Smart Home Ambient Assisted Living (SHAAL)

INTRODUCTION

About 20% of the world’s population will be aged 60 or above by 2050. In the US alone, about 80% of those over 65 years are living with at least one chronic disease. Caregivers are expected to rise from 25% to 53% by 2060 in Europe only. In Malaysia more than 9% of the population will be aged more than 60 years (3.2 million). Existing smart home system does not cater for the elderly. The is a strong demand for the use of instruments, apparatus, appliances, material and software to assist elderly (people aged above 65), and those who are physically and cognitively impaired to fulfilling their daily activities towards quality independent living. A smart system is needed to:

- Monitor and support everyday activities of needy and elderly people,
- Provide continual assessment of health of disabled and elderly people
- Improve surveillance, management and control of home appliances.
- Provide instant notification.

SNAPSHOT

This invention presents Smart Ambience Assisted Living System specifically designed to fulfill the needs for quality and independent living for elderly. It provides online monitoring which can support the everyday activities of the needy and elderly people.

PRODUCT FEATURES

- Miniaturized
  - Small footprint for easy deployment
  - Pervasive
- Low cost, Low Power
  - Utilizing commercially off the shelf (COTS) components
- System Scalability
  - Minimal modification to the existing system
  - The cost is limited to the new expansion only
- System Robustness
  - Self organize, self-healing routing protocol
  - Virtually unlimited network coverage
- Ubiquitous System
  - Notification and automation control can be accessed through web-based or GSM network
  - Anywhere, anytime

MARKET POTENTIAL

Smart home world market size is estimated to reach $58.68 billion by 2020, at an estimated CAGR of 17% from 2015 to 2020. Key drivers of the smart home market are:

- Consumers convenience, safety & security
- Demand for energy efficient solutions
- Product development in Internet of Things (IOT) & M2M communication

Ambience Assisted Living (AAL) market is the intersection of three different markets:
- Telecare,
- Telehealth
- Smart Homes (home automation)

The Asia-Pacific smart homes market is estimated to grow at the highest growth rate.