

(cleaned) Participant 33 and TE Study

Lisa Wocken 00:02

Got it. Okay, thank you. Okay, so current take on token engineering

participant 33 00:08

from the top. So we've got sort of token engineering is engineering, which is, you know, application of scientific knowledge to create new stuff. And we have sort of the fodder of new stuff or the this idea of tokens. And tokens I find interesting, because they're sort of the, the heart of the current horizon of digitization, which I've been involved in, you know, since since the sort of mid 70s. And automating collection of data, that sort of thing and experiments. So it's this idea that, you know, we have, we have a representation of a body of information, in this case, sort of the state of a, usually some distributed ledger technology. And so, you know, what, what, what, what, in what can be done with that, this, this new sort of layer of digitization that's, that's, that's going on?

Lisa Wocken 01:22

One of the things we've been pondering is, is token engineering, as words is that the appropriate name for this emerging field, we have had people throw in other words like tokenomics, or crypto economics, what's your take on the different terminology used in the space and what you think is appropriate going forward?

participant 33 01:43

I think that if anything, the field needs to be broadened and not not not sort of made more specific. tokenomics To me, refers essentially to tokens as a representation of value, and in particular financial value. And there's so much more than that. And, you know, engineering is a field, that's sort of the application of science. And the sciences required to really understand what we're, what the potential here is our very broad, I mean, economics is one of them. But so psychology, so sociology, you have to understand human motivation, and your Learning and Motivation, we have to understand how all how organized, how to help people organize into groups, and get to get stuff done there. You know, the whole idea is sort of incentivization, you have to understand what people think are motivating in order to incentivize them. So it's much more much more broad than, than just thinking about it as, as a substitute for a dollar

Lisa Wocken 03:12

Now, you mentioned your token engineering adjacent. Tell me a little bit more about the practices that you engage with what your typical day to day and process flow or, again, we're trying to get at the practices that are existing within the space.

participant 33 03:28

Um, it's not so much understanding or developing. You know, what, what a token it actually represents, both in terms of sort of structure and function, but rather the context in which the token exists. So what what does the organization look like? Sort of what's the what's the, you know, the current state, what are they trying to represent with this token? And then from there,

token engineering has a, as a basis on which to occur. So it's certainly it's kind of the preliminary step prior, collecting the information necessary to do a good job of token engineering.

Lisa Wocken 04:17

Just to get a sense of where you see yourself situated in the token engineering space, it sounds like it's more conceptual and consulting. How would you paint that broader picture?

participant 33 04:27

Well, you know, I think the usual ask is, we've, we've got this great idea. We think we can tokenize it, we just want to make sure we engineer the token, so that it does what we wanted to do. There's a major major sort of presupposition there that the people asking the questions know what they want the token to do. They may have this broad conceptual idea of kind of what they wanted to do, but it's going to be operating in a in a, in a concrete context. And understanding, you know, the complexities of that context are critical in order to sort of get the result the outcomes that the people want to get. So that's the, that's the, that's where I work.

Lisa Wocken 05:20

Yeah, and the last piece on sort of the daily practices are there any tools that you know, are prevalent in the field or that you particularly rely on or resources that you frequently point people toward?

participant 33 05:31

Pointing pointing people towards, I work for \$name\$. So I have to point people towards \$CAD CAD\$, it's a wonderful simulation tool. And in these complex systems, you can't figure out a priority, sort of what the, the behavior is going to be, you have to sort of define the boundaries of the system you're trying to create, and then have participate in somewhat of a trial and error, trying to figure out sort of what behaviors drive what outcomes. And and so you're this, this whole idea of modeling the system's digital twins simulations based on those digital twins, that kind of thing is critical. But again, my main input is is sort of the information that is required to build up such simulations rather than the building of those simulations themselves.

Lisa Wocken 06:43

And within that, is it primarily conversational, or what specific articles or outlet

participant 33 06:50

making sure that you understand, you know, sort of the, the organization, it's one thing to go to, you know, a fortune 500 company, and you're pretty damn sure there's like a CEO on top, and there's like this operational side, and you know, what the basic structure is, but the thing about about the, the web three space is, it's, you know, it's something of a, of an experimental field, people are trying out all kinds of different things. So there, you can't go in and assuming that, you know, sort of the dynamics of any organization, you have to you have to basically take it from scratch.

