

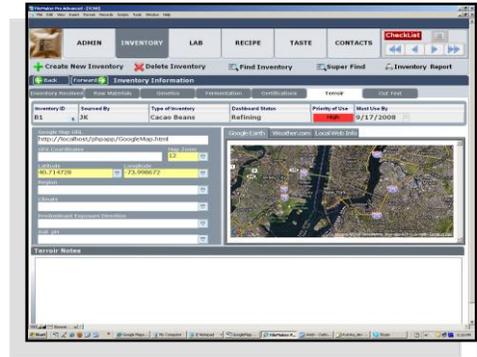


Chocolate Recipe Builder System

Executive Summary

This case study demonstrates the development of a system in FileMaker, which keeps track of the entire recipe test a user runs until he/she achieves a perfect one. This application helps in storing records of the numerous recipe tests conducted and helps user to finalize on the ideal recipe.

One of our clients aimed to have a system designed for chocolate factories to keep track of the chocolate making process with the system performing cross platform usability, fonts, graphics and formats made available for touch screen monitors. They were looking to develop this system using FileMaker in order to overcome the manual process.



Checking the track record of Mindfire in FileMaker, the client approached for a solution to his needs. He was touched upon the very first time he interacted with our technical person and immediately granted permission to start the development work. Mindfire delivered a perfect solution to the client by developing a relational database developed in FileMaker that keep track of the processes/steps followed during the building of different types of chocolate recipes with different flavors and tastes. Six different modules were created to keep track of the proceedings.

About our Client

Client Software Development company | **Location** San Francisco, USA | **Industry** IT

Business Situation

The purpose of the client approaching Mindfire Solutions FileMaker team was to develop a system to be used by chocolate factory for keeping track of chocolate making process and also to automate it. They also aimed at designing the system for touch screen monitors to enter exact data on a desktop workstation during the chocolate recipe building process.

Mindfire Solutions delivered a system that exactly met client's objective. The system had cross platform usability, fonts, graphics and formats and was also designed for touch screen monitors. The system built, was a relational database developed in FileMaker that keep track of the processes/steps followed during the building of different types of chocolate recipes with different flavors and tastes. It also uniquely identifies the beans and track how they are used. Six different modules were developed and implemented in the system which is as follows:



- Inventory
- Lab
- Recipe
- Taste
- Contacts
- Admin

Solution Details

The Mindfire Solution

After a lot of brainstorming sessions between the two parties and amongst the developers, our FileMaker team finally came up with a feasible solution of developing six different modules that would be implemented in the application to monitor the process. Detailed description of each module is described below:

Inventory: This module allows new Batch entries in the inventory for different types of beans and inventory. It keeps track of relevant bean data, GPA Coordinate with Google map integration and the process control with several cut tests. It has the search functionality which allows the search for a particular batch or batches based on the user entered criteria. It has the printing functionality built which allows the users to print the inventory detail and to label printing features with barcode, the bar which is printed on each label for a batch.

Lab: This module consists of sub modules or processes which keep track of the Roasting, Liquor, Refining, Conching processes. The system keeps track of the moisture measurement, roasting temperature, and baking time, machine ID of the machine used in each roasting cycles, liquor processes, the ratio of all the ingredients added during refining process and tracks the temperature and humidity parameters and time taken by the conching processes. This system allows the lab users to maintain a checklist of all the above processes which the bean has under gone and print the checklists. It has the printing capability to print the Batch Processes, summary of Batch Process based on process data and characteristics of the process output.

Recipe: This section allows building new chocolate recipes out of different ratios of samples. A new recipe can also be derived from other base recipes. It keeps track the formula of the recipes with a detailed path of origin to all beans and all measurements and specific information of all other ingredients used in a recipe.

Taste: This is a section where the panel tasters can give ratings and comments on the prepared chocolate samples. They can fill up a feedback form on the mouth feel, experience, odor, color, appearance, smell, aspect, flavor, etc. on a chocolate sample or recipe.

