Promeet Technical Review
Prepared for Glass Ventures

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This report is organized into three sections, catering to the reader's available time.

ABSTRACT (IF YOU HAVE 1 MINUTE)

This report provides a technical analysis of Promeet, a platform designed to enable real-time monetisation of live events and meetings for content creators. The platform seeks to address inefficiencies and limitations in traditional social media monetisation methods by offering instant, direct, and cross-border payments. The technology is currently functional. Scalability is a challenge that needs to be addressed if the Promeet is to scale globally. The founders demonstrate awareness of these challenges and possess extensive relevant technical experience. Financial projections suggest the model is viable if a sufficient user base is acquired, given the relatively low gas fees and server costs compared to projected meeting income. Additionally, our review found no red flags in the platform's security measures, which rely on established technologies to mitigate potential vulnerabilities.

I. OVERVIEW (IF YOU HAVE 10 MINUTES)

Promeet present a platform that utilises blockchain technology to offer a decentralised and transparent payment solution for video conferencing. By enabling real-time monetisation of live events and meetings, Promeet addresses inefficiencies and limitations associated with traditional social media monetisation methods. The platform provides creators with instant, direct, and cross-border payments, facilitating a secure and efficient means of engaging with their audience and generating revenue.

A significant advantage of Promeet is its ability to provide immediate revenue generation for creators, in contrast to the delayed and often complex monetisation models prevalent on traditional platforms. The platform employs stablecoins for transactions, ensuring stability and security, and supports micropayments as low as one cent. Promeet integrates open-source VOIP frameworks and web3 auth [1] for wallet integration.

The main challenge faced by Promeet is related to scalability and transaction costs. The scalability issues inherent in the blockchain ecosystem and associated gas fees can create bottlenecks and impact user experience during periods of high network activity. Although the platform can currently handle up to 30,000 transactions per day, scaling to the millions or billions of transactions required for global adoption remains a challenge (as is the case for many web3 solutions [2]). The company has plans to address these issues, including considering, MONAD B advanced rollup solutions and adding additional nodes to manage increased transaction volumes.

The technical team at Promeet demonstrates a comprehensive understanding of both blockchain technology and scalable server architectures, instilling confidence in their ability to effectively address scalability issues. Their use of proven technologies and conservative approach to security will help mitigate potential vulnerabilities. Although it is impossible to guarantee a hack-free system, we did not identify any red flags when evaluating their security architecture.

Financially, Promeet's model diverges from traditional subscription-based SaaS approaches, presenting unique opportunities and challenges. The company projects a decrease in Customer Acquisition Cost (CAC) over time, driven by network effects and word-of-mouth referrals. This prediction seems reasonable [3]. While initial user acquisition costs may be high due to apprehensions about blockchain based financial transactions, the platform's credibility should grow with increased adoption and endorsements.

Promeet faces competition from traditional Web2 platforms, which typically offer more seamless and cost-effective transaction handling. Promeet's first-mover advantage in the blockchain-based video conferencing market and the complexity of integrating secure video conferencing with blockchain technology present some barriers to entry for potential competitors, both large and small.

The company's go-to-market strategy focuses on broad user applicability, engaging influencers, content creators, and esports organisations to drive adoption. This approach, akin to successful technology companies such as Zoom and Slack [4], aims to maximise user base and market penetration [5].

In summary, Promeet offers a platform that facilitates instant and secure monetisation for content creators. While it encounters challenges such as scalability and higher transaction costs, its strong technical foundation, strategic approach, and potential for broad market appeal position it well for future growth and success.

II. TECHNICAL REPORT (IF YOU HAVE 1 HOUR)

I. COMPANY PURPOSE

Promeet aims to revolutionise the way content creators monetise their work by providing a platform that enables real-time transactions and monetisation through live events and meetings. By leveraging blockchain technology, Promeet seeks to offer a secure solution for creators to engage with their audience and earn revenue.

