



Jake 02:18

Thank you well for coming on. And joining me on the podcast today. It's great to have you on I've been looking forward to the conversation. I've been playing around with this app called Dominus, which you built. It's on the protocol called noastre. All this stuff is a bit new and might sound foreign to a lot of people. Maybe you've heard a little bit about and want to learn more. If that's the case, this is a great episode for you. But anyway, I've been looking forward to talking to you about this. You built the app Dominus, and it's going super well. I think as far as I know, it's like the most popular on the protocol to date. I'm having trouble, you know, people banging down the gates to get in, think you guys are going from testflight to App Store pretty soon. So definitely want to talk about that and the protocol at large. But before we get into all that would be great just to hear sort of your story, and also your name as well, your JB 55 basically on all social media, you know, Twitter, and dominance and all the like, great to hear just sort of how you got to where you are and what you're doing today. And, you know, some of the decisions you made along the way.

William Casarin 03:16

Cool. Yeah, yeah, thanks for having me. It's been, it's been pretty crazy. For this app that kind of blew up blew up, I was I've just kind of been tinkering on it for the past six months or so. It was just, it was my attempt at building the best possible example of what this protocol could do. And I'm sure we'll get into what the what the protocol is and how it works. But, you know, my background just, you know, I just love playing with technology. I've always been a huge computer nerd since I was kid, you know, fell in love with Bitcoin 2010. And, you know, again, it's one of those protocols that feel like it could change the world. And I just wanted to be involved. So anytime I'm able to, like, apply my skills to kind of, you know, use protocols to kind of change the world like I'm on there, I want to be there. So. So I feel like money was a big one. And I think the next big one might be free speech online, just because it's kind of becoming not as fun it's kind of more corporatized internet these days. So if my some of my goals just kind of bring it back to what the internet used to be right when the IRC days and kind of just people talking to each other. So this is what I see it as Nostra. It's just



it's kind of it's very nostalgic for the people who were on the internet in the in the early days. And I want to kind of bring that back if you like we kind of lost that. So yeah.

Jake 04:29

Very cool on so maybe actually be interesting to hear a little bit about like your experience on the internet in the early days. And what elements of this remind you of that I know like, I'm sure we'll talk a little bit about Jack's involvement with noastre donates money and things like this. But um, you know, he was commenting basically reminded him of early Twitter, which was you know, over a decade ago now, how does it you know, I wasn't really honestly on the internet that long ago. So I'm curious, like, what aspects of it do you miss? What aspects is This kind of bringing back, you know, how does it sort of try to reemerge the beauty of the early internet for you?

William Casarin 05:07

Yeah, I was born in 1988. So I kind of just would just start to when I was a teen, I was just starting to get on the internet, it's just when things started to take off. And but the early internet, like right on the first websites sort of come out. It was there was, there wasn't really any huge players, like maybe the biggest one was like Gmail that just came out or something, but there wasn't that much, there wasn't much of a corporatized way they were just kind of like people just putting stuff online. And like these like crazy geo cities, websites and like tripod and you know, people just like uploading their you know, they're a tutorial on how to be Goldeneye double Oh, seven or something, right. So it's just kind of like much more organic and much more, seem much more human much more natural. And I feel like as, as time went, kind of progressed, since like, the early 2000s, and into the even just 2020 or 20, the current year 23 Just came progressively more controlled by like advertisement and corporations, and even a lot of the stuff you Google is just like it's heavily filtered, based off of like, what you're gonna most maximally, you know, buy or whatever, right? So, you know, and sometimes I do feel like we've lost what it was like on the early internet, when it was just more organic and more natural and more just like, you know, human beings interacting with each other. So I feel like, not sure. Anyway, going back to what you said, with like, when Jack announced that he



sent this tweet out, which was, oh, yeah, this reminds me. So this protocol reminds me of Twitter, does that 5000 users but better, then right, when he tweeted that, and my servers went down? Well, we didn't have that many beefy relays at the time, we actually found a lot of performance issues in our relays. But that was the biggest, like, setting off point when he when he when he said that. So yeah, so I feel like nostre kind of brings back a lot of like the early like nostalgia of the early Internet, and I want to keep the I want to keep that going. I want I want it to be like this fun thing that's controlled by people and not like corporations who are just, you know, trying to sell stuff. So

Jake 06:53

yeah, very cool. I remember the James Bond GoldenEye, but a few years after you so I missed some of the early stuff. And frankly, I didn't even really appreciate like sort of the power of the internet until like, really late. I don't know if it's why, like necessarily my surroundings or whatnot, people are associated with, but it wasn't until actually, I mean, not that it was necessarily related. But once I started getting into Bitcoin and things like I joined Twitter, all of this was like, pretty late. I mean, I was obviously aware of Twitter and had heard of Bitcoin, things like this, but wasn't really early to gain on once I did, I was like, started a podcast and all this, I was just you start to really realize like the leverage of the Internet, and you can meet amazing people from all around the world, it's just very cool situation that I sort of, for whatever reason, was not really a part of growing up. So it's been really cool. And obviously, we want to talk about nostril learning in real time how to pronounce that, you know, you see it on the app and everything. But that is no threat until right about now.

