

# BLOCKCHAIN REVOLUTIONIZES THE ADVERTISING INDUSTRY

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Blockchain technology is changing how online advertising is purchased, delivered, tracked and valued. Industry insiders see blockchain, a distributed ledger system, as a natural fit to improve the trustworthiness and payment processing of the advertising supply chain, especially for digital and video advertising.<sup>1</sup>

Blockchain technology is still in its early phase of development, much like the internet was in the 1980s. Blockchain is tantalizing to advertisers and publishers as it may offer many benefits. Advertising technology experts herald blockchain's potential to increase efficiency, reduce fraud, track data effectively, and control costs.

The advertising industry is huge, with annual revenues exceeding \$532 billion.<sup>2</sup> A larger portion of advertising budgets is being allocated to digital advertising, up 21% to \$88 billion in 2017. Mobile advertising accounted for 57% of digital advertising revenues, up 36% to \$49.9 billion. Digital video advertising also is growing rapidly, up 33% to \$11.9 billion last year.<sup>3</sup>

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The transparency of blockchain's decentralized public ledger system is a fundamental advantage of the technology. Transaction history is recorded and cannot be altered, and all transactions are visible to all participants. Blockchain's ability to track and reconcile the number of ad impressions delivered in a digital ad campaign can speed the billing process and reduce contentious payment negotiations between publishers and advertisers.<sup>4</sup>

Online ad fraud has plagued the advertising industry throughout the life of the internet. Advertisers worry that automated bots instead of humans are clicking on ads and falsely boosting ad results. Blockchain can be used to verify that humans are viewing the ads being monitored and that those ads meet the criteria of their targeted audience, saving millions in advertising spending each year.<sup>5</sup>

More recently, many advertisers have found their ads on undesirable sites with content that is objectionable to their brands. This often is due to the use of programmatic ad placement technology by media companies that use behavioral and demographic information to identify people potentially receptive to the ad. When automated ad exchange networks seek to match advertisers' needs with potential outlets, the matches can be less than ideal.<sup>6</sup>

Blockchain improves the level of trust and security implicit in transactions. It enables multiple partners to collaborate and make transactions without confiding too much information. As each blockchain transaction is executed, a new block is added to the chain that cannot be changed. As such, blockchain could limit the amount of demographic information required for advertising transactions, thus improving online security for all users.



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One blockchain development with great potential focuses on smart contracts, and several industries, such as financial services and healthcare, are investing in this technology. Smart contracts use specific coding or distributed apps (known as “dapps”) to establish binding agreements that are triggered by specific events such as an expiration date or price parameter. Publishers could use smart contracts to speed up and clarify programmatic payment processing with their advertisers.<sup>7</sup>

One limitation of blockchain for the advertising industry is slow processing speed. Advertising exchange auctions occur in real time, and, currently, blockchain applications are too slow to process payments instantaneously, as the entire blockchain must be updated with each transaction. However, developers are looking at ways to build fast-acting payment systems on top of blockchain to enable instantaneous transactions between users.<sup>8</sup>

**To discuss these topics in more detail, please contact your PNC Relationship Manager.**

- 1 “IAB Explores The Future of Blockchain for Video Advertising in New Comprehensive Whitepaper,” press release issued by the Interactive Advertising Bureau, Feb. 8, 2018. Available at: <https://www.iab.com/news/iab-explores-future-blockchain-video-advertising-new-whitepaper/>
- 2 “Blockchain: Reshaping advertising, removing fraud, rebuilding trust,” by Jeremy Epstein, Clickz blog, Nov. 10, 2017. Available at: <https://www.clickz.com/blockchain-reshaping-advertising-removing-fraud-rebuilding-trust/114170/>
- 3 “Digital Ad Spend Reaches an All-Time High of \$88 Billion in 2017, With Mobile Upswing Unabated, Accounting for 57% of Revenue,” press release issued by the Interactive Advertising Bureau and PwC, May 10, 2018. Available at: <https://www.businesswire.com/news/home/20180510005682/en/Digital-Ad-Spend-Reaches-All-Time-High-88>
- 4 “Let’s Try to See Clearly on Blockchain for Advertising,” by Jaisimha Muthegere, *Ad Age*, March 7, 2018. Available at: <http://adage.com/article/digitalnext/rose-colored-glasses-blockchain-advertising/312628/>
- 5 “Why Digital Advertising Needs A Blockchain Solution,” by Steve Olenski, *Forbes*, Feb. 16, 2018. Available at: <https://www.forbes.com/sites/steveolenski/2018/02/16/why-digital-advertising-needs-a-blockchain-solution/#6015f4171f71>
- 6 “Advertisers Try to Avoid the Web’s Dark Side, From Fake News to Extremist Videos,” by Suzanne Vranica, *The Wall Street Journal*, June 18, 2017. Available at: <https://www.wsj.com/articles/advertisers-try-to-avoid-the-webs-dark-side-from-fake-news-to-extremist-videos-1497778201>
- 7 “Let’s Try to See Clearly on Blockchain for Advertising,” by Jaisimha Muthegere, *Ad Age*, March 7, 2018. Available at: <http://adage.com/article/digitalnext/rose-colored-glasses-blockchain-advertising/312628/>
- 8 “Let’s Try to See Clearly on Blockchain for Advertising,” by Jaisimha Muthegere, *Ad Age*, March 7, 2018. Available at: <http://adage.com/article/digitalnext/rose-colored-glasses-blockchain-advertising/312628/>

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