Testimony of Ryan Wyatt, President of Polygon Labs

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I. Introduction

Chair Bilirakis, Ranking Member Schakowsky and members of the Subcommittee, thank you for the opportunity to testify today. I am particularly appreciative of the Subcommittee's interest in this unique issue – the varying and widespread uses for distributed ledger technology.

My name is Ryan Wyatt and I am President of Polygon Labs, an international software development company that builds blockchain scaling infrastructure. Prior to joining the blockchain space a little over a year ago, I was an executive at YouTube as the Global Head of Gaming for nearly eight years.

My testimony today will first address the fundamental problem that blockchains solve; then I will discuss how blockchains provide value to their users beyond pure economic value; and finally, I will talk about the potential value to the United States to build a healthy and well-regulated blockchain technology ecosystem.

II. Blockchains Solve the "Value Extraction" Problem on the Internet.

The current era of the Internet has started being referred to as "web2," reflecting this time when people can both read and share information on the Internet (as opposed to "web1" where it was "read only"). The past few decades of web2 have resulted in a version of the Internet built primarily by large, centralized "Big Tech" companies. These companies – based in the U.S. – are true innovators, creating an Internet far beyond what its originators could have dreamed. We can now do almost anything online – buy groceries, see and talk to our friends and family, and play videogames with people halfway across the world. That this growth happened in the U.S. is critically important, both for the U.S. economy as well as for the protection of consumers and users of the Internet.

The growth and innovation from these web2 giants comes at a cost, however: the extraction of value from users. This is not only in the form of fees charged for goods or services, but also in the form of companies taking intangibles from users – for example, a "maps application" recording a user's whereabouts, social media requiring personally identifiable information, an application knowing your browser searches to provide you advertisements for goods that increases consumer spending. Today, our online identities are stored in silos within company databases, and this is how these companies create value for themselves. These companies share the least amount of value to the user necessary to incentivize continued use.

But our data, our content, our time, and the incredible value we create from all of that should be owned by consumers, not large corporations. This is where blockchains come in: they democratize the Internet, correct the value extraction problem and make the web "read, write and own" – the next generation of the Internet, referred to as "web3."

Blockchains are secure and transparent ways of recording information on the Internet. Rather than having a single centralized technology company maintaining the information, blockchains secure the information through a set of computers run by a broad group of people, all of whom verify and maintain the same set of information. The computer code for blockchains is built upon cryptography, a method of protecting data through the use of mathematical concepts and algorithms built into the software code.

In web3, users still access the same types of websites and applications to read and share information, but through a different foundational Internet infrastructure – blockchains. This allows users to control all aspects of their use of the Internet, rather than large technology companies. Web3 applications are developed by third parties and built on top of blockchain networks, separate and apart from the original developers of the blockchains. Due to the fact that blockchains work without intermediaries, users can connect to web3 applications through their own personal software and decide when, how and whether to share any information about themselves – their data, their content, their works of art, and their assets. And the software asks for the user's permission – literally requiring them to click a button – before any interaction on the web3 Internet takes place.

Polygon, a blockchain network originally built by Polygon Labs (but now existing and modified at the behest of third-party validators), is infrastructure for this new Internet. It is part of the foundational layer on which web3 applications are being built and deployed – not just by developers, but also by large American brands such as Nike, Reddit, Starbucks, Ralph Lauren, Coca-Cola, the NFL, and J.P. Morgan Chase, just to name a few.

III. Blockchains Allow Users to Create Value For Themselves, While Preserving Privacy.

Web3's paradigm shift to a user-owned Internet brings a number of benefits to users and consumers.

First, consumers have greater control of their data. Because no single person or company controls a blockchain or has control over user data on a network, web3 avoids two fundamental problems encountered in web2: companies having the sole ability to monetize user data, and companies holding user data in a way that it can be hacked or otherwise compromised.

Second, web3 allows users to create value for themselves when and how they see fit. Whereas web2 technology companies have built walled gardens so only they control data about their users or consumers and decide whether to share any value with them, in web3 user data belongs to the user so that they can wield it in ways that actually benefits them.

Third, web3 transactions and interactions are more transparent. Blockchains allow this to be seen, without necessarily tying the information to a user's personal data. This eliminates much of the

information asymmetries that occur when web2 companies hold all the information and users do not have access to it. Users in web3 are able to view information about applications on blockchains in real time, and make decisions about their interactions and transactions on the Internet.

Fourth, while blockchains have the transparency described above, they are also able to protect user privacy through new technology, such as zero-knowledge proofs. This software allows users to keep their data private while simultaneously proving whether certain information about themselves is true, *e.g.*, age, citizenship, membership, etc. This type of verification will become increasingly important as AI and other novel technologies require confirmation of personhood, age or other features in a way that creates trust.