William Casarin 07:51

Yeah, well, I say Nasir, I think I'm the minority of a lot of people see nostre a lot of people see it. Some people say nos, stir. I don't know, I don't know what it is, to be honest.

Jake 08:00

Yeah. When you have to, you know, when you have to read it, and you know, hear it too often. We need more podcasts about it. And then



it'll sort of like there'll be a consensus on how you say these things. But anyway, I want to sort of set the stage a little bit more go back to you said 2010. Bitcoin is that was, were you really, were you involved, like you saw it back then. And we're sort of engaged back then. Or you sort of first heard of it early days and took a while to get on board to talk a little bit about like, sort of sort of discovery of Bitcoin and everything like that.

William Casarin 08:28

Yeah, I got in. I just joined the IRC channel. I actually I think I saw it on Hacker News, someone like someone posted on this, like an E currency or whatever. Okay, whatever seems interesting. So I downloaded it played with it joining the join the IRC channel, you know, people were like selling Bitcoin for like, \$1 on the IRC channel back then. So I just like, you know, I bought a couple of them. And it was just like, just playing with it really. And then, so I've always, I've always, it's always been like in the background, I've always tried to use it for things. So for instance, in 2013, I was working for a company called Monstercat. And we sold our albums with a with Bitcoin, which was like one of the first times that's ever happened, I think so. And I started to see the value like, wow, I can actually, I didn't have to interface with the legacy system because right at the time, we were using PayPal to like pay our artists and it was just such a pain in the ass. So I was I was experimenting with paying out artists and Bitcoin was with like one big giant Bitcoin transaction that like pays out 600 people. And I realized at the time, it was like, Oh, that was cheaper than actually doing a PayPal payouts. So yeah, I've always just loved tinkering it and applying it to like real world use cases, because at the time, it was just a toy. Not many people were like using it for real things. So it was always interesting to see how can we actually apply this in real life so

Jake 09:35

and how about like, as it's developed over the years, obviously, you know, everyone's heard of it. Now. It's and sort of established there's a whole nother thing of like crypto and people are you know, they're now there's tribalism, sort of between people who are like Bitcoin Oh, many people are not. What do you make of the whole



evolution and sort of, how is your perspective on the whole thing developed alongside that?

William Casarin 09:58

Yeah, so you know, I went through that whole, like the ICO craze. And I saw, like, you know, all people like scamming people and making lots of money and a lot of people getting burned. And I actually didn't like that I wanted, you know, it's not nice to see people invest all their money and like lose it on like these, like token scams. So I quit very quickly became someone who was very much against altcoins. And just try to keep something that's more pure and not controlled by a small group of people. So that's the way that I see a lot of these other coins is, you know, you know, the people just trying to make money and people just trying to take advantage of people. So that was just my perspective, just going through this whole thing. So that's why I've always been very pro, that kind of Bitcoin only, just because I just feel it has the most decentralized network. And I'm like, It's and we can start building like an internet of money on top of it using the Lightning Network. So in about 2016, or top two and 1717, I decided to quit my job and work on the Lightning Network. So I was one of the first things like five nodes on the network, and I helped to work I worked on see lightning and things like that. So I saw the power of the protocol in terms of like, wow, we can actually now do real time instant settlement, you know, point point anywhere on the internet and like, some like, Hey, how can I integrate this and then more things? So I that's why I like once I once I start building this nostra project, it was like, Well, why not just put lightning into nostro, because it makes a lot of sense. And, and I'm just, that's probably one of the biggest features in this in this app that I'm building is being able to send people lightning back and forth over a social network. And you know, it's unsensible speech, and it's unsensible money. So it's a very powerful combo.

Jake 11:25

Right? So let's take a couple steps back here, just for the people who have no idea what's going on. How are you sort of best think to introduce it maybe like as if you're introducing it to like a middle school or something like that, or high school or someone or like, you know, my grandmother or whatever it is, and like a simple of terms



possible? Because it gets very technical very quickly. How do you describe nostre, the protocol, and then what you're building, Dominus the app. And if it makes sense to sort of go really more slowly, one step at a time, we can just start with the protocol and then get to your app later.

William Casarin 11:56

Yeah, maybe we'll just start with like, motivation, because a lot of the time it's like, you know, why are we doing this stuff? Like, why are we doing these crazy things with protocols? What's a protocol? You know, I always like to start like, what is what what is the protocol says, even my partner, like, always gives me she's like, she's like, You keep saying protocols? What do you actually mean by when you say protocol. So when I say protocol, it's all it is, is a language for two computers that they have a shared common language that they can talk to each other. So imagine in the world where, you know, I'm talking to someone, I don't speak their language, it's really hard for me to, to actually, like, do things with that, like in terms of like, coordinate tasks and stuff, I have to, it's very hard if unless you have a common language to kind of coordinate things. So that's all a protocol is to a computer, it's just a language that they can use to talk to each other. And then once you have that language, then programs from one side of the world to the other side of the world, and computers, they can actually start to do things automatically in interesting ways. So one common example, is your browser. So your browser is it has a suite of protocols. So it knows when to talk to a server, it pulls down a webpage, and then there's protocols that just say, Hey, you, this is how you render the web page and whatnot. So protocols are everywhere, and to kind of underlies a lot of our internet technology. So, so just starting with that, so just know what a protocol is, you know, nostre is an attempt to build a protocol for social media. So why would we want to do this so there's a big issue on the internet right now, where a lot of our a lot of the ways that we interact and a lot of ways that we talk to each other, we have to go through these centrally controlled, you know, corporations and companies that have unilateral ability to, like, take you off the network, and then completely, you know, D platform you and things like that. So there's been attempts to and so that's, that's a huge issue. We don't we've we're in a free society, we want to be able to interact



