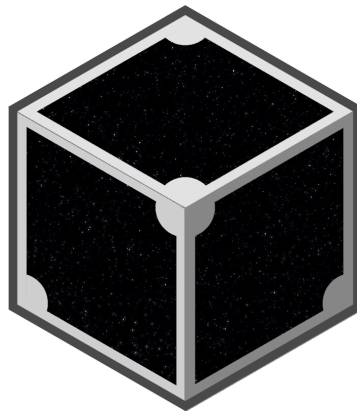spacetimemeta.io

IDENTITY WHITEPAPER
PART 1

Last update: April 2022

Welcome to the Identity whitepaper part 1, This is a continuation of previous work on the Spacetime Metaverse project and is meant to add value to the whole Cardano Ecosystem. Due to the integration of other projects in the metaverse identity system, this paper was split into 2 parts. Part 1: Introduction to $handle and how we plan to integrate them. Part 2: Building game content on top of identities.

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INTRO

In the Spacetime Metaverse users can already possess parts of the metaverse and customize them to host 3D environments or websites. We already have examples of this like [project solaris](#) and [spawn planet](#). These worlds can be explored in first person and games can be played there. Now we want a way to collect items and rewards in these games and attach this information to our profiles in an immutable and transparent way. Doing so will make our progression persistent and compatible with any environment.

In this document, we present the different moving parts of this system and explain the reasons behind the conceptual decisions.

$handle

In the Cardano community, the [$handle](#) project is the dominant project regarding identities. For this reason, we decided to not mint our own Spacetime Metaverse Identity Token but instead build it directly on top of the existing handle project using only transaction metadata and multisig transactions. We first took this decision for the benefit of the Spacetime project as it will feed our ecosystem with [30k individual users](#), but we believe this choice to be beneficial to the whole Cardano community as it will provide additional features to one of the most recognized projects in the space.

On the technical side, using handles will take care of the uniqueness of each profile (since all handles are unique) and will allow easy mapping of metaverse profiles to cardano addresses, as this is the principal utility of the handle project.

TYPES OF PROFILES

There are 2 types of profiles. The profiles for individuals and the profiles for projects and groups. All profile types are entirely based on Cardano transaction metadata, meaning you don't need anything else than an $handle to create a profile.

By default, a $handle represents a user profile and will appear on the leaderboards. To create a project profile or a group profile, creators must fill and successfully submit a transaction containing the $handle they want to register as project and the necessary metadata in the right format.

In the following sections, we go over each type to describe their utilities and basic implementations. Keep in mind this paper only scratches the surface of what can be done with Metaverse identities. Much more can be extrapolated from this implementation and

spacetime intends to keep developing multiple other features in the years to come.

USER PROFILES

On the Cardano Blockchain, Stake keys are representatives of a single user. What we want in the Spacetime metaverse, is something to point at profiles, so that one user can control multiple Metaverse profiles. Just like most video games, it can be fun to create different game characters to explore different classes and options, without sacrificing those we already have.

This is where handles come into play, Spacetime will consider every individual handle as individual metaverse profiles. This allows one user to own multiple profiles and give them different attributes. Here is a closer look to what can be done with a metaverse profile.

What you can do with a Spacetime Meta profile:
1. Set a profile picture
    ○ Using transaction Metadata, you can link a profile picture to appear on your profile presentation and in leaderboards. If you don't select a picture, a default one will appear by your name on the leaderboard.
2. Set a profile name
    ○ Using transaction Metadata, you can select a profile name to appear on your profile presentation and in the leaderboards. Note the name is different from the handle IDs. Names are not unique.
3. Support your favorite project
    ○ Using transaction Metadata, it will be possible to select a list of favorite projects to appear on your profile presentation. This selection will also be reflected on the projects profiles, as most supported projects will be on top of the leaderboard.
4. Appear in leaderboards

- ○ Once your profile is registered in transaction metadata, it will appear in leaderboards across Spacetime Metaverse. being registered on a public system like the Cardano blockchain enhances the metaverse experience by allowing for all content creators to display your profiles the same way.
5. Join Groups
   - ○ You can link your profile token to multiple groups created around existing collections.
6. Receive success and scores
   - ○ Once you own a $handle, registered project handles will be able to give score, experience, success and items. to your profile by pointing new scores to your token.

All the metadata attached to your token will be transferred in a transaction if you ever sell your profile to another user. Profiles with multiple/rare success and high level skills might become valuable game items.

Here is an example of what a valid metadata for full customization of a profile might look like:

```
{
    77223004:{
        "handle": "$user-handle",
        "name": "demo user",
        "image": "Qme7ss3ARVgxv6rXqVPiikMJ8u2NLgmgszg13pYrDKEoiu",
        "projects": ["$spacetimemeta","$project-handle"]
    }
}
```

PROJECT PROFILES

Since the Cardano Blockchain is a public network, anyone can make a transaction including metadata in a format that would give themselves some illegitimate rewards. To prevent these illegitimate rewards from being registered in the leaderboards, all the scoring and rewarding transactions from a certain creator must be coming from the creators registered address. Fortunately, we have $handles to easily map project information to the address of its owner.

To be registered as a project, you need to mint a profile token with the project tag in its metadata. This form of profile has all the basic functionalities.

What you can do with a project token:
7. Set a project picture
    ○ Using transaction Metadata, you can link a project picture to appear on the presentation page of your profile and on the profile of those who support your project. This is also the picture for your project when it appears in leaderboards.
8. Set a project name
    ○ Using transaction Metadata, you can select a project name to appear on your project presentation and in the leaderboards.
9. Get support from your community
    ○ Using transaction Metadata, your community will be able to select projects they like and link your project to their profile.
10. Appear in leaderboards
    ○ Once your profile is registered in transaction metadata, it will appear in leaderboards across Spacetime Metaverse. being registered on a public system like the Cardano blockchain enhances the metaverse experience by allowing for all content creators to display your profiles the same way.

Here is an example of valid metadata for a project profile registration:

```
{
    77223003:{
        "handle": "$project-handle",
        "type": "project",
        "name": "demo project"
    }
}
```

When submitting the metadata presented above, a very simple project profile is created with the name 'demo project' and all other fields empty. Using the $handle registered as a project, the creator can now affect the users $handles by attaching metadata to a transaction and pointing this metadata to the wanted user handles.

More information about rewards distribution in the second part of this whitepaper.

by: Liquid Blocks, Founder of SPACETIMEMETA.IO
Time is relative, space is non-fungible.