

Spiral-Based model for software architecture in bio-image analysis: A case study in RSV cell infection

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Abstract

The advancement in biological and medical image acquisitions has allowed the development of numerous investigations in different fields supported by image analysis, from cell to physiological level. The complexity in the treatment of data, generated by image analysis, requires a structured methodology for software development. In this paper we proposed a framework to develop a software solution with a Service-Oriented Architecture (SOA) applied to the analysis of biological images. The framework is completed with a novel image analysis methodology that would help researchers to achieve better results in their image analysis projects. We evaluate our proposal in a scientific project related to cell image analysis.

Palabras clave

Spiral methodology, Bio-image informatics, Cell image processing, Respiratory Syncytial Virus.