

The home is an important place for people. It affects the overall quality of life . It is self-evident that constantly improving and developing this area of life takes an important role. A step in this direction are the so-called smart home environments. A smart home is generally referred to a fully equipped environment with sensors and different technology, which has its goal to help the user in as many conceivable situations and assisting him. A smart home is one that incorporates advanced sensing and automation systems to provide the inhabitants with monitoring and control regardless of whether they are inside or outside the home and to gather information about the current status in the smart home. For example, a smart home may have controls for lighting, temperature, multi-media, security, window and door operations, as well as many other functions. The motivation for developing smart home systems comes from many reasons, but most prominent are convenience, security, energy management, connectivity and luxury. Smart Home systems are one of the newer areas of research that have not been fully integrated into our society. This is because the research requires many other disciplines of research and engineering to produce a functional smart home. The cost of installing a smart home is also a large hindrance to the emergence of smart home systems into the market. The extra cost of the install is from the fact that even though a majority of homes were built in the near past, technology has been growing exponentially. This means that most homes were built before this technology was available, and this creates a barrier for the development and sales of smart home systems. However the technology is becoming better and cheaper, and this will help to make smart home systems an expense worth having when new homes are being built. The biggest motivation behind smart home systems is the convenience. Convenience is really another way of saying "time saver", and into day's world where everything is moving faster, every second has value. Most of the technology we use today is based of convenience, for example cars get us where we need to go faster, phones get us information from other people faster, and computer's get work done faster. Smaller conveniences in the home will be desirable because they allow the home to save the user time as well. There are already many convenient technologies in the home like the dishwasher, washing machine, and microwave ovens. These technologies are more mechanical in nature and often there are much less computerized conveniences in the home. A Smart home systems goal is to introduce the benefits of computerized technology. For example, when using the smart home system, the user will not need to walk around turning off lights, they can save that little bit of extra time by just pressing a button on their phone, or even have the lights programmed to shut off after a certain amount of time. Maybe there is some music on the user's computer they would like to play on a sound system, smart home systems will allow the user to play the music from where ever they are without needing to go to their computer, find the song, and make sure the song is in a playable format for their sound system. There are many other small conveniences provided from the smart home. Security is also a big factor in the emergence of smart home systems. With a sophisticated enough system, home security becomes a powerful tool that gives piece of mind and power to the user. Security systems are also a large deterrent for crime. The mere presence of a camera will put doubt in any criminals mind about committing a crime. There are already many security systems on the market available and in use today, however integrating the security system into the smart home gives the user a one stop access to everything in their home. If the smart home system

integrates the smart phone into the system then this means that the user will always know the status of the security of their home. Energy management has become a huge factor in deciding anything, due to the trend of increasing cost of energy. As civilization grows, it constantly needs more energy to power itself. This leads to heavy pressure on efficient use of energy. Smart Home systems help the user do this and save them money at the same time. The smart home system is able to monitor certain process that use energy in the house and can control the amount of energy being used. A primary example would be with lights. Lights are often left on when they don't need to be. A smart home system can be set to turn that light off after a certain amount of time. Maybe the user doesn't like that feature because lights will turn off randomly when they are watching TV or lying in bed. The smart home system allows the user control from his phone so it can be turned off, or set to turn off. This is also the case with many items that use electric power. Giving the user the control to turn things off like the AC, water heater, and TVs or computers allows the user to be more conscious of the energy use and control it accordingly. Another reason for motivation on selecting this product is connectivity. The idea of connectivity is that having things connected results in communication or the transfer of information. By connecting everything in the home, so that everything can talk to each other, information about the home is easily attained. There are many benefits to increasing the amount of information available. Research and analysis are one of the main benefits because data extraction is much easier when things are connected into a single network. For example connectivity will lead to data extraction possibilities like how much power certain appliances or components are using. Connectivity also increases control over assets. By having the data to make informed decisions the control of the home is increased. Luxury is also a factor in the smart home systems that are currently in use. Because of the high cost of smart home system, only those that can afford it will be able to use a smart home system. The high cost causes other reasons to be less prominent when deciding the motivations for a smart home. However luxury is not as concerned with .cost and will not lose its value as significantly due to high cost