

Review on Present Situations of Smart City

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Abstract. Smart technology creates new business in each industry and will be the role of continuous development. Non-existing or impossible new changes in industry have taken place as several smart technologies have been applied in industry areas. In this paper, we described the reviews on current state of Smart City.

Keywords: Smart, City, Intelligent, Convergence, Usage.

1 Introduction

Today, the hot issues in IT industry include convergence, big data, cloud computing. Digital convergence combines existing industry with IT to create new values and even industrial structure. We commonly call the modern society as “digital convergence”. Especially, mobile, smart, cloud computing can be called core technologies of the large technological direction of convergence that “smart” is receiving spotlight as convergence is deepening. The proactive meaning of smart is ‘wise’, ‘clever’, and etc. However, smart means high intelligence of individuals and industry as a social economic phenomenon. The core characteristic of smart is ‘intelligence’, but not only this characteristic mean the smart era. The smart era did not suddenly appear, but had appeared as a new paradigm as network of the internet era, mobility of the ubiquitous era, intelligent IT of the convergence era had converged. Smart technology creates new business in each industry and will be the role of continuous development. Non-existing or impossible new changes in industry have taken place as several smart technologies have been applied in industry areas. For instance, the medical industry will prosper the flower called smart health care due to sensing technology and fruits called smart grid will be made by power network and sensing of devices.

These new businesses will create new businesses of smart industry through convergence, and will continuously develop. The previously referred smart technologies of city, home, factory, work, entertainment are converged in various industries to rapidly change our lives. In this paper, we review smart city.

2 Reviews on Smart City

Smart city means a city where public functions available in common cities are networked by means of cutting-edge information / communication technology. Functions necessary for the realization of ICT-based smart city include concepts of sensor-based ubiquitous environment and intelligence [2][3].

Smart city began as Internet-based cyber city in computers and has advanced to the current status[5]. The framework of smart city consists of the six elements: smart government, smart building, smart mobility, smart energy, environment and smart service.

In the U.K., the positive social atmosphere toward smart city has been expanded since the Glasgow project. In 2007, the U.K. government established a special committee called TSB for the future construction and technology-centered innovation of the U.K. The committee planned the 'Smart City' project and collected proposals from local governments in 2012, and finally, Glasgow was selected as the target city. In 2013, Glasgow decided to carry out its 'Smart City' development project in cooperation with IT companies such as IBM and Intel. With Glasgow as the first example city of this future city program planned by the technology strategy committee of the U.K., the U.K. government is planning to establish the second and third smart cities in major metropolitan cities such as London, Birmingham, and Sunderland.

'Cross Roads' in Denmark is a smart city project of Copenhagen, Denmark, initiated in 2002. In the 1990s, plans around Copenhagen transferred to Eastern Europe and Asian regions for low-wage earners. As a result, the former plants and harbor areas became slums. With the aim to foster a new dynamic force for manufacturing industry in these areas, Copenhagen implemented the 'Cross Roads' project. "Cross Roads" means a city that combines cultures, media, and communication technology.

China is planning to invest 300 billion yuan for the formation of 320 smart cities by 2015. To this end, the Chinese government announced 90 demonstration areas for smart city development in January 2013 and then confirmed 103 areas on August 5. The demonstration areas are subject to various supports from the Chinese government.

Smart city is a future-oriented cutting-edge city that networks major facilities and public functions of a city by integrating cutting-edge ICT elements such as Cloud computing. The Chinese government is carrying out careful urbanization policies in order to minimize adverse effects of rapid economic development such as insufficiency of energy, environmental pollution, etc. and continue the growth by forming a 'Smart' city. At present, the urbanization project in China aims to change the quality of cities drastically by means of security system, infra facilities, smart city construction and management, etc.

The Chinese government is planning to form 320 smart cities in different regions by 2015, beginning from Ningbo in 2010. Ningbo started its integrated construction of smart city in 2011 and is planning to invest about 2.58 billion dollars into cutting-edge city construction, commercial area reconstruction, and smart grid industry development up to 2015.

3 Conclusions

Smart City means a city where public functions available in common cities are networked by means of cutting-edge information / communication technology. Functions necessary for the realization of ICT-based smart city include concepts of sensor-based ubiquitous environment and intelligence. This study comprehensively considers actual cases of smart city, home and abroad, which presents space for most life activities and presents directions for the future briefly by comparing them with smart cities in our society.

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