with each other and speak freely with each other, and, you know, send our ideas and ideas out onto the network. But you know, if you have one central party controlling that it makes it really hard to win. And what ends up happening is that people self censor, and they stop, they actually stop saying the things they want to say because they're worried of getting banned. So that's a concern. So anyway, so nostra is this attempt to like, Hey, how can we rebuild the existing systems that are centrally controlled so that they can be the so that not one party can control what people are allowed to say? So there's there's been multiple attempts at this there's there's Macedon is one protocol, activity pub. But not sure it's like this other attempt at building something that has better properties than these other protocols, but which which we can get into so

Jake 14:21

so I don't want to go too far off track here. But it's an interesting point, I think you brought up which is like, the obviously censorship is sort of a lively discussed issue, probably more so now than it was even just a few years ago. You know, like Bitcoin and, and it's basically like one of the big value ads of like, people are all about like, decentralized, decentralized, decentralized, but the thing to me decentralization is basically and feel free to disagree here, but it's like, pretty much a means to an end. And there can be different ends like to which it to means, but one of those is censorship resistance. And so, you know, in the case of social media, Uh, if you're, you know, Donald Trump, you just got banned overnight on like, all of the different ways that you reached everyone in the world who follows your tweets and your messages and whatever it might be. If it's, you know, in the case of money, you had the example earlier, I guess last year, some point maybe, I don't know, maybe a year ago, or something like that, where the truckers in Canada who were protesting had, like, their bank accounts, frozen. And basically, it's what you're talking about, it's finding whenever there's centralized control of something really important, whether it's a social media website, or, you know, the financial system, there's inherent risk to that, like, you know, small group of people or individual who maintains that control does something that you basically don't agree with. And so, you know, that's sort of one separate thing. But the other thing you mentioned was like, people start self censoring. And I wonder, you know, the,



the issue of having people able to share what they want, is different from like, whether they actually do, and I wonder how much of the self censorship comes from the possibility that you say the wrong thing, and you get censored versus sort of the public pressures of like, this is just going out and being seen by so many people that I can't be the same person that I am in a group of six people that are my friends. And so I need to like self censor a little bit in that way, too. And so I'm wondering sort of, if you take away the big controlling censorship, you know, what, to what degree do people speak more freely? And to what degree it is that social dynamics still lead to sort of this, you know, self censorship that we see on the internet, where people aren't really being themselves in some way?

William Casarin 16:40

Yeah, yeah, there's definitely multiple forms of self self censorship, like you, like you mentioned, that's probably what you mentioned, is probably the bigger one, which is, you know, social norms, you don't want to say things just like, and ostracize yourself from from the group. But when I mentioned, I specifically mentioned the one about, you know, depending on there's another form, which is like when you're on a platform, and you know, you have to be worried about like the terms of service, things like that. I mentioned this, because, you know, there's this other solution to, you know, the centralization on social media problem, which has has been activity by witnesses this other protocol. And this is, I was actually on this protocol for about a couple of years. And I realized the biggest issue is, I was self censoring myself, because there's actually much fewer admins. So on Twitter, you know, the Elon move their trust and safety team, and they make decisions on who's allowed to speak or if they, if you say the wrong thing, they'll kick you off. But in these other protocols, you know, there's a usually the small communities of people, and you know, if you have to follow what that small group set is, that is appropriate speech for that small group. So I noticed when I was joining us small incidents about like, in and I was like Macedon, social, even if I just said Bitcoin, I'd get banned. So I was noticing, I was censoring myself in those smaller communities. So I'm like, all of these assumptions are very similar, this idea of, I want to be able to be comfortable to say what I want to say no, and, and I don't want anyone to have any control over me in terms of what I'm



allowed to say, I should be able to say whatever I'm allowed to say. So that's why I started working on nostre, which is like, I want something where I can actually build my social graph and maintain it throughout time. And not worry that, you know, whether it's a small instance, on Mastodon or like a large centralized party, I don't want them to like, kind of make me self censor myself, in some sense,

