

Defining the Mission Statement

In the previous chapter, you learned that the *mission statement* declares the specific purpose of the database in general terms and that you define it at the beginning of the database design process. Furthermore, it provides you with a focus for your design efforts and keeps you from getting diverted and making the database structure unnecessarily large or complex.

The Well-Written Mission Statement

A good mission statement is succinct and to the point. Verbose statements have a tendency to be confusing, ambiguous, or vague; they do more to obscure the purpose of the database than to clarify it. Here is an example of a typical mission statement:

The purpose of the New Starz Talent Agency database is to maintain the data we generate, and to supply information that supports the engagement services we provide to our clients and the management services we provide to our entertainers.

This mission statement is well defined and uncluttered by unnecessary statements or details. It is a very general statement, just as it should be. Think of a mission statement as the flame of a candle located at the end of a dark tunnel. The light produced by the flame guides you to the end of the tunnel, so long as you focus on it. In the same manner, the mission statement guides you to the end of the database design process. Guided by your mission statement, you can focus on designing a database structure that will support the declared purpose of the database.

A well-written mission statement is free of phrases or sentences that explicitly describe *specific tasks*. If your mission statement contains these types of phrases or sentences, remove them and rewrite the statement. Be sure to keep the discarded phrases handy, though, because you may be able to use them to formulate mission objectives.

(You'll learn about mission objectives in the next section.) Here's an example of a poorly worded mission statement:

The purpose of the Whatcom County Hearing Examiner's database is to keep track of applications for land use, maintain data on applicants, keep a record of all hearings, keep a record of all decisions, keep a record of all appeals, maintain data on department employees, and maintain data for general office use.

It should be immediately apparent that there are a few things wrong with this mission statement.

- *It's slightly verbose.* Remember that the ideal mission statement should be succinct and to the point.
- *The specific purpose of the database is unclear.* This mission statement is written in such a way that it is difficult for you to ascertain the specific purpose of the database.
- *It describes several specific tasks.* Two issues arise when a mission statement is written in this manner. First, the description of the tasks does nothing to define the specific purpose of the database. Second, the statement somehow appears to be incomplete. It raises the question, "Are there any tasks we've forgotten to include in the mission statement?"

You can fix this mission statement by removing the references to specific tasks (be sure to save them for the next step) and rewriting the statement. Here is an example of one of the possible ways you could rewrite this mission statement:

The purpose of the Whatcom County Hearing Examiner's database is to maintain the data the examiner's office uses to make decisions on land-use requests submitted by citizens of Whatcom County.

Notice how the purpose of the database has become much clearer in this version. Also note that the statement is more succinct and doesn't give the impression of being incomplete. You'll always have a clear

focus during the database design process when you formulate your mission statements in this manner.

Composing a Mission Statement

The process of creating a mission statement involves conducting an interview with the owner or manager of the organization, learning about the organization, and determining the purpose of the new database.

You conduct the interview for this step with the owner of the organization or, if he directs, the appropriate staff. Either will be able to help you define the statement because each has an overall understanding of the organization and a general comprehension of why the database is necessary in the first place. Besides helping you to define the mission statement, this interview will also provide a great deal of information about the organization itself. This information is valuable because you can use it later in the design process.

Encourage the interview participant to discuss as many facets of the organization as she can, even if the discussion relates to issues that aren't directly relevant to the database. The idea here is for you to understand what the organization does and how it functions; the more you understand an organization, the better prepared you will be to design a database that will fulfill its needs. The organization's general need for a database will become clear to you once you have a better understanding of the organization itself. You can then translate this need into a mission statement.

Be sure to ask open-ended questions during the interview. In some cases, a good question can prompt the participant to state the purpose of the database without much effort. For example, say you posed the following question:

"How would you describe the purpose of your organization to a new client?"

This is a good open-ended question because it focuses on the issue yet gives the participant the freedom to respond with what she feels is a complete answer. Furthermore, this type of question will typically generate a response that you can translate directly into a mission statement.

Now assume you received the following reply:

"We supply entertainment services to our clientele for any and all occasions. We take care of all the details for the engagement so that it is as worry-free for the client as possible."

