

**INTERPRETATION IC 90.1-2010-24 OF
ANSI/ASHRAE/IES STANDARD 90.1-2010
Energy Standard for Buildings Except Low-Rise Residential Buildings**

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Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE/IES Standard 90.1-2010, Sections 9.4.1.2 and 9.4.1.6, relating to lighting controls.

Background: LumiFi is a company that has developed a software based lighting control system operated by a user's mobile device. The technology leverages the growth and adoption related to the Internet of Things (IoT). LumiFi uses a patent pending algorithm to generate more than two predetermined and differentiated lighting scenes based upon a user's activities and needs (using two or more luminaires). The software can also schedule lights on and off, dim to variable levels and has automatic recall of settings as well as "all off." Control is possible through the advent of wifi bulbs and fixtures thereby bypassing the need for traditional hardware/hardwired lighting control systems. The LumiFi system does not replace the traditional switch but rather gives additional control to users and administrators for lighting management.

Interpretation No.1: A *software* based lighting control system that is controlled by a user's personal smart mobile device AS WELL AS a physical wireless device that is affixed to a corresponding commercial space AND that controls two or more luminaires, generates more than two predetermined and differentiated lighting scenes, that can schedule lights on and off, dim to variable levels and has automatic recall of settings as well as all off qualifies for exception "a" to Section 9.4.1.2b - *Spaces with multi-scene control systems*.

Question No.1: Is this interpretation correct?

Answer No.1: Yes. Provided a complete control system is permanently installed within the building and not dependent upon controls imbedded into lamps that are not permanently attached to the luminaire.

Interpretation No.2: A *software* based lighting control system that operates on a user's personal mobile device AND that uses contextual awareness (spatial validation i.e. only operated when user is physically present) fulfill the requirement outlined in Section 9.4.1.6c as a "control device at the entry door".

Question No.2: Is this interpretation correct?

Answer No.2: No. The intent of this requirement is for a control that is permanently installed in the space and available to any occupant.