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**MEMORANDUM**

To: Igor Barinov and POA Networks, Ltd.

From: Jared Marx and Paul Caritj

Date: May 4, 2018

Subject: Federal Money Transmitter Laws as Applied to Bridge (final)

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## I. Introduction

You asked us to analyze whether the functionality in Bridge, a project by POA Networks, Ltd., would constitute money transmission under federal law. POA Networks has strong arguments that Bridge would not constitute money transmission. However, because the technology is new and federal regulators have not addressed directly analogous situations, the actual regulatory treatment of the functionality cannot be predicted with certainty.

Note that we have analyzed here only the Bridge functionality, and that our analysis depends on our understanding of the relevant facts as described below in the Factual Background section. If those facts were to differ materially from our description, our analysis may change. We also analyze here only federal money transmission law. We have not analyzed any issues under any other federal law, such as securities law, commodities law, or consumer protection law. Further, we have not analyzed any state laws, including state money transmission law.

## II. Factual Background

Bridge is a project undertaken by the developers of POA, a public Ethereum sidechain that uses an alternative consensus model called proof-of-authority. Bridge seeks to make POA tokens effectively tradeable on the Ethereum blockchain, even though POA tokens are not themselves Ethereum-based tokens. Bridge will do this by setting up a process by which POA token holders can effectively remove their tokens from the POA ledger and have them recorded instead, one-to-one, on a second Ethereum-based ledger. Bridge will likewise facilitate the reversal of that process, so that a token can be later removed from the Ethereum-based ledger, and re-recorded on the POA ledger.

The POA development team has already launched POA, and POA native tokens can be traded on various exchanges. Because they use a new and unique protocol, however, POA tokens are not tradeable on a number of centralized and decentralized exchanges. By contrast, Ethereum tokens (that is, Ethers) employ a broadly accepted protocol, so that Ethers—as well as tokens created by Ethereum smart contracts—are broadly tradeable on nearly all cryptocurrency exchanges. The purpose of Bridge is to provide a method to preserve the uniqueness of the POA

network, while also giving token holders the benefits of broadly-accepted Ethereum-based tokens.

The first step in doing this is for POA Networks to launch a smart contract in Ethereum using the ERC20 standard (the most widely-accepted standard for Ethereum smart contract tokens). That new smart contract will create a new, blank ledger of Ethereum-based tokens that will be called "POA20" tokens. This new ledger will then be used to record token ownership for holders who seek to trade POA tokens on the Ethereum blockchain.

Next, POA Networks will set up four additional smart contracts that will effectively manage the communication between the POA ledger and the POA20 ledger. (The use of four separate smart contracts reflects the need to specifically manage each separate ledger as well as the authenticators for the transfers; as a practical matter, however, the four contracts operate together to effectuate the re-recording of token ownership.) Those four smart contracts—which are in effect the "Bridge" itself—ensure one-to-one recording of tokens, prevent double-spending, and authenticate requests to transfer tokens from one ledger to the other (but not between wallets). When they set up the Bridge, POA Networks will also establish a new sub-network of the POA network that will validate requests that the Bridge re-record tokens on either the POA or POA20 ledger. Namely, three of the validator nodes on the POA network will listen for and confirm transactions requesting that Bridge re-record tokens on either ledger, provided that the requests meet the validation rules that the network .

As a functional matter, Bridge allows a holder of a POA token to remove his record of ownership from the POA ledger, and have it instead recorded on the POA20 ledger. Likewise, once there are tokens recorded on the POA20 ledger, Bridge will allow holders to remove those tokens from that ledger, and have them recorded instead on the POA ledger. Tokens then recorded on either ledger may then meanwhile be purchased or sold in the same way as any other tokens recorded on those ledgers. Any tokens removed from the POA ledger are recorded in identical amount on the POA20 ledger, and vice versa. Tokens may be subdivided or transferred on either ledger.

Importantly, Bridge causes both POA and POA20 to use identical public keys to represent ownership of tokens on each ledger. That is, if a holder of a POA token has that token re-recorded on the POA20 ledger, the POA20 ledger will list that tokens under a public key that is *identical* to that which had identified his or her holdings on the POA ledger. Because of this, the holder will also necessarily use the same private key to authorize any transfer of that token to another address, regardless of which of the two ledgers it is recorded on.

