Blockchain to the rescue of small publishers

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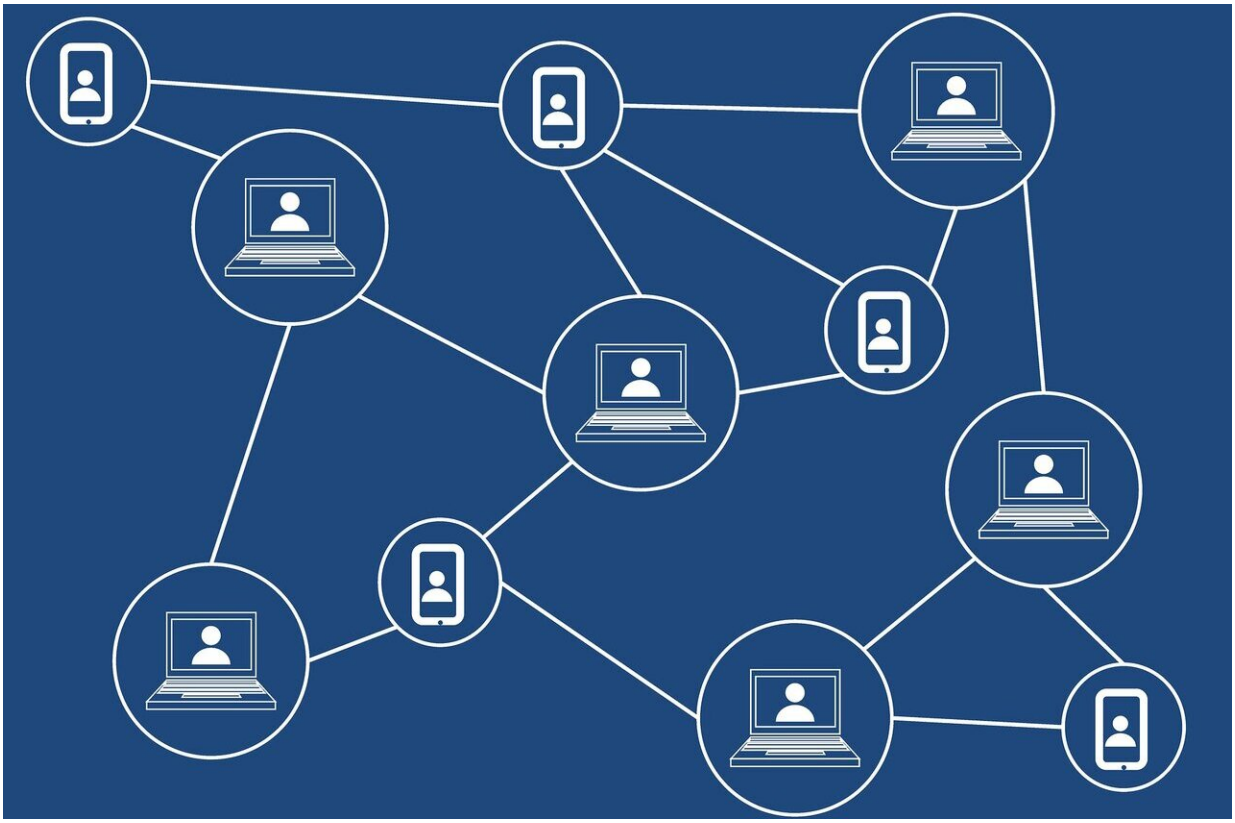

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As Australian book publishers grapple with global disruption, digital technologies, and economic uncertainty, QUT researchers are looking at how blockchain technology can help them survive and thrive.

Led by Associate Professor Mark Ryan from QUT's Creative Industries

Faculty, the team developed a world-first blockchain prototype system for digital rights management and royalty distribution to enable the creation of new commercial opportunities for small publishers.

The two-year collaboration involved researchers from QUT's Creative Industries, Law, and Science and Engineering Faculties, and Brisbane-based micro publisher Tiny Owl Workshop.

"There's a lack of practical research into how publishers may benefit from blockchain, as well as authors, and other creatives, along with other cultural institutions such as libraries and archives," said Professor Ryan.

"So, we worked with Tiny Owl Workshop to create additional value from the IP publishing houses generate when creating books. A new digital edition of the novella No Point in Stopping is the result.

"Blockchain technology underpins cryptocurrency, and is being used for rights and royalties management for numerous industries, like music distribution, and the tracking of products including beef, diamonds and the sale of art.

"There is a small, but growing volume of research and innovative technological experiments that focus on blockchain for book publishing. But, most of it is focused on enabling authors to self-publish and earn royalties."

Sue Wright, Director of Tiny Owl Workshop said the project team enabled Tiny Owl to create new revenue and royalty streams from the kind of IP all publishers create as they work to bring books to market.

"We took the behind-the-scenes intellectual property the publishing team created when developing the novella No Point in Stopping, written by Brisbane author Samuel Maguire," said Ms Wright.

"Then three new paratexts were designed as an 'Education Edition' for writers and creative writing students. The largest is the Editor's Bundle which includes the original manuscript, the edits, and correspondence between the editor, Harlan Ambrose, the author and the publisher."

Professor Ryan said the second outcome of the project was the creation of a blockchain prototype system for rights management and royalty distribution that enacts micro-payments via smart contracts to all creative professionals involved in the writing and publishing process.

"Using open source blockchain technology, the project managed intellectual property agreements and royalty payments, and tracked purchases with a custom digital ledger," he said.

"Thirdly, the project resulted in a Print and Electronic (P&E) tracking system that can track the sale of physical books made possible by the design of a marketing bellyband that contains a QR code.

"This code gives purchasers of physical book copies a free download of one digital bundle from the 'Education Edition', linking physical book purchases in bookstores to online downloads; and providing a ledger of where customer transactions originate from."

"Working with blockchain is still a very technical and complex process. Our project required in-depth knowledge of information technology, information systems and coding, as well as legal expertise and an understanding of the creative aspects of book publishing."

Dr. Michael Adams from the Science and Engineering Faculty's School of Information Systems developed the prototype open source blockchain-enabled system for the project.

"The prototype coordinates complex communications between a browser-

based user interface, the YAWL business process management system and the blockchain platform Hyperledger Fabric," Dr. Adams said.

The No Point in Stopping project was funded by Catapult grant from QUT's Institute for Future Environments, a scheme designed to seed innovative transdisciplinary research that responds to the needs of industry.

More information: Mark David Ryan et al. No Point in Stopping White Paper: A Publisher-Centred Blockchain Model for the Book Publishing Industry, (2020). DOI: 10.5204/rep.eprints.135712

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