You can easily rewrite this type of response and turn it into a mission statement. When a response such as this one consists of two or more sentences or phrases, one of the sentences or phrases typically indicates the purpose of the database. For example, you can use the first sentence from the preceding reply to construct the mission statement. Here is one of several ways you could rewrite the reply:

The purpose of the All-Star Talent database is to maintain the data we use in support of the entertainment services we provide to our clientele.

The most important point to remember is that the mission statement should make sense to you (the database developer) and to those for whom you are designing the database. Different groups of people have different ways of phrasing statements, and the specific wording of the statement can depend greatly on industry-specific terminology. Your mission statement is complete when you have a sentence that describes the specific purpose of the database and that is understood and agreed upon by everyone concerned.

Here are a few sample questions that you can use to arrive at your mission statement:

How would you describe the purpose of your organization to a new client?

What would you say is the purpose of your organization?

What is the major function of your organization?

How would you describe what your organization does?

How would you define the single most important reason for the existence of your organization?

What is the main focus of your organization?

You may have noticed that some of these questions seem to be the same question rewritten in a different manner. Keep in mind that the observation regarding the phrasing of mission statements also applies to the interview questions you'll use throughout the database design process. You can pose the *same question* to several people and receive different responses because each person may interpret the meaning of the question a little differently. In some cases, you may just get a long "I haven't had my first espresso yet" type of stare. Experiment with different types of phrasing and determine which type works best for you. Your method of constructing and posing questions may be different from someone else's, but it doesn't matter so long as you have a method that suits you.

CASE STUDY: DEFINING A MISSION STATEMENT FOR MIKE'S BIKES

Now you need to define a mission statement for Mike's Bikes. Before you can define the mission statement, you must conduct an interview with the owner to gather information about his business. Assume you have an assistant named Zachary who is conducting the interview for you. The interview may go something like this:

ZACHARY: "Can you tell me why you believe you need a database?"

MIKE: "I think we need a database just to keep track of all our inventory. I'd also like to keep track of all our sales as well."

ZACHARY: "I'm sure the database will address those issues. Now, what would you say is the single most important function of your business?"

MIKE: "To provide a wide array of bicycle products and bicycle-related services to our customers. We have a lot of great customers. And regular ones too! They're our biggest asset."

(The interview continues until Zachary has finished asking all the questions on his list.)

After the interview, review the information you've gathered and define the mission statement. You can ascertain a few points from the previous dialogue with Mike, such as the fact that he'll need to be able to track products, customers, and customer sales. But the most valuable point is provided by his reply to the second question. You can use the first sentence in that reply to formulate the mission statement. Taking into account some of the other points you've identified in the interview, you can rewrite Mike's reply to create the following mission statement:

The purpose of the Mike's Bikes database is to maintain the data we need to support our retail sales business and our customer service operations.

When you believe you have a good mission statement, review it with Mike and make sure that he understands and agrees with the declared purpose of the database. When you and Mike are satisfied with the mission statement, you can go on to the next step, which is to define the mission objectives.

Defining the Mission Objectives

To expand upon the overview in the previous chapter, *mission objectives* are statements that represent the *general* tasks supported by the data maintained in the database. Each mission objective represents

a *single* task. These mission objectives provide information that you'll use throughout the database design process. For example, mission objectives help you define table structures, field specifications, relationship characteristics, and views. They also help you establish data integrity and define business rules. Finally, mission objectives guide your development efforts and ensure that your final database structure supports the mission statement.

Well-Written Mission Objectives

A well-written mission objective is a declarative sentence that clearly defines a general task and is free from unnecessary details. It is expressed in general terms, succinct and to the point, and unambiguous. Here are some examples of typical mission objectives:

Maintain complete patient address information.

Keep track of all customer sales.

Make sure an account representative is responsible for no more than 20 accounts at any given time.

Keep track of vehicle maintenance.

Produce employee phone directories.

These mission objectives are well defined and easy to understand. Each mission objective represents a single general task and defines the task clearly without unnecessary details. For example, the last mission objective in the list states that employee directories need to be produced, but it doesn't indicate *how* they are to be produced. It is not necessary to indicate how the employee directories will be produced because that issue is part of the application development process. Remember that the purpose of a mission objective is to help define various structures within the database and to help guide the overall direction of the database's development.

