

## **ABSTRACT**

### **COMMUNICATION INFRASTRUCTURE DEVICES AND SUPPORT TOOLS FOR INTELLIGENT RESIDENCES OR BUSINESSES AND COMMUNICATING METHOD WITH AND OPERATING INTELLIGENT ELECTRICAL DEVICES**

A method and apparatus for propagating optical signals via a cascaded line of support devices for electrically powered wiring devices and low voltage IoTs and Ai devices, combined into homes and high-rise units for operating, controlling and reporting home automation via optical, electrical and wireless communication with no collision, by providing traffic control for signals propagation.

The cascaded devices linked via plastic optical fiber or other optical cable are aided by a series of testers during installation and beyond, with the electrical and low voltage devices are installed by a plug-in action into the cascaded devices and removed by a pull hand tool.

Fig.19A