INTELLIGENT BUILDING SYSTEM

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ABSTRACT

Intelligent Building System (IBS) or Intelligent Building Controls (IBC) is one of the many technology that been used in the world. Like others' technology, such as, Personal Computer (PC) technology, IBS also involved in emulate of the integrated technology by the producer. In the beginning, basic system of the IBS just a HVAC, lighting, security, and occupant safety system controls becoming increasingly complex system. Today the smart system and devices can controls offer the management system in the building.

Because of that reason, our group has made decision to choose the Intelligent Building System (IBS) as a Final Project Report. In this project report, we will introduce the characteristic about IBS. It's will includes the history, and the develop of IBS, in today's world.

For more details our group also visiting two modern building in the Malaysia, that we consider the buildings have a characteristic of the IBS. The building is Kuala Lumpur City Center (KLCC) and Kuala Lumpur International Airport (KLIA). For KLCC, Petronas Twin Tower, we are succeeding to studying more detail and see nearly how they manage the building system. This includes the hardware, software and equipment they used. But for KLIA, we just introduced the basic system of the buildings and a part operation sequence system. This because KLIA is one of the sensitive areas and also have a very big area in the building management, so that the KLIA management made a separate/different department of the management to make more easily to controls.

1. INTELLIGENT BUILDING SYSTEM

1.1 Introduction

Today's buildings are becoming increasingly complex. The building systems (HVAC, lighting, etc.) are so complex that additional systems are required to help manage their use. These additional, smart systems are referred to as Intelligent Building Controls, or Building Automation Controls.

In the late 1970's, basic HVAC controls began to be implemented. In the 1980's, lighting, security, and occupant safety system controls were introduced. Today's smart systems and devices can control the following:

- Access Systems (gates, electronic locks, security system)

- Audio/Visual Systems (video walls, music playback, projection systems, audio and video conferencing)

- Communications (telephones and intercoms)

- Smart Appliances (coffee makers, ovens)

- HVAC systems (air handling units, fan coil units, ventilation louvers)

- Electric Lighting (exterior and interior lights, safety lighting, theatre lighting)

- Motorized Devices (garage doors, sun shades, blinds)

- Security Systems (alarms, child tracking devices, retinal, fingerprint, or voice identification systems)