In Know Time Solution: Blockchain Consulting

Business idea as written out by W. Ben Towne
Granted to Dr. Yeimi Pena for further development in George Brown College blockchain certificate program

Motivation

Suppose you would like to offer your special knowledge and services as a consultant, but you don't want to waste a lot of time on the business aspects of payment coordination and marketing. This NFT-based business gives you an easy way to sell your time and knowledge services for money, even if you don't know just how much you should charge or how to get the word out.

There is some market demand among clients willing to pay for this, e.g. see discussion on Randall Hunt's 1/26/21 tweet (in Figure 1, only the start is shown, but several others agree they'd pay.)

Consultant ("Host") UI

A host connects to the Dapp, creating a profile with a photo, description, etc. which may be stored off-chain. They have a calendar view (version 1: text input boxes instead of a calendar view) and can select time slots to enter availability for appointments. They might also include a description of what topics or range of topics are expected/requestable for discussion, restrictions on things that are out of scope, etc., generally and/or for each appointment slot.

Adding a new appointment creates one or more NFTs. These NFTs are assigned to the host (and the contract creator may require some small fee for that assignment). The host can sell/give away/otherwise transfer these NFTs to someone else, and the NFTs can then be exchanged through the ecosystem of tools supporting standard NFT transfer.

The host may need to sign a transaction (with their private key) mined on-chain within some time (e.g. ≈5 minutes) of the start time of the meeting, to check in and claim their own attendance (unless the host is also the owner of the NFT for that slot). If they do not, there may be some automatic refund given to the holder of the NFT for that time slot. (This could be done through the main contract or through a separate one, even one added later.)

Attendee UI

The attendee acquires an NFT for a time slot with a particular host. The final "winner" of the meeting is determined as of a threshold cutoff some time before the meeting (e.g. ≈15 minutes). NFT transfers after that cutoff time will not have effect or make economic sense. At some time sufficiently after that to assure a reasonable degree of finality (e.g. ≈5 minutes), a chain-connected computer inspects the state of the chain to determine who was the owner as of the last block mined before the threshold. This account is the official "winner" of the meeting. From this time forward, the winner can visit a Web site hosted by that chain-connected computer, and they will be asked to sign a particular message to demonstrate their control of the relevant private key. In response to a successfully verified signed

message, the server will respond with a link to be admitted to the meeting in whatever technology platform is being used. In version 1 this may be Zoom, Google Hangouts, or similar. In the future, it could be technology hosted/developed by the contract offeror, such as a Jitsi clone, which might better support integration of permissions as discussed below.

Permissionless Marketing incentives

Suppose a host has great knowledge to share, and the sessions are quite valuable, but most people don't realize it because the host isn't good at marketing. This structure creates an incentive for someone else to buy up the initial supply of NFTs, promote the host/speaker's skills to drive up demand, and then sell the NFTs at a profit (earned through that marketing effort). This benefits the marketer directly, the speaker indirectly (higher future demand could mean higher future initial prices), and the audience of people who find that host's knowledge/services valuable but would not have been able to discover them without the aid of the marketer.

Token Attributes

Each token has the following attributes, which may affect its perceived value:

- Host: blockchain address
- StartTime: uint timestamp (seconds since 1/1/1970 UTC)
- EndTime: uint timestamp (seconds since 1/1/1970 UTC)
- CanListen: Boolean participant permission attribute
- CanSeeVideo: Boolean participant permission attribute
- CanSeeScreen: Boolean participant permission attribute
- CanSpeak: Boolean participant permission attribute
- CanShareVideo: Boolean participant permission attribute
- CanShareScreen: Boolean participant permission attribute
- CanControlDevice: Boolean participant permission attribute, for hosts with Net-connected devices like lab equipment. (This may be expandable to multiple devices if desired; controllable cameras might also count as a device, if someone wants to zoom in or pan around to see some specific detail on their own pace).
- CanAccessRecording: Boolean participant permission attribute, indicating if the participant will be allowed to record (or access a recording created by the host, afterward).
- CanAddParallel: Boolean host permission attribute. If false, the host cannot change this attribute or add another NFT with an overlapping time range using the same account and scheduling contract. That may increase the NFT market value.
- HostCheckedIn: Boolean that can be set to true only by the host, only within several minutes of the startTime.
- HostRating: Numeric value which can be set after the start time of the meeting by the NFT token-holder who "won" the meeting.
- ParticipantRating: Numeric value which can be set after the start time of the meeting by the host.

Most hosts will select a default set of participant permissions (e.g. all except CanControlDevice, assuming no Net-controllable devices) and stick with those for all their availability, but hosts do have the

freedom to modify these prior to NFT creation. For example, a host might usually offer tokens for all participant permissions and just one NFT per time slot. In some time slots, they might issue multiple fully-privileged tokens to support a group session, which might have a lower cost to each individual participant. A host might also have a time slot with one fully-privileged token for someone who can ask questions/interact and multiple others that can only listen and view, where the latter are expected to be lower cost than fully-privileged tokens and the question-asker's token might be lower-cost than for a time slot with no audience, but the sum could be higher than what the host would get for a one-on-one slot. Because the identity of the holder of the question-asker token is publicly knowable (at least by address), this information might affect the value of the view-only tokens for the same time slot. For example, a viewer might pay more to observe a conversation between two famous people or between the host and someone known for asking great questions. Other smart contracts in the ecosystem can be used for lockups limiting transferability of those tokens if a question-asker wishes to demonstrate commitment that they won't make it available for transfer.