II. FOUNDERS

A. Jonathan Azeroual

Jonathan is the technical expert at Promeet. He has experience in finance and the cryptocurrency industry. He holds a finance degree from ESCP Business School and a postgraduate degree in Financial and Statistical Engineering from Université Paris Dauphine. Over the past decade, Azeroual has founded two companies, achieved a profitable exit, and led an IPO. His roles include Chief Blockchain Officer at INX and Head of Trading at Redwood Digital Group.

B. Gadi Benari Buch

Gabi is the Chief Business Officer at Promeet, responsible for overseeing the company's business development and strategic initiatives. His prior roles include Head of Business Development at INX and leadership positions at ILS Brokers. Gadi holds a BA in Business and Psychology from Fairleigh Dickinson University.

III. PROBLEM THEY AIM TO SOLVE

Promeet aim to address the issue that most social media platforms do not provide effective ways for content creators to monetise their fan base directly. Traditional monetisation methods, such as sponsorships and content creator funds, often favour a small percentage of top creators, leaving the majority without viable income streams. Additionally, current systems are not decentralised, and transaction processing can be slow and cumbersome.

IV. THEIR SOLUTION

Promeet offers a decentralized, peer-to-peer (P2P) platform currently running on the Polygon network, enabling real-time monetization of live events and meetings. The platform uses stablecoins for transactions, ensuring stability and security. Features include automatic wallet setup, instant payment processing, and the ability to handle micropayments as low as one cent. Promeet also integrates open-source VOIP frameworks and web3 auth [1] for wallet integration. The platform is designed for conducting live streams and video conferences, enabling content creators to share their content and receive instant, direct, and cross-border payments. Promeet aim to offer straightforward business model, charging a 5% fee per transaction. This is lower than other platforms that typically charge fees ranging from 10% to 50%.

V. TECHNOLOGY OVERVIEW

Promeet runs on the Polygon network. Transactions are processed using stablecoins. The platform operates on a decentralized network, with all money being blockchain-based. Promeet never holds customer funds. Currently, the system can handle up to 30,000 transactions per day, with plans for further scaling. Gas management techniques are employed, and the company holds MATIC [6] as an intermediary for liquidity. Security measures include implementing small allowance requests from wallets to manage peer-to-peer settlements and initiate transactions. Wallet integration is facilitated through web3 auth. To address scalability, additional nodes can be added in parallel to handle increased transaction volume. It should be noted that transaction scalability will be one of the major challenges to be solved as Promeet scales up.

A. Current Status

The technology is currently up and running. Our video meeting with the Promeet team was held on their platform. It included a demonstration of a monetary transaction which was executed during the meeting. The technology is extensively documented and the founders claim it was developed in 9 months, which is quite fast given the number of moving parts.

B. Technical Philosophy

The founders recognize the extensive development of web3 infrastructure that remains underutilized. Consequently, they made clear that their strategy is to leverage and capitalize on this existing technology rather than developing bespoke solutions. They emphasize the importance of utilizing stable and well-proven sys-

tems during the development phase of their product to ensure reliability and efficiency.

VI. SCALABILITY

Scalability is a critical issue that needs to be addressed for the success of any transaction intense blockchain system. Video conferencing also demands substantial computational resources. This section will evaluate the scalability of the company's solution in two dimensions: scaling the video conferencing infrastructure and scaling the transaction throughput on the blockchain.

A. Scalability in Terms of Scaling Video Conferencing

Scaling video conferencing infrastructure involves expanding the capacity to handle more simultaneous users and higher-quality video streams. Currently, the company utilises Google's Edge Network [7] for networking and dedicated servers for high availability and low latency. Each server can support up to 2,000 participants with dedicated VCPUs and RAM. The company employs a distributed architecture, leveraging multiple servers across different regions to ensure minimal latency and optimal performance.

To enhance scalability, the company can adopt horizontal scaling, which involves adding more servers as required to distribute the load. This strategy can effectively increase the capacity to handle a growing number of users. Furthermore, using independent server management allows each server to operate autonomously, which further supports scalability by preventing bottlenecks and single points of failure.

