

Foundational Principles of SSI

Strawman Draft for IIW 31 Review

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This is a shared document for the global SSI community convened by the [Sovrin Foundation](#). If you have ideas, comments or suggestions, we invite you to contribute them—access is open to anyone. If you are interested in joining the Sovrin Governance Framework Working Group, please visit our [Meeting Page](#).

Introduction

This document represents an open public dialogue to establish a broad community consensus about the foundational principles of the digital identity model known as **self-sovereign identity**, or **SSI**. The ultimate purpose of the document—once it is fully mature—is to serve as a public record of these principles so that they can be widely referenced by any person, organization, regulation, or governance framework that chooses to incorporate them.

Prior Work

A number of articulations of the principles of SSI—or closely related principles—have been published since the turn of the century. They are provided here for background and acknowledgement. NOTE: *If you know of another citation that should be included in this list, please suggest it.*

- [The Laws of Identity](#) (Kim Cameron)
- [The Windhover Principles for Digital Identity, Trust, and Data](#) (Institute for Data Driven Design)
- [The Path to Self-Sovereign Identity](#) (Christopher Allen)
- [Self-Sovereign Identity Principles](#) (Christopher Allen & Rebooting the Web of Trust)
- [Schutte's Critique of the Self-Sovereign Identity Principles](#) (Matthew Schutte)
- [Identity and Digital Self-Sovereignty](#) (Natalie Smolenski)
- [A Technology-Free Definition of Self-Sovereign Identity](#) (Joe Andrieu)
- [lifeID Self-Sovereign Identity Bill of Rights](#) (lifeID)
- [Sovrin Governance Framework](#) (Sovrin Foundation)
- [Presidio Principles: Foundational Values for a Decentralized Future](#) (World Economic Forum)
- [Data as Property?](#) (Salomé Viljoen)
- [Self-Sovereign Identity - The Good, the Bad and the Ugly](#) (Oskar van Deventer, TNO)
- [SSI? What we really need is full data portability](#) (Emily Fry & Elizabeth Renieris)
- [10 Guiding Principles of Pistis Learner Record](#) (Pistis.io)
- [Charter of Fundamental Rights of the European Union \(English\)](#) (EU Commission)
- [Privacy by Design: a Holochain Exploration](#) (Kirsten Wahlstrom, Anwaar UI-haq, Oliver Burmeister)
- [MyData Declaration](#) and [MyData Guiding Principles](#) (MyData Global)
- [Design Principles for SSI](#) (Jasmin Huber and Johannes Sedlmeir)

About This Strawman

Rights-Based

As the links above illustrate, many approaches may be taken to defining the foundational principles of SSI. One of the prior examples, the *lifeID Self-Sovereign Identity Bill of Rights*, starts to take a right-based approach in which the principles of SSI are defined in terms of a set of inalienable rights of individuals. The following strawman is framed completely in terms of SSI as an instrument to exercise a set of fundamental human rights.

Ownership-Free

Although it is popular to use the term “ownership of your data” when describing SSI, ownership of data as an intangible asset is a controversial topic from a legal perspective. Consistent with a rights-based approach, the following strawman asserts only a set of rights associated with data.

Technology-Agnostic

In the Prior Work examples, Joe Andrieu advocates for a definition of SSI independent of any particular technology used to implement it. This is also consistent with a rights-based approach. As such, the strawman attempts not to use terms like “DID”, “verifiable credential”, “digital wallet”, or other implementation-specific concepts.

Personal Data-Based

Lastly, the term “identity” itself can be challenging. This is in large part because, as many authors have emphasized, identity is not an “absolute” or a “noun”, but a functional construct that exists in the context of relationships, groups, and collectives. So the following strawman does not actually use the term “identity” but refers only to [Personal Data as that term is defined by the EU General Data Protection Regulation](#) (GDPR):¹

‘Personal data’ means any information relating to an identified or identifiable natural person (‘data subject’); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.

Also note that the principles do not distinguish between digital and non-digital forms of Personal Data because the principles applied to both.

¹ Robin Renwick notes that this definition of Personal Data is still evolving within the EU, and recommends that the Principles of SSI continue to track it as it evolves.

Foundational Principles of SSI

The Foundational Principles of SSI recognizes that all Individuals should have the following fundamental rights over their Personal Data, limited only by legal restrictions subject to the full due process of law.

1: The Right to Personal Data *Existence*

Individuals shall have the right to create, record, and persist identifiers, biometrics, and other Personal Data providing proof of their own existence.

2: The Right to Personal Data *Independence*

Individuals shall have the right to hold, share, and provide proof of Personal Data without the need to rely on or notify an administrative authority.

3: The Right to Personal Data *Self-Determination*

Individuals shall have the right to control and determine usage of their Personal Data.²

4: The Right to Personal Data *Portability*

Individuals shall have the right to fully automated portability of their Personal Data under their personal control and agency, using publicly available royalty-free open standards.

5: The Right to Personal Data *Privacy*

Individuals shall have the right to not be subjected to arbitrary or targeted interference with the privacy of their Personal Data.³ A broad interpretation of privacy⁴ shall be maintained.

6: The Right to Personal Data *Security*

Individuals shall have the right to security of their Personal Data, including the right to control and manage their own identifiers and encryption keys.

7: The Right to Personal Data *Agency*

² This principle applies the concept of self-determination in international law. See <https://en.wikipedia.org/wiki/Self-determination>.

³ This language is derived from Article 12 of the 1948 Universal Declaration of Human Rights. See https://en.wikipedia.org/wiki/Right_to_privacy.

⁴ Finn, R. L., Wright, D., & Friedewald, M. (2013). Seven types of privacy. In European data protection: coming of age (pp. 3-32). Springer, Dordrech, available at: https://link.springer.com/chapter/10.1007/978-94-007-5170-5_1

Individuals shall have the right to use, connect, and delegate to Agents of their choice, including Individuals, Organizations, Devices, and Software Programs, to control and manage their Personal Data, and to understand the incentives, policies, rules, and algorithms employed by those Agents.⁵

Alternative Formulation (2020-11-01)

Identity rightsholders shall have the following rights with regard to their identity data to the extent that the exercise of such rights enable a free, healthy and just society:

1. The ability to prove their unique existence independent of any specific administrative authority.
2. The ability to control the usage of their identity data.
3. The ability to move their identity data freely between domains of administrative authority.
4. To ability to secure their identity data, including exercising control of their own identifiers and encryption keys.
5. The ability to protect the privacy of their identity data.
6. The ability to delegate to agents of their choice—including individuals, organizations, devices, and software programs—to exercise these rights, and to understand the incentives, rules, policies, and algorithms employed by these agents.

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⁵ This right encompasses the right of self-sovereign guardianship. See <https://sovrin.org/data-protection/>