Free wireless sensors network industry research paper sample

Business, Industries

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Introduction

The current technology with wireless sensors network has created a better opportunity for the growth and expansion of many industries in the world. The wireless sensors network industry is the latest in the data network family. Organizations that implement wireless networks have realized a decrease in most challenges associated with communication of company staff, clients, and stakeholders. One of the sectors that has benefited from the wireless sensors network is the healthcare industry. Healthcare industry faces a great challenge when it comes to communication between health workers, physicians, patients, and other healthcare centers. Many organizations have started offering wireless services in order to promote the current technology. A wireless sensor network is made up of many sensor

nodes, each with a separate sensing, processing, storage, and communication unit. Sensors range in size depending on the type of application and the type of work they perform (Morinaga, Kohno & Sampei 22-30)

Discussion

Wireless sensor network providers

The issue of communication has led to many innovations as experts search better and efficient ways of delivering information from one target to the other in the most convenient manner. On this issue, wireless sensors network industry offers various services to their clients in order to improve on communication processes. Who are the leading companies in this industry and what services do they offer. Below are some of the leading companies in the wireless sensors network industry.

Millennial Net

Millennial Net is one of the best developers of wireless sensor networking software, services, and systems. It offers integrated cost effective wireless services that enable remote monitoring and management of various devices, and provide data to enable an organization make a more informed decision-making process. Founded in 2000, Millennial Net has maintained its high profile in this industry (Millennial Net).

Cisco Secure Wireless Solutions

Cisco Secure Wireless Solutions is a global wireless sensors networking company that has offers complex solutions to all wireless communications.

The company plays a major role in resource utilization, improved operation efficiency, site safety, extended knowledge management, and improved asset surveillance and security. The plant integrates a group of sensory data and helps manage them in a complete network, providing a wide variety of other business operations. Organizations this at rely of Cisco networks experience a significant change in terms of reduced costs of production, high productivity based on a working network technology (Cisco)

Linear Technology

Linear Technology is a pioneer in the field of wireless sensor network due to its ability to connect smart devices. The company provides reliable, scalable, and resilient wireless products and services with the most advanced technology. The technology incorporates current network management and comprehensive security features, hence, provides devices that are compatible to any environment. Most of its clients are from fortune 500 organizations that provide solutions to building automation, data management, and renewable energy among other operations (Linear Technology 1).

Leading companies in the Wireless Sensors Network play a major role in promoting technology among people and the society by introducing advanced means of communication. In the health sector, wireless sensors find a number of applications in the day-to-day operations. Wireless devices have entered the medical area because they have a wide range of capabilities. They not only improve the quality of life of patients, but also

enable efficient monitoring of patients by physicians and give timely health information (Lisa 25-26).

Application of wireless sensor networks in hospitals

Wireless technology forms the best option for emergencies such as natural disasters, and conflicts where patient's past medical records are much needed. With the help of hand held devices with wireless sensors integrated, the amount of time physicians require to identify a problem is minimized significantly. In addition, continuous medical records helps in building of a patient's database and easily accessed whenever they needed. This reduces the amount of paper work required and eliminates duplication of patient records. Application of wireless sensor networks in the hospitals has benefited the health sector to a great deal by improving patient safety. Many researchers have shown that hospitals that have integrated wireless sensor networks for communication purposes promote patient's safety. The safety of both the patient and the doctor is ensured through proper keeping of medical records. In addition, the process minimizes the high costs of acquiring health care services. Wireless sensors have helped reduce hospital bills by almost 18 per cent with hospitals getting an approximate 21 per cent rise in value (Wayne).

On the other hand, hospitals apply wireless sensor networks in their operations especially in service provision. The health care sector has scarcity of professionals, and with the help of this technology, some gadgets, and devices represent human beings. Less health workers and lack of the necessary technology contribute to the lack of safety in a hospital because

the few workers performs duties extra duties. Implementation of wireless sensors network provides the industry with an opportunity to reach more professionals that are qualified through social networks such as facebook, Twitter, Whats-up messaging, and Emails.

The present technology has brought about many changes from the traditional modes of operations. Companies such as Millennial Net have come up with software capable of ensuring remote monitoring and management of an organization with minimum human interference. Wireless sensor networks are more applied in surgery theatres whereby a patient undergoing an operation is fitted with various sensors around the body to monitor his or her progress. In addition, such sensors improve the safety of a patient because a physician can easily tell when a problem occurs and make the necessary remedies. Moreover, such sensors are integrated with wireless communication devices that gather information about the patient healing process after an operation. Monitoring of patient's progress forms the key means of achieving quality patient care. Communication between doctors and patients using the modern technology promotes improved decision-making processes and enables efficient coordination of healthcare services. Wireless sensor network application in hospitals also improves data delivery, ensuring effective delivery of medical information to the authorities. New technologies now allow patients to walk around the wards while being monitored by computers attached to sensors. Wireless sensors are attached in the body of a patient, eliminating the tradition process where a person would walk around in a wheel chair carrying monitoring gadgets. In addition, this benefits the industry because one computer can monitor the database

for many patients at a go, compared to when a human being was making the observations.

Wireless sensor networks are also used to monitor chronic diseases. Chronic diseases contribute to about 75 per cent of total medical care cost because they encompass many health problems such as diabetes, asthma, sleeping disorders, and heart diseases. Such illnesses require an effective health-monitoring program. Episodic patient monitoring is the most commonly used method of wireless sensor network for monitoring chronic diseases. The process helps identify the progress of the disease until recovery (Hofstraat 25).

Recommendations

The world is evolving at a very high rate and as such, some of the technologies are currently used have been passed by time. Information and Communication Technology (ICT) experts require conducting more research on newer technologies that are extra efficient and helps save costs. From the above research, wireless sensor network industry has done a commendable job in producing wireless sensors that are applied in various sectors. The healthcare sector is one of the most vital areas requiring thorough investigation in order to assist save lives of people. Coming up with an effective technology would minimize cases of patient deaths because of lack of certain facilities, and ensure healthcare services are available to all irrespective of race, financial backgrounds, and region.

Conclusion

Wireless sensors networks contribute to the development of a country, especially when they are able to produce wireless network sensors. Based on the above research, most organizations would like to implement this technology, but the cost and availability of qualified personnel limits their application. Some industries have even tried to produce low cost devices focusing small retailers in order to help improve their operations. The healthcare sector has tried implementing the above technology. Most hospitals are today equipped with wireless sensor networks for communication enhancement. The process has contributed a lot in improving healthcare services and ensuring patients and doctors' safety. Moreover, patients and their families can easily monitor the disease progress at the comfort of their homes since wireless sensors send information to long distances as long as one is connected.

Works cited

Cisco . Cisco Secure Wireless Plant Solution: Wireless Sensors Networking for Industrial Environments . N. p., 11 Dec. 2013. Web. 6 Apr. 2014. Linear Technology. " Dust Networks Applications." Linear Technology. N. p., 2014. Web. 6 Apr. 2014. Lisa, K. et al., " Electronic Health Records and Ambulatory Quality of Care," Journal of

General Internal Medicine. Vol. 3 No. 1, 2012. pp. 23-35.

Hofstraat, J. W. " Integrated care for chronic diseases, leveraging remote monitoring and telehealth approaches." Gerontechnology 11. 2 (2012): 11-23.

Millennial Net. " MillennialNet." Millennial Net. N. p., 2014. Web. 6 Apr. 2014.

http://www. millennial. net/Company. aspx

Morinaga, N., Kohno, R., & Sampei, S. Wireless communication technologies

new

multimedia systems. New York: Kluwer Academic Publishers. 2012. Print