

DeFi Explained: 2 men, 2 perspectives; 1 mission

We deep dive into the men behind the curtain at Radix, Dan Hughes 'the techie' building the platform and Piers Ridyard, the ever patient CEO! Both possess different yet important skills for launching a startup in the DeFi realm.

Maddyness catches a glimpse of how they work together and their first impressions, as well as diving into Radix and why it is and will be transformative to the DeFi industry.

Maddyness spoke to both Dan and Piers because something as impactful as creating a permissionless platform is very technical and also incredibly innovative. Both men have been on this journey together, but have taken different paths. We wanted to highlight that founders and CEOs can have many different, but important traits and talents, that when combined can work incredibly well together. (We also didn't let them see each other's answers! So you can get a real flavour of who they are and what they really think of each other!)

[Maddyness] Dan, What made you

decide to take on the almighty task of building a new DeFi platform?

[Dan] I don't think there was a defining moment where I thought "Right, let's conquer the crypto world!". It all started as a curiosity how Satoshi had solved one of the longest standing computer science problems, namely permissionless consensus and I wanted to take it apart, understand it and break it. It wasn't until I had an understanding of the technical, and what could be improved that I paid some attention to the economic and philosophical potential of cryptocurrencies and how they could revolutionise many industries.

My journey evolved over time from simply trying to resolve some of Bitcoin's future problems to building the behemoth that is [Radix](#).

What breakthrough moment made you realise you were on the right track to building something so prolific?

Again, hard to define a specific moment in time. Getting to this point has been a sometimes painful process of iterate, break and improve. Scaling distributed systems, whether crypto or good old databases is really hard, permissionless systems being the hardest of them all.

If I had to pick, I'd probably put it all on realising that dynamic sharding wouldn't work and that the key to scaling and maintaining some kind of acceptable security is more about how you manage and organise the data rather than the consensus mechanism itself.

For those still wary of Crypto and DeFi what is different this time?

While space can still be a bit "wild west" at times, it's certainly matured over the 8yrs or so I've been involved. Back in the early days, it was almost pure chaos, no exchanges, trading was largely OTC and scams were rife, zero regulation, nigh impossible to on and off-ramp to and from fiat currencies, no conferences or meetups, BitcoinTalk was pretty much the only place to be.

I think it'll still be a few years before space has grown up enough where the average person in the street is using it day to day, but it's certainly getting there; it's a much safer place to be these days than it was and there is a lot

more infrastructure. Compared to just 7-8 yrs ago it's quite amazing the ecosystem that has grown around these technologies.

Can you describe Piers in three words?

Composed, determined and diplomatic!

Composed because I've only seen him lose that cool twice, and for good reason. It was only a mild cool losing too, on the surface at least, I myself would have been at least purple.

Determined because he kinda has to be for what Radix is trying to do.

Diplomatic because every good CEO needs to be. Running a company means problems. People's problems', whether internal or external, are the most complicated and need to be resolved amicably and with compromise.

What were your first impressions of Piers and why did you think you would both work well together? Why is he the right CEO to bring Radix to the future?

I first met Piers at an Ethereum meetup back around 2016 I think. I got chatting to him about crypto initially and it led into a bunch of finance and insurance conversations, we chatted for about 2 hours, I remember thinking "That guy's quite smart!" which is rare for me as I tend to end up talking to those that can talk the talk but can't do the walk. I also missed my train home due to chatting, so if you meet Piers and have a train to catch, watch out, he's a real talker!

He was working on a crypto-insurance project at the time, and over the coming months, we increasingly met and chatted, became friends, then he camped in our London office for a while and dragged me off to San Francisco for 3 months. Around that time I was overwhelmed with wearing the CEO, CTO and all the other hats and was looking for someone to take over the CEO role. Spending 3 months with someone in a California heatwave with a broken aircon teaches you a lot about a person, and he was the perfect candidate to take over the CEO role.

He "got" the vision, what I was trying to do and was excited by it. His personality also meant he could run with it to places I couldn't. I'm a bit "eccentric" let's say, which has its place but a CEO role isn't it.

Are you proud of your achievements and what is next for you and Radix?

I'll save the prouiding at least until our RPN-1 mainnet is out the door and seeing some decent adoption, but I am excited to see where things lead us from there and that hopefully, all the hard work pays off.

We've got quite a lot to do after RPN-1 as defined in our roadmap, and it'll be a couple of years before a lot of the vision I have really started to be realized, but if it does, I guess then I'll have a bit of that pride you speak of.

What is your favourite quote and why?

Heh, there are so many to pick from, and as I'm a complete [cinophile](#) it makes the choice almost impossible ☐

One that is relevant and I've quoted a few times is from the movie "Margin Call" (great movie if you haven't watched it) and is said by Jeremy Irons during a tense boardroom scene:

"There are 3 ways to be successful in this game. Be first, be better or cheat ... and I don't cheat!"

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[Maddyness] Piers, you joined Radix at the very end of 2017 at the height of the peak of the ICO bubble and right before the crash of 2018, why go join the world

of DeFi at such a volatile time?

[Piers] Volatile times create extreme focus and attention, this is the fire in which the best ideas are forged and the biggest breakthroughs are often made; particularly in an area of technology where community forms such an essential part of how the technology is built, secured and run.

DeFi has found a way of galvanising the crypto community. This time, it is galvanising the community around real working products. This is one of the huge differences between what happened in 2017 and what is happening now.

DeFi is the killer application for crypto and it has started to find product-market fit in products such as Aave, UniSwap and Balancer. However, Ethereum has a few major problems, including poor scalability, insecure code, and a challenging developer experience.