The company demonstrates a significant amount of technical knowledge in this area. They utilise existing infrastructure powered by Google, such as Google Kubernetes Engine (GKE) and Google Cloud Load Balancing. This reliance on well-established infrastructure components, combined with their extensive technical expertise, particularly the knowledge possessed by their lead technology officer, suggests that the system will scale effectively. My discussions with the technical team left a strong impression of their capability and preparedness in managing these scalability challenges.

However, one potential issue is their reliance on Google's architecture, which is not inherently decentralised. This reliance might not align with the decentralised ethos of blockchain technology. Nevertheless, for many use cases, this may not pose a significant problem, particularly given the robust performance and scalability offered by Google's infrastructure.

B. Scalability in Terms of Transactions on the Blockchain

Currently, on chain the system can handle 30,000 transactions per day. Based on the companies business plan, they predict they will be profitable by Q1 2027. To achieve this profitability they require 76,000 transactions per day. Scaling to this level is very achievable and the team already have realistic plans to do it. However, millions if not billions of transactions will be required per day if Promeet is to scale globally and for this transactional scalability is an issue that must be addressed.

It is worth noting here that low gas, high frequency transactions are problematic for the wider web3 ecosystem, and are a frequent topic of discussion with many projects attempting to provide solutions. The following analysis details the current system design and potential future enhancements for scaling transaction throughput.

1. Current System Design

Promeets current systems use custom Lua plugins, JWT authentication, and event notifications, which allow for modifications and adaptations to fit specific current and future requirements. We will briefly describe what these are below and then discuss their implementation into the Promeet architecture.

a. *Custom Lua Plugins* Lua plugins [8] are modules that extend the functionality of the video conferencing system. They allow flexible integration with external systems or the addition of custom features. Lua plugins handle various events within the system, such as join/leave actions, message handling, and meeting start/end events, enabling the triggering of custom actions based on these events.

b. *JWT Authentication* JWT (JSON Web Token) [9] is a compact, URL-safe means of representing claims to be transferred between two parties. JWT authentication ensures secure access by using tokens to authenticate users. These tokens contain claims that can be verified by the server to ensure that users have the necessary permissions to perform certain actions. Custom claims within JWT tokens provide additional context, such as user roles, meeting IDs, and billing information, which can be utilised by Lua plugins to enforce business logic and custom access controls.

2. Event Notifications and Blockchain Operations

The system generates event notifications for significant actions, such as meeting creation, user join/leave, and meeting end. These notifications are sent to the backend server, which processes them in real time.

Based on these event notifications, the backend server can trigger various actions, such as recording meeting details, updating user balances, and interacting with the blockchain.

Upon receiving event notifications, the backend server interacts with the blockchain to manage transactions. This includes calculating the exact amount spent on a meeting based on the predefined meeting price. The USDC token contract is used to give an execution authorisation on the wallet's behalf for a set amount, ensuring that payments are made accurately and transparently based on the terms agreed upon by the participants. The blockchain provides an immutable ledger of all transactions.

3. Implementation Details

The implementation details of the system include Lua plugins structured as modules that can be loaded and executed by the video conferencing server. These plugins can access various APIs provided by the server to interact with the system. Event hooks within the plugins listen for specific events, and when an event occurs, the corresponding hook is triggered, allowing the plugin to execute custom logic.

JWT tokens are generated by the authentication server and include claims such as user ID, role, and expiration time. These tokens are signed using a secret key to ensure their integrity. When a user performs an action, the server validates the JWT token by checking its signature and claims, allowing or denying the action based on the validity of the token.

Event notifications are sent via webhooks to the backend server, which listens for these webhooks and processes the events accordingly. The payload of each event notification includes relevant details, such as meeting ID, user ID, timestamp, and action type, which are used to determine the appropriate blockchain operations.