Lisa Wocken 07:30

Great, we're curious as to what areas do you believe are essential when it comes to knowledge that people would have in order to be an effective token engineer?

participant 33 07:41

Well, you know, engineering is a discipline, it's a very broad discipline, it's gotten it's done, it's, it's, you know, sort of been proven through the ages. So, I think knowing what engineering is, is is very important. So, you know, being able to both being able to apply engineering in both sort of to quantitative information, which is kind of the standard engineering practice, but also to be able to apply it you know, with qualitative information, the idea that sort of you know, sociological interviewing, we use the got some people who are who are sort of steeped in an ethnography, so, this, this whole idea that you can't observe a system from outside the system, you have to get into it, and then you can record sort of the narrative of of that interaction, that type of qualitative information being able to integrate that into an into an engineering paradigm is is critical as well.

Lisa Wocken 08:55

Any other specific areas of knowledge that you believe are critical

participant 33 08:59

for your economics, mathematics, you know, and then psychology and sociology, to sort of understand the idea of incentivize behavior, which is you know, what economics is all about, you have to understand sort of formal language. presenting ideas in a formal language is what mathematics is all about. And then, you know, all of these systems regardless of how sort of automated we think of them, there they are, essentially automating the interactions between people. So you have to you have to understand what what motivates a person, you know, the idea of psychology and then what, what, what motivates groups of people on how they how they interact. So sociology is just as important.

Lisa Wocken 09:54

Great, thank you. We're gonna shift to challenges and needs some care. So what challenges you've faced working within the token engineering field.

participant 33 10:05

Um, other than, then I'd say the major one is kind of along the lines of what I, what I mentioned earlier, it's it's the simplification of what a token is. In the in the, the idea that even a simple organization isn't, isn't really a simple system, it's a, it's a complex system in and of itself, and has to be sort of treated in that fashion. So there are, there's no way to know all of the potential interactions ahead of time, there's, there's there is you have to accept the fact that, you know, there are going to be lots of unknowns. That that sort of thing. I think I know, by and large, people are, are coming around to that viewpoint. But I think it's still there's still a desire for things to be simple. They aren't necessarily so

Lisa Wocken 11:20

in addition to that, do you see any common pitfalls of people practicing in the space?

participant 33 11:27

Um, I guess, you know, sort of thinking thinking that you can, you can set things up a priori and, and just let them go. And they'll, they'll end up where you think they're going to end up. But because of the the sort of necessary or inevitable appearance of unknowns, you can't, you have to you have to it's a it's a it's a system where that has, that can only be sort of controlled that can't be what would be a good word can't be It can't be molded.

Lisa Wocken 12:10

I appreciate that response. I'm appreciating all these responses. Thank you so much. What do you see then as the most pressing need for the field right now?

participant 33 12:23

Um? Well, I think I think it's, as, as you start to get into the, you know, the recognition that you're talking, you're dealing with a complex system, I think, there there is a this, this is, this is more of a sort of a personal feeling than anything sort of objective, but I have a sort of a personal distrust to social engineering. And the fact that, you know, we're combining the idea of engineering, and then these ideas of psychology and sociology, you know, it can it can it can, it is definitely going in the direction of social engineering. And I think that the main problem becomes with us, this is, you know, you again, you have to, you have to assume that the there there is not sort of an optimal outcome. There are, there are sort of competing ideas of what optimal outcomes are, and the the, the the mechanisms that are being engineered, need to be able to, to sort of maintain organizational organizational coherence in the face of essentially conflict. You know, it's not all just cooperation. So, that's, that's, that's an area that I think is in need of, sort of focus in some more, some more effort.

Lisa Wocken 14:42

The next section that we'll focus on goes a little bit more in depth on a couple of more niche topics. And I think what you're sharing to lead as well to this first one, which is what is the role that you see ethics playing within the field?

participant 33 14:57

Ethics says it has a role everywhere. It's basically the same roll that always has is, it's the way in which you consider something to be right or wrong. You know, the outcome can be exactly what you think that outcome is. But you know, you should be but you know, is it the right? Is it right to do that? And what basis are you using to, to even come up with that, with the rightness or wrongness of it? Do other people agree with you? Are you just sort of trying to ram your own views? Through through the system? Ethics is always a concern in any human endeavor. So it is that that thing that allows you to discuss the rightness and wrongness of something.