If a mission objective represents more than one general task, you should decompose it into two or more mission objectives. Here is an example of a poorly written mission objective:

We need to keep track of the entertainers we represent and the type of entertainment they provide, as well as the engagements that we book for them.

There are two problems with this mission objective.

1. *It defines more than a single general task.* It is clear that there are two tasks represented in this statement—keeping track of entertainers and keeping track of engagements.
2. *It contains unnecessary detail.* It's unnecessary to refer to the entertainer's "type of entertainment" in this mission objective. The phrase *type of entertainment* either refers to a distinct characteristic of an entertainer, or represents a new task that should be declared as a mission objective. If it refers to a distinct characteristic of an entertainer, it should be removed from the statement; otherwise, it should be used as the basis for a new mission objective.

You can fix this mission objective by removing the unnecessary detail and rewriting it as two mission objectives. (Keep the details you discard on a separate list; they may be useful later in the design process.) Here is an example of one possible revision:

Maintain complete entertainer information.

Keep track of all the engagements we book.

Notice that each mission objective now clearly defines a single general task and is easy to understand as well. Mission objectives such as these are easy to use as you design the database.

Composing Mission Objectives

Defining mission objectives is a process that involves conducting interviews with users and management and then writing appropriate mission objectives based on the information gathered from the interviews.

The purpose of the interview is to determine what types of general tasks need to be supported by the data in the database. You accomplish this by asking the participants open-ended questions and allowing them to elaborate on their replies as necessary. The mission statement and mission objectives interviews are the easiest ones you'll conduct during the design process because everyone is usually enthusiastic about participating. (In my experience, at least.) It's fairly easy to get people to discuss what they do on a daily basis and to give their perspective on the function of the organization. This is also one of the few interviews you'll conduct with both users and management; there should be a lot of common ground between the two groups due to the general nature of the interview.

One very important point to remember is that *the interviews you conduct here involve very general discussions*. The discussions are more conceptual than analytical; your intent here is not to analyze the current database or database application, but to get an overall idea of the general tasks the database should support. Keep in mind that one of the purposes of the mission objectives is to help guide the development of the database structure.

As you conduct the interview, be sure, once again, to ask open-ended questions. Remember that open-ended questions are apt to elicit better responses from your participants. Ask the participants questions regarding their daily work, how the organization functions, and what type of issues they believe need to be addressed by the database. Encourage them to discuss as many facets of their work and the organization as they possibly can. As they reply, try to record each response as a declarative sentence. You'll find it is much easier to

transform a sentence into a mission objective if you can do this. Here are just a few examples of the types of questions you could pose during the interview:

- What kind of work do you perform on a daily basis?
- How would you define your job description?
- What kind of data do you work with?
- What types of reports do you generate?
- What types of things do you keep track of?
- What types of services does your organization provide?
- How would you describe the type of work you do?

All of these questions are likely to evoke a good, lengthy response from the participant. One of the advantages of questions like these is that they provide the opportunity for you to ask follow-up questions. For example, say you received the following response to the last question in the list:

"First, I try to determine the general problem with the vehicle. Then I fill out a work order and note my assessment of the problem. Finally, I send the vehicle to the next available service team."

You'll immediately notice that it's a lengthy response, which is fine. You should also note that you could easily ask a follow-up question, such as the following:

"Is there any type of customer information incorporated within the procedure you just described?"

Even if the reply is "No," the question is still open-ended enough for the participant to elaborate further on his original response. This type of follow-up question could also jar his memory and cause him to relay other information, which may be related to the subject of the original response.

Here is a set of mission objectives that you could derive from the participant's original response:

Maintain information on customer vehicles.

Keep track of work orders.

Maintain information on our service teams.

Maintain information on our mechanics.

Maintain information on our customers.

Three of these objectives are derived directly from the response. They're easy for you to determine because their subjects are explicitly stated in the response itself. The last two mission objectives are derived from *assumptions* based on the response. This is a technique (which you can think of as "reading between the lines") that experienced database designers use quite often, and it is one that you should use when you're defining mission objectives. The technique relies on your ability to determine what information a response conveys *implicitly*, as well as what it conveys *explicitly*. So pay attention. Listen for implications. Without good assumptions, your overall set of mission objectives could be incomplete.