Contacts: This is a contact management module developed in this system which stores all the organization, vendor, and company staff contact detail information.

Admin: This section allows administrator to add new users to the system and assign them to different roles. All the modules in this system are restricted to be accessed by users with specific roles. It has a dashboard which shows all the beans from the inventory with their Inventory status, lab stages, recipes and the taste stages



added by tasters. It also shows a summary of complete path of processes a sample has followed. Also has a printing option to print labels for a sample.

Achievements

The major challenges which Mindfire’s team had to focus on were; integrating Google map with the application to monitor the process that starts with the grower and ends with production of chocolates and designing the GUI of the application to be used in a touch screen application. The FileMaker team did well to overcome them and deliver a robust and efficient system to the client.

Technologies

FileMaker Pro 9 Advanced

Final Results Software System

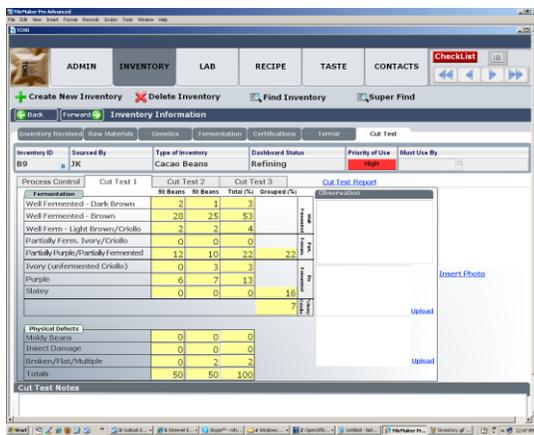


Figure1 - Bean Cut Test

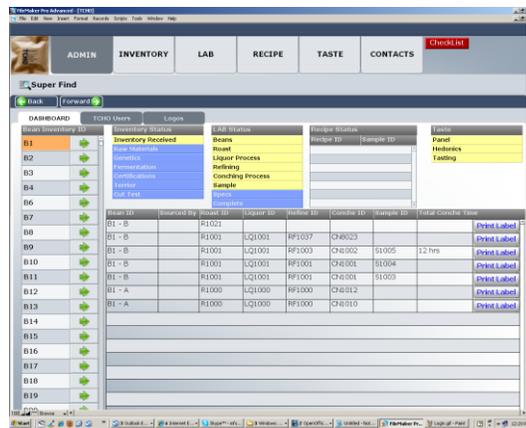


Figure2 – Bean Dashboard

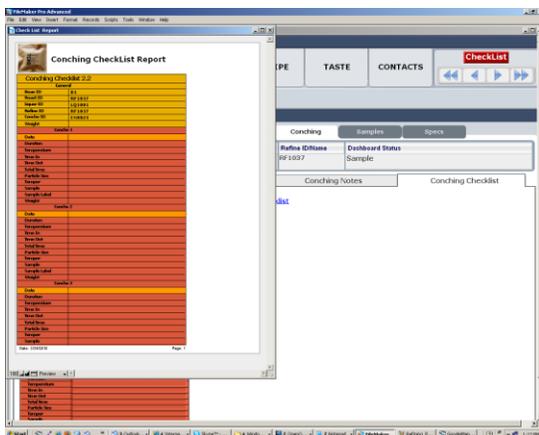


Figure3 – Conching Checklist

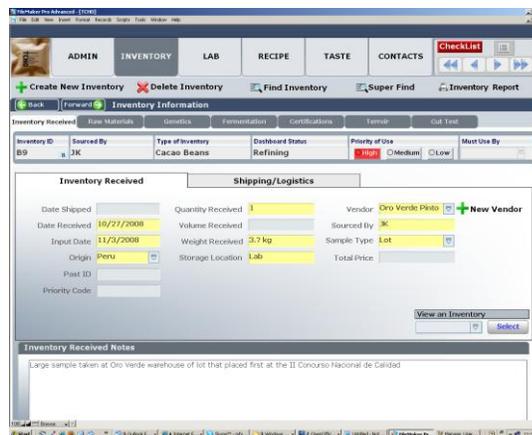


Figure4 – Inventory

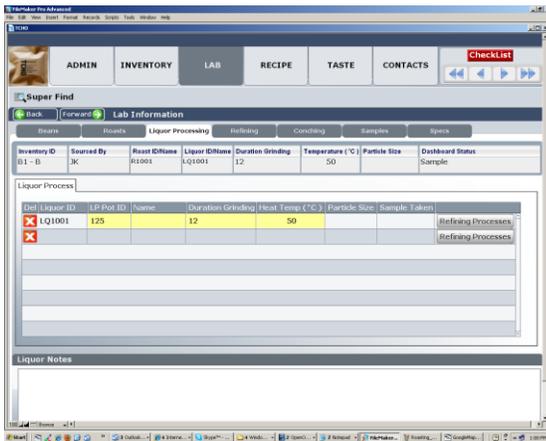


Figure5 – Liquor Process

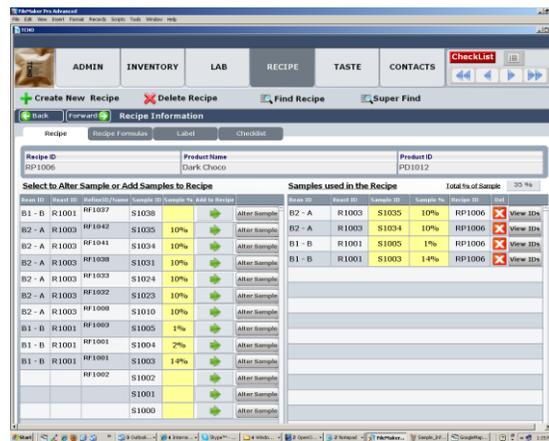


Figure6 – Recipe Formulation

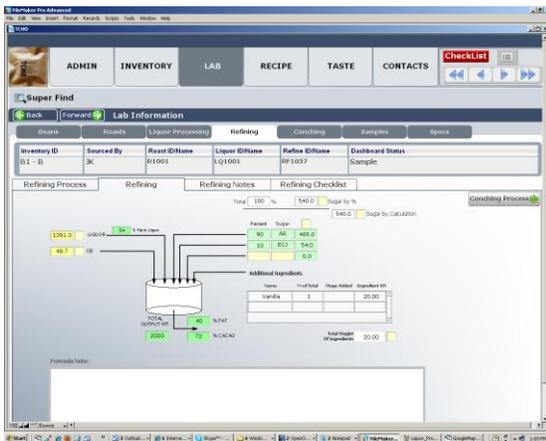


Figure7 – Refining Process

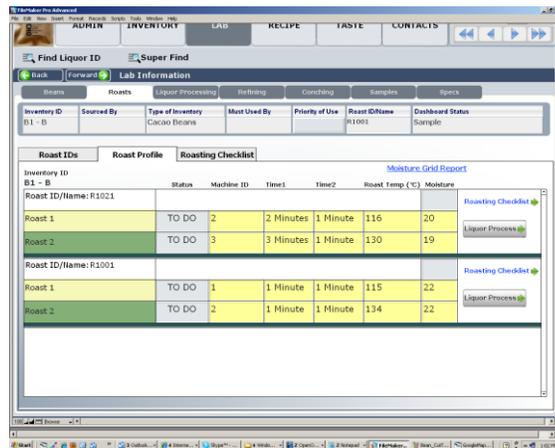


Figure8 – Roast process

Customer Benefits

- The client jumped on from manual process of monitoring things to automated one.
- They had a robust and efficient system in place that allowed them to cut their expenses and save time.
- They had a better way to keep track of inventory and manage processes.

Future relationship

The client was very impressed and awarded the team with another bigger FileMaker project that involved more number of developers apart from retaining some of the developers for maintenance of the present system developed.

