



The Ohio Department of Transportation Office of Research & Development Executive Summary Report

Smart Sign Ordering System

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Problem

The districts submit sign orders to the Sign Shop, where all approved orders are processed in production planning, fabrication, and subsequent shipping. Due to lack of data automation and efficient means of data exchange and management, engineers/technicians often need to look into the Manual before filling the information line-by-line in the order form. This process is slow and errors often occur in the current practice.

The University of Akron has developed an on-line traffic sign ordering system, the Smart Sign Ordering System (SSOS), for the Ohio Department of Transportation (ODOT). The implemented SSOS is an efficient tool for data exchange between the districts, Central Office and the Sign Shop. It allows automated data entry during preparation of sign orders, and provides on-line data review and modification capabilities. In addition, it enables querying and sorting, and helps tracking the orders in the production and delivery phases. This tool improves work efficiency in the sign ordering by reducing human errors and speeding up the entire order-filling process.

Objectives

The objective of SSOS is to increase the efficiency of the sign ordering process by (1) reducing labor costs due to extended review time, (2) organizing submitted orders on-line so that production schedule can be adjusted and material usage estimated, (3) enabling on-line cost estimation and (4) proving a means of data management for summary of orders and production.

Description

The implemented SSOS is an efficient tool for data exchange between the districts, Central Office and the Sign Shop. It allows automated data entry during preparation of sign orders, and provides on-line data review and modification capabilities. In addition, it enables querying and sorting, and helps tracking the orders in the production and delivery phases. This tool improves work efficiency in the sign ordering by reducing human errors and speeding up the entire order-filling process.

Conclusions & Recommendations

SSOS has created automated functions for data entry during preparation of sign orders, and provided on-line data review and modification capabilities. In addition, it enables querying and sorting, and helps tracking the orders in the production and delivery phases. This system improves the work efficiency in the sign ordering process by reducing human errors and speeding up the entire order-filling process. Preliminary results of the testing have shown that use of SSOS for sign ordering is feasible, convenient, and efficient.

Implementation Potential

The pilot testing of the SSOS program followed several on-site training sessions for ODOT personnel from its districts, Central Office, and the Sign Shop. SSOS is designed primarily for sign ordering management. To make the system more useful before system wide implementation, further development is needed to expand its functional features.