

Design and Implementation of a Protein and Disease Retrieval Services System Based on Integrated Databases

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Abstract. With the development of the experimental equipment technology and the beginning of the genome project, genetic information has been increased geometrically. In addition, information on DNA, RNA, protein, and various structures has been also increased. For this reason, the number of databases that contain such information is a growing trend. Statistically, about five hundreds of different databases exist. However, they have a problem that since they do not have different information each other and one biological phenomenon from different viewpoints is measured, biological information on them is much related in the meaning. Although there have been some attempts to connect such related information, new and various databases have been continuously built. As a result, we must search for a number of databases in order to get the biological information. The scattering of the related biological information suffers from the development of biotechnology research. Therefore, it is required to integrate the biological information in the field of bioinformatics. In this paper, we propose a data modeling to integrate the different types of disease and protein databases in order to solve such a problem and construct the integrated databases. We also design and implement a protein and disease retrieval services system based on the integrated databases.

Keywords: Disease Database, Protein Database, Integrated Database, Disease Retrieval Service

Acknowledgment: This research was supported by the Ministry of Education, Science and Technology Grant funded by the Korea Government (The Regional Research Universities Program/Chungbuk BIT Research-Oriented University Consortium) and by the Ministry of Education, Science Technology (MEST) and Korea Industrial Technology Foundation (KOTEF) through the Human Resource Training Project for Regional Innovation.