Laboratory / Center profile

VSE Center (Japanese VSE Center)

Representative:

Associate Professor Naohiko Kohtake

Research Interests:

Design and management for space systems and ubiquitous systems, systems engineering, and computer science

Members:

Associate Professor Seiko Shirasaka, Associate Professor Tetsuya Toma, (SDM faculty members), Yumi Furuishi, Kazunori Shioya, Makoto Shizunaga, Motoko Takeuchi (SDM Research Institute researchers), doctoral and master's students.

The VSE Center was established in February 2011 to promote process improvement in system development in Very Small Entities (VSE), such as small and medium-sized enterprises (SMEs) and small departments and projects within large enterprises. With the aim of assisting improvement of development sites through industry-academia-government collaboration, it is already producing successful outcomes.

Why was the VSE Center established?

The recent cost reduction in system development has led to the hollowing out of domestic industry and the globalization of IT technology. Domestic IT companies are encouraged to further increase their investment in quality improvement, productivity improvement, state-of-the-art technologies, and human resource development to enhance global competitiveness. Accordingly, many companies are improving their development process based on CMMI, ISO/IEC15504, and other process models. Such process improvement, however, requires human resources with special skills, which only a few SMEs can afford. Even in large enterprises, it is difficult to find such human resources because many projects are not large enough to warrant them.

Under such circumstances, ISO/IEC29110, the international standard for software development process models, was established in January 2011 to be easily applicable for VSEs, such as SMEs and small departments and projects within large enterprises. Even with limited resources, sustainable process development in software development is firmly established through efficient process assessment which can be achieved with the effective use of state-of-the-art technologies. Under such circumstances, VSE centers have been established all over the world to promote process development using ISO/IEC29110. The Japanese VSE Center was established in response to the growing needs for process development for VSEs.

Aims and activities

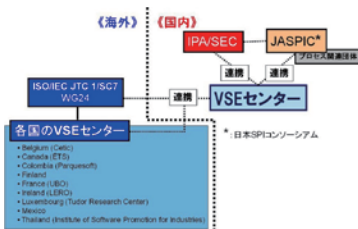The VSE Center has carried out activities described below with these two aims:
1) To enhance IT companies' financial stability and global competitiveness
2) To establish manufacturing processes, which are one of Japan's strengths, to secure superior global positioning

The first VSE Forum

The VSE Center hosted the first VSE Forum on June 15, 2011 at the Collaboration Complex. Lectures and enthusiastic discussions were centered on domestic and international trends in process improvement and process assessment, and on examples in which ISO/IEC29110 was applied. Topics such as how the Center was established and the outline of future activities were also covered. Nihon Joho Sangyo Shimbun and Nikkei BP both ran articles featuring the VSE Forum.

Conferences and meetings on standardization

The VSE Center members actively attend conferences and meetings on standardization to collaborate with VSE Centers worldwide and to contribute to international standardization. Kazunori Shioya, an SDM Research Institute researcher, attended the international standardization conference in Paris in May 2011 and the international conference in Dublin in November 2011 to present our activities and discuss internal standardization. Motoko Takeuchi, an SDM Research Institute researcher, presented her team's research results at the June 2011 Euro SPI Conference on process improvement and accepted the Best Paper award on their behalf.

Application of ISO/IEC29110 in process assessment

Professors, researchers, and students in the VSE Center conducted process assessment on several projects in an SME and in a large enterprise. They worked in teams to assess each project through work product review, interviews and assessment, and reported their assessment results along with their suggestions for process improvement.

Training seminars

The VSE Center holds seminars to share process improvement skills and knowledge. SDI Research Institute researchers Yumi Furuishi and Makoto Shizunaga initiated on-campus seminar series as well as off-campus series for several companies. The VSE Center is cooperating with related organizations to provide such seminars to the public and plans to hold several seminars in cooperation with the Information Technology Promotion Agency of Japan in 2012.

Cooperation network with related organizations

Associate Professor Seiko Shirasaka speaking at VSE Forum

SDM Research Institute Researcher Motoko Takeuchi presents paper at Euro SPI Conference

Related articles:

VSE Center ▶ http://www.vse.jp/ (in Japanese)

ISO/IEC 29110 ▶ http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51154

The first VSE Forum (SDM News July 2011 issue) ▶ http://www.sdm.keio.ac.jp/en/pdf/sdmnews/sdmnews_en_201107.pdf

Motoko Takeuchi accepts the Best Paper Award at Euro SPI Conference (SDM News August 2011 issue) ▶ http://www.sdm.keio.ac.jp/en/pdf/sdmnews/sdmnews_en_201108.pdf

Article on VSE Center featured in Nihon Joho Sangyo Shimbun ▶ http://www.sdm.keio.ac.jp/news/2011/07/12-165341.html (in Japanese)