We built our technology to solve these problems before DeFi started to explode. DeFi only reinforces the importance of solving these issues to help public decentralised ledger technology move to the next, mainstream phase of its use.

I think a lot of people are aware of the limitations of the existing crypto currencies and public ledgers, how is Radix different?

Many people realise that Ethereum has a fundamental scalability problem. What many people don't realise is that it actually has four fundamental scalability problems:

1. User to user scalability problems (e.g. Bob sending 5 Eth to Alice)
2. User to application scalability problems (e.g. Alice sending 5 Eth into a smart contract to buy a crypto kitty)
3. Application computation scalability problems (e.g. this smart contract uses lots of computation and slows down the network)
4. Application to application scalability problems (e.g. Aave, Chainlink and UniSwap need to all work together)

Radix took a fundamental approach here to make sure that all of these problems are solved by the Radix technology, not just one or two of them. We did this by re-thinking both consensus and the application layer of Radix, creating an environment that is easy to develop in, super scalable for all four

scalability problems faced by public ledgers, and purpose built for building DeFi applications.

If we understand that Radix solves the problem of scalability of a permissionless platform, can you elaborate as to how this will really make a global marketplace really come to life?

Scalability is just one part of the equation. The real magic here is the proven product-market fit of Decentralised Finance and the impact that is going to have on the global financial markets. Right now, every system in finance is essentially built on its own, proprietary, non-compatible technology stack that has a huge amount of human process behind it.

The London Stock Exchange (LSE), the US NASDAQ the Shanghai Stock Exchange (SSE) are all built as islands, where a user has to integrate specifically into each of these proprietary technologies to be able to trade across them. Concepts like being able to directly and atomically swap an asset traded on the LSE for one traded on the SSE is meaningless.

This is because, at the moment in finance, lending, borrowing, swapping, and issuance are all done in these little islands of technology that require legal contracts and excel spreadsheets sent over email as the connective tissue. APIs are improving this process, but there is no such thing as a standard API; Plaid became a \$5.3B company for essentially this reason.

The internet was a huge improvement on what came before: you used to need to phone your broker to place orders, as they had to physically be there and had to be given permission to trade on the floor. In the internet age, I can go directly onto a (centralised) platform to trade on the stock markets, even as a retail investor. However, to use each of those platforms, I still need to register and create a user account on every single one, and the assets I hold on one cannot interact directly with the assets I hold on another.

This is the core and key difference for assets and services that are built on public ledgers. As soon as they are built on public ledgers like Radix, they become interoperable. I can seamlessly and programmatically move my assets from the services of one application, built by one company and team, to that of another, built by a different company and team, but issued and launched on the same decentralised public ledger. The public ledger acts as an interoperable platform for many startups to experiment and build better

versions of existing products (such as stock exchanges) or entirely new products (such as continuous function market makers) that are just not possible with the current systems.

From a consumer point of view, the products and services are probably not going to change much in their appearance, they will still be accessed via mobile apps, and will probably still be offered via regulated companies in the fullness of time. Their improvement will be speed (seconds not days or weeks to move money between investment accounts); higher rates of interest offered on deposits; seamless ability to swap between asset types without needing to go into cash as the interim asset; and fully customized consumer financial products, rather than one-size-fits-all.

Decentralised Finance is not about moving existing banks onto public ledgers. It is about unbundling of banking services (borrowing, lending, investment) into applications that can all interoperate on a single public network and compete for users' wealth with the best offerings. Banks are like newspapers coming into the internet age, some will make the transition, but not all.

Can you describe Dan in three words?

Smart, humble, practical.

Can you tell me your first impressions of Dan and what he was building with Radix? What made you jump on board?

When I first met Dan we immediately went deep on a huge number of topics in crypto, these ranged from scalability issues on public ledgers, to the importance of stable coins in the crypto ecosystem. My first impression of Dan during these first conversations was of a razor-sharp intellect, coupled with a humility that is incredibly rare to see in highly talented individuals.

As I learned more about what Radix is and why it works, I became increasingly excited by both the Radix technology, and the man behind the code. Over the years it has become clear to me that immutable technology cannot be built by immutable people, and it is Dan's intellect coupled with his willingness to be wrong, and to learn, overcome and adapt to new information that made me certain about his chances of pulling off his hugely ambitious vision.

What has been your favourite 'aha' moment so far?

We have created a model for how and why DeFi works, and what drives traction. We call this the DeFi cycle and it is made up of three components: Access, Liquidity and Choice. Access describes how easy it is to access a DeFi ecosystem in the first place. To improve Access the ecosystem needs to lower the barriers to entry (e.g. how difficult it is to acquire crypto) which allows more users to enter the ecosystem. More users in the ecosystem increase transaction volumes, driving up Liquidity and down costs. Increases in volume and liquidity drive the creation of more assets and products for the user. The greater Choice of assets and products in turn drives more users to Access the ecosystem.

Once in full swing, these three forces are capable of creating the incredible traction we are seeing on Ethereum today. It is a very simple model, but one that we believe is at the heart of the \$8.5B currently locked in DeFi.

Are you proud of your achievements and what is next for you and Radix?

We decided to focus on DeFi early. As a result, we had the time to put in the engineering effort to actually address some of the structural problems with DeFi on platforms such as Ethereum. It is easy to jump on a trend once the entire market is talking about it, but reading the tea-leaves and taking the early engineering steps to address the market need before it has become a focal point is how the best company strategy is built. I am super proud of the Radix team for their foresight in that regard.

Our next milestone is the launch of the Radix Public Network which is scheduled for Q2 2021.

What is your favourite quote and why?

"There are more people alive today than have died in the entire history of the human race."

It reminds me that more history is being written today than has happened to date – that human potential is now greater than it ever has been at any point in our past.

Read also

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