

A Proposed Currency System for Academic Peer Review Payments Using the BlockChain Technology

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Abstract: Peer review of scholarly papers is seen to be a critical step in the publication of high quality outputs in reputable journals. However, it appears that there are few incentives for researchers to agree to conduct suitable reviews in a timely fashion and in some cases unscrupulous practices are occurring as part of the production of academic research output. Innovations in internet-based technologies mean that there are ways in which some of the challenges can be addressed. In particular, this paper proposes a new currency system using the BlockChain as its basis that provides a number of solutions. Potential benefits and problems of using the technology are discussed in the paper and these will need further investigation should the idea develop further. Ultimately, the currency could be used as an alternative publication metric for authors, institutions and journals.

Keywords: peer review; BlockChain; currency

1. Introduction

Almost every research academic is aware of the current environment in which both institutions and individuals are subject to some form of assessment and a considerable proportion of the scoring is often weighted on the production of scholarly outputs, typically as papers in reputable journals. Apart from the obvious authors and readers, these journals typically have a small number of editors who do most of the day-to-day management of the intellectual material; there might also be a larger editorial pool from the discipline who oversee the journal, and then there are those people who take on the role of reviewers which could include all of the previously listed groups of people. The production of the journal will also include a publisher that will include those that publish for profit and those that publish through a non-profit entity such as a learned society. Irrespective of the details of the process, the production of an academic journal is an economic system and like any such system the publishing process presents a number of intended and unintended incentives.

Due to the anonymous nature of peer review, there appears to be a lesser incentive for people to carry out this part of the publication process when compared to authoring articles or being part of the editorial activity. Although some journals will list those that have carried out reviews on its behalf, it is more difficult to provide a measure of the number, quality and timeliness of those reviews. This paper considers how it might be possible to provide a greater incentive to carry out peer review and to raise the quality of those reviews using some of the currently available internet-based technologies. The proposal also provides a mechanism to track the review process and has the potential for wider application within the academic publishing environment as an alternative metric to those used at present.

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