BITFURY LIGHTNING NETWORK ALGORITHM SUCCESSFULLY TESTED

French company ACINQ tests Bitfury's innovative Flare algorithm for routing on the Lightning Network

SAN FRANCISCO, CA – September 26, 2016 – The Bitfury Group's innovative algorithm solution for payment routing on the Lightning Network (known as Flare) was successfully implemented and tested this week by ACINQ, a French startup that builds products and services for the Bitcoin ecosystem.

In July 2016, the Bitfury Group released a white paper describing Flare in collaboration with the Lightning Network team, publicizing the specifications for a successful algorithm in order to encourage further academic progress. ACINQ's team, using the specifications set out in the white paper, coded a payment routing algorithm and tested it with 2,500 AWS nodes. After their tests, ACINQ discovered that the proposed Flare algorithm was able to find a payment route in about .5 seconds with a probability of 80 percent.

"This success exemplifies why The Bitfury Group is committed to research and to supporting the implementation of Lightning Network. Our dedicated engineers as well as our fellow Blockchain companies are committed to the success of Lightning," said Valery Vavilov, CEO of The Bitfury Group. "This test of Flare, with small modifications made by the ACINQ team, shows that our solution is not only theoretically feasible, but successful. We are now one step closer to bringing the Lighting Network into reality and solving the scalability issue of the Bitcoin Blockchain."

"Bitfury's Flare is so far the most advanced proposal on routing, which is one of the major remaining challenges for the Lightning Network," said Pierre-Marie Padiou, CEO of ACINQ. "We used this algorithm in Eclair (our own implementation of the Lightning Network) because we wanted to go beyond simulations, and see how well it would perform in a real deployment. We are happy with the results, and see this test as a promising first step in the development of a scalable routing framework for the Lightning Network."

"With a live, large scale network test of Flare, ACINQ has taken the investigation of the algorithm to the next level supplementing our prior simulations. Their live network tests shows that the scheme is indeed workable in practice, bolstering our theoretical investigation," said Laolu Osuntokun, Lightning Network engineer and co-author of the Flare paper.

About the Lightning Network

The Lightning Network is a promising overlay solution that will enable micropayments and increased transaction processing on the Bitcoin Blockchain. The Lightning Network operates as a network of bidirectional payment channels that transfer value off-blockchain. The network is also designed to be decentralized, eliminating the need for custodial trust. The security of the network is enforced by smart contracts using Bitcoin's built-in scripting capabilities.

Additionally, instead of creating on-blockchain transactions for individual payments, the broadcasting of these transactions is deferred. The Lightning Network can also be deployed on other blockchains, or between blockchains with cross-ledger transactions.

About The Algorithm

The Lightning Network would allow for huge scalability of the transaction processing power of the Bitcoin Blockchain network, with transactions per second (tps) capacity potentially exceeding that of legacy payment rails (such as Visa or PayPal).

One of the defining features of the Lightning Network is the ability to route payments between net-work users without the need to trust one or more intermediaries. In most cases, it should not be necessary for parties to create a direct payment channel in order to complete a payment. Payment routing, or finding a path of payment channels, is therefore an issue of particular importance for the Lightning Network. Any solution should route the payment from the sender to the recipient and be optimal according to certain criteria (such as time to complete the payment and/or routing expenses). To succeed at scale, the Lightning Network will likely need a fully automated solution to payment routing.

The design goal for the algorithm is to ensure that routes can be found as quickly as possible for the Lightning Network while minimizing the amount of data stored on devices and maintaining decentralization. This is accomplished at the cost of each node proactively gathering information about the Lightning Network topology, as well as reactively gathering information about the topology as needed for transaction requests. The collected information includes channels within a low hop-distance (local "neighborhood") and paths to randomly selected nodes ("beacon" nodes) farther away. The existence of payment channels is verified using information on the Bitcoin Blockchain and data pro-vided by channel parties. As a result, a node will have a well-illuminated map of its local neighbor-hood within the network, with random patches of visibility further away enabled by the selection of beacon nodes. The combination of local and beacon nodes allows a node to minimize routing state, while finding routes to any given node with a high probability.

About The Bitfury Group

The Bitfury Group is the leading full service Blockchain technology company and one of the largest private infrastructure providers in the Blockchain ecosystem. The Bitfury Group develops and delivers both the software and the hardware solutions necessary for businesses, governments, organizations and individuals to securely move an asset across the Blockchain. The expertise of The Bitfury Group ensures successful, easy, fast, secure and cost-effective connectivity to the Blockchain. The Bitfury Group is a global team of experts in technology, business, communications, security and civil society. The Bitfury Group believes the Blockchain can and will open new doors for global economic opportunity and prosperity, and its mission is to create and advance Blockchain applications that will further promote innovation and the advancement of the peer-to peer economy and the Economy of Things.

About ACINQ
ACINQ is a French Bitcoin technology company, founded in 2014. The team believes that Bitcoin is one of the most important inventions of the last 20 years, and that the Lightning Network is the most promising solution to Bitcoin's scalability issues. ACINQ is proud to be part of a community of companies and individuals working together to bring Lightning to life, and firmly believes this technology will add value to the entire Bitcoin ecosystem.

FOR MORE INFORMATION, PLEASE CONTACT:
Rachel Pipan
Rachel.pipan@bitfury.com
Bitfury Lightning team
lightning@bitfury.com
Website: www.bitfury.com
For inquiries about ACINQ:
contact@acinq.co
For more information about Lightning Network, see:
http://lightning.network
For Inquiries about Lightning Network:
contact@lightning.network