CLAIMS

1. A wireless network installation system, comprising:

a network of wireless tags installed at respective locations in a physical premises environment, comprising:

an asset type of wireless tag associated with a mobile asset in a designated space in the physical premises environment and configured to transmit beacon signals in the physical premises environment, wherein beacon signals transmitted by the asset type of wireless tag comprise a universally unique identifier and a description of the mobile asset;

an infrastructure type of wireless tag~~)~~ in the designated space and associated with an infrastructure component of the physical premises environment and configured to transmit beacon signals in the physical premises environment, wherein beacon signals transmitted by the infrastructure type of wireless tag comprise a universally unique identifier and a description of the designated space, the description of the designated space including location of the infrastructure type of wireless tag;

wherein the asset type of wireless tag identifies the location of the asset type of wireless tag from the description of the designated space; and

an interface map file loadable in a memory of a computing device and displayable by a client application executable on the computing device, wherein, when displayed by the client application on the computing device, the interface map comprises a graphical representation of the designated space in the physical premises environment and a graphical representation of the infrastructure type of wireless tag at a location in the graphical representation of the designated space that is correlated with the location of the infrastructure type of wireless tag in the designated space of the physical premises environment.

2. The wireless network installation system of claim 1, wherein in response to receipt of an input at the location of the infrastructure type of wireless tag in the graphical representation of the designated space in the interface map, the client application executing on the computing device displays the description of the designated space.

3. A wireless network installation method, comprising:

loading a map file of a physical premises environment in a memory of a computing device;

displaying a map interface of the physical premises environment on the computing device based on the map file loaded in the memory;

from a user receiving a selected location in the map interface;

prompting the user to install a wireless tag at a real-world location corresponding to the selected map interface location;

scanning the wireless tag to obtain an identifier of the wireless tag;

loading a selected firmware type in a memory of the wireless tag and initializing the wireless tag, wherein the selected firmware type is based on a hierarchical role of the wireless tag within the wireless network; and

associating the selected location in the map interface with the identifier of the wireless tag.

4. The wireless network installation method of claim 3, wherein the displaying comprises displaying on the computing device features that correlate with corresponding physical infrastructure features in the physical premises environment.

5. The wireless network installation method of claim 3, further comprising, in response to receipt of user selection of location in the map interface, a client software application executing on the computing device generating a message instructing the user to install a particular type of wireless tag at the selected map interface location.

6. The wireless network installation method of claim 5, further comprising, by the client software application executing on the computing device, generating a

message instructing the user to install the particular type of wireless tag at the selected location on infrastructure of the physical premises environment.

7. The wireless network installation method of claim 6, further comprising, by the client software application executing on the computing device, instructing the user to initialize the particular type of wireless tag at the real-world location corresponding to the selected map interface location.

8. The wireless network installation method of claim 7, further comprising, in response to user selection of a scan button, the ~~computer~~ client software application causing the computing device to scan an identifier of the wireless tag.

9. The wireless network installation method of claim 8, further comprising, by the ~~computer~~ client software application, causing the computing device to wirelessly scan the identifier of the wireless tag.

10. The wireless network installation method of claim 8, further comprising, by the computer software application, causing the computing device to optically scan the identifier of the wireless tag.

11. The wireless network installation method of claim 8, further comprising, after retrieving the identifier of the wireless tag in the physical premises environment, receiving ~~a~~ the selected firmware type for the wireless tag.

12. The wireless network installation method of claim 11, further comprising, at the selected map interface location, showing an icon representing the selected firmware type.

13. The wireless network installation method of claim 3, further comprising, by a computing device, applying one or more design rules to a current installation of wireless tags to detect problems with the current installation of wireless tags in the physical premises environment.

14. The wireless network installation method of claim 13, wherein the one or more design rules comprise rules specifying maximum permissible distances separating any pair of wireless tags based on the types of the wireless tags and their respective locations in the physical premises environment.

15. The wireless network installation method of claim 13, wherein the predefined design rules comprise a design rule specifying that no wireless tag should be out of range of all other wireless tags in the physical premises environment.

16. The wireless network installation method of claim 13, wherein the predefined design rules comprise a design rule specifying that the wireless tag provides complete coverage of a specified area of the physical premises environment.

17. The wireless network installation method of claim 3, further comprising, by a computing device, installing one or more additional infrastructure wireless tags in one or more locations to remove one or more dead zones in wireless coverage in the physical premises environment.

18. A wireless network installation method, comprising:

loading a map file of a physical premises environment in a memory of a computing device;

loading one or more requirements in the memory of the computing device for an installation of wireless tags in the physical premises environment;

executing, by the computing device, a wireless tag installation simulation application program operable to automatically configure rooms and other defined spaces in ~~the~~ a map interface of the physical premises environment according to the one or more requirements, wherein the wireless tag installation simulation application program proposes a configuration of wireless tags in the physical premises environment;

performing, by the wireless tag installation simulation application program, one or more design rules checks on the proposed configuration of wireless tags in the physical premises environment; and

detecting, by the wireless tag installation simulation application program, any warnings, errors, or failures in ~~the~~ a proposed installation;

responsive to a detected error in the proposed installation, editing the proposed installation by the wireless tag installation simulation application program executing on the computing device; and

responsive to a failure of the wireless tag installation simulation application program to detect any error in the proposed installation, presenting the proposed configuration of the wireless tag installation as ready to be deployed in the physical premises environment; and

initializing tags based on the proposed configuration, the initializing including loading a selected firmware type in a memory of the wireless tag, the selected firmware type is based on a hierarchical role of the wireless tag within the wireless network.

19. The wireless network installation method of claim 18, comprising, by the wireless tag installation simulation application program executing on the computing device, providing editing tools to ~~the~~ a user for editing the proposed configuration.