Jake 18:21

right. And so people aren't, I think that's like a useful, useful way to look at it. And to describe it. So just take that like, sort of a step further. You know, people are used to interacting with like apps, and we're talking about like protocols, and it can be difficult to understand how nostre actually solves this problem that we're talking about here where people don't feel the need to self censor, to, you know, please, or rather like, not offend a few admins and control or, you know, the team at Twitter or whatever it might be. And I think a part of that is, you know, in this case, due to the fact that like, people can choose to participate in different apps. And there's the underlying protocol, which sort of has no opinion, no admins, things like this. And then the apps, you can sort of choose to move between them. But how does that actually, like, what's the best way to describe that to, you know, someone like your partner, who you're saying, like, you know, ask you like, what's the protocol? Like, how do you in the most simplest terms possible? How do you describe how that sort of solves this problem that we're talking about? Yeah, so

William Casarin 19:25

one possible way to describe it would be so another example of protocols like the email protocols, everyone's very, everyone's very familiar with this protocol. You know, the, there's many different clients on this protocol. So you can use your Outlook, you use your Gmail, but the reason why they can all interoperate is because that underlying protocol or the underlying language that this computers can use that use to talk to each other. So one big issue with email though, is if you want to, so usually the service provider will just host all of your email, right? So if you get banned from that provider while you might lose access to all your email it maybe if you're lucky, you're able to sync it down to your computer and stick it somewhere else but In reality, like you just kind of lose access to



all your data where nostra takes a different approach. So instead of only just sending the notes, sending the emails to like one server having storing, storing it all in one central server, whenever you do a tweet, or whenever you post, it actually sends it to like N servers or like 10 servers. And so this kind of gives you a lot of interesting properties. So that gives you censorship resistance. So not any one individual, one of those servers can well they could ban you one of those servers could ban you, but doesn't matter because you have nine other copies on other relays, they're called. So what basically how it works is, when you when you spin up this client, this nostre client, you'll just connect to those 10 relays, everyone else that you know, can can connect those 10 relays. And then you know, your client will just fetch notes from all those, all those relays at the same time. So if one with one of those relays behind us, it doesn't matter, because you can pull it from the nine others. And you can always add and remove relays, you can run your own relay, so you can backup your own speech on your own node. So it's, it's very similar to so in some sense, if you think about if you're using the Twitter app, it's just it's just, it's just a client that has one relay. It's like they're it's their server. Whereas an ASHA app is like it's your client now talks to 10 servers and not so it's a very simple idea. But it gives you a lot of interesting properties.

Jake 21:14

So with the the censorship, would that occur, or the banning or whatever you might want to call it, would that occur at like the relay level? Or like the app level?

William Casarin 21:23

Or both? Yeah. So ideally, clients will not make any moderation decisions for you. Like the ideal client is just one that connects relays and receives and sends and receives messages. And it also would give you ability to filter things you don't want to see block people you don't want to see. But in terms of. So yeah, so you could in theory, build a client that just like blocks certain people, but it wouldn't no one would use the client system. So yeah, I think the most realistic scenario, if they're for censorship is if like a relay is removing illegal content, which is what they probably should be doing anyway. And, you know, or just, or if someone's spamming their server,



they might want to block that person. But yeah, it's just it's much harder to kind of like censor people in this protocol, just because not one person is in control of like the one relay that everyone connects to. So right, and

Jake 22:12

is there any risk, especially early on, while things are still growing of like, you know, the various relays like, you know, being in communication with each other and deciding on certain things, like you said, sort of like the I forget the name of the app was that you'd use previously, that you said sort of you and you use it for a couple years, and then you didn't really like it so much, because it was like small team of admin. Is there any risk early on? Well, there's not that many relays that something like that sort of forms? Or are you already sort of past the point where that's a concern in your mind?

William Casarin 22:45

Well, you know, it's just so when I was comparing to so and so what else compared to the previous thing I was using, which is called activitypub, and Macedon, things like that. The issue with those ones is the same issue that the the email, that email problem that I mentioned, which is all of your all your social graph is stored in that one instance, on the activity pub site. So that if if you get banned from an instance, you have to start over. So it's but in Nasr, it's not as bad as if you get banned from one really doesn't matter, because all your stuff is still backed up everywhere else, and you can back it up locally. So yes, in theory, all 10 of those relays could collude and ban you, let's say they have some messaging, you know, behind the scenes. But in reality, then people would quickly recognize that and just like, spin up new relays that don't do that. So it has this like self healing property, that it's much easier to kind of, like, get around censorship versus in the Macedon side, where you just get banned from an instance and you got to start over and it's really pain in the ass. So I think that's kind of the main benefit. Right? So

Jake 23:41

we've been we've been talking a lot about Nostra, but we haven't yet really dug in on on the actual what you're spending most of your time on these days, which is the client, the abdominus. So can you talk



about, you know, I think six months or so that you've been sort of grinding on this thing? What was part of the original motivation? We talked about, like sort of the motivation at the protocol level? Does that sort of lend itself towards motivation on Dominus? Did you think you know, what made you think like, oh, I can go build to a better client, and then I'm seeing out here than anywhere else is gonna build the next six months, some of the principles you took towards what to actually build something that sort of looks a bit like Twitter, but obviously, there's a lot different going on, you know, for all the reasons we've talked about. Just how did that get started? And how's the progress been did it