Lisa Wocken 15:53

And so just so I'm hearing you is then the charge to token engineers to be doing that thinking and to be having those conversations are,

participant 33 16:02

and it is a conversation, it isn't just something that sort of you can sit down and come up with the answer yourself. It is again, it requires the understanding that there are conflicts, the understanding that there are different motivations. The understanding that there there is, there is diversity in the world. And we we need to accept it, we need to come to a balance, we can't just say this is the way

Lisa Wocken 16:31

building on that our next topic is really focused on diversity, equity and inclusion. And how do you? Let me see here, just so yeah, what are your thoughts on how we increase diversity and inclusivity within the field,

participant 33 16:46

work really hard. The field has essentially two filters that are acting against diversity and inclusion. One, there's an extremely high technological barrier to participation, you have to be a digitized society. There are lots of societies in this world that are that are still analog, they cannot participate. So they're there, their viewpoints of view will not be sort of incorporated into whatever we're doing. And then there's this the the, the, the expertise. Layer, I mean, we're talking about understanding economics, engineering, psychology, sociology, probably political science, you know, this is these are, these are, you know, each one of these is an academic grade discipline. there that just the number of sort of that select those, the selectivity of the of those criteria are pretty darn high. So you're going to be done, you're dealing with the property of small numbers, the odds of bias are massive, you're going to have it. I think that's the main problem. So how do you how do you sort of approach that? And I think, you know, there, there are certain ways of, of coping with inherently biased systems. And probably that's the best we can do for now. But, you know, we need to recognize the fact that just because we talked to, you know, everybody we talked to in this field, is a very small subset of the human race. So

Lisa Wocken 18:44

thank you. Um, the next topic is focused on finances. So in your perspective, what are the incentives or typical rewards for being a practicing token engineer?

participant 33 18:57

Um, let's see. The immediate financial gain is probably not in the cards, although you can probably get a pretty good pretty good living doing it even still. I think it is. You know, there are there are adventurous people, there are explorers comes down to diversity again, we're also selecting for adventurous people in support and explorers. And there are sort of the rewards that come with being involved in a cutting edge technology should have become mainstream. Everybody who's in it now has got a got a leg up. So I think that that's probably it. I think. If you're trying to sort of incentivize participation, I I think I would, I would you know, not use not not expect to be able to compete with sort of the big web to employers in terms of salary. But I think that you there's there's a, there's a very high draw to people who are interested in working on the cutting edge.

Lisa Wocken 20:26

Yeah, one of the questions we've been asking people is, what do you believe the average salary range per token engineer today would be?

participant 33 20:36

Doing? Great question. I, you know, in my prior life, in ad tech, I lead a team. So I could tell you, you know, all of the all of the job spec salaries, I don't have that responsibility now. So I haven't done I haven't actually sat down and think thought about it. US salary range? My my. I don't know. I really don't know.

Lisa Wocken 21:09

All right. So any, any other thoughts on financial before we move to our last section?

participant 33 21:15

Um, no, I think that that's, again, hiring is hasn't been my responsibility. So I'm in state of my life where I'm jettisoning responsibilities, I'm not trying to pick up new ones

Lisa Wocken 21:30

Sounds like a good place to be. Okay, so when it comes to the future, this is a two parter. What do you wish for the future of the field? And where do you see the field headed in the next three years?

participant 33 21:44

My wish is that the token engineering is sort of ready. Sort of, except its place in, in sort of the grand tradition of digitization. I think in particular, there's, there's a need in future computer systems, to be able to have a digital concept of concepts, sort of this, the idea that there's a, you know, a more abstract version of the idea that you can, you can sort of bad about that might the example I like to, you know, I've got a dog there, I've got a dog. But I can also talk about dogs in general, or I can talk about furry creatures in general, there's these levels of abstract abstraction that you can that you can build up. They're very useful in terms of building models of the world. And I think that sort of tokens, as they're, as they're sort of representatives of state in these in these sort of hybrid network level computation networks have that potential. And I'd like, I'd like to see what can happen in that in that area.

Lisa Wocken 23:07

That is your wish. But is that also where you see it?

participant 33 23:11

I'd love to I'd love to see that headed in that direction. And again, to take on more more more meaning than just than just sort of fungible fungible currencies. And the idea that the the types of concepts that a token can represent are mostly semi fungible. So how do you factor in sort of not only the attributes of the token itself, but the context in which those those attributes sets are valued by the environment in which they participate?