Finally, web3 brings greater certainty and equality in transactions and interactions on the Internet. The software underlying blockchains works indiscriminately. It does not require an intermediary to allow an interaction or give them the power to disapprove them for any number of reasons. Everyone, regardless of gender, race, religion and country of origin is treated equally, and has the ability to access the same sites, applications and services.

A few examples highlight the ways that web3 is better for users and consumers. On social media in web3, users never have to share their personal data – no email, no name, etc. – and users will never lose their content through de-platforming or other control by a centralized technology provider. In a blockchain-based consumer loyalty program, a user earning reward points has the benefit of both the points as well as the data about themselves the points reveal – they like coffee, they are avid baseball fans and attend MLB games, they enjoy country music – and can use that data to obtain other value. Today, if a user earns reward points for a particular airline, that user only has the ability to use the points with that specific airline and cannot share that data with other service providers to whom that data may be valuable – luggage companies, ride sharing services who may take that person to or from the airport or hotels in the cities the user frequently visits. In web3, the user can control and share data about themselves with other companies who may find the information valuable and thus, create value both for themselves and, potentially, for other companies. For example, if a person has achieved "status" on Airline 1 as a frequent flier, a user can share that information with Airline 2, who may offer that person a $500 voucher to fly on Airline 2 instead. In this way, a user is being paid for their data if they decide to share only the information they need to share with Airline 2. This also may benefit Airline 2 in attracting a new customer.

Use cases for web3 applications are currently in use and continue to proliferate. These uses are not only financial; they span economic sectors such as fashion, privacy, education, social impact and gaming, among others.

Last month, Nike began its .Swoosh program, launching Nike collectibles in the form of non-fungible tokens or "NFTs" that are digital sneakers. Within a week, Nike reported that the .Swoosh campaign had surpassed $1 million in sales, indicating consumer interest in owning digital goods and looking to fashion as a medium of expression in the digital world, just as in the physical world. Separate and apart from sales, Nike reported having over 300,000 .Swoosh members. Last week, Nike announced a partnership with sports video game publisher EA Sports in which Nike will make available certain .Swoosh virtual creations in EA Sports games to build better experiences

for consumers. This means that users can take their Nike .Swoosh NFTs and utilize them for expression in ways they want across platforms and experiences – something that could not previously done with other fashion and art purchases.

Coca-Cola launched a similar program in which consumers could purchase NFTs and then share them with a friend; the company then sent new, additional NFTs to holders of the original NFTs as a way to incentivize involvement in the Coca-Cola "community." But unlike in web2, it also allowed for the consumers to receive something else of value simply for being part of this community.

Other groups have created blockchain-based community organizing mechanisms, referred to as decentralized autonomous organizations ("DAOs"), in which they allow individuals to participate in membership. For example, LinksDAO, a self-described "global community of golf enthusiasts in web3 reimagining the modern golf and leisure club,"[1] purchased a golf course and uses a blockchain-based membership pass, which allows participants to vote and make decisions regarding the membership, the course and the club. These types of web3 organizing mechanisms give members greater participation rights as well as more transparency about the conduct of the group and club, without relying on a centralized third party to explain the rules.

Further, Reddit has created an NFT program to empower artists to create and sell their work, and whenever users of Reddit purchase an NFT collectible, it can be used as an avatar on Reddit's website. The avatars were first made available in August 2022, generating thousands of dollars in sales for the artists.

In addition to new consumer applications that benefit users, other companies and organizations have begun leveraging blockchains across various industries to make a positive impact.

For example, the U.S. Air Force has implemented a blockchain-based supply chain solution called BASECAMP.[2] Traditionally, the USAF relies on a complex supply chain to keep its forward-deployed forces adequately equipped and maintained. Recognizing the security threats inherent in the manufacturing of its military equipment and potential data breach vulnerabilities, the USAF commissioned the creation of an Additive Manufacturing solution to ensure a more secure and efficient supply chain management. Since its creation, BASECAMP has resulted in significant time reduction for tracking non-conforming parts as well as enhanced data integrity.

In addition, the Department of Defense has commissioned a project called the "Authenticity Ledger for Auditable Military Enclaved Data Access" (ALAMEDA), which the DoD funded through a $1.2 million Small Business Innovation Research Phase I grant.[3] ALAMEDA is intended to create a "single source of truth" on a blockchain to support the U.S. Navy and the Defense Logistics Agency to address the challenges inherent in In-Transit Visibility across multiple channels.

[1] https://linksdao.io/.
[2] https://simbachain.com/case-study/u-s-air-force/.
[3] https://simbachain.com/case-study/department-of-defense/.