4. Workflow

The workflow of the system begins with the creation of a meeting, during which a JWT token is issued to the host. As users join the meeting, their JWT tokens are validated by the server to ensure secure access. At the end of the meeting, an event notification is sent to the backend server, which processes the event and interacts with the blockchain to pay the exact amount spent on the meeting based on the predefined price. The transaction details are then recorded on the blockchain, providing an immutable record of the payment.

5. Future Enhancements

The company is considering MONAD B, advanced rollup solutions, potentially offering the scalability improvements necessary to meet future demands. As new blockchain technologies emerge, the company remains open to migrating to more scalable solutions if they prove to be superior. Although these plans are early stage, it is good to see that the founders are aware of and have an understanding of solutions that could be used to solve scalability issues going forwards.

C. The Technical Team

Discussions with the company's technical team revealed an impressive understanding of these challenges and potential solutions. The team demonstrated expertise in both blockchain technology and scalable server architectures, providing confidence in their ability to address scalability issues effectively.

VII. SECURITY

Ensuring the security and integrity of the video conferencing system, particularly when integrated with blockchain for financial transactions, is of utmost importance. This section outlines the security measures in place, focusing on encryption, authentication mechanisms, network security, and the segregation of processes for handling notification events, backend server interactions, and blockchain operations.

A. Susceptibility to Hacks

It is impossible to guarantee that any system is completely hack-proof, and Promeet is no exception. However, the company's approach to security emphasises the use of established and proven technologies over untested innovations, which may help mitigate potential vulnerabilities. This conservative philosophy, combined with the expertise of their advanced technical team, suggests a capacity to manage and maintain a secure platform. The founders of Promeet prioritise leveraging existing, reliable solutions. This likely reduces the risks associated with novel technologies that might not yet have undergone extensive scrutiny. Their conservative approach to technology adoption could be beneficial in maintaining system integrity and security. While absolute security can never be guaranteed, the use of proven technologies and the competence of the technical team provide a solid foundation for minimising susceptibility to hacks. Additionally, we did not identify any red flags during our review that would indicate significant security risks or concerns.

B. Authentication and Authorization

The video conferencing system employs end-to-end encryption to secure all media and data transmissions. Audio and video streams are encrypted using Datagram Transport Layer Security (DTLS) [10] and Secure Real-time Transport Protocol (SRTP) [11], ensuring the privacy and security of media during transmission. Additionally, data channels used for chat and other non-media communications are encrypted using Transport Layer Security (TLS). This dual-layer encryption ensures comprehensive protection against unauthorised access and data breaches.

Robust authentication and authorisation mechanisms are critical components of the security infrastructure. The system uses JSON Web Tokens (JWT) for user authentication. Each JWT includes user-specific claims and is cryptographically signed to prevent tampering. This ensures that users are authenticated securely and their permissions are accurately enforced. The JWT structure supports Role-Based Access Control (RBAC), allowing the system to enforce permissions based on predefined user roles, thereby restricting access to sensitive actions and information to authorised users only.

C. Web3Auth Integration

The integration of Web3Auth [1] provides a non-custodial solution for wallet creation, enabling users to generate and manage their cryptographic keys securely. This ensures that users retain control over their private keys without relying on a central authority. Transactions are signed with the user's private key, adding an additional layer of security.

D. Network Security

Network security is provided through the use of Cloudflare for firewall and Distributed Denial of Service (DDoS) protection. This aims to safeguard the system against network attacks, ensuring continuous availability and reliability. All communications between system components are encrypted using TLS, aiming to ensure that data in transit remains secure and protected from interception.

E. Segregated Process for Notification Events, Backend Server, and Blockchain Operations

The process for handling notification events, backend server interactions, and blockchain operations is segregated to enhance security and maintainability. Significant actions within the video conferencing system generate events that are transmitted to the backend server via secured webhooks. The backend server processes these events, extracting relevant information and performing necessary actions, such as event logging and transaction initiation.

