**What is claimed is:**

**1**. A method for linking a plurality of sensing devices, comprising:

generating, by a first sensing device disposed in a space, a first search signal to search for other sensing devices;

generating, by a second sensing device disposed in the space, a first synchronization signal in response to the first search signal;

logically connecting, by the first sensing device, the second sensing device in response to receiving the first synchronization signal;

generating, by the first sensing device, a connection tree as a data structure representing logical connection relationships with other sensing devices;

storing, by the first sensing device, a connection relationship with other sensing devices disposed within an area of interest according to a transition to a specific mode;

clustering, by the first sensing device, both of the sensing devices respectively having transmitted the first received synchronization signal and a second received synchronization signal into a single logical group when a time difference between the first and the second received synchronization signal is less than or equal to a threshold; and

generating, by the second sensing device, a second search signal to search for another sensing device.

**2.** The method of claim 1, further comprising:

logically connecting, by the second sensing device, a third sensing device in response to receiving a second synchronization signal generated from the third sensing device;

providing, by the second sensing device, its connection relationship to the first sensing device; and

updating, by the first sensing device, the connection tree as a data structure according to the connection relationship.

**3.** The method of claim 1, wherein the first sensing device includes a plurality of operation modes, and is configured to:

store a connection relationship with a nearest sensing device that transmitted a first received synchronization signal among a plurality of received synchronization signals according to a first operation mode, or

store a connection relationship with the target sensing device disposed within an area of interest among a plurality of received synchronization signals according to a second operation mode.

**4.** The method of claim 1, wherein the second sensing device stores a connection relationship with the first sensing device in response to generating the first synchronization signal.

**5**. The method of claim 1, further comprising:

stopping, by a fourth sensing device that received the first search signal, the generation of its own synchronization signal upon receiving the first synchronization signal.

**6**. The method of claim 1, wherein the space is a cargo loading space for transportation, and at least one of the plurality of sensing devices is attached to the cargo.

**7**. The method of claim 1, wherein each of the plurality of sensing devices generates a synchronization signal only once.

**8**. The method of claim 7, wherein the second sensing device terminates the additional creation of connection relationship based on no synchronization signal is received in response to the transmission of the second search signal.

**9**. A sensing device disposed in a space, comprising:

a memory configured to store a connection relationship with other sensing devices disposed in the space according to a transition to a specific mode;

a communication module configured to support short-range communication with at least one sensing device;

a sensor subsystem configured to sense environmental information including temperature or humidity; and

a processor configured to:

generate a connection tree according to connection relationships with the at least one sensing device,

process sensing information, and

cluster both of the sensing devices respectively having transmitted the first received synchronization signal and a second received synchronization signal into a single logical group when a time difference between the first and the second received synchronization signal is less than or equal to a threshold.