

Obstacles to Implementing an Execution Engine for Clinical Guidelines Formalized in GLIF.

Kolesa P, Spidlen J, Zvárová J.

EuroMISE Centre, Institute of Computer Science AS CR, Department of the Medical Informatics, Prague, Czech Republic.

Abstract

This article is on obstacles we faced when developing an executable representation of guidelines formalized the Guideline Interchange Format (GLIF). The GLIF does not fully specify the representation of guidelines at the implementation level as it is focused mainly on the description of guideline's logical structure. Our effort was to develop an executable representation of guidelines formalized in GLIF and to implement a pilot engine, which will be able to process such guidelines. The engine has been designed as a component of the MUltimedia Distributed Record system version 2 (MUDR(2)). When developing executable representation of guidelines we paid special attention to utilisation of existing technologies to achieve the highest reusability. Main implementation areas, which are not fully covered by GLIF, are a data model and an execution language. Concerning the data model we have decided to use MUDR(2)'s native data model for this moment and to keep watching the standardisation of a virtual medical record to implement it in execution engine in the near future. When developing the execution language, first of all we have specified necessities, which the execution language ought to meet. Then we have considered some of the most suitable candidates: Guideline Execution Language (GEL), GELLO, Java and Python. Finally we have chosen GELLO although it does not completely cover all required areas. The main GELLO's advantage is that it is a proposed HL7 standard. In this paper we show some of the most important disadvantages of GELLO as an executable language and how we have solved them.

PMID: 16160317 [PubMed - in process]