POA Networks will itself have the ability to exercise certain control over the POA sub-network that will validate Bridge transactions. So while the actual three validators of the POA bridge network will be chosen primarily on a volunteer basis, POA Networks will retain power using a multi-signature authorization structure to remove and replace any single validator on the POA sub-network. While POA Networks does not expect to exercise this power, it will retain it.

## III. Legal Landscape for Federal Money Transmission

The United States regulates money transmission primarily under the Bank Secrecy Act, 31 U.S.C. §§ 5311–30, as interpreted by the Financial Crimes Enforcement Network ("FinCEN"), a part of the United States Department of Treasury. The Bank Secrecy Act (and the related regulations) require certain financial institutions to, among other things, register with FinCEN, keep detailed records of transactions, perform anti-money laundering diligence, and report suspicious activity.

In general, a person becomes subject to the Bank Secrecy Act by being a "financial institution" with operations or users within the United States. *See generally*, 31 U.S.C. §§ 5311–30 (keying obligations to the defined term "financial institution"). Of particular relevance here is a financial institution called a "money transmitter" which is a type of "money services business." *See generally*, 31 C.F.R. § 1010.100. Money transmitters are required to register with FinCEN, *see* 31 U.S.C. § 5330, and otherwise comply with various diligence and recordkeeping requirements under the Bank Secrecy Act.

A money transmitter is a person who "accept[s] currency, funds, or other value that substitutes for currency from one person and [] transmi[ts] currency, funds, or other value that substitutes for currency to another location or person by any means." 31 C.F.R. § 1010.100(ff)(5)(i). The question of whether a party is a money transmitter "is a matter of facts and circumstances." *Id.* at 1010.100(ff)(5)(ii).

In 2013, FinCEN provided guidance how this definition applies in the context of virtual currency. First, FinCEN made clear that virtual currency was "value that substitutes for currency," so that its transmission implicated the money transmission laws. *See generally* FinCEN Guidance, FIN-2013-G001 (Mar. 18, 2013) ("2013 FinCEN Guidance").

FinCEN also explained, among other things, that a party is a money transmitter when it "accepts real currency or its equivalent from a user (the 'purchaser') and transmits the value of that real currency to fund the user's convertible virtual currency account . . . ." FinCEN Guidance, FIN-2013-G001 (Mar. 18, 2013) ("2013 FinCEN Guidance") at 4. Even though such a transaction does not involve the transmission of value between people, FinCEN found that it satisfied the definition because exchanging currency for virtual currency "constitutes transmission ***to another location***, namely from the user's account at one location (e.g., a user's real currency account at a bank) to the user's convertible virtual currency account . . . ." *Id.* (emphasis in original). Similarly, FinCEN noted that a party is a money transmitter if it "accepts [] de-centralized convertible virtual currency from one person and transmits it to another person as part of the acceptance and transfer of currency, funds, or other value that substitutes for currency." *Id.* at 5.

By contrast, however, FinCEN noted that cryptocurrency miners are not money transmitters. It found in 2013 that "[a] person that creates units of this convertible virtual currency and uses it to purchase real or virtual goods and services is a user of the convertible virtual currency and not subject to regulation as a money transmitter," *id.*, and reiterated that in a letter ruling on January 30, 2014. FinCEN Letter Ruling, FIN-2014-R001 (Jan. 30, 2014) ("To

the extent that a user mines Bitcoin and uses the Bitcoin solely for the user's own purposes and not for the benefit of another, the user is not an MSB under FinCEN's regulations . . . .").

In general, FinCEN enjoys broad authority to interpret its regulations under the Administrative Procedures Act.

## IV. Analysis

### A. Discussion of POA Networks' Arguments that Bridge Does Not Constitute Money Transmission

We have identified three arguments for why Bridge does not constitute money transmission, and in general, we think it more likely than not that Bridge does not in fact constitute money transmission. But because FinCEN has broad authority to interpret its regulations, it could readily decide to the contrary.

*Argument: No transmission of value to another location*

POA Networks' best argument here is that, because the record of a token that moves from one ledger to another remains listed with the same public key and manipulated with the same private key, the Bridge functionality does not affect the "location" of value, and so is not money transmission.

