

# Technology Stack Working Group

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## Introduction

The Technology Stack Working Group (TSWG) specifies requirements, specifications, and test suites for the technical architecture of the ToIP stack. For an overview of the ToIP stack, see the [Introduction to ToIP white paper](#). For an overview of the ToIP stack development process, see the [Evolution of the ToIP Stack](#).

## Scope

The scope of the Technical Stack Working Group (as defined by [our charter revised in September 2023](#)) is to define (directly or by reference) the technical standards, test suites, and interoperability certification standards for the Trust over IP architecture stack as described in the [Introduction to ToIP](#) paper and the [Design Principles for the ToIP Stack](#) paper.

## Leadership

2023 Co-Chairs:

- [Darrell O'Donnell](#) (Continuum Loop)
- [Drummond Reed](#) (Gen)
- [Kevin Griffin](#) (GLEIF)

2023 Vice-Chairs:

- [Daniel Bachenheimer](#) (Accenture)
- [Tim Bouma](#)
- [Steve McCown](#) (Anonymo Labs)

## Task Forces

Much of the work on deliverables of the TSWG is performed by self-organizing Task Forces (TFs). Following are the current active TFs and their current leads. See their home pages for their meeting schedules.

1. [Trust Registry TF \(TRTF\)](#) — [Darrell O'Donnell](#) Andor [Kesselman Antti Kettunen](#)
2. [Authentic Chained Data Containers \(ACDC\)](#) TF — [Samuel Smith](#) [Phil Feairheller](#) [Kevin Griffin](#)
3. [Technology Architecture TF \(TATF\)](#) — [Wenjing Chu](#) [Drummond Reed](#)
4. [Trust Spanning Protocol TF \(TSPTF\)](#) — [Drummond Reed](#) [Wenjing Chu](#) [Samuel Smith](#)
5. [AI & Metaverse \(AIM\) Technology TF \(AIMTF\)](#) — [Wenjing Chu](#)
6. [Credential Exchange Protocols TF](#) — [Mathieu Glaude](#)
7. [DID WebS Method Task Force](#) — [Phil Feairheller](#), [Stephen Curran](#), [Lance Byrd](#)
8. [X.509 VID Task Force](#) — [Eric Scouten](#)

## Meetings

The TSWG currently holds a plenary meeting **once every four weeks on Wednesdays** in two time slots (one for North America/Europe and one for Asia Pacific time zones):

1. **NA/EU: 08:00-09:00 PT / 15:00-16:00 UTC**
2. **APAC: 18:00-19:00 PT / 01:00-02:00 UTC**

Meetings in 2024 will begin on **January 23**.

For all authoritative meeting logistics and Zoom links, please see the [ToIP Calendar](#).

See the [TSWG Meeting Page](#) for an index of all Meeting Pages with agendas, notes and recordings from all meetings.

## Deliverables

The table below lists all TSWG deliverables and the Task Forces working on each. **Bold** = completed. Non-bold = future. WG members are welcome to follow the links to contribute, either by joining the responsible Task Force (TF) or contributing directly to a deliverable document.

| Name of Deliverable                                               | Deliverable Type | Link to Deliverable                                                     | Task Force                                      | Deliverable Status               |
|-------------------------------------------------------------------|------------------|-------------------------------------------------------------------------|-------------------------------------------------|----------------------------------|
| Principles of SSI                                                 | Recommendation   | <a href="#">PDF</a>                                                     | <i>Completed</i>                                | <b>ToIP Approved Deliverable</b> |
| Design Principles for the ToIP Stack                              | Recommendation   | <a href="#">PDF</a>                                                     | <a href="#">ToIP Stack Design Principles TF</a> | <b>ToIP Approved Deliverable</b> |
| ToIP Technology Architecture Specification                        | Specification    | <a href="#">ToIP webpage</a> (with links to the GitHub version and PDF) | <a href="#">ToIP Technology Architecture TF</a> | <b>Public Review Draft 01</b>    |
| ToIP Trust Spanning Protocol Specification                        | Specification    | <a href="#">ToIP wiki page</a>                                          | <a href="#">Trust Spanning Protocol TF</a>      | Draft Deliverable                |
| ToIP Trust Registry Protocol Specification                        | Specification    | <a href="#">ToIP wiki page</a> (with links to current versions)         | <a href="#">Trust Registry TF</a>               | Draft Deliverable                |
| ACDC Specification<br>(Authentic Chained Data Containers)         | Specification    | See <a href="#">ACDC TF home page</a>                                   | <a href="#">ACDC TF</a>                         | Draft Deliverable                |
| KERI Specification<br>(Key Event Receipt Infrastructure)          | Specification    | See <a href="#">ACDC TF home page</a>                                   | <a href="#">ACDC TF</a>                         | Draft Deliverable                |
| CESR Specification<br>(Composable Event Streaming Representation) | Specification    | See <a href="#">ACDC TF home page</a>                                   | <a href="#">ACDC TF</a>                         | Draft Deliverable                |
| SAID Specification<br>(Self-Addressing Identifier)                | Specification    | See <a href="#">ACDC TF home page</a>                                   | <a href="#">ACDC TF</a>                         | Draft Deliverable                |
| Oobi Specification<br>(Out-of-Band Introduction)                  | Specification    | See <a href="#">ACDC TF home page</a>                                   | <a href="#">ACDC TF</a>                         | Draft Deliverable                |
| did:webs DID Method Specification                                 | Specification    | <a href="#">ToIP wiki page</a>                                          | <a href="#">did:webs TF</a>                     | Draft Deliverable                |
| did:x509 DID Method Specification                                 | Specification    | <a href="#">ToIP wiki page</a>                                          | <a href="#">X.509 VID TF</a>                    | Draft Deliverable                |

## How to join

After you have joined Trust Over IP, you can join this WG by signing up for the Working Group's mailing list. Use this [link to sign-up for the TWSG-2 mailing list](#) to signify your acceptance of the WG charter and desire to participate in the TSWG-2. Scroll to the bottom of the page. Log-in using your group.io username and password or LF ID. Then click on the blue button **[+Join This Group]**, mailing list at [lists.trustoverip.org](mailto:lists.trustoverip.org). Our mailing list is [technology-stack-wg-2@lists.trustoverip.org](mailto:technology-stack-wg-2@lists.trustoverip.org).

Members as well as observers are welcome (with the important caveat below).

## Participation

For the protection of all Members, participation in working groups, meetings and events is limited to members, including their employees, of the Trust over IP Foundation who have signed the membership documents and thus agreed to the intellectual property rules governing participation. **If you or your employer are not a member