F. Blockchain Operations

Blockchain operations are facilitated through an allowance mechanism, where users set allowances on their wallets to authorise the backend server to make transactions on their behalf. This aims to ensure secure and controlled access to funds, reducing the risk of unauthorised transactions. JWTs, integrated with Web3, include claims such as user ID, role, and wallet address, and are signed to ensure their integrity. The Web3 client generates cryptographic signatures using the user's private key, which are included in the JWT to authenticate requests and transactions. The backend server verifies these JWTs and signatures, ensuring that only authorized actions are performed.

G. Implementation Details

The implementation of these security measures is supported by custom Lua plugins that generate events based on user actions and meeting states. Events are securely delivered to the backend server via webhooks, protected using HMAC [12] signatures to ensure authenticity. The backend server, structured with a microservices architecture, processes each event by the appropriate microservice, which performs actions such as updating databases, initiating transactions, and sending notifications.

H. Example Workflow

An example workflow illustrates the security process from meeting creation to transaction execution. A meeting is created and a JWT token is issued to the host. As users join the meeting, their JWT tokens are validated by the server. Upon meeting end, an event is generated and sent to the backend server via a secure webhook. The backend server processes the event, checks the user's allowance, and interacts with the blockchain to execute the payment transaction. The transaction is signed using the user's private key managed by Web3Auth and executed on the blockchain. Finally, the transaction details are recorded on the blockchain, providing a transparent and immutable record of the payment. The video conferencing system is well designed and employs robust security measures. The team that designed the systems had a deep understanding of how they worked and were able to

answer our questions about the systems to a high level of detail.

VIII.   FINANCIAL MODEL

Promeet's business model diverges from traditional subscription-based SaaS models. This approach introduces both opportunities and challenges, which shape the company's financial dynamics and strategic positioning. Promeet anticipate that the Customer Acquisition Cost (CAC) will decrease over time. Initially, acquiring the first cohort of users will incur higher costs, primarily because of widespread apprehensions regarding online scams, particularly those involving financial transactions. However, this initial barrier is expected to lessen as the platform builds credibility through increased user adoption, successful fundraising efforts, and endorsements from notable personalities. Promeet predict that the network effect and word-of-mouth referrals are projected to play a substantial role in attracting a significant portion of users organically, thereby reducing reliance on paid acquisition methods. The prediction appears reasonable [3], especially given that Promeet markets itself primarily as a video conferencing company and secondarily as a blockchain company. This positioning should facilitate the process of convincing typical non-Web3 users of their legitimacy. Churn rates for Promeet are expected to be higher compared to traditional SaaS businesses, largely due to the absence of a subscription model and the unpredictable business profiles of hosts compared to companies with signed contracts. Promeet suggest that this effect will be mitigated by the large market size. This argument does not seem logical as web2 competitors are also interacting with the same market. The company has projected an average commission of $3 per room, with hosts conducting approximately three paid rooms per week and an average meeting price of $20. This flexible pricing model aims to balance accessibility for users with revenue generation for the platform. While these projections do not seem unreasonable it is worth noting that at this stage they should be viewed with a large error bar (in either direction). That being said, the cost per meeting once the customer has been acquired is very low:

$$\text{gas}_{\text{cost}} + \text{server}_{\text{cost}} = \$0.0200 + \$0.0016 = \$0.0216, \quad (1)$$

so there is room to account for margin of error here.

IX.   COMPETITIVE LANDSCAPE

A.   Comparison vs Web2 Competitors

1.   Advantages

One of the significant advantages of Promeet over traditional Web2 competitors is the ability for creators to earn revenue immediately from their content. Unlike traditional platforms where monetisation can be delayed or tied to complex subscription models, Promeet offers instantaneous revenue generation. Additionally, the platform's cross-border payment capabilities allow creators to reach and monetise a global audience, effectively overcoming geographical and financial barriers. Promeet aims to provide creators with more control and independence over their earnings. This independence moves them away from the constraints and limitations often imposed by other platforms. Leveraging blockchain technology, Promeet aims to ensure secure and transparent transactions, fostering a trustless experience among users. The inherent transparency and security provided by blockchain technology are crucial in building trust and reliability within the platform.