This argument relies on the definition of "money transmitter" in the Code of Federal Regulations. Those regulations define a money transmitter to include the "transmission of . . . value that substitutes for currency to another location or person by any means." 31 C.F.R. § 1010.100(ff)(5)(i). Thus, money transmission only takes place if funds are sent to (1) a different person, or (2) a different location.

As an initial matter, there is little doubt here that, because Bridge re-lists transferred tokens using an identical public key, there is no transmission of value to a different *person*. The person who orders the transfer uniquely retains the private key for those tokens regardless of which ledger they are listed on. So the money remains at all times with the same person, and this will not implicate the money transmission regulations.

Nevertheless, money transmission also includes transmission of value to "another location." *Id.* Thus, POA Networks must also explain why the transfer of the record from the POA ledger to the POA20 ledger does not constitute changing the "location" of the value. *See Bank Secrecy Act Regulations; Definitions and Other Regulations Relating to Money Services Businesses*, 76 FR 43585-01 (Jul. 21, 2011) ("Transactions involving the acceptance of currency from one person at one location and the return of that currency to that same person at the same location would not be considered a money transmission service."). POA Networks in fact has a strong argument that funds are "located" for purposes of the regulation not on a ledger, but with the holder of the relevant private keys. Thus, POA Networks can argue that no change of location takes place here.

In a traditional context, value is typically understood to be "located" at the institution that controls funds, or at the physical location where the funds are available. Thus, money held by a

bank is located at the bank, and funds held by a traditional money transmitter like Western Union are located at the particular branch where they are sent or received. Even though those institutions use ledgers to record funds, it is not the ledger itself but the institution or physical building that represents the "location" of funds. That is consistent with the fact that these institutions retain sole control over the disposition of any ledger they use to record value, so that the location of *the ledger itself* is generally irrelevant.

In the distributed ledger context, however, no bank or other central actor manages the ledger that records value. Instead, holders of private keys have the unique power to modify only their own line of the ledger, and those who keep copies of the ledger—i.e., nodes on the network—have no power to modify the ledger themselves.

Stripped of an entity that controls the ledger, it would be tempting to identify *the ledger itself* as the location of the value. But that makes little sense. A distributed ledger by definition has no single physical location, and moreover, the ledger has no value without the power of a private key-holder to modify it. So it is in fact more consistent with the traditional understanding of the "location" of value to focus on the location of the person who has the technical capacity to control those funds. In the traditional context, that is the institution that keeps a ledger; in the decentralized context, it is the person who holds the private key associated with any given line of the ledger. Private keys also have the advantage of having a discrete location, and more importantly, so do the individuals or entities that control those keys. It is indeed this concept that explains why private keys are said to be held in a "wallet"—a place where money is kept. Thus, funds are best understood to be "located" with a private key-holder.

If the location of value is the location of the private keys, then Bridge does not cause funds to move locations when it transcribes holdings between the POA and POA20 ledgers, because the private keys never change in that transaction. And if Bridge does not change the location of value, then it does not constitute money transmission.

Note, too, that POA Networks can relatedly argue that the POA ledger and the POA20 ledger are, in effect just one ledger. As a technical matter, Bridge binds the two together in such a way that, whatever happens on one ledger effectively happens on the other. So under that concept, too, even if the ledger were the "location" of the value, there is only *one* ledger, and so Bridge is not transferring value to another location.

The policy goals of money transmitter regulation also support this understanding. The purpose of money transmission regulation is, generally speaking, to prevent money laundering and the transmission of funds for criminal enterprises. *See, e.g.*, 31 U.S.C § 5311 (purpose of relevant statute is to create requirements that have a "high degree of usefulness in criminal, tax, or regulatory investigations or proceedings, or in the conduct of intelligence or counterintelligence activities, including analysis, to protect against international terrorism"). In a traditional setting, regulation of transmission among "location[s]," even if those funds continue to be held by the same person, serves those ends. For example, the paradigm for money transmission, Western Union-style fiat currency transmission, could conceivably be used to obscure the source of funds even if transferred between locations but always held by a single person. Thus, money transmitter regulation in that context serves a valuable end.

