

Whitmann Price Consulting: Knowledge Management and Specialized Information Systems

The Advanced Mobile Communications and Information (AMCI) system that Josh Graves and Sandra Fleming are designing for Whitmann Price Consulting (WPC) is a specialized system. It is being custom designed to provide consultants with many of the information systems available at headquarters from any location over a BlackBerry mobile phone. The AMCI system can employ several forms of artificial intelligence (AI) to assist consultants in the field.

The most widely used and appreciated AI applications at WPC are its many expert systems. Auditors, accountants, tax consultants, crisis management consultants, human resource consultants, in fact all the consultants at WPC lean on expert systems to provide fast solutions to complex problems. Josh and Sandra need to determine which expert systems to make available to consultants over the AMCI system.

For example, human resources consultants use an employee-to-workload expert system to help businesses determine the optimal amount of employees to hire to support a certain business activity. The consultant enters variables regarding the proposed work, and the expert system crunches the numbers to provide several options regarding the amount of employees required at varying pay rates. Auditors use an expert system to find irregularities in financial records. Such a system is especially useful when the financial records are too large for a human to manually trace. The expert system studies the records and identifies areas where the numbers don't add up. The consultant can then zoom in on those areas to determine if there is an error.

WPC also uses an intelligent agent tool to assist consultants in research. When a consultant starts working with a new client, the consultant enters keywords regarding the new case into the intelligent agent system and it will return a list of past cases with common characteristics. The consultant can then open those case histories to benefit from the lessons learned and approaches taken.

Another proposed AI system, called the Whitmann Price Consultant Presence system, will be integrated with the AMCI system. Presence systems use new technologies that track members of an organization for easy communication. Similar to technology used by instant messaging systems, the Whitmann Price Consultant Presence system maintains a list of all consultants and their current status, such as 'available by phone', 'in my office', 'available by text messaging', or 'not available'. The system combines the knowledge of each consultant's status with their location and area of expertise to route communications to the most appropriate consultant.

Using natural language processing, the system takes phone calls from consultants and customers, learns what that person needs, and then routes the call to a consultant that can help. For example, a human resources consultant might need legal assistance regarding an issue of worker's compensation. The consultant dials the number for the Presence system and, when prompted, says 'Workers comp legal advice'. The system then finds the most suitable consultant currently available to assist with the problem.

Josh and Sandra understand the value of artificial intelligence in business systems, and realize that using state of the art technology can help a company gain a competitive advantage. The complexity of such systems often makes them much more expensive than lower-level MIS or DSS systems. Cost will definitely be a factor when they need to determine the feasibility of including these systems in the AMCI system.