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NEW DIGITAL CURRENCY AIMS TO UNITE EVERY MONEY SYSTEM ON EARTH

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RODRIGO BATISTA IS the CEO of Mercado Bitcoin, the first Brazilian bitcoin exchange and one of the largest digital currency operations in Latin America. Today, Mercado lets you swap Brazilian real for both bitcoin and litecoin, another currency that exists only on the internet, but Batista will soon expand the scope of his operation. By the end of August, he says, his site will embrace a brand new digital currency project called Stellar.

Unveiled last week by a not-for-profit foundation bootstrapped by one of the most important developers in the world of digital currency, Jed McCaleb, and one of the hottest startups in the rapidly evolving realm of online payments, Stripe, this new project aims to bring digital currencies to a much wider audience and provide a much smoother way of moving all sorts of money over the internet. Stellar is many things,

but it's best to think of it as an effort to create a worldwide network that lets anyone send any currency and have it arrive as any other currency. You can send bitcoin and have them arrive as dollars. You can pay someone in euros, and he can receive them as litecoin. You can transmit yen and turn them into dogecoin or Brazilian real.

That's why Batista is so quickly moving his Mercado exchange to this new technology. Stellar can help take digital currency beyond rather insular projects like bitcoin and litecoin, melding it with fiat currencies and extending its advantages to the average internet consumer. "It gives you something that's missing in other projects," Batista says of Stellar. "It's very, very powerful." The hope is that other companies and organizations will also embrace the technology, creating that common network that can transport all currencies—a true internet for money.

"We are living in a world of closed, un-interoperable networks," says Patrick Collision, one of Stripe's co-founders, referring to the many credit card networks that now move money across the net. "Whether it's bitcoin or Stellar or some other technology, it's really important—and, I hope inevitable—that something comes along and unifies them."

This "internet for money" is still a long way from becoming a working reality—if it happens at all. But those behind Stellar are already deeply experienced in the realm of online money, and the project has received an unusually large amount of attention in the five days since its launch. Stellar is open source software anyone can use for free, and within an hour of its unveiling, one currency exchange had already adopted the technology. Independent developers have since submitted changes to the open source software. And over 110,000 individuals have signed up for Stellar accounts, which would allow them to use the technology.

Certainly, there are reasons to be skeptical. Jeb McCaleb, the primary developer of Stellar, tried this same basic idea in the past, with a project called Ripple, and this project is still struggling to find a wide audience

amidst an uncertain regulatory environment. But according to McCaleb, Collison, and others, Stellar is an attempt to correct some issues that have hampered Ripple—not to mention the problems that have burdened so many other digital currency projects, including bitcoin.

From Ripple to Stellar

In 2010, Jed McCaleb founded Mt. Gox, which would eventually become the world's largest bitcoin exchange. Then, after just a few months, he sold most of the operation to another entrepreneur, well before it descended bankruptcy, beset by regulatory problems and multiple attacks from online hackers. As Mt Gox floundered, McCaleb set about rethinking the idea of digital currency, and the result was Ripple.

Jed McCaleb. Ariel Zambelich/WIRED

Bitcoin is driven by a network of computers that spans the globe. These machines provide a way of storing the digital currency, but they also let you readily sending it from place to the place. One of the chief advantages of bitcoin is that you can move the currency across borders without forking over steep fees to someone like Western Union, but it can also be used to pay for goods and services, both online and in stores (via smartphones). With Ripple, McCaleb aimed to extend this setup to all currencies, including dollars, yen, euros—anything.

In order to do this, the Ripple project also created a new digital currency, called XRP. Basically, the Ripple network needed XRP to facilitate trades on the network. If you wanted to trade bitcoin for dollars, for instance, the network first found someone who would trade your bitcoin for XRP. Then it would find someone else who would trade your XRP for dollars.

But this caused a problem: many assumed McCaleb and the other founders of project were just trying to get rich off the new currency—which, if successful, would continue to rise in value—and eventually, McCaleb fell out with the company he created to build the technology, Ripple Labs. But with Stellar, McCaleb and his new colleagues have essentially rebooted the Ripple project—"Stellar is a fork of Ripple, so the code is practically identical," says Ripple Labs—and they've rebooted it in a way that, they hope, will make it more appealing to the larger digital currency community as well as the ordinary businesses and the general public.

Digital Currency for the People

Like Ripple, Stellar aims to create a network for moving any currency across the globe, and it creates a new digital currency for facilitating trades, also called stellar. But unlike Ripple, Stellar is run by a not-for-profit foundation—an organization ostensibly outside the control of

any one company—and the organization is giving away a vast majority of the currency generated by the system.

