

SE approach to ubiquitous maintenance system design: Requirements development methodology

Suho Jeong (POSTECH) - suho82@postech.ac.kr

Jun Pil Kim (POSTECH) - junpil@postech.ac.kr

Jae-Min Cha (POSTECH) - chahero@postech.ac.kr

Joong-Yoon Lee (POSTECH Graduate School of Engineering Mastership (GEM)) -

jlee2012@postech.ac.kr

Suk-Hwan Suh (POSTECH Graduate School of Engineering Mastership (GEM)) - shs@postech.ac.kr

Copyright © 2013 by Jeong, Kim, Cha, Lee, Suh. Published and used by INCOSE with permission

Abstract. U-maintenance system means a supporting system for maintenance of production facility via ubiquitous technology, such as RFID (Radio Frequency Identification, USN (Ubiquitous Sensor Network), RTLS (Real Time Locating System), etc. Compared with conventional maintenance system including e-maintenance system, u-Maintenance system has high potentials in many respects. However, from the system design perspective, u-maintenance system is a complex system where many aspects should be taken into consideration. We approach the problem by systems engineering. In this paper, we focused on a requirement development methodology. The usefulness of the proposed methodology was illustrated by a u-maintenance system for industrial steel-plant.