

# PROVENCO: Distributed Update Server

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## 1 Introduction

This project was initiated by the sponsor, Tony Strange of Provenco Retail Automation after the need for a dependable method of transporting updates between client branches was identified.

The following primary requirements were determined:

- A client application was to be developed to download required updates with little user intervention. This should run in the background and not be obtrusive to the end user.
- Updates must be categorised by priority. An update with a priority of high must be downloaded before an update with medium or lower priority.
- The application must be designed with varied internet connections in consideration. Some branches may only connect to the Internet via 56k modem, connection stability cannot be guaranteed.
- The application and components shall be developed with the Microsoft .NET framework and Microsoft C# programming language in the Microsoft Visual Studio environment.

It was determined the Microsoft BITS technology would be a good candidate. This was to be investigated against alternatives.

## 2 Objectives

Primary objectives included:

- Research Microsoft BITS technology and evaluate against alternatives.
- Provide a documented recommendation on the best solution.
- Develop a fully functional prototype to demonstrate the technology.
- Provide Provenco with a framework for future applications.
- To provide a report and application that is valuable to Provenco.

## 3 Methods

To determine the method for the project an initial meeting was organised to discuss the general scope and background issues surrounding the requirements.

The results of this meeting identified Provenco had worldwide clients for their software in locations all over the world, internet speed and connection stability was an issue. Regular updates were required to be sent out.

Various technologies for the transfer of data across a network were researched and evaluated against the requirements. The results of this were presented in a proposal report. This included documentation for the design of various system components.

Once the proposal was agreed on development began on the creation of a client application, web service, database and web interface.

Evolutionary prototyping was used at each stage of development. This iterative approach allowed semi functional applications to be running with much less development time and allowed for easier tracking of progress.

## 4 Results

This project involved the following:

- Analysis of required system

- Research and documentation of recommendation based on proposed technology and alternatives
- Development of a Win Service (console application), Web Service, database and web interface.

## 5 Conclusion

The update distribution server utilised the Microsoft .NET framework for the Windows operating system to develop a functional system which met all primary objectives and requirements outlined.

The deliverables completed in this project will provide Provenco with a functional framework for future applications.

