Design, Development by Functional Analysis in UML and Static Test of a Multimedia Voice and Video Communication Platform on IP for a Use Adapted to the Context of Local Businesses in Lubumbashi

Authors : Blaise Fyama, Elie Museng, Grace Mukoma

Abstract : In this article we present a java implementation of video telephony using the SIP protocol (Session Initiation Protocol). After a functional analysis of the SIP protocol, we relied on the work of Italian researchers of University of Parma-Italy to acquire adequate libraries for the development of our own communication tool. In order to optimize the code and improve the prototype, we used, in an incremental approach, test techniques based on a static analysis based on the evaluation of the complexity of the software with the application of metrics and the number cyclomatic of Mccabe. The objective is to promote the emergence of local start-ups producing IP video in a well understood local context. We have arrived at the creation of a video telephony tool whose code is optimized.

Keywords : static analysis, coding complexity metric mccabe, Sip, uml
Conference Title : ICWET 2020 : International Conference on Web Engineering and Technology
Conference Location : Toronto, Canada
Conference Dates : June 18-19, 2020