

documents. This leads to the following fact regarding information retrieval: the retrieval performed by the intermediary always precedes the user's analysis of the documents but does not exclude it entirely. The basic advantage of any retrieval by the intermediary is that it reduces the size of the collection for user's analysis. Therefore, it is expedient to consider an IR system as the most modern form of reducing the size of the search collection to some level acceptable to the user for his or her analysis. Considering the sizes of existing collections of documents, the development of effective IR systems becomes extremely important.

### 3.5

#### Conclusion

The continuous development of information activities throughout human history encountered many crisis situations. In other words, at different stages of this development the forms existing at that time could not cope with the flow of existing information and had to give way to new forms capable of successfully functioning under new conditions. The essence of the current information crisis is well understood by researchers, which is why the development of automated IR systems became a necessity. This new form (the IR system) is designed to overcome the current information crisis by successfully satisfying IN under new conditions. Therefore, in the subsequent chapters we will consider the creation of such systems in great detail.

It should be pointed out that this object, called an IR system and intended for the realization of the automatic search for information, will be considered as a system (using an approach discussed in Chapter 1). This is done because the system's approach substantially simplifies the development of IR systems and allows us to concentrate on the quality of information service to the user. Therefore, the discussion that follows can be viewed as consisting of two parts. In the first part, we analyze the goal, function, and structure of an IR system (described in the next chapter), that is, its theoretical basis; in the second part (described in a number of subsequent chapters), we analyze the construction or concrete realization of each element of the system, that is, its practical realization. Of course, special attention is paid to the automatization of all processes in the IR system.

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#### Bibliographic Remarks

We recommend the following additional readings.

- Johnson, E. D. (1965). *A history of libraries in the western world*. New York: The Scarecrow Press.  
 Price, D. J. (1961). *Science since Babylon*. New Haven: Yale University Press.