Phd in Computer Science and Mathematics – XXXIII cycle

Business Process Management (BPM) and Case Management (CM) for Enhanced Care Pathway

Lucio Colizzi – Computer Science Department – University of Bari ALDO MORO – lucio.colizzi@uniba.it

ABSTRACT

In the last two decades there has been a growing interest in investigating the correlations existing between funds spent in private/public health care and the actual quality of medical care services as perceived by citizens accessing them. This issue is addressed as *disease management*, defined as the complex decision making process aiming to determine a program of coordinated healthcare interventions minimizing both the healthcare costs and the effects of disease on individuals. In this research stream, one of the main approaches is the Integrated Clinical Pathway (ICP). The research objectives aim to explore how tools and methodologies coming from Business Processes Management (BPM) and Case Management (CM) can support decision makers, i.e., care managers and physicians.

Industrial partner

openwork Just solutions

Openwork is an Italian Independent Software Vendor leader in the development of application platforms for BPM and workflow management. The JAMIO process engine is its cutting edge technology.

Within the phd, Openwork is providing requirement and is involved for testing the solutions identified on its Jamio platform.

International partner

UCLM Universidad de Castilla-La Mancha
CAMPUS OF INTERNATIONAL EXCELLENCE

ITSI Instituto de Tecnologías y Sistemas de Información

The mission of the ITSI is to enhance the research in different areas of Computer Engineering in order to develop and transfer to the organizations, information systems and technologies that contribute to the progress and well-being of society, particularly in the region of Castilla la Mancha. *In this phd ISTI is involved in the issues concerning the quality of the software product*

Description of Activities
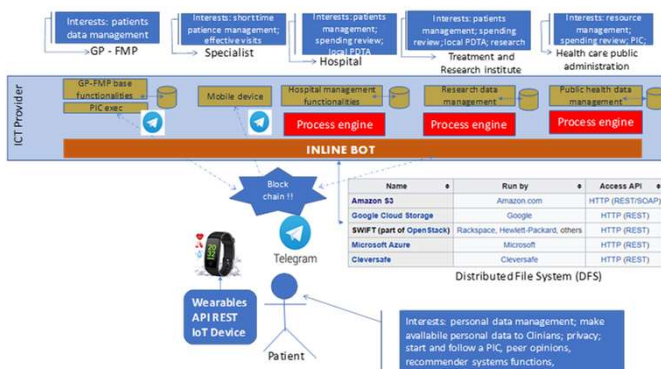
Integrated Clinical Pathways, designed by clinical stakeholders, are high level process description. This means that this kind of process representation are not machine executable because of the lacks of details. Based on REST/API technologies, that includes CHATBOTS with functions guiding the execution of the activities performed by humans, an Interest Based Architecture (IBA) is proposed. The aim is to obtain clinical process executability covering the following pillars: to suggest what has the next step to perform (to govern the state of the process); making teamworking agile; eliminating redundancies; reducing conflicts; suggesting actions that will reduce costs still having the same outcome; optimizing the use of resources.

Industrial partner supervisor:
Dr. Guido Damiano (guido.damiano@openworkbpm.com)

Accademic supervisor:
Dr. Danilo Caivano (danilo.caivano@uniba.it)

International partner supervisor:
Prof. Mario Piattini (mario.piattini@uclm.es