# SERVICE SCIENCE AND ITS CURRENT ROLE IN GREEN IT

*Sasiporn Usanavasin.*

Master of Science Program in Software Engineering (M.S.SE)
Faculty of Informatics, Sripatum University, Bangkok, Thailand
sasiporn.us@spu.ac.th

## *ABSTRACT*

*Service Science* is an interdisciplinary approach to the study, design, and implementation of services systems, which are complex systems that require dynamic configurations of resources such as people, technology, organizations and shared information to create and deliver value between providers and customers through services.

The concept of Service Science has been in spot light for the past few years since the major portion of the world economy has been shifted from agricultural and manufacturing sectors to service sector as we can see the service sector now generate more than 60% of GDP in many developed countries (e.g. USA, Japan, Germany, Russia and Brazil) and a rapid growth of GDP in the developing countries including Thailand. To improve the revenue from the service sector, it is essential that we take Service Science into account as we need to understand the underlying principles of service systems and to discover the components that interconnect them in order to provide a structure for building a widely accepted and coherent body of knowledge. This knowledge then can be used to enhance service quality as well as to support service innovation.

In a globalized world, there is no doubt that the Information Technology (IT) has played a significant role in almost every business and services. However, there is a big gap of communication and understanding between business and IT people due to the lack of intersection of knowledge between the two domains. Service Science aims to reduce this gap by attempting to merge technology with an understanding of business logics and processes. The new generation of service experts should then understand how services can be delivered in an efficient and profitable way, how the services should be designed, how to choose and use technology to improve their efficiency and productivity, and how to measure the effectiveness and the customers' satisfaction. Therefore, this new academic interdisciplinary would bring together the ongoing work and knowledge in the well-established fields of computer science, information technology, operations research, industrial engineering, management sciences, and social and legal sciences, etc., in order to develop the skills required in a services-led economy.

As in Green IT, the knowledge from Service Science can be used to improve business process and make use of computing resources more efficiently such as using Web 2.0 technology to help people communicate on-line without to meet face to face and set up a paperless-working environment to reduce the carbon in the industry, etc.

## *EDUCATION*

Doctor of Computer Engineering, Keio University, JAPAN, 2003-2006 (Thesis Title: Facet-based Semantic Web Services Discovery in Multi-Ontology Environment)

Master of Computer Engineering, Keio University, JAPAN, 2001-2003 (Thesis Title: Multi-Faceted Approach for Searching Web Applications)

Research Student, Keio University, JAPAN, 2000-2001 (Research area: Software Engineering)

Bachelor of Information Technology (IT) (1st class honors), Sirindhorn International Institute of Technology (SIIT), Thammasat University, THAILAND, 1995-1999

High School, Chestnut Ridge High School, PA, USA.1994-1995 (Graduate High school Diploma with honors)

## *RANGE OF EXPERIENCE*

Director of Master of Science Program in Software Engineering, Sripatum University, Thailand

Secretary of Services Science Management and Engineering-Human Resource Development (SSME-HRD) Working Committee

Special Lecturer at Sirindhorn International Institute of Technology (SIIT), Thammasat University

IT Consult and Project Coordinator at CSI Asia Co., Ltd.

System Administrator: Thailand Board of Investment (BOI), Tokyo office. - Responsible for designing customer management database for managing information of potential investors to Thailand. The database was successfully integrated the old filing system and input of new data into the new database. She was also responsible for management and maintenance of BOI's database system.

Web Master: Royal Thai Embassy in Tokyo, JAPAN - Responsible for designing and management of information to represent image of Royal Thai Embassy to the public, as well as dissemination of information on the embassy's services to Thai citizen living in Japan. She was also responsible for maintenance and update of the web site.

Trainee under sponsorship of Japan Federation of Economic Organizations (Keidanren): NEC Cooperation, JAPAN - Received 3-week training at NEC in the field of Transmission Business Engineering.

Research and Teaching Assistant: Sirindhorn International Institute Technology (SIIT), Thammasat University, THAILAND - Responsible for supervising and giving lectures on Object-Oriented Programming and Operating System laboratories