The DBA in the IS Organization

The ability of the database administrator (DBA) to work effectively depends on the skill and knowledge the DBA brings to the task, and the role the DBA has on the overall Information Systems (IS) operation. This section describes how best to define the DBA role, discusses the relationship of the DBA to the IS organization, and makes suggestions for taking advantage of that relationship.

This chapter covers the following topics:

- Position of the DBA in the Organization

- Necessary Attributes for a DBA

- Management Support

- What Mistakes Are Possible?

Position of the DBA in the Organization

The DBA should be placed high enough in the organization to exercise the necessary degree of control over the use of the database and to communicate at the appropriate level within user departments. However, the DBA should not be remote from the day-to-day processes of monitoring database use, advising on and selecting applications, and maintaining the required level of database integrity.

The appropriate position and reporting structure of the DBA depends solely on the nature and size of the organization.

In most organizations, the DBA is best placed as a functional manager with an status equivalent to the systems, programming, and operations managers. The DBA should have direct responsibility for all aspects of the continued operation of the database. It is also useful to give the DBA at least partial control over the programming and IS operation standards, since the DBA must have the ability to ensure that DBMS-compatible standards are understood and observed.

Necessary Attributes for a DBA

The DBA is an essential resource to the organization: a politician, technician, diplomat, and policeman. The DBA needs to be a fair-minded person who is able to see both sides of database problems (that is, the IS department's side and the user's side) without prejudice in favor of either side. The DBA is expected to resolve problems for the benefit of the organization as a whole.

The DBA also needs

- administrative skill to set up and enforce the standards and procedures for using the database;

- technical ability to understand the factors governing hardware performance, with considerable knowledge both of the operating system software and the DBMS being used;

- a thorough knowledge of existing and future applications; and

- skills to produce an efficient database design that meets the application requirements.

In many medium-to-large installations, DBA functions are performed by a team rather than an individual. In this case, different members of the team specialize in different skills and aspects of managing database resources.

In a small installation, it may be difficult to justify a team, yet impossible to find an individual with all the necessary attributes. In this case, a DBA must rely on assistance from other specialists such as the systems programmer, senior operator, or senior analyst.

Management Support

To be effective, the DBA must be recognized and supported by both IS and user group management. With an in-depth understanding of the database operation and the service it provides to the organization, the DBA needs to be recognized as a center of competence for all matters involving the design or use of the database.

In principle, management should include the DBA in all decisions affecting the database to ensure that the database environment is not disrupted. Additionally, the DBA may often be able to suggest more cost-effective solutions that were known to management.

What Mistakes Are Possible?

When establishing the DBA function, the following mistakes should be avoided:

- Placing the DBA too low in the organization (insufficient authority). To function effectively, the DBA should be given enough authority to match the DBA's responsibilities. Far from being a threat to the established scheme of IS management, the DBA should be seen as a necessary adjunct when working in a DBMS environment. The DBA needs the cooperation, support, and respect of fellow managers, but will not have it if he or she is denied sufficient authority to perform the necessary tasks.

- Placing the DBA too high in the organization (too much authority). The position of the DBA should ensure the smooth operation of the DBMS environment, not bring it to a standstill under mounds of paper, unnecessarily restrictive procedures, or overbearing management. It is accepted that the dividing line between too little and too much authority is narrow, but the line must be recognized and drawn for each organization.

- Failing to define all DBA functions and responsibilities. The DBA should be authorized to perform the necessary functions, as they apply to the DBMS site. These functions need to be defined by participating managers from both the IS and user areas after careful consideration of the organization's requirements. Once the functions are defined, the DBA is responsible for establishing the procedures needed to ensure that they are performed.

- Failing to select a DBA with sufficient administrative experience. The DBA function is not an appropriate place to teach administration to a junior manager. The DBA function requires considerable management expertise, particularly in the area of human relations.