ANONYMIZED IDENTITY VERIFICATION SYSTEM PROCESS

FIELD OF THE INVENTION

1. This invention is directed generally to the field of personal data identification processes applied and practiced by membership organizations.

BACKGROUND OF THE INVENTION

2. Personal Data Protection Act (PDPA) or its equivalent within countries is an oft-cited reason preventing issuer organizations from sharing personal identifiable data of their members to other organizations without prior consent from members. As a result, issuer organizations usually incur costs to create member identity cards and/or equivalent systems over and above available national identity systems to manage membership identities. This patent application proposes a novel process illustrated in Figure 1 to decentralize persisted anonymized personal and/or issued identifiers that may be verified real-time by any verifying organization without the need for collaborating member organizations to share personal identifiable data of their members, create member identity cards and/or equivalent systems.

3. Existing Membership Identification Purposes, Forms, Methods, Processes and Challenges.
    a. *Purpose of Membership Identification Between Different Organizations*. The purpose of membership identification between different organizations is to allow a collaborating verifier organization to authenticate the veracity of an issuing organization member's identity before allowing the authenticated requester access to the verifier organization's systems, accounts, data, benefits and/or resources to name a few.

    b. *Forms and Methods of Member Identification Between Different Organizations.* Typical forms and methods of member identification includes the use of National Personal Identification Numbers issued by a public service issuer organization like the government; or Membership cards issued by corporate issuer organizations like Banks, Social Support Organizations, Business Loyalty Programmes to name a few.

    c. *Process of Member Identification Between Different Organizations.* A typical process for member identification comprises (i) an Issuer Organization producing a unique identifier for membership identification purposes, (ii) a Verifier Organization authenticating the veracity of another organization member's identity for authentication purposes.

    d. *Challenges in Sharing Membership Data Between Different Organizations*.
        i. Issuing Organizations Need to Issue Proxy Identity Member Cards – The ability of a verifier organization to authenticate the veracity of an issuer organization member's identity hinges on the Personal Data Protection Act (PDPA) requirement that the verifier organization has the individual's consented personal record for authentication purposes. In the absence of the individual's consented personal record, a proxy identity like a

membership card is usually used in lieu of an individual's consented personal record. For example, individuals on social support programmes are issued with member cards as a proxy identity bearing logos from authorized public organizations like Charities or Government Agencies to allow means tested individuals to enjoy subsidies from verifying organizations providing food or medical services without having to divulge their personal records.

ii. Verifying Organizations Unable to Verify Real-Time Validity of Proxy Identity Member Cards – The ability of a verifier organization to verify the validity of proxy identity member cards issued by issuer organizations hinges on the requirement that the verifier organization has access to the issuing organization membership data. Building on the same example above, verifying organizations providing food or medical services may only trust on face value that proxy identity member cards issued by social support programmes are valid without actual verification of the individual's entitlement and/or validity in the social support programme. i.e. It is not uncommon for individuals to retain their membership cards when they are no longer on social support programmes.

4. *What Is New In The Present Invention.* With reference to Figure 1, the present invention presents a new process to share anonymized member identities between Issuer Organizations and Verifier Organizations.
    a. Issuing Organization Anonymizes Member's Personal Identifier as a Public Decentralized Blockchain Record – Moving away from issuance of physical proxy identity member cards, the present inventive process shall anonymize an issuer organization member's personal identity using industry standards for hashing data before uploading the anonymized identity into blockchain as an immutable and decentralized public record.

    b. Verifier Organization Anonymizes Requestor's Personal Identifier as a Verification Record – Moving away from verification of physical proxy identity member cards, the present inventive process shall anonymize the requesting individuals' personal identity onsite at the verifier organization premises using the same industry standards for hashing data mentioned in para 4a above.

    c. Anonymized Identity Verification Process – The present inventive process shall check real-time via Internet cloud-based mediums, to verify if there is a perfect match between the anonymized identity public blockchain record uploaded by an issuer organization in para 4a, and the requestor's anonymized identity presented to the verifier organization in para 4b. If there is a perfect match between process in para 4a and 4b, the veracity of the requestor's identity is feedback to the verifying organization real-time for follow up as shown in Figure 1. With regards to Figure 1, para 4a and 4b are indicated in Figure 1 block diagram in blocks denoted with (4a) and 4b) respectively.

CLAIMS

1. Principal considerations
    a. Anonymized Identity Verification System Process.

2. What is claimed is:

    a. A process to enable (i) member individuals, (ii) member organizations, (iii) verifier organizations, to verify real-time decentralized persisted non-personal anonymized identifiers.

    b. The process according to claim 1, which further comprises THREE (3) constituent parts, namely; Real-Time Personal/Issued Identifier Anonymizing process, Decentralized Persisted Non-personal Anonymized Identifiers, and Anonymized Identity Verification process as follows:

        i. Real-Time Personal/Issued Identifier Anonymizing Process.
        Member individuals personal or issued identifiers presented to verifier organizations are anonymized real-time using industry standards hashing algorithms.

        ii. Decentralized Persisted Non-personal Anonymized Identifiers.
        Member individuals personal or issued identifiers submitted to member organizations are anonymized using industry standards hashing algorithms and persisted in decentralized blockchain databases.

        iii. Anonymized Identity Verification Process.
        Real-time Anonymized Identifiers in 2bi) and decentralized persisted Anonymized identifiers in 2bii) are matched by verifier organizations.

3. A business model method according to claim 1, which further comprises:

    a. Patent licensing fees for similar use of the present invention's process for verifying real-time decentralized persisted anonymized identities.

    b. Software licensing of the present invention's process for verifying real-time decentralized persisted anonymized identities.