With Bridge, by contrast, the consistent use of the same public key eliminates that concern. Funds will always and permanently be traceable between the two ledgers, so Bridge serves no conceivable purpose in obscuring the source of funds. Nor could it be used to fund illicit activity, since the funds will be held by a single person and *identified* to be held by that person by a consistent public key. Bridge likewise does not provide a way for a new owner to acquire or sell funds, and provides no means for exchanging virtual currency for fiat currency. Parties *can* purchase or sell tokens on the POA or the POA20 ledgers, but those sales generally will already be subject to money transmission regulation if they take place on an exchange that operates in the United States.[1] There is therefore very little policy reason to subject Bridge itself to traditional money transmission regulation.

The most significant argument to the contrary is simply that, understood in the most ordinary way, the "location" of the tokens *could* be seen by a regulator to be the distributed ledger itself. And since the POA and POA20 ledgers are recorded by different networks, a regulator could conclude that they are two different locations. Thus, FinCEN could find that money transmission takes place when the record of a token is transferred from one ledger to the other.

Although this is a poor fit for the purpose and implementation of the regulation, the ordinary meaning of "location" makes it a reasonable possibility. This would be particularly true if FinCEN were motivated to extend its regulatory reach rather than limit it, and so rely on this commonplace understanding of "location."

*Argument: Bridge constitutes mining, which is not money transmission*

POA Networks could also argue that the Bridge functionality itself is essentially "mining" activity. FinCEN has expressly stated that cryptocurrency mining activity does not constitute money transmission. *See* FinCEN Letter Ruling, FIN-2014-R001 (Jan. 30, 2014) ("To the extent that a user mines Bitcoin and uses the Bitcoin solely for the user's own purposes and not for the benefit of another, the user is not an MSB under FinCEN's regulations . . . ."). Here, POA Network would argue that, just like Bitcoin miners, the three Bridge nodes come to consensus on the authenticity of transactions, and are rewarded by the POA network for completing that task. Thus, just like running a node on the Bitcoin blockchain does not constitute money transmission, running the Bridge does not either.

The primary problem with that argument, however, is that, unlike Bitcoin miners, the Bridge nodes are all ultimately controlled by POA Networks. While that control is limited and POA Networks does not intend to use it, FinCEN would be likely to ultimately conclude that POA Networks as a legal matter controls the Bridge itself. And while running a node on a

[1] We assume here that POA and POA20 tokens are traded on exchanges that comply with money transmitter laws. To the extent that this is *not* the case, the risk profile here *rises substantially*, and even more so to the extent that a person could obtain fiat currency at a non-compliant exchange. If Bridge permits parties to move funds among ledgers that do and do not trade on compliant exchanges, then FinCEN has a much stronger policy reason to deem Bridge to be money transmission, because it could be used to obscure the source or destination of funds.

distributed ledger does not generally constitute money transmission, controlling a network that *as a whole* was conducting money transmission likely would.

The argument also suffers from the fact that it employs a ruling that likely didn't contemplate the full implications of its conclusion. When FinCEN ruled that mining does not constitute money transmission, it did not discuss *at all* the concept that miners do not just get new virtual currency, but that their fundamental function is to process the transmission of funds from one person to another—the hallmark of money transmission. Thus, it is reasonably likely that, in a context where that function is more obvious and more centralized—as with Bridge—FinCEN may take the opportunity to note that, in some cases, mining activity *can* be money transmission.

One thing POA Networks might consider with regard to this argument is whether the Bridge could be fully decentralized, as the POA network itself is. If that were the case, the analogy to Bitcoin mining would be stronger, since the Bridge nodes would be no longer subject to a central authority. That is not so say that it would ensure any particular interpretation by FinCEN, but it would likely provide the company some additional comfort.

*Argument: Bridge does not accept value*

Finally, POA Networks could also argue that, even if Bridge did transmit value from one location to another, it never "accept[s]" value, and so is not a money transmitter.