Review the following response and determine whether there is implicit information hidden within the response itself:

"I book entertainment for our clientele, which consists of commercial and noncommercial clients. Our noncommercial clients are typically individuals or small groups who book weddings, birthdays, anniversaries, and the like. Our commercial clients, on the other hand, consist of businesses such as nightclubs and corporations. The nightclubs book entertainment in six-week slots; the corporations book things such as corporate parties, product rollouts, and various types of promotional functions."

Aside from the explicit information that this response conveys, there are at least two pieces of implicit information that you can uncover in

this response. The first piece of implicit information concerns the need to maintain information on the entertainers booked for the engagements. An agent needs to know things such as the entertainer's name, phone number, mailing address, availability, and whether he will travel to out-of-town locations. The second piece of implicit information concerns the need to maintain information on the engagements themselves. An agent must know all the details concerning the engagement in order to ensure that the engagement runs smoothly.

Now that you know how important it is to look for implicit information, keep it in mind when you're defining mission objectives.

Here are the "final words" regarding mission objectives: Make sure that your mission objectives are both properly defined and well defined, that each objective makes sense to you and to those for whom you are designing the database, and that you look for any implicit information hidden within every participant's response.

CASE STUDY: DEFINING MISSION OBJECTIVES FOR MIKE'S BIKES

It's time now to interview Mike and his staff so that they can help you define the mission objectives for the Mike's Bikes database. Here's a partial transcript of the interview with Mike. Once again, your assistant, Zachary, is conducting the interview.

ZACHARY: "Can you give me an idea of the things you'd like to track in the database?"

MIKE: "Oh sure, that's pretty easy. I want to keep track of our inventory, our customers, and our sales."

ZACHARY: "Is there anything else that you can think of that is related to these subjects?"

MIKE: "Well, I guess if we're going to keep track of our inventory, we should know who our suppliers are."

ZACHARY: "What about the sales reps involved in each sale?"

MIKE: "Oh yeah, we should definitely keep information about our employees. If nothing else, it's a good idea to do this from a human resources point of view. At least, that's what my wife tells me!"

(The interview continues until Zachary has finished asking all the questions on his list.)

When the interviews are complete, review all the information you've gathered and define the appropriate mission objectives. Be sure to keep the "final words" in mind as you define them. Here are a few possible mission objectives for the Mike's Bikes database.

Maintain complete inventory information.

Maintain complete customer information.

Track all customer sales.

Maintain complete supplier information.

Maintain complete employee information.

Once you've compiled a list of mission objectives, review them with Mike and his staff. When they are satisfied that they understand the mission objectives and that the list is relatively complete, commit the list to a document in your favorite application program and save it for later use.

Summary

This chapter opened with a discussion of the *interview process*. You learned why interviews are an important part of the database design process and why it's important to learn how to conduct an interview properly. You now know the difference between an *open-ended* question and a *closed* question, as well as when to use each kind of question.

We ended this discussion by reviewing a set of interview guidelines, and you learned that you should use them to help you ensure that the interviews are productive and successful.

The *mission statement* was our next topic of discussion. We expanded upon the information in Chapter 4, "Conceptual Overview," by looking at how the mission statement states the specific purpose of the database. You now know that the process involves conducting interviews and learning about the organization, then formulating the mission statement from the information you gathered during these steps. We defined the characteristics of a good mission statement, and you learned that a well-defined mission statement establishes a clear focus for your design efforts.

Next, we discussed *mission objectives*, and we expanded upon the Chapter 4 overview once again. As you now know, mission objectives represent the tasks performed against the data in the database, and you define them after the mission statement. We then explored how to define a mission objective. Here, you learned that you conduct interviews with users and management and that the information you gather from these interviews provides the basis for each mission objective. We also discussed the characteristics of a well-written mission objective, and you learned that a clearly defined mission objective will help you define various structures within the database.

Review Questions

1. Why are interviews important?
2. What problem can arise when you conduct an interview with a large number of people?
3. What is the primary reason for conducting separate interviews with users and management?