Eye Informaticsthe Research on Data and Knowledge Integration

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Abstract Using a large amount of data, information and knowledge in ophthalmology, the paper discussed the principles and methods of knowledge integrations in Eye Informatics, involving the triple-structure of carrier-variable-and-its-value of an information unit and analyses of the types and their calculations of these three components. The paper also discussed the transformations between various types of knowledge, especially between those about population and individual. At last, the progresses made in so called conceptual ontology(CO), experimental ontology(EO) and Compass-Beacon ontology(CBO) were introduced, and the ideas about how to explore and develop the CBO of Eye Informatics were presented.

Key words Eye Informatics, The Theory of Bio-Medical Knowledge Integration(BMKI), Medical Informatics, Medical Knowledge Engineering