Universidade do Minho

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Integração de sistemas de informação: perspectivas, normas e abordagens

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Abstract As Tecnologias da Informação (TI) permitem definir várias arquitecturas de integração e possibilitam diferentes abordagens para um mesmo problema. É uma realidade confusa onde existe uma forte competitividade tecnológica que influencia a adopção de diferentes soluções. Neste âmbito, as TI suportam e controlam a comunicação entre sistemas heterogéneos permitindo a sua compatibilidade e integração. Algumas soluções seguem normas definidas e actualizadas por empresas ou organismos credenciados o qu

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Abstract

Information Technologies (IT) allow to define various integration architectures and permit different approaches to the same problem. This is a confusing reality where there is a lot of competitive technologies that influences the adoption of different solutions. In that scope IT supports and controls the communication between heterogeneous systems allowing their compatibility and integration. Some solutions follow standards defined by credited enterprises or organizations facilitating Information Systems (IS) integration.

The classification of the different solutions for IS integration is not easy or evident at the beginning. However the approaches can centralize whether into information, into applications or into business processes. Those three areas correspond to a way of classification that serves as a start to put in order the ideas in this work. There is an emphasis in the process centric integration because of his importance to make the integration solution suitable to the business. This specific view of the IS integration influences the appearance of new standards like, for instance, the Business Process Execution Language (BPEL) standard. With the technology evolution there is growing complementarity and convergence of the approaches, and this allows new architecture definitions as for example the Service Oriented Architecture (SOA). In that particular case the BPEL standard permits a procedural way of specifying IS integration. Systems are accessible through Web Services and can be integrated based on technical specifications defined by the corresponding standards.

To illustrate those concepts, and also as an experimental objective, an IS integration example is created. It is based on some technologies and standards described in this work. In that case, the main objective is to show in a practical way different technological perspectives for IS integration implementing two alternatives. Web Services and BPEL are used in the second approach to show their advantages. In the final some conclusions are expressed about the classification, the integration example and the technology evolution in this area.