William Casarin 24:25

so the protocol itself was created by someone named Fia, Jeff, he's, like a pseudonym. I think he started into the 2020. So it was like two years after, you know, after he created this, and there was all the clients that were available, were kind of slow and crappy. But I was looking at the protocol. And I'm like, there's no reason why these things should be slow. Like we should be distributed really fast. Should be really fast. I don't really understand why all the clients were just so kind of buggy. So I was like, Hey, why don't I just tried it. So my basics, I created this. I wanted to create a mobile client. There was no mobile clients at the time. So hey, I had an iPhone at the time. So like, hey, let's see if I can actually just make a client even I've never made an iOS app before. I'm just like, I just want I want to I want this client on my phone. I think we can do it much faster. So that was the main reason for building Dominus. I just wanted to prove that this protocol is so much more than what these other clients were kind of. Anyway, so yeah, I just been tinkering. tinkering on it. Like in my spare time, on weekends, whenever at the time, it wasn't like full time dev or anything. But just because it was such a simple protocol, it was very easy to get something working very quickly. And that was that's the thing that kind of blew me away right away. It was like, Wow, this thing. It's so simple to build on that. I can see any dev just like reading this like one is it all I did, I read a single markdown document. And I was able to build this client that does all these amazing things. I'm like, this is going to be the thing that makes it be adopted like wildfire, just because it's so insanely simple. Like there's a lot of other things like web three,



like, you know, solutions, and they integrate with these, like complicated blockchains blockchains are very complicated. And they, you know, they're slow, and they're not really meant for like fast, real time, you know, fetching of threads and stuff like that. So I realized like, okay, we're not a blockchain. It's super simple. Anyone can integrate with it. Like, these are the these are the ingredients for like a really successful decentralized protocol. So I'm starting to see that now. There's so many clients, it's like, 20 clients or so. And it's kind of just growing like wildfire. So I'm really excited to see where that's gonna go next.

Jake 26:16

And what was the catalyst for this? We talked a little bit about, like the, you know, Jack donation earlier with that sort of a critical moment in time, or was there something going on before that that was brewing? Because it sounds like I mean, even I didn't actually download Dominus until, I don't know, maybe a week or two after I think the jack donation sometime sometime around Christmas, so just a couple of weeks ago, and I think it was that same day that I started on it. You put out a you know, you put out a post saying that like basically the testflight was full, I think you guys reached 10,000 users that day. And so now you're grinding towards getting it out in the app store. But what were sort of some of the pivotal milestones thus far, and what do you think's like next, next to calm?

William Casarin 27:02

Yeah, I mean, it was pretty slow. It was, it was just kind of like all these weird nerds are just tinkering with the protocol. There wasn't like, you know, we did this event in November called nostra November, which was just like maybe like six of us. Just just posting on only posting on Austria and not Twitter. I think I got to like halfway through the month, and I gave up on us because like I wanted to do. And I still love Twitter, I guess it's a great client. I just wish they would like integrate with OnStar. But yeah, it was it's always been very slow. And until the till the jack thing, the jack thing just kind of blew everything up. It kind of Yeah, whenever ever since he said that, like that. 5000. Anyway, yeah, it was just, it's just been crazy, like ever since he did that. You know how to call Jack. And



he's an awesome dude. And he just he just wants, he just wants these protocols to win. And it's cool to see them supportive. So

Jake 27:47

how can you mentioned like, Twitter should just integrate with Nostra, how does it how would that actually work? Like is that a feasible future that you think is possible?

William Casarin 27:57

I semi jokingly say that but I truly believe that a large social network could integrate with it, because it's a relatively simple protocol. And you know, to build a relay for the Twitter side, the way that it would work is like they would simply just spin up like a Twitter relay, and then a Dominus client could connect to it. And then, you know, there's no reason why it couldn't pull threads. Same way that, you know, the Twitter client does it. So in theory, I believe they could probably do it. And I think it'd be really cool, I doubt they'll ever do it. But there's other social networks that are that have already done it. So it's like mines.com is one example. And they have a relay. And you know, it's a, it's an insane relay, you connect to it, and like a firehose of like crazy events and stuff. But you can do it. And so it's cool to see that we're already starting to see a little bit of interoperability and adoption on this thing. So

Jake 28:41

yeah, it's interesting. I know, you know, a lot of these big players are probably gonna be hesitant to touch anything new and upcoming and disrupt their own business models and things like this. But the possibility, the fact that the possibility of an exhibit, it's kind of interesting. I think about

William Casarin 28:59

the Yeah, I mean, a lot. I haven't really mentioned this, but you know, we're focusing on the social media use case. But in reality, this is a much more general protocol. So you could use it for, you know, a blogging platform or like built, you could build an app on top of it that just uses it as like the data storage layer. It's very much like a Firebase type. I don't know if any people know about fire. I don't know the technical level of the sciences. But it's, there's,



it's like a real time database that you that you can build applications on. And social media is just one. Just one use case. There's other things you can build on it. So what's cool is that once you build on it, all of these, all these apps are in theory interoperable. So I can do a tweet and I like show up in like a notetaking app. I don't know why you'd want that. But I'm just just saying it's like, you know, the interoperability that that is enabled when you build on top of nostras is really is fascinating, and it's not even really been explored yet. So

Jake 29:49

are there are there particular you know, I mentioned like a blog I've seen like there's, I think, early versions of, you know, more of like a telegram or WhatsApp type of thing. There's I think a game or two, maybe more people are building on nostras. You know, the social media thing makes sense for the sensor censorship issue that we've talked about, are there other sort of categories that you think are most interesting? Or that would be, you know, from an interoperability perspective, intriguing along with the social media stuff? Or are you sort of just heads down right now on, you know, social media and Dams?

