

Incentive and Playful Strategy for a Participative Model of Learning and Experimenting Blockchain

Fatou Ndiaye.MBODJI*, Gervais MENDY**, Ahmath Bamba MBACKE*, Samuel OUYA

*LIRT laboratory, ESP Polytechnic School of UCAD university, Dakar Senegal

fatou.mbodji@esp.sn, gervais.mendy@ucad.edu.sn, ahmathbamba.mbacke@esp.sn, Samuel.ouya@gmail.com

Abstract—In this paper, we are interested in the scalability of simulator models of new technologies, such as the blockchain, which present many technical and consensual constraints and challenges. Thus our proposal focuses on an important feature of meta-models of such simulators, namely the management of the incentive to participate in the proposal to make them evolve continuously. This is done through the election of a king based on his significant contributions to the evolution of the model. The introduction of an evolution can be an optimization of the model's performance or the integration of a recent advance in technology. To better illustrate our proposal, we do an implementation of a blockchain simulator with a perspective of optimizing its upgradability and trying to move towards a single simulation platform based on our model that aggregates the learning and experiment of the blockchain while managing the low and high level details.

Keyword—Blockchain, learning, modelling, scalability, simulator, technology watch



Fatou Ndiaye MBODJI is holder of a master's degree in software engineering and information systems from the ESP polytechnic school of the UCAD University in Dakar, Senegal. Her target application framework for her research work is that of developing countries. She is interested in topics such as blockchain, fintech, smart contracts. However she is not limited to these topics and areas, as proved by this study, which has a serious game aspect.. She plans to produce many more papers that will highlight her love for mathematics, art and literature.



Pr. Gervais MENDY is a researcher-scientist at the ESP polytechnic school at UCAD university where he was head of the IT department from 2012 to 2016.

Holder of a PhD in Computer Science from Paris-Sud XI University, his research interests are in Computer Combinatory, Social Network Analysis, Internet of Things (IoT) and IT Security.

He is a member of the LIRT Laboratory of UCAD.



Pr Ahmath Bamba MBACKE is a researcher-scientist at the ESP polytechnic school at UCAD university. He is vice-president of ASCII, a Senegalese association of researchers. He has trained and accompanied several startup students of the ESP. He is interested in Modeling, Software Engineering, Multi Agent Systems, Databases and Artificial Intelligence.



Pr. Samuel Ouya is currently the director of the LIRT laboratory at the UCAD. He was from 2013 to May 2017 the first Director of Infrastructure and Information System of the first virtual university of Senegal (UVS). Holder of a thesis in Applied Mathematics from the Gaston Berger University of Saint-Louis in Senegal and a Telecommunications Thesis from the UCAD university in Dakar-Senegal, he is interested in Applications of innovative telecom services to virtual organizations.