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IEEE Monmouth University Student Branch (Software Engineering)

Presents

Workflow Automation based on Intelligent Software Agents

By

Manuel Fuentes

Abstract

Using technology to improve business process workflows can be a challenge, particularly for large institutions with very complex, but robust methods and procedures. Established institutions like government agencies or business in well-regulated environments have specific operations requirements which are usually supported by a significant investment on information infrastructures and business procedures. These organizations cannot afford to go through significant process reengineering efforts do to the risks involved in process changes and the potential costs of modifications to their business practices.

Using a combination of software agent technology, domain space modeling, and business rules engines can result in an effective way to introduce process automation to existing business workflows while containing technology adoption risks. The talk will present an approach to bottom-up process automation based on software agents and its application to a merchandize ordering and manufacturing process. The method supports an evolutionary approach where steps in the workflow are automated gradually until the desired automation level is achieved.

About the Speaker

Since 1990, **Manuel Fuentes** worked in the application of artificial intelligent technologies for commercial and government applications. While in Bell Labs, Manuel developed expert systems for telecommunications systems maintenance, lead multiple quality assurance and software development teams, and investigated the applicability of various neural network configurations for telecommunication equipment fault diagnosis. Since 1997, Manuel is leading a software systems consulting practice, where he participated in the implementation of a variety of software systems. Manuel led multiple technical teams in projects sponsored by the Office of Naval Research. These projects included researching software architectures based on neural network and genetic algorithms to automate electronic circuit test generation, graphical tools for stowage planning, and the usage of expert agent technology to achieve military process automation. Other projects included modeling and simulation of communications networks, and automation of state government workflows using data mining and natural language processing. Manuel also worked with Viecore FSD in the development of decision support systems for Army unmanned vehicle command and control, and software architectures for distributed enterprise applications. Most recently Manuel is participating in the implementation of distributed simulation environments for naval applications.

Date:	**Monday, March 31, 2008**
Dinner:	**6:00 PM**
Presentation:	**6:45 PM**
Location:	**Magill Commons Club Dining Room,**
	Monmouth University, West Long Branch, NJ 07764
RESERVATION:	Make reservations at website http://ewh.ieee.org/r1/njcoast/
	(Click on "REGISTER for Talk" link, refresh your browser, and fill the form.)
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