interference between different trees; and repeating until no additional trap device or monitoring device is responding and is added to the network: at each trap device or monitoring device with an empty sub node database, sending at the rendezvous frequency the pairing signal during the dedicated slot time of the tree, wherein each top tree node and each tree node (n1, n2, n3, n4) comprises an address to its parent and a sub node database with addresses to all its direct children saved in the node memory; at each trap device or monitoring device that is receiving the pairing signal and that does not have a stored parent address stored: receiving on the rendezvous frequency information about frequency of the network communication frequency; receiving at the network communication frequency tree individual dedicated slot times during a repeat cycle; assigning the trap device or monitoring device as tree node in the tree of the top tree node; storing the network address of the trap device or monitoring device sending the pairing signal as parent address; assigning a node network address to the trap device or monitoring device; communicating on the network communication frequency the assigned node network address to the tree, wherein the network address is indicative of which tree (t1-t6) it belongs to and what tree level it is located at; wherein each top tree node and each tree node is a range extender and wherein one or a plurality of any of the top tree nodes (tn1-tn6) or the tree nodes (n1-n3) comprise(s) a battery (9) as power source.

Accordingly a network of pest control devices is built with as small trees as possible and as many trees as possible. If all devices are in range of the gateway every device will be a top tree node and alone in its tree. Only if a device is not in range of the gateway, a tree will be extended with tree nodes. Communication paths will thereby be reduced to a minimum

which will reduce the energy consumption of the nodes. The battery of battery driven trap devices and monitoring devices will thereby last longer and the risk for animals suffering in powerless traps will decrease. Intervals between battery exchange will also be longer reducing costs for managing the pest control system.

According to some embodiments, the network address is indicative of which tree it belongs to and what tree level it is located at. If a node is not responding for some reason it is thereby easy to establish the implications for the network.

The data protocol sends the bare minimum that is required for the network protocol to function. The data amount communicated in the system is thereby reduced which will reduce the energy consumption of the nodes. The battery of battery driven trap devices and monitoring devices will thereby last longer and the risk for animals suffering in powerless traps will decrease. Intervals between battery exchange will also be longer reducing costs for managing the pest control system.

According to some embodiments, the method comprises: at the gateway: detecting that one or a plurality of node in the network is not responding; adding the identity of any missing nodes to a lost node list; repeating for each node in the lost node list: iterating through the network level by level away from the top tree node level until the currently searched node is found: sending at the network communication frequency a pairing signal during the trees dedicated slot time; if receiving a response assigning the trap device or monitoring device a new network address and removing the trap device or monitoring device from the lost node list. A broken device or a device that for some reason does not access its parent node will thereby be handled by setting up the part of the network no longer connected again. Sub-nodes to the broken node may thereby be connected to a different tree instead if within range of any node in the network. This will produce a very resilient network that repairs itself automatically as much as is possible if problems arise. It will in turn reduce the risk of animals being trapped in a trap device that is not connected to the network reducing the risk for animals suffering undetected.

According to some embodiments, the method comprises setting the gateway in a battery mode in which the gateway enters a sleep mode when not required to communicate according to repeat cycle schedules. In case of power failure, the network will thereby keep working for a long time. This will produce an even more resilient network with reduced risk of malfunction.

According to a third aspect there is provided a method of controlling the signal strength of a pest control network set up according to the second aspect, comprising setting the signal strength of the gateway and all trap devices or monitoring devices of the pest control network to a first signal strength when arranging a new trap device or monitoring device at the location for pest control, wherein a new trap device or monitoring device is placed so as to receive a signal from the network; setting the signal strength of the gateway and all trap devices or monitoring devices of the pest control network to a second signal

strength, stronger than the first signal strength, when building the network in accordance with the second aspect; setting