This invention is dedicated to the public

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Voice-controlled Indoor Navigation System

Most recently proposed indoor navigation ideas require a user to have a mobile device such as a smartphone, with an appropriate app installed on it. This can be a major inconvenience to visiting travelers – they might not have a compatible device or have access to the Internet to install the app.

Instead, I propose the following:

1. A system of stationary devices is deployed in the building(s), with at least one device for each major intersection.
2. Each stationary device is comprised of the following parts:

- a disk-shaped enclosure suspended from the ceiling;
- a microphone;
- a loud speaker;
- a matrix of LEDs capable of projecting arrows on reflective floor surface;
- a computing unit capable of voice recognition, voice generation, and controlling the LEDs;
- a power supply for the components.

The system of such devices is claimed to provide the complete navigation capability from one point of the building(s) to another, by providing visual and voice directions to the destination or to the next navigation device on the route. The process of obtaining the directions is described in Figure 1.

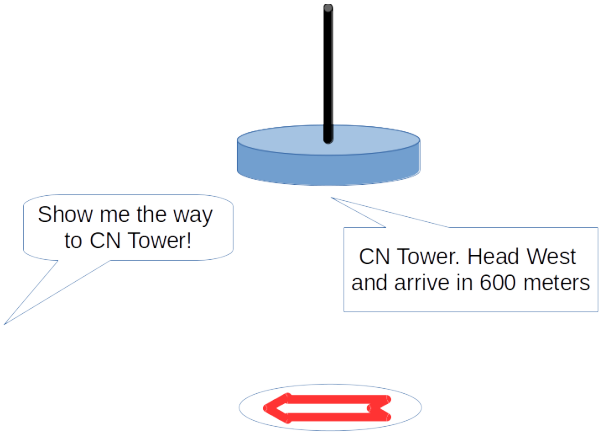

Figure 1.

Additional features may be provided by each device, such as WiFi access, Bluetooth beacon, advanced routing options, etc. One of the benefits of such a device is that it does not take any of the floor space and can be easily relocated.

An outdoor version of the device can be considered, with the LED matrix built into the pavement under a transparent non-slippery shield.