

Implementation of HUBzero as a Knowledge Management System in a Large Organization

HUBBUB Conference 2012

Gaurav Nanda, Jonathan Tan, Peter Auyeung, Mark Lehto

School of Industrial Engineering, Purdue University

September 24th, 2012

PURDUE
UNIVERSITY

Organizational Data

Overview

- Knowledge Management principles:
 - Knowledge is captured using intranets, extranets, groupware, web conferencing, and document management systems.
 - Organizational memory formed by refining, organizing, and storing knowledge using structured repositories.
 - Knowledge is distributed through education, training programs, automated knowledge based systems etc.
- Challenges:
 - Digital objects are difficult to find.
 - When found, objects are difficult to assess.

HUBZERO

Features for Knowledge Management

- Mechanism for Uploading New Resources
- User Groups for Private Collaboration
- Ratings and Review
- Content Tagging
- Wikis and Blogs
- Online Presentations
- Interactive Simulation Tools

HUBZERO

Current Implementation

- Knowledge Base for Reliability Engineering group of a large organization.
- Employees use reliability engineering tools at various locations, many times to analyze a similar problem.
- Earlier they were not able to search previously done analysis for a particular problem.
 - HUBzero implementation made it possible !

Reliability Tools

Implemented in this study

- Failure Mode Effects and Criticality Analysis (FMECA)
- Reliability Growth Analysis
- Shakedown Testing
- Unified Problem Solving
- Loss Allocation
- Functional Block Diagrams

HUBZERO

Implementation Challenges

- Collecting data from people
- Getting owner's consent before publishing
- Selecting good quality resources for publishing
- Interfacing HUBzero with other Software/Groupware
- Access Control of the files
- Server to host HUBzero(HUB-in-a-box version used)
- Maintaining security of the HUBzero server

HUBZERO

Customizations

- Sophisticated search mechanisms using metadata.
- Multiple views of the information
- Different navigation layouts (Tag Browser, Lists, Filters)
- Automated tagging based on content
- Social networking features of reviews and comment
- User interface enhancements based on layout principles of some popular websites like YouTube, Amazon etc.

HUBZERO

Implementation - Summary

- Completely automated the process of acquiring, publishing and sharing data.
- Linked HUBzero with existing software in the organization.
- Developed new navigational features on HUBzero to improve search and review process.
- Limitation: All RE tools implemented are MS excel based.

HUBZERO

Implementation – Future Work

- Beta testing is under progress and usability study is planned for the enhanced interface.
- Get users from different groups within the organization to collaborate through HUBZERO.
- Develop measures of effectiveness and metrics for HUB in an enterprise setting.
- Develop a generic template of requirements analysis for HUBZERO implementations.



Thank You
Questions?