Lisa Wocken 23:56

As AI, technology continues to advance, we know it has the potential to disrupt the field of token engineering. How do you see AI affecting the field and what role do you see it having in the evolving landscape?

participant 33 24:12

technology in general, I see as a as a as a force multiplier. So whatever you can do without technology, you can do more of it with it. AI is no different there. I don't I don't believe at this time AI systems have anything approaching sentience. So like the apocalypse is not nice, you know, maybe 10 years, 20 years from now. Things weren't move really fast, but we're good for now. So basically, we're dealing with any other technology like any other it's a multiplier. And in particular, it can multiply complex system engineering analysis of the sort that goes on in token engineering. So it has also the potential of sort of maybe maybe allowing more people to participate in the same way that personal computers allow sort of more people to participate in analytical functions in quantitative analytical functions, or, you know, the generation of reports and outputs that kind of. So, again, we're multiplying, it's a quad, it's a, it's a, it's a, it's an efficiency, play. It just makes ethics that much more critical. Because now, there used to be a saying that, To err is human to forgive is divine, but to really screw something up takes a computer, you know, we're still in that state. So we can really screwed it up now. Because computers are really powerful. In that, in that sense, I think that can ethics and plays a huge role. Or at least it needs to.

Lisa Wocken 26:10

Yeah, that's been [for staff]. I haven't heard that phrase before. So thank you for that. And also, I, we've been hearing a lot of people say, that's why, even if it's broader than token engineering, they like having the engineering name tied to it, because it comes with some of that ethical underpinning. What are what are your thoughts on that? And how do we keep ethics at the center, given what's at stake this early on?

participant 33 26:40

In? You know, I think I think that the the professional ethics is a thing. professions have worried about it, and you know, not in a self serving way, but in a in a real way. And engineering, engineering is one of those professions in which ethics has a very strong history. I mean, an engineer, as a civil engineer, who signs their name on a on a, an infrastructure project, such as a bridge is accountable for that bridge, not falling down. And that sort of thing needs to work, I think we're talking about areas where we're, you know, that level of accountability is necessary to, to sort of maintain the ethics, the the ethical considerations that need to go into decisions being made. And we've had discussions, \$name\$, you know, what, what's the difference between, you know, engineers and scientists, or, you know, I got into computer engineering, or software engineering, at a time when the title was controversial? Engineers didn't feel that, you know, software engineers were worthy of the name, because they did not have the same accountability. And they did not have the same education, that that sort of focused on that accountability and the need for ethics that the, you know, a standard five year engineering

program, really, you know, has built it. So I would say it's, it's very important to maintain the idea of engineering in this field.

Lisa Wocken 28:39

Would you say that,

participant 33 28:40

you have the practice of engineering?

Lisa Wocken 28:44

And so would you say that software engineers have have now even though they don't write their name on something in the same way? Do you think they've rightfully kind of taken a place in the realm of engineering? Or is there still that kind of divide there?

participant 33 29:00

I think there's still that kind of a divide. That's highlighted in the fact that there is a, you know, law on the books in the United States, that makes companies like Google and Amazon and, you know, essentially, not not responsible for the social impact of their systems that are being made not accountable. So how many how many bridges would you draw drive across? If you knew that the, you know, the firm that built the bridge was not liable for its structural integrity?

Lisa Wocken 29:39

Yeah. For me, personally. Yeah. You know, it's interesting, because we only have a week or two left of these interviews we've already done, you know, 20 -25 I think you might be the 25th. And so one of the things that's becoming apparent is sort of this clash of perspectives with the software engineering mindset and move fast break things, but there's people in the token engineering field that are of that mindset and have that background and kind of learn as they go. And then others who have come through like electrical engineering backgrounds and have the full engineering suite, and have now adapted over into tokens. And so I lower my hand. And so I'm curious as to like, is that just a tension that the field will continuously grapple with, like software engineers and traditional engineers, or do you see a potential, you know, third option a way forward,

participant 33 30:45

um, you have to use the tools that are appropriate to the to the, to the application, there are applications that require sort of high frequency inputs, which would be the, you know, work fast break things, or there are applications that require, you know, lower frequency inputs, which are the, you know, the more designed first. M.O., the key thing is to recognize the potential side effects. You know, work fast break things is very good. If you also sort of taken to heart, the idea of, of sort of agile methodologies, which is, you don't take any big steps, it's great to break something, if you've only, you know, you still have your resting on three legs. So, you know, the fourth leg is going out and trying something, and if it breaks, okay, I still have three. But if you're bipedal, and you've picked your leg up, and it's going to land someplace, and that place that it lands is unstable, you know, you can fall over and break something serious. So you have to sort

