굴삭기 프론트 부분 레이아웃 설계 지원 시스템 구현에 관한 연구

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A Study of Implementation of Layout Design System for the front of Excavator

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Key Words: Early Design(초기 설계), Knowledge-based Design(지식 기반 설계), Layout Design (레이아웃 설계), Model Verification(모델 검증)

Abstract : A designer has to do a lot of checking procedure for the design of an excavator front group with designer's experience and a mechanical analysis. Generally, it takes a lot of time to finish the checking process. As a result, a market entry time for the product is delayed. To increase an efficiency for the checking operation, it is required to use a design information available including illustration, tables, charts, and so on as much as possible. In this paper, we implement a layout design system that utilizes the existing design knowledge with a simple GUI based on mechanical engineering analysis. Eventually the system will be connected to a vast engineering database which is being built at a company with an ontology mapping mechanism.

소형항공기용 비행 및 음성기록장치 최적설계

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Development of Flight Data Recorder & Cockpit Voice Recorder for Small-Sized Aircrafts

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Key Words: FDR(비행기록장치), CVR(음성기록장치), DAU(자료수집장치), DPU(데이터처리장치), SCU(신호조절장치), VCU(음성획득장치), IFU(인터페이스장치), PCU(전원제어장치)

Abstract : Large commercial aircraft and some smaller commercial, corporate, and private aircraft are required by FAA to be equipped with two "black boxes", the Cockpit Voice Recorder(CVR) and the Flight Data Recorder(FDR) that record information about a flight. For this reason, a new combined FDR & CVR for small-sized aircrafts. is presently developing at Korea Aerospace Research Institute(KARI). In this paper, we introduce the present status of our development and propose five optimized designs of Units applied to our combined FDR & CVR system, i.e., Data Processing Unit, Signal Condition Unit, Voice Capture Unit, Interface Unit and Power Control Unit.