The definition of money transmission comprises not only the transmission of value, but also the "acceptance of . . . value that substitutes for currency." 47 C.F.R. § 1010.100. If a party does not accept value, then it is not a money transmitter, even if it transmits value. Here, POA Networks would argue that Bridge does not "accept[]" value because at no point does Bridge control tokens or otherwise hold them for itself or another party. Rather, the Bridge functionality merely transcribes a record from one ledger to another, without an intermediary "acceptance" of that value. This argument has a strong foundation in the text of the regulation, as the word "accept" does not well describe what Bridge does.

Nevertheless, the primary weakness of the argument is that, if valid, it would also mean that the transmission of funds *among different people* on a ledger is not money transmission, either. After all, there would then be no "acceptance" of value in that setting as well. That is problematic because transferring funds among different people on a ledger *is* a potential means of laundering money and financing criminal activity. Thus, FinCEN has a strong policy-based incentive to interpret its regulations to capture that functionality. FinCEN's 2013 guidance on virtual currency confirms this, noting that "a person is an exchanger and a money transmitter if the person accepts such de-centralized convertible virtual currency from one person and transmits it to another person as part of the acceptance and transfer of currency, funds, or other value that substitutes for currency." 2013 FinCEN Guidance at 5.

**B. Practical Application of Analysis**

As a practical matter, even though we think that Bridge is best understood not to be money transmission, FinCEN would likely receive deference from courts on *either* interpretation of the regulation. Federal agencies like FinCEN are entitled under the Administrative

Procedures Act and *Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837 (1984) to wide latitude in interpreting the laws and regulations they administer. *See also Auer v. Robbins*, 519 U.S. 452 (1997). Here, there is sufficient ambiguity and a sufficiently poor fit between the regulation and the proposed function that FinCEN would likely be entitled to make any reasonable interpretation of the existing authority. Thus, FinCEN might find that Bridge does not constitute money transmission or it might find that it does, and in *either* case, parties would be unlikely to be able to successfully challenge that conclusion in court. And as we have noted throughout, POA Networks' arguments will not necessarily convince FinCEN of its position.

POA Networks should also understand the consequences of conducting money transmission without having complied with federal law. First, FinCEN can take regulatory action, and seek to fine POA Networks and stop it from using Bridge. *See, generally,* 31 C.F.R § 1010 Subpart H. Those fines can be substantial, and can be levied on participating individuals, as well as corporate entities.

Second, and importantly, unlicensed money transmission is a federal crime under 18 U.S.C. § 1960, carrying a statutory maximum penalty of 5 years imprisonment. Section 1960 extends to any person who "conducts, controls, manages, supervises, directs, or owns all or part of" a money transmitting business. 18 U.S.C. § 1960. That means that the individual principals who manage or own a non-compliant money transmitter can be held personally criminally liable. Generally speaking, regulatory non-criminal action is much more common for an unlicensed money transmitter who is not otherwise implicated in any other criminal activity. However, the statute does not require that for the government to seek criminal sanction.

POA Networks should also understand that, generally speaking, if its functionality is available in the United States, it will be subject to US law, regardless of where it is incorporated or where its offices, employees, or servers are located. And with few exceptions, countries cooperate with the United States in permitting it to enforce its law in that way.

As POA Networks determines whether and to what degree it plans to launch Bridge, it should also be aware of two other options for seeking additional guidance from FinCEN. First, FinCEN provides a hotline to call for informal guidance: (703) 905-3591. Because Bridge is both highly technical and new, however, FinCEN may not readily give helpful advice here over its hotline. In addition, that advice will generally be non-binding, and so of limited value.

A more robust means of seeking guidance is to submit a request for guidance to FinCEN under its authority in 31 C.F.R. § 1010 Subpart G. If POA Networks were to make such a request, it would submit a letter to FinCEN advocating that FinCEN rule that Bridge does not constitute money transmission, and would also seek an in-person meeting to advocate for that outcome. FinCEN's response time for such letters, however, varies widely. Some are resolved within only a few months, while others are not resolved for over a year. Guidance issued by FinCEN under that process is binding both on the requestor and on FinCEN.

## V. Conclusion

We think it is more likely than not that the Bridge functionality does not constitute money transmission under the law. However, it is very possible that FinCEN or a court could

rule to the contrary, and POA Networks should be aware that it could face grave risks if that were to happen. As always, please let us know if we can be of further help.

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