William Casarin 30:29

So I think, so it's interesting. So we built this, this thing where you can connect to multiple relays. And mainly it was it was for the original reason was for censorship resistance. But it also enables this other use case, which, you know, imagine if you connect to a private relay that's maybe run by your company. And he only only in that case, you only need to connect to one relay. But now you have a private slack that you can use, you know, the Dominus app to connect to and chat and like slipped in, or like a telegram like client where you can connect to, and have you basically run your own slack node in your in your, within your company, which I think that's a kind of an interesting use case. And then since so, let's say you just connect to that one relay. But then you can connect connect to an another relay that's run by another company, now you're connecting to that person's that company's Slack. So even though originally it was meant for centers of resistance, this multiple relays, in reality just allows for actually a really flexible way to connect to multiple servers that



are holding text data and stuff. So no one's actually doing this yet. But I think those types of use cases might be really interesting in the future.

Jake 31:38

Well, and one of the coolest things I've seen so far on actually on Dominus itself is people are sending payments, basically, like micro payments or buying each other coffees and things like this. I don't know how that sort of stuff gets started and becomes like a thing, but people are doing it and there's like, you can invoice people basically, how did those integrations work with Lightning Network? Are you seeing like, is this something different than you've seen elsewhere? I haven't been nearly as involved with, with lightning and whatnot. So how is this you know, potentially going to change the way that things are working on the Bitcoin lightning side of things?

William Casarin 32:12

Yeah, so like, at being like, being a big lightning person. And you know, being involved in working on the protocol, it doesn't seem like a natural thing to do to put lightning into a social network. And I think it's just seeing how people are interacting with lightning on on Domus and on Nostra. It really, it was a big lightbulb moment for me, because I realized, okay, we're hooking in peer to peer instant, you know, payments tipping. In this, like, decentralized network, the network effects of that are potentially like insane to think about. So imagine if like, you have hundreds of 1000s of people, eventually on this network who are sending or loading up their wallets in their app and tipping people. And, you know, like, what would that I think that's going to drive like even just like Bitcoin and lightning adoption, so as a big winner, that's makes me happy. So just being able to integrate with lightning as tightly as possible is always been a goal of dharma. So the way that it works right now is all you do is that you just post a lightning invoice, which is just a piece of text, you paste it in a post, and then Dominus will parse it and put a little payment widget US press on. So things like that I really want to, I really want to do more of within the app just to make it easier for people to interact with this, this protocol. Because in reality, people don't really want to, they don't want, they don't care on how these underlying things work. They just wanted an easy way to interact



with them. So if Domus is able to do that, and make it easier for people to interact with Lightning Network, that's like a, that's really cool.

Jake 33:34

Right, and then another cool thing I'm seeing going on as people are actually sort of, like funding you in real time to, you know, to do what you're doing, and to build on this and everything like that, I think you have like \$100 million, Satoshi goal on your like, on your website, and you're maybe 15 or 20% of the way there. So people are sending, you know, 1000s of dollars worth of bitcoin at this point. So the goal is basically like a full Bitcoin. But how are you actually, you know, it's nice to have like a constant stream of, of donations. And most of them, I think, at this point are small, but they do add up. But how do you think about overall, like, Are you full time on this at this point? If you're not you, you know, do you want to be? How do you sort of raise enough funding to that you just run extremely lean? And these donations are enough? Or do you raise money? I saw the tweet about, you know, turning down people with who aren't offering Bitcoin only basically, in terms of like VCs and stuff like this. So how do you think about actually sort of making this, you know, leveling it up a bit and going full time and try and blow it out the best you can?

William Casarin 34:40

Yeah, well, luckily, I've been getting lots of help from the community. It's an open source project. So I probably have like 20 people who are just helping me in real time. So in terms of like that side of things, I'm covered and also, Jack was very generous and was able to donate a decent chunk of money directly to me to work on it. So just the amount of support that I've been getting just from the community and also Yeah, just people tipping me in real time, like, like you said, you know, just the past five days people present me \$5,000 Or like \$44,000 on the Lightning Network, just direct to streaming tips to my node. And so it's like a no that are on at my house. And this is it's just, it's just mind blowing to me that this is impossible. I'm running a Bitcoin node at my house and a lightning node, and people just stream it from around the world, people just streaming SAS to me just a fun, because they want this to become a



reality. And maybe that's like a new type of funding model. I don't I've never really been a big believer in, in tipping for sustainable long term stuff. But, you know, maybe if there's like a lot of people in the Lightning Network that could actually in theory become a good way to, you know, fund a developer in the future, maybe instead of having to raise a lot of money. But yeah, I do eventually want to want to grow this out. And I have a lot of you see meetings, there's like a huge, there's a long list of people who I'm stoked to talk to you just because a lot of people want to invest right now. But I don't I don't really have like a bit a co founder right now I have to think about that. But I whatever right now, my main focus, just making this app as awesome as possible, just to keep it keeping people happy. And just to see where this goes. And who knows, like I don't know, I would love this to be could be big a bigger thing. And we're definitely getting there. I just, it's been crazy. So

