Proposed Automation System for
ABC Video

Phase 1: Gathering Requirements

Introduction

In order for the consulting SE team to create an automated system for ABC Video, the members must first build an accurate, complete mental model of the business. First, the consultants must make a few assumptions and operate on them until we gather enough facts to prove the assumptions true or false. Assumptions are important, but they usually rest on the consultant's past experience in similar situations, and they must be up for evaluation and change while gathering information for the client's new application.

Second, we need to gather enough information to form a list of project requirements. From this list of requirements, we can form a structure of the proposed project. However, gathering information for the requirements can be a complicated and error-ridden process.

Assumptions

The data which Vic initially offered the consultants regarding ABC Video related more to what Vic wanted in a new system, omitting many factors about the present company which could be germane to building the new system. Following is a list of many of the consulting team's assumptions about the company and its owner:

Financial Considerations

- We assume that ABC Video has enough capital for purchasing the IBM compatible PCs needed for this project as well as the barcode labelers and readers.
- Vic will be willing to replace the two AT PCs if they will not work with the new/ proposed automated system.
- ABC Video is now operating in the black and has cash on hand to initiate the project by hiring consultants/software engineers.
- If ABC Video has a mortgage, we assume it is manageable now and will continue to be despite the outlay for hardware and software required for this project.
- ABC Video is a sole proprietorship, owned and managed by Vic, with no partners, no incorporation, and no board of directors.
- Vic has a sufficient number of good-standing accounts with various sizes and types of video distributors.

Commitment

- We assume that Vic likes his video business and plans to stay with it for a long time.
- Vic will be the sponsor as well as the champion of the project.

- Vic is committed to seeing this automation project through to completion and installation.
- ABC Video has enough floor space to accommodate adding more PCs and a network.
- The current staff at ABC Video is willing to learn a new checkout system.

Company Staff

- We assume that Vic has discussed his automation concerns with his staff.
- Current staff will be able to work with and handle the new automated checkout system with a minimum of transition time and customer inconvenience.
- ABC Video has been in business long enough that it has become well established in the community.
- Vic has decided upon a staff member who will act as the Lead (when Vic is not present) during project implementation.
- ABC Video has developed a written employee manual.
- ABC Video has developed a written checkout process manual with instructions for new employees.
- Vic has determined who will be inputting the past customer information to the new database.

Customers

- We assume that customers of ABC Video will be pleased with the new system and checkout automation.
- ABC Video has enough room in a parking lot or along the curb to handle increased business.
- There is no reason that future business should not continue at its current rate or even increase.
- We assume that Vic is not going to raise the price of video rentals in order to pay for this automation project.

Gathering Requirements

Importance

Creating an automated system to replace a manual system requires interaction between the developing team (including software engineers), the users and the manager for information gathering. This gathered information translates to project requirements and must be as complete as possible before software engineering begins.

However, numerous difficulties arise when outsiders attempt to gather non-biased, pertinent and quantifiable information about a company. Listed below are some of the difficulties the consulting team may encounter while gathering requirements.

Difficulties

<u>Predictions and Competition</u>

- Future requirements relate to expected changes in the industry, which may or may not happen as predicted.
- Competitors closely guard any expansion information that may affect ABC Video's business.
- Competitors will not offer information for use by a competing business.
- Competition among staff members may jaundice the information they provide.

<u>Observation</u>

- Observation provides only crude numerical estimates of volume and is restricted to current time and circumstances.
- The time of observation may not be indicative of store activities that take place normally.
- While not telling someone you are going to observe him / her is unethical, giving full disclosure may lead to a change in behavior.

<u>Interviews</u>

- Incomplete information may be passed on to the interviewer as being complete.
- With such a small staff, triangulation could be difficult.
- Interviewers will probably have to wade through much irrelevant information.
- Interviews and discussions with employees can take up a lot of the consultant's time.
- During interviews, staff members may slant information according to their own personal experience.
- Staff members may be biased against the project and give prejudicial information.
- Interviewees may fear their comments will not be held in confidence by the interviewer; if so, this could affect their responses.
- Interpretation of a less than positive question or answer may actually be a matter of semantics.

<u>Questionnaires</u>

- ABC Video is too small for use of a staff questionnaire.
- Customer questionnaires can offer great information, but only about 15% of people who receive them will actually fill them out and return them.

<u>Other</u>

- Some information is difficult to classify.
- Group meetings often run off subject into non-pertinent matters and are often more time-consuming than fruitful.
- If sponsor and staff members are not computer literate, they may not have any constructive ideas on what they actually want.
- The project sponsor may be confused about which factors he wants built into the project.

- Customer opinions can be very difficult to gather, especially since the process of information gathering may be considered an infringement on privacy or time.

Conclusion

Data gathering is performed during every phase of application development. Inattention to certain aspects of data gathering and requirements writing will cause errors in analysis and design that are costly to fix. Close attention to gathering requirements will keep the cost of error correction down, will speed completion of the project, and will assist the software engineering team in creating an application that works well for the client, the users and the customers.

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