Design and Implementation of Agricultural Machinery Equipment Scheduling Platform Based On Case-Based Reasoning

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Abstract : The demand for smart scheduling platform in agriculture, particularly in the scheduling process of machinery equipment, is high. With the continuous development of agricultural machinery equipment technology, a large number of agricultural machinery equipment and agricultural machinery cooperative service organizations continue to appear in China. The large area of cultivated land and a large number of agricultural activities in the central and western regions of China have made the demand for smart and efficient agricultural machinery equipment scheduling platforms more intense. In this study, we design and implement a platform for agricultural machinery equipment scheduling to allocate agricultural machinery equipment resources reasonably. With agricultural machinery equipment scheduling platform taken as the research object, we discuss its research significance and value, use the service blueprint technology to analyze and characterize the agricultural machinery equipment schedule workflow, the network analytic method to obtain the demand platform function requirements, and divide the platform functions through the platform function division diagram. Simultaneously, based on the case-based reasoning (CBR) algorithm, the equipment scheduling module of the agricultural machinery equipment scheduling platform is realized; finally, a design scheme of the agricultural machinery equipment scheduling platform architecture is provided, and the visualization interface of the platform is established via VB programming language. It provides design ideas and theoretical support for the construction of a modern agricultural equipment information scheduling platform.
Keywords : case-based reasoning, service blueprint, system design, ANP, VB programming language