of adapt to the situation that you find yourself. So in situations where the challenges aren't critical, breaking stuff is fine. If somebody's going to die, because something broke, you obviously don't want to go there. And I think, you know, again, engineering is the field that's dealt with both of those things, I think, in software engineering, sort of, yes. But really, they've been brought in and sort of encompassed by a standard, you know, more typical organizational or engineering r&d organization. NASA doesn't want rockets with people in them that blow up. So you know, they apply engineering principles, you don't want to a nuclear reactor to go critical on you. So you apply engineering principles to that. Even simpler things, even like a you know, a simple industrial site needs to be properly engineered to make it as safe as reasonable. But my, my worry with with software engineering is that everything sort of gets the treehouse treatment where you know Okay, I got a great idea, let's go build a tree house. And so you just do it. Sometimes the tree house stays up, sometimes it falls down. So hopefully you haven't built it up so high that you get hurt falling down. That's the that's the difference.

Lisa Wocken 33:57

Wonderful. Well, the very last question that we have for you is, even though we're coming to the end of our interview portion of our study, we're still interested in learning about whose work you admire in the space. And also if you have any recommendations that people you think would be great for us to include in this study.

participant 33 34:19

Um, unfortunately, my, I'm new to this, I've only been working for about two years. And as I said, I'm adjacent to token engineering, not in the midst of it. So I am, like, totally immersed in \$name\$ and what they do. I think they do really good stuff. But I'm kind of biased. But I also think that you're well aware of what \$name\$ has and probably have asked folks, you know, other than me to opine on this, but beyond that I don't I don't really have any names are so great.

Lisa Wocken 35:00

Any other institutions that you know, \$name\$ benchmarks off of, or that we should be thinking about what they put out,

participant 33 35:09

we like to think we're right on the cutting edge think I think an interesting look would be in some of the \$name\$ communities. They're probably, you know, as dynamic a group, as you'll find. So, you know, if you want to get into the work fast and break things mentality, that would be a place to look. I think, you know, I've got, I've got a little bit of experience working with \$name\$, a little bit of experience working with \$name\$, but not really with any folks other than, you know, just to I've tried to set up validation nodes, things like validator nodes, things like that, sort of the tech support group, rather than any kind of sort of would pass is token engineering. In you know, that may be one area to look into

Lisa Wocken 36:25

I love that I'm just out of curiosity, what in your mind, or maybe some extreme examples of token engineering in the space we've had, or maybe their projects you've even worked on, but we're trying to get a sense of like, what lives within the field of token engineering, so I love that you brought up \$name\$ as something that might be different but dynamic than \$name\$, what other projects or places come to mind?

participant 33 36:49

Um, I, you know, the, the main, the main sort of divider for me is, is, is on the technical side. So, you know, how, how fast or slow is the is the is the network set? You know, how much change can they adapt to, at any given time, I don't really have experience working with Bitcoin, but it's, it's the grandfather of the one, it basically is what it is, it changes in accordance with the needs, identified by, you know, a small cadre of core developers. So, you know, it's probably on the, the slow moving side. And again, things like things like \$name\$ that are, you know, they have the idea of not being a, you know, monolithic network, but a network of networks, is where you start to see the idea of, of change. And as a biologist, that would be somebody with a biology background, I'm very interested in interested in idea of things that can evolve, and the rates at which they evolve. So, you know, Bitcoin would be a very slowly evolving systems, I think it's been, it's been designed that with that in mind, whereas something like like, the \$name\$ networks, they can come and go as needed on this, you can spin one up as you need and spin it down when you don't need it anymore. So they need a much, much faster ability to, to change in that particular situation, I think the sort of the ideas of, you know, how do you how do you govern the system? How do you build the system with sufficient, you know, change, our ability to change, you know, sort of built into the structure? And then how do you govern this thing, once you've sort of got all these potentially wobbly pieces that are that are put together? How do you? How do you keep it from just shaking apart?

Lisa Wocken 39:15

Wonderful. Well, thank you so much. This has been very enlightening and interesting, fascinating for me personally, and just really have deep gratitude for your participation in this. What we do with all the results is we're going to be shifting over into analysis phase and then we'll have an initial findings report on the practices needs and challenges in July. And of course, you'll you'll be getting one of our first distributions of that. So thank you so much. Do you have any other questions on your end before we close?

participant 33 39:47

No, no, thank you got all the points I wanted to make out. So thank you.

Lisa Wocken 39:52

All right, opportunity. Well, thank you really appreciate it and have a great rest of your day.

participant 33 39:58

You as well.

Lisa Wocken 40:00

Thank you so much bye bye