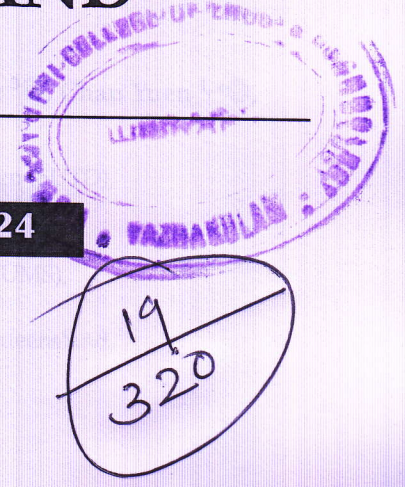


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Keywords: energy management, building energy management systems, ontology and inference rule based framework, building automation

1. Introduction

Globally, buildings consume around 30% of total energy and 60% electrical energy every year [1]. Research and development interest in building energy management systems (BEMS) has, therefore, continuously increased in recent years [2-3]. The objective of BEMS is to improve energy efficiency of buildings as well as to reduce the inconvenience experienced by the building users. This can be achieved by controlling the operations of various energy consuming equipment such as HVAC, lights, elevators, etc. BEMS are complex systems comprising of various system components such as sensors, energy meters, actuators, and communication devices, which are integrated together to achieve various