

Customer Profile

CTRL System Inc,
(<http://www.ctrlsys.com>)

Our Solution

Based on the requirements of CTRL System we proposed that the system be developed as a browser based application using Active Server Pages (generated automatically by IIS Application template of Visual Basic 6.0), HTML and DHTML. The web server used is Internet Information Server 4.0 Web server, running on Windows NT 4.0. MS Access was used as the database. Both VBScript and JavaScript were used for the validation at the client side.

The system has all the functionality of the client's existing DOS based system as desired and provides a web based user-friendly interface.

Methodology

The system was developed as an add-on module to the existing system. Hence, it was designed in such a way that it fits into the existing system. The system was designed and developed using the Iterative Methodology and a Component based architecture.

Benefits

InventoryCTRL effectively minimizes the human interaction in maintaining the inventory. It also helps in ordering of parts by calculating the inventory

Introduction

InventoryCTRL was developed as one of the series of products from CTRL Systems Inc. InventoryCTRL is a product targeted at the Fleet/Equipment Maintenance Industry. The system is a distributed application that allows the complete tracking of any consumable inventory.

This product is used in association with the VehicleCTRL, Fuel Interface and ROCTRL, designed to help the user to control the maintenance operations. InventoryCTRL maintains year-to-date records for all inventories in the user's warehouse. And more importantly, InventoryCTRL analyzes this data to print reports, which can help the user in planning future orders more accurately.

Situation

CTRL Systems Inc. wanted InventoryCTRL to be a web-based distributed system that allows the complete tracking of any consumable inventory (stocked or non-stocked) from suggested order through product receipts and issuances.

The system was to provide the following functionality:

- Work as Internet/Intranet Solution.
- Control and monitor any type of consumable inventory item.
- Provide suggested orders based on actual history of usage.
- Automatically create purchase orders and provide for blanket purchase orders if established on the system.
- Maintain history for both stocked and non-stocked parts.
- Help minimize inventory overhead by providing suggested phase-in or phase-out according to usage.
- Provide automatic markup for cost analysis.
- Provide cost analysis based on either LIFO or Rolling Average costing, and
- Provide complete investment analysis.
- Provide a flexible reporting mechanism.

Apart from above functional requirements CTRL wanted the System to:

- Be able to work over the Internet
- Be scalable and customizable
- Be user-friendly and intuitive to use.
- Be reliable and manageable
- Provide acknowledgements wherever required.
- Be accurate and reliable

Features

- Web based Inventory, spread across multiple locations.
- Uses component architecture, hence very secure and maintainable.
- Web based customizable reporting capabilities.
- Automated Purchase Order generation.
- Continuous monitoring of all the consumables in the Inventory.
- Maintains history for both stocked and non-stocked parts.
- Provides suggested orders based on actual history of usage.

available, apart from providing the user with time-to-time information in the form of various reports. It maintains the information of various vendors for a given part along with their history in terms of meeting the standards and deliveries etc, which is used for choosing a vendor for a given part to be ordered.

- Provides automatic markup for cost analysis
- Provide complete investment analysis

Tools and Technologies

- Microsoft Windows 9x/NT Platform
- Internet Information Server 4.0
- Microsoft Visual Basic 6.0
- Visual Basic IIS Application
- Microsoft Access

Our Process

The system was implemented using a component based architecture as the following modules:

Setups and Adjustments: This module helps in, setting up new entities related to the system or modify the existing ones. This module is accessible by only the administrator. This is used for setting up and adjustment of Users, Parts, Vendors, Inventory Locations, and Bins etc.

Transactions: This module helps in tracking the different transactions of various parts. The basic transactions include:

- Issue parts
- Receive parts
- Order parts
- End of day inventory
- Physical inventory
- End of period inventory

Reporting: This module is used for generating different reports associated with the various entities of the system. The main entity of the system is 'Parts'. The reports are generated dynamically using different criteria. The reporting functionality includes:

- Part Reports
- Vendor Reports
- Transactions Report
- End of Day Reports
- End of Period Reports

Conclusion

We have made significant contributions in terms of the design for this system and tried to keep in mind the client's long-term requirements. The System was designed and developed to cater the needs of Fleet Industry, but can be easily customized to use across different industries. As the system uses component model, it is easy to maintain and upgrade.