Ripple has said that it plans to give away 50 percent of XRPs to the user community. With Stellar, however, 95 percent will be given away. That leaves 5 percent set aside to fund the foundation, with about half of that going to foundation staffers such as McCaleb over a four-year vesting period. "We adopted this model because we don't think internet infrastructure should be owned by any small group of people," McCaleb says.

What's more, Stellar is designed to move money at much higher speeds than bitcoin, and unlike the bitcoin system—which will eventually stop making more of the digital currency—the Stellar network will continue to generate more stellars until the end of time. Because it's an "inflationary currency," the founders of the project believe, people will be encouraged to actually spend it, rather than just hand on to it, as so often happens with bitcoin. "The motivation was, in part, to have people focus a bit less on digital currency as something to hoard or a store of value," Collison says.

Brothers Patrick (left) and John Collison, co-
founders of Stripe. Ariel Zambelich/WIRED

This change in the bitcoin model will likely have little effect—at least in
the short term. After all, the number of bitcoins won't stop expanding
for another 125 years. People hoard the currency for other reasons. But
Stellar's overall approach could still encourage more people to actually
use the currency. Rodrigo Batista particularly likes that the project
doles out more currency to individuals if they learn to send and receive
stellars. This, he says, will help people treat it more like a currency,
rather than simply using it as an investment tool, rather than merely
hoping that the value will go up.

In this and other ways, he says, Stellar can bring digital currency to a
much wider audience. The bitcoin system doles out currency to people
who help drive its worldwide network with rather complex hardware
rigs, but Stellar gives its currency to people who merely show an
interest. "If want to help people in Philippines sent money back and

forth to their families," says Joyce Kim, a venture capitalist and longtime friend of McCaleb's who is overseeing the new Stellar Development Foundation, "we have to give them the opportunity to participate without ante-ing up a large amount of money first."

The rub, says Tim Swanson, a market researcher and author who closely follows the progress of digital currencies, is that system may not be as fair as it seems. It may have trouble identifying scam artists who collect large amounts of currency by pretending to be multiple people. "Identity fraud is a hard nut to crack," he says.

The Banks and the Law

But the bigger aim here is to create a universal way of moving all money —not just stellars—and this effort faces other hurdles. The project must also convince organizations to setup the digital currency "gateways" that will drive the Stellar network. Gateways are Stellar's analogue to banks, except no one needs a license to run one.

"You can hold a balance with a gateway, which is any network participant you trust to accept a deposit in exchange for credit on the network," according to Stellar's introductory post. You could store your dollars in one gateway, for example, and these could be used to pay someone in euros. The gateway would first convert your dollars to stellar and then send them to another gateway that can convert the stellar into euros.

This is what Batista has vowed to set up by the end of August—a gateway—and according to Collison, five organizations have already built their own gateways. But in order for the project to truly flourish, says Swanson, it will also need the participation of mainstream banks and credit card companies—that's where people keep their money—and such organizations may been reluctant to participate in an area that's still clouded by regulatory uncertainty. "What most bitcoin-related

projects run into is establishing relationships in the banking and financial industry, and complying with laws, currency-licensing requirements," he says.

That's why Ripple—Stellar's predecessor—is focused not bringing on its technology to consumers but to financial operations. "We think people will interact with Ripple via the financial instruments they already use," says Ripple Labs director of communications Monica Long.

The Stripe offices in San Francisco. 📷 Ariel Zambelich/WIRED

That said, it helps that Stellar is backed by Stripe, a company that's already providing a way for all sorts of online businesses to accept credit card payments. Through Stripe, Stellar has a direct avenue to the next wave of online merchants. Indeed, Collison—another old friend of

Jed McCaleb—sees Stripe as a way of significantly expanding the company's business. "We obviously have a very strong interest in the underlying network that moves the money being as robust and as effective as possible," he says. "If we have a better underlying transport layer for moving money, that makes our marker that much larger, and that's why we're so interested."

But he's also quick to point out that Stellar is not controlled by Stripe. The company has provided the initial funding for the Stellar Development Foundation, but the aim is turn the organization into an independent non-profit run by a board of directors that spans the industry. "We just helped it get started," he says. Ultimately, this will decide the fate of Stellar. For the project to work, it must find a way of playing nicely with regulators, but it must also be something that's open to anyone, that can be readily used by anyone, that doesn't give one organization an advantage over another. In short, it must be like the internet. "Major infrastructure for the world like this," says Kim, "shouldn't be owned by a company."

Additional reporting by Robert McMillan