Separately, UNICEF has been exploring implementing blockchain technology in a number of ways in its aid relief. It launched its CryptoFund in 2019 to fund projects that solved community-centric problems in innovative ways and to bring greater transparency to its work, allowing anyone to donate in cryptocurrency and then to confirm transfers have been made between donors, UNICEF and projects.[4] "The CryptoFund makes crypto-denominated investments in companies that are developing open-source software and data-driven solutions to address the most pressing challenges facing children and young people."[5] Investments to date include improving food and vaccine systems through tracking on blockchains and increasing access to equitable, affordable Internet access for remote and underserved areas in developing countries, among others. Recently, the organization announced that it wants to create a decentralized organization (on Polygon) to help facilitate communication and decision-making across all the people and organizations involved in UNICEF's many projects.

The above examples barely scratch the surface in showcasing new blockchain-based web applications and use cases. Ultimately, blockchains have extraordinary utility in all sectors of the economy, and also bring benefits to users and consumers alike.

IV. Building Blockchain Technology In The United States Is Good for Americans.

Getting web3 policy right in the U.S. is not just about reifying global economic standing, but also advantages Americans in the following ways:

- Economic growth and jobs: The U.S. stands to gain at least four million jobs – 1 million technology jobs and 3 million non-technical jobs – by 2030, according to a recent report from Electric Capital.[6] This kind of growth is critically important to Americans. Historically, the U.S. has lost out when it has allowed certain technology to go overseas and later tries to get it back (*e.g.*, semiconductors, 5G). The U.S. continues to lose approximately 2% of developers each year, according to the Electric Capital report. Instead of having to try to bring back this technology sector, the U.S. should ensure this industry is able to be built here.

  Further, blockchains are a global phenomenon, borderless as to work locale, with teams employed anywhere. This is not an industry relegated to the "technical elite" coasts, but one that is able to bring jobs to individuals everywhere, and significant career opportunities exist for younger individuals, who have a deep understanding of and affinity for the technology.

- Consumer Protection: The U.S. has the most robust markets in the world, with strong consumer protection laws. When regulation does not meet novel technology where it is, the U.S. loses its competitive edge to other countries. The transparency of blockchains allows for better consumer protections with the elimination of information asymmetries, and the ability for regulators to see and understand various issues in real time. Combining

[4] *See* https://cryptofund.unicef.io/track/#txs.
[5] https://cryptofund.unicef.io/projects/.
[6] https://www.developerreport.com/developer-report-geography.

good laws with the transparency of a blockchain results in enhanced consumer protection, compliance with which can be verified by the government at any time.

- Continued U.S. Preeminence in Technology: Globally, there is an understanding that blockchain technology is here to stay. In response, many large countries and jurisdictions around the globe are successfully building out robust regulatory structures for the industry. The European Union has implemented the Markets in Crypto-assets Regulation, or "MiCA," through the European Parliament and which is set to take effect as law later this summer. The UK is committed to becoming a "global crypto-asset hub," and issued a robust consultation and call for evidence in February, which received widespread industry responses. Japan has had robust laws for crypto-exchanges for years, and is continuing to engage with stakeholders on novel technology issues, as well. Last week, Hong Kong reopened its licensing regime for crypto-asset companies, and to allow retail customers to be able to trade crypto-assets. The Monetary Authority of Singapore even did a sandbox with J.P. Morgan where it engaged in various types of blockchain transactions on the Polygon network. The U.S. has been at the fore of the web2 revolution, with large tech companies being built here – the jobs, economic growth and protections that affords Americans is unparalleled, which counsels towards the same approach to web3 technology.

- National Security: With this "gap" in the US, and questions about what the US will do with the blockchain space, other countries – notably, China and Russia – have seen this as an opportunity to undercut the strength of the U.S. dollar. Recently, Hong Kong has re-opened the blockchain industry to retail crypto trading. China has been courting companies in the space to bank with the Chinese national bank, and the digital Yuan is far out ahead of competing national efforts, with China leveraging it for settlement with other countries. And finally, Russia recently announced that it is working to use crypto for international settlement. Although these points focus more on crypto-assets rather than simply blockchains alone, these are necessarily part of the same ecosystem, and strong standing in the U.S. for both is important for the U.S.'s continued geopolitical security.

With these matters in mind, and the extraordinary benefits to users and consumers outlined above, ensuring that blockchain technology is built in the U.S. from the start is incredibly important for Americans and for the U.S. economy, markets and national security.

V. Where Do We Go From Here?

We believe that next steps require two sides – policy and industry – coming together with a willingness to build out regulations that intersects properly with the realities of this technological innovation and protects consumers and the U.S. markets. The Subcommittee's understanding of the fundamental value brought about by blockchain technology is critical, and those of us innovating responsibly welcome this dialogue.

We are committed to making this version of the Internet better than the last to bring value and protections back to consumers.

Thank you again for the opportunity to testify before the Subcommittee. I look forward to your questions.