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# IMPLEMENTING A MANAGEMENT-DIRECTED INFORMATION SYSTEM

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## Abstract

*The CEO of the University Research Foundation (URF), Dave Norton, decided to sponsor an information systems (IS) development project to facilitate automation of discovery disclosure tracking. Discovery disclosure is the process at URF that tracks establishment and progress of funded (federal grants and contracts) inventions, innovations, and discoveries made by principle investigators (PIs). Dave made this decision because the legacy IS didn't work well with the existing discovery disclosure process. That is, managers couldn't rely on the quality and accuracy of the information requested from the legacy IS. The reason being that the legacy IS was not integrated nor synchronized with the tracking process. Moreover, managers had great difficulty even obtaining the information they required from the legacy system because the interfaces and applications were not "manager friendly" and the IS people were not used to fulfilling the business needs of the organization. As a result, managers had to physically track down principle investigators to obtain information about their progress and the status of their contracts and grants.*

*Dave Norton approached us because he had heard that we were working on a novel information system called process manager technology (PMT). PMT is based on a tree-based architecture that utilizes a relational database and a directory system to facilitate automation of business processes. The database stores relational records while the directory stores profile information. PMT uses a tree traversal approach (similar to directory traversal upon which UNIX/Linux is built). PMT is designed so that a non-technical person can either work with a designer or design a process or set of processes. PMT allows the designer to set up a set of actions at each stage of a process. The catalyst for the actions is based on a question or set of questions at each node of the tree. The actions can be calculations, queries to a database, searches in a directory, and/or asking another set of questions. The actual user of the system (once the processes are designed using PMT) then moves through the trees based on his or her answers to the questions presented. Since PMT is designed to work with a centralized database and directory, everyone in the organization is traversing the processes (implemented through a series of tree decisions) in the manner intended by the designer. The real value of PMT lies in its ability to enable actual processes to be readily built into the system. The manager who best understands the process either builds the trees with PMT or works directly with a designer to build the trees. No programming is involved.*

*Although we were responsible for the development and implementation of PMT, we are researchers at heart. To satiate our research inquisitiveness, we embarked on a case study with the URF to document how a novel information system can automate information flow and streamline inefficient business processes. The research methodology chosen was the action research approach as the researchers along with three additional parties were intimately involved with the development and implementation of the novel information system, PMT. The goal of the PMT project was to automate discovery disclosure tracking.*

*The results of the PMT implementation project are mixed. Discovery disclosure tracking involves contract establishment, research and development, ongoing monitoring, and close out of inventions and discoveries made by principal investigators (PIs) working for URF. PMT development for the contract establishment process has not yet begun. The research and development process is still underway, but should be fully automated within the year. Ongoing maintenance has not yet begun. Full automation of the “close out” process is in place and the manager in charge of that process designed the system. Dave Norton continues to champion PMT for discovery disclosure. Once PMT has proven to be viable for discovery disclosure, he wants to expand the scope to other processes within URF.*