Cascabel Computerized Canteen Processing (CCCP)

System Requirements Specification

Executive Summary

Project Description

Cascabel, a Mexican-inspired fast food restaurant, is in the process of expanding from 2 to 3 locations and, based on its early successes, is planning for rapid expansion in the next 3 years. Their business plan calls for rolling out a web-based ordering system for pick up at about the same time the 3rd location opens. As identified by the marketing and technical team through market research, including interviews with current customers, the system must allow both new and repeat customers, who often place the same or similar orders, to easily place orders. The system must support a small number of beverages, side-items, and entree items. Entree items may be customized by adding various toppings, much like a pizza.

A future improvement that should be planned for but need not be supported in the current system is integrating and replacing the current handwritten ticket system for in-person orders with this system. The business experts have determined that being able to support tech-savvy customers via online ordering is of a much higher priority than automating the in-store ticket system.

Project Goals

Goal 1: Enable customers to easily place orders online.

Advantage: Customer time savings and convenience will lead to increased business.

Metric: At least 10% of sales will come from on-line orders, and overall sales will increase by at least 10% within 6 months of implementation.[1]

Stakeholders

- Mr. Cascabel, Owner of the Cascabel franchise
- Cascabel employees
- Current customers
- New customers
- Neighbors

[1] The numbers were suggested by the marketing analysts in their 9/1/2008 report based on customer focus groups. 20% of existing customers indicated that they are likely to use the new system. The analysts recommended the 10% targets based on their experience that fewer customers order online than indicate they will in focus groups.

Comment [EAD1]: This is an evolving example for MSOE's CS489 course, offered in the fall quarter of 2008. Please contact Dr. Durant <durant@msoe.edu> with questions or comments.

Comment [EAD2]: After providing some basic background as to why the project is being done, "the system" (or "product," etc.) has its main attributes stated.

Comment [EAD3]: Provide key information about where the system must be flexible (or need not be). "The only thing worse than generalizing from one example is generalizing from no examples at all." --X Window System design principle

Comment [EAD4]: A goal represents a desire of a system user that will be fulfilled by the system.

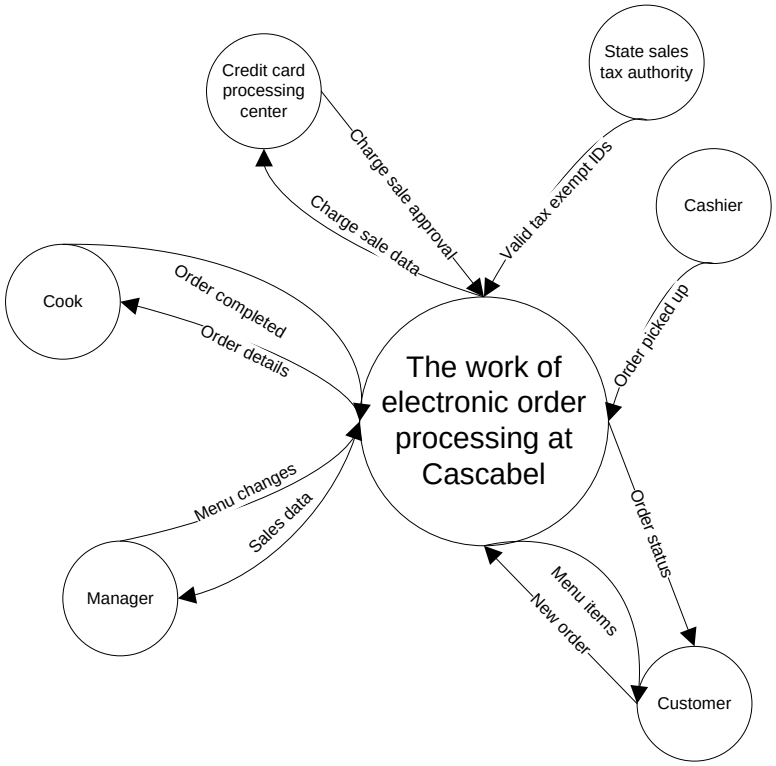
Comment [EAD5]: An advantage states the business motivation for wanting to meet the goal

Comment [EAD6]: A metric specifies a numeric, objective measurement of success in meeting a goal.

Comment [EAD7]: A list of all people and groups who have a stake or interest in the system, including contact information for key. The groups are often overlapping. More important stakeholders (funding source, people in regular contact with the system, etc.) should be listed first.

Comment [EAD8]: Peripheral stakeholders are listed towards the end. These are groups whos concerns must be addressed even though they are not regular users. Neighbors may be concerned about traffic and present difficulties to the business. Regulatory agencies are often listed here.

Work Context



Adjacent System	Category
Credit card processing center	Cooperative
State tax authority	Autonomous
Cook	Active
Cashier	Active
Manager	Active
Customer	Active

Use-Case Model Hierarchy

UC1	Customer places and picks up new order.
UC2	(defunct)
UC3	Manager inputs menu change.
UC4	State sales tax authority sends update.
UC5	Customer places and picks up repeat order.

Comment [EAD9]: Clearly indicate what is in and is not in the system being designed. This helps ensure key stakeholders and the designers have the same goals in mind.

Comment [EAD10]: The main business events correspond closely to the inflows to the work; the key events to model are the ones that represent a user's goal: placing an order, making menu changes, etc. There are also temporal business events, for example, designing the system to print a sales report at 6 AM daily. Many of the outflows from the work are responses to business events and are not business events themselves. Business events are sometimes listed in a separate section.

Comment [EAD11]: We do not apply the "hierarchy" aspect in CS489. It allows use cases to be grouped by type of tasks. This section provides a concise list of use cases.

Comment [EAD12]: Prefix indicates type of artifact.

Comment [EAD13]: Standard format: "[Adjacent system] [goal verb] [goal object].

Comment [EAD14]: If a use case (or requirement, or any numbered artifact) is removed, it can be indicated as "defunct," "unused," etc. Artifacts are ***never*** renumbered since that would require error-prone updates of various documents that refer to the numbers.

Assumptions

Dependencies

Risks

Constraints

Open Issues

Use Cases

UC1. Customer places and picks up order.

1. The customer selects an option to place an order.
2. The system lists available items.
3. The user indicates each that he wishes to order.
4. The system indicates that one of each selected item is being ordered.
5. The user optionally changes the quantity of each item being ordered.
6. The system presents options to add available and allowed toppings to each ordered item.
7. The user selects any allowed toppings.
8. The system allows any of the above modifications plus the option to place the order.
9. The user indicates that the order is ready to be placed.
10. The system presents the user with the available locations.
11. The user selects a location at which he will pick up the order.
12. The system provides a total and requests credit card information from the user.
13. The user provides credit card information.
14. The system contacts the credit card processing center and obtains approval for the total.

Comment [EAD15]: Could the system know the desired location if this is a repeat customer? This can be handled in an "alternative flow."

Comment [EAD16]: Is this when the total should be presented? UCs help us identify important questions like these.

Comment [EAD17]: This yields a functional requirement that credit card information must be processed, which in turn should yield a non-functional requirement for security of this information.

Comment [EAD18]: What happens if a planned step fails? This is handled in an "exception flow."