2.   Disadvantages

Despite these advantages, Promeet also face challenges when compared to Web2 competitors, primarily in terms of scalability. Transactions in the Web3 space are currently challenging to scale due to gas fees. This can be a considerable barrier when compared to traditional Web2 platforms, which typically handle large numbers of transactions with greater efficiency. Scaling issues (which are inherent in all blockchain networks [2]), could lead to potential bottlenecks and slower transaction times during periods of high network activity. These scalability challenges could impact the user experience and adoption rates, making it difficult for Promeet to compete with more established Web2 solutions that offer more seamless and cost-effective transaction handling.

B.   Go-to-Market Strategy

Promeet are deliberately choosing not to associate themself with any specific industry. This decision stems from a desire to appeal to a broad user base and ensure that the platform can be utilised by a diverse range of users, rather than being pigeonholed into a particular market segment. This approach is similar to other successful technology companies, such as Zoom and Slack [4], which have designed their products to be universally applicable across various industries,

thereby maximising their user base and market penetration [5]. Despite this broad focus, the company has seen early engagement with the esports industry. The strategy for entering this market includes three core avenues: engaging influencers and content creators, collaborating with esports organizers and publisher-owned leagues, and forming tie-ups with esports teams through fan engagement apps. These discussions, facilitated by the Esports Business Network (EBN), highlight the platform's potential within this dynamic sector. EBN's track record, including partnerships with Riot Games (creators of League of Legends and VALOURANT) and Tencent, underscores the synergy between esports and blockchain technologies. Additionally, the company is actively engaging with content creators on social media platforms to build awareness and drive adoption. This outreach involves sending targeted messages to approximately 400-500 content creators daily, resulting in a notable hit rate of around 5%. This is quite a high engagement rate for cold call style messages.

C. Barriers to Entry for Competitors

The company enjoys a first-mover advantage in the blockchain-based video conferencing market. The complexity of integrating secure video conferencing with blockchain technology, along with the need for extensive technical expertise, makes it challenging for new entrants to replicate the company's offerings swiftly. According to the company's assessment, even large, established players with substantial resources would require nine months to a year to develop and deploy a comparable solution. Based on our assessment of their system, this is probably a slight over estimate, but it is reasonable to assume that the complexity of the product does present some level of barrier to entry even for larger players.

D. Target Users

The target users of the company's video conferencing system are diverse, reflecting the platform's broad applicability and the company's strategic decision not to limit its focus to specific markets. The initial engagement with the esports industry highlights one of the primary user groups, where the need for secure, high-quality video conferencing and instant payment transactions is particularly pronounced.

In addition to esports, the company's active outreach to content creators on social media indicates a wider target audience that includes influencers, educators, and professionals who require reliable and secure video conferencing solutions. The platform's ability to facilitate seamless, blockchain-based financial transactions makes it an attractive option for users who value both security and efficiency in their online interactions.

By not restricting its market focus, the company aims to attract a broad spectrum of users, leveraging the unique advantages of its blockchain-integrated video conferencing platform to meet the needs of various industries and individual users alike.

X. SUMMARY

Promeet leverages blockchain technology to offer a decentralised and transparent payment solution for content creators. While it offers benefits in control and security, it faces challenges such as higher transaction costs and scalability issues compared to Web2 platforms.

Appendix A: Metcalfe's Law

Metcalfe's Law states that the value of a network is proportional to the square of the number of its users. This principle implies that as more users join the network, its value increases exponentially, not linearly.

Appendix B: MONAD

Monad is a high-performance Layer 1 blockchain designed to enhance scalability with the ability to process up to 10,000 transactions per second (TPS) through its unique MonadBFT consensus mechanism and parallel execution capabilities. It maintains full compatibility with the Ethereum Virtual Machine (EVM)

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