Other fields of use

In addition to an application where the host is a consultant with special knowledge, this could be used for other applications. For example, it could be used by performance artists, poets, storytellers, etc. crafting special experiences for very small audiences. It could be used for paid tutoring/teaching, appointments with professional services providers like a CPA (tax time is coming!), attorney, therapist, or telemedicine doctor. It could be used as a special opportunity to chat with a famous person, along the lines of famous politicians' campaigns sending out fundraising emails saying "if you donate before X time, you will be entered into a drawing for a lunch with the candidate/officeholder!" Raffle mechanisms like that could be implemented as a separate smart contract able to transfer NFTs; the benefit of using a token standard is that there is already a wide ecosystem of those sorts of tools.

The service would also likely have application in the adult entertainment industry, which is surprisingly large in terms of financial metrics.

Revenue Model Possibilities

The developer of the contract could put it out under a **proprietary** rather than open-source license, and take a flat fee for each NFT created and/or initial ownership and a small percentage from the initial sales of the NFTs.

The business might also have a website where upcoming NFT slots are listed, and hosts may be able to buy an ad (using an ERC-20 token or native coin) to have their slots promoted on this website. (Non-blockchain based advertising could also be used, but would be mostly outside the offeror's business model.)

If the offeror is hosting an integrated video chat platform, they can present an easy interface for attendees to tip the host in a way that leads the offeror to keep a small percentage, e.g. through ERC-20 tokens from the same offeror.

If this is deemed likely to be patentable and a patent is desired, the application should be filed before publication. The most similar found patent in a very brief search is here, but it does not seem to be a match on quick review.

Potential Partners

Pete[r] Schramm, PMP, is a mentor of Matt Clark and was in WBT's small group for a Vaccinate DC Design Jam 3/6/20. He is a founder of Lattus, a platform for helping people find mentors, and he has facilitated many communications through that platform. Once an MVP is developed, they may be worth approaching for a demo and discussion about if they would like to use it.

Potential Competitors

Traditional consulting firms; CodeMentor.io; live adult entertainment sites extending their tech

Relevant Tweet

(Image might wrap to next page; source here)

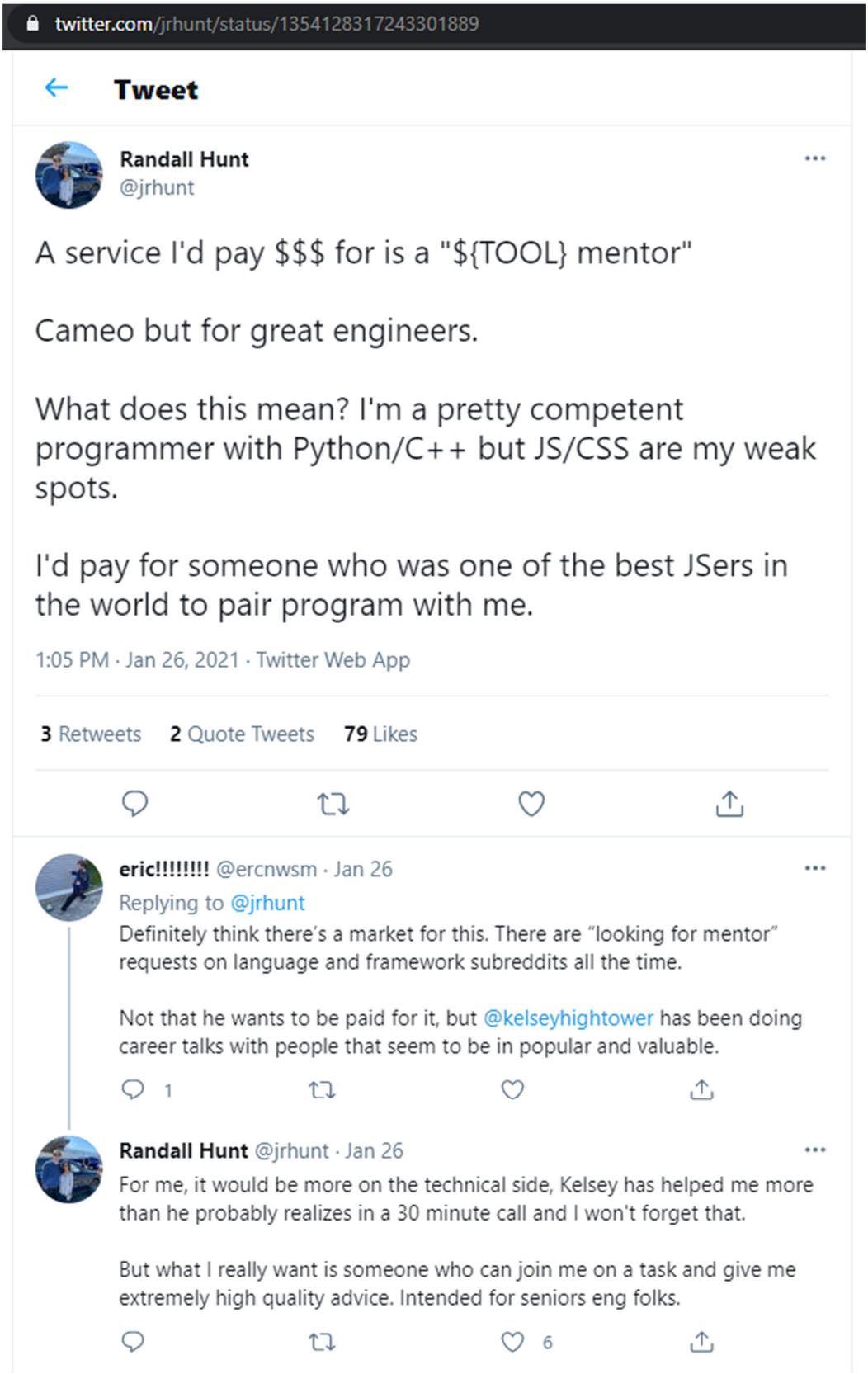

Figure 1: Demand example from attendee side