Will GDPR scupper blockchain?

Europe's General Data Protection Regulation (GDPR) has stirred much debate over internet privacy. Essentially, the GDPR aims to create "digital rights" for EU citizens, requiring companies that collect or use personal data to ask for consent from their users or customers. This includes companies that maintain databases containing personal data, even if they do not have a physical presence in the EU.

Those who oppose the GDPR say its authors focused on the simplistic view that companies centralise data collection and storage and they can manipulate or edit data at will. This view conflicts with the future of distributed computing, says Mark Jamison, a visiting scholar at the American Enterprise Institute, where he works on how technology affects the economy, and on telecommunications and Federal Communications Commission issues.

Distributed computing has generated increased attention amidst expanding use of bitcoin and its underlying technology, blockchain. Blockchain does away with central databases by distributing data across numerous computers that coordinate on a peer-to-peer basis.

"Blockchain protects data by using hashing systems that tie each layer of data to the layers beneath it, making it impossible to alter historical data without corrupting the blockchain's hash system. The computers coordinating the blockchain reject any corruption of the hash system," Jamison explains.

He is of the opinion that EU's privacy rules and blockchain technology will struggle to coexist. First, there may be no one to regulate. Often no one is in charge of the data on a blockchain, and no one owns it. For example, no one owns the bitcoin blockchain. So if a European wanted his or her transaction information pulled off the bitcoin blockchain, to whom would he or she go? If bitcoin is found in violation of GDPR rules, whom does the EU fine?

Another conflict is with the immutability of blockchain. This means that if someone tries to alter historical data by, for example, removing the European's bitcoin transaction information, all the subsequent data are corrupted.

Amidst this conflict of visions — centralised versus decentralised computing — blockchain entrepreneurs may need to avoid European data on their blockchains. "This can be done by leaving Europeans out altogether or by including only data addresses, not data itself, on the blockchain. Either approach slows and maybe even stops blockchain innovation," says Jamison, concurrently the director and Gunter Professor of the Public Utility Research Center at the University of Florida's Warrington College of Business.

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