

Abstract

The presented work contains an analysis of the terminology system of the International Classification of Nursing Practice (ICNP) in the context of medical / health informatics.

The author analyses the roots of difficult penetration of information technologies into health-related applications: it is the difference in the view of the nature of information between health disciplines and information technologies as well as the subjective nature of health as the subject of health disciplines. As a possible solution to overcome these differences that has its solid base in husserlian phenomenology and that is compliant with Peirce's semiotics, the author shows semantic matching of health-related data with algorithms that process these data. Semantic matching, however, must be based on a reliable and accurate description of meanings of concepts and relations - which brings the need for a sound terminology system.

The work describes the origins, the history and the structure of the ICNP system of nursing terminology. The consequences of the use of multi-axial hierarchy for the first versions of ICNP are analyzed and the circumstances of the Czech translation are explained. Besides that, examples of the changes in terminology that were induced by the transition of ICNP between the preliminary versions (alpha and beta) and the first production release are demonstrated. In the new versions of ICNP, structure of the multi-axial hierarchy has been entirely replaced by a more suitable ontology-based representation. The consequences of some requirements on the structure of ICNP ontology are also demonstrated - most prominently consequences of strictly disjoint neighbouring classes.

The Czech version of ICNP has not passed the standard procedure of back-translation. Besides that, on the contrary to the international version, the Czech version has remained in the state of the beta-release and has not been maintained since year 2000. Therefore, the terminology is gradually ageing.

The presented work contains a frequency dictionary of three parallel language versions of ICNP-beta: English, Czech and Slovak. To support detection of difficult parts of the Czech (or Slovak) translation, a simple algorithm is proposed that finds candidates of translations errors.