

## Utilizing usability model with multi-agent technology to facilitate knowledge sharing of software maintenance process knowledge environment.

### ABSTRACT

This paper described a system to manage knowledge generated during the software maintenance process (SMP). Knowledge Management System (KMS) is utilizing to help employees build a shared vision, since the same codification is used and misunderstanding in staff communications may be avoided. The architecture of the system is formed from a set of agent communities each community of practice (CoP). The agents can learn from previous experience and share their knowledge with other agents or communities in a group of multi-agent system (MAS). This paper also described on the theoretical concept and approach of (MAS) technology framework that could be implemented (SMP) in order to facilitate knowledge sharing among the maintainers as well as to demonstrate it into the system wise, on how the (MAS) technology could be utilized in (SMP) system model for serving the maintainer that is developed by using groupware such as Lotus Notes software. This paper applied the definition of (ISO 9241-11, 1998) that examines effectiveness, efficiency, and satisfaction. The emphasis will be given to (SMP) activities that may concern with (MAS) technology that to help the maintainers in order to work collaboratively including critical success factor ensuring that SMP initiatives would be delivered competitive advantage for the (CoP) as well as users of the organization.

**Keyword:** Multi-agent-system; Knowledge management; Software maintenance; Lotus notes; Knowledge sharing and usability.