Jake 36:05

yeah, no, it's awesome. It's really cool to watch. And we're talking a little bit before we started the recording, but I'm just like, sort of in awe of anyone building anything to do with like social because you have to on the one hand, like be heads down working, and then on the other be like heads up, like engaging. And I see you on like all the time always messaging people and stuff like that. I'm like, This guy's got to carve out time to be like heads down coding and everything. So just a super hard balance of that been, have you been able to sort of get your arms around it ever since things like crazy with adoption sort of overnight?

William Casarin 36:40

Yeah, that is true. You say it's like, it's insanely hard to work on a social network and work on a client for social network when like you're working on the app, and then people are asking you questions, and you feel the need to answer everyone's questions, because it's like it, you want to help people. And so I'm still trying to find a balance. But it's yeah, it's very difficult. I find like, I've been just like applying pull requests, and I'll just like, answer people's questions. And then while I'm applying pull requests and testing and stuff. So I'm lucky that I'm getting enough people working on the client that I'm not doing a lot of like direct coding, or at this



time, but maybe once the pull request slow down, I can probably have to put my head down a bit more in start coding again.

Jake 37:15

What's it like? I'm curious, you know, both in terms of like, this team of like, maybe 20 or so people around the world, presumably, that are all chipping in. And then on the other side of things with, think Fiat Joffe, Fiat JAF, however you pronounce it the, you know, synonymous or anonymous, founder of or creator of, of nostre, how do you sort of communicate up and down or, you know, I presumed like you're having some conversations with Fiat Joffe in terms of what's going on with the protocol and what you're building on the dominant side, and then managing or helping to at least sort of organize to some degree, this decentralized group of developers, it's like sort of a very new, you know, there's a certain way that like, companies and corporations have been built over the years, and it's been sort of, you know, simplified and worked down to a science, whatever you want to call it, it's very, you know, it's time tested all of this sort of new ways of organizing, whether it's something that we're talking about here, or people talk about Dows and whatnot, like, there are all these different sort of ways of organizing now. What is your experience been in this sort of position? Both, you know, above and below, you know, above, but you know, with Fiat jobs at the protocol level, and then all the people helping out around the world? How is that different from like your traditional experience working in more traditional structures?

William Casarin 38:38

Yeah, it's definitely not hierarchical in any means. It's very decentralized. As an open source project, the protocol itself, is just a bunch of Markdown documents. And loosely like a, there's a bunch of few people building clients, but they're all pretty much independent, which has been really, really cool to see. Because I'll find that someone in a class and another client, they'll implement a cool feature, I'm like, Ooh, I want to implement that. So the competition between clients has been really fascinating. And I've been, I've been getting this a lot of thought. And I realized this is what's lacking in a lot of these centralized platforms is like, since they control the data, they don't really have to compete with other clients or



compete with other user experiences on on the same like social data, right? So imagine, you know, okay, we have this social network where people are sending messages back and forth. But now we have clients that can compete for user experiences, so get more people into their clients. And so what's going to happen is, you know, these clients are gonna get better and better faster than any other any other client that a centralized client could provide. So I think that's really fascinated like free market aspect of what's happening with on this protocol, in the same sense of like an email client could try to provide features that another email client might not have, right, so you have that similar competition on Austria. So that might make some really cool clients we haven't haven't seen before. So

Jake 39:55

yeah, it's interesting to competition in and of itself, obviously not welcome for companies but great for customers just tends to make products even better across the board and things like this. And obviously people can choose, you know, if there's no dominant Twitter or Facebook or whatever it might be choose between what you want and what you like. And that can sort of drive the roadmaps of the leaders and things like this. All right. So and then you mentioned you know, we talked about I don't know, if it's actually different are the same, the 14 BTC donation now there's public? I don't know if there's another separate one that you personally or whatever, but I think you guys you're working with Dr. Joffe. Correct me if I'm wrong on sort of like helping, you know, allocate the donation that was public? How do you think about, you know, doing that it sort of lends itself towards the same question of like managing this decentralized workforce, or working alongside collaborating this decentralized workforce? What are the thoughts around like, sort of the best ways to allocate that money and these early days,

William Casarin 40:57

so, so if you had, Jeff originally got the 14, and he would just probably too much for him to manage all by himself. And he felt like there was too much pressure, so he sent me half of it. So now, you know, we were both mostly independent in terms of how we want to spend it. But in reality, we're still in the same group chat. So we still trying to figure out what's the best way to define people who are



working on stuff. My personal approach is I'm collecting a list every time someone who's like contributing something really substantial to any project on nostra I'm writing, I'm asking them for their bitcoin address, and I'm writing it down. And you know, the people who are contributing the most in across, you know, all the clients, even if they're competing with my client, we're going to be rewarding those people and people who stick around for a while and not just like, come in just and leave. So that's the way I'm approaching it. And I just, I didn't feel like that's, that makes the most sense, because like a meritocracy type thing, right, where people should be rewarded for doing putting in the work. So that's been my approach. And and so I'm going to do another rounds, I gave one bitcoin to VHF, just like as an award just because like, there's a thank you. And we send out a bunch of the thank you rewards. So we send about 5 million SATs to like 10 of the core Devs. But I'm now building, I probably have a list of like, 10 more people who I'm gonna send another 5 million SATs each, just reward them for all the work they've been putting in since then, working on clients working on contributions to clients and things like that. So

Jake 42:12

that's it's a lot to handle. And it's uncharted territory. So I definitely sort of admire that you're taking up the task. And it's, you know, like you mentioned, I sort of asked you to describe the whole thing, very fun mentally, and you started with the motivations, which I think is very telling, like most people, you ask them how their product works, they don't really start with the motivations, right? That's obviously like a very ideological thing. And, you know, I think there's a lot of people who agree and disagree across the board, especially like, people or Bitcoin only, versus people who aren't, and whatnot. But I think there's actually a good amount in common between even these groups that can get a little tribal on Twitter. And I think, you know, it's just, it's great to see people sort of building things that they care about, for more reasons than just, you know, money. Not that anything wrong with money and everything. But there's, there's real reasons behind it on so it's cool to see.

William Casarin 43:04



What's cool about this project, it's not an it's not a Bitcoin project, right? So it's because nothing, there's no Bitcoin built into it. There's a lot of Bitcoiners in the, in the protocol right now, just because it's like, you know, as created by fiat, Jeff, he made a lot of Bitcoin related specs and stuff. But this network is open to anyone. So there's like, you know, there's people in Syria and people on it, there's Bitcoin people on it. And I totally imagine the future where there's, you know, if you want to an Aetherium, like experience with NF T's and all this stuff within an app, there's no reason why you couldn't build it on Nostra. And you can have your own clients for that, like, you know, I think forecasters kind of doing some that something similar to that right now. And that's kind of like the theory and version of the it's not in Austria, but it's like they're doing their own thing. But there's no reason why we can all interoperate on this protocol. So

Jake 43:43

that's interesting. I, I'm excited to just sort of see it all play out. And I've I've never experimented with more like social apps than I have in the last like six months or so just because it seems like there's new stuff coming up. That's I don't know why exactly. There's just more intriguing to me now than, than it has been previously tried to stay. Usually I try to stay off, things just kind of can't seem to manage my attention with too many of them up at the same time. But anyway, I guess the last question, because I know we're coming up on time. Fast forward, you know, I don't know, a year from now, three years from now, five years from now 10 years from now, whatever sort of time horizon is most interesting for you to talk about? What's, you know, best case scenario or bull case? What do you see for the future of nostre? And Dominus?

William Casarin 44:30

Yeah, maybe if this thing keeps growing, you know, we start to see it more widely adopted into other apps and, you know, other products and, you know, different services, like could be integrated into a lot of, you know, customer service stuff, like more and more, who knows, like this, this could just keep growing to the point where it's used and everything like that, it will be the opposite of the most ultimate bull case. You know, the, you know, the the bear case for this would



be, oh, we find some like scaling issues or the spam gets too bad on the network. And then just thing just doesn't work in practice and then everyone goes back to doing something else. Like it's entirely both of those things are entirely possible. So yeah, my focus right now is like hey, let's just try to make this thing work in so that it can be built out to a larger scale but yeah, it's really uncertain right now who knows what's where this is gonna go.

Jake 45:17

Very cool. Well, anyway, I appreciate you taking the time and it's been a lot of fun playing around with this stuff and now getting to talk to you and learn more about it from one of the main people behind it was really cool so and hopefully people listening as well. They haven't tried it yet. They'll go and I guess they can't quite download it yet right now because the testflight got voted and they have to wait for the App Store is that right?

William Casarin 45:41

Yeah in terms of my client you it's I'm I can open up slots as they come but it's like they keep filling up because people can keep trying to use it but you can still try the protocol and you can interact with people on Dominus by going to like astral that ninja or snort does social or there's a bunch of other web clients that you can you can check out and if you just go to nostre dash protocol slash nostre I think and there's some links to our telegram you can join join the telegram and ask questions like that you know and we'll get you started so

Jake 46:09

cool. So and anywhere else you would find people like you know follow you on Twitter or anything like that where they're sort of just keeping in touch with you know, latest what's going on at both protocol level and Adonis?

William Casarin 46:21

Yeah, I'm more active on Nasr these days. So you'll probably see me just chatting there's like global feeds and you can see me chatting in Austria. I'm not gonna say my pub key because it's very long. In on Twitter, I'm GB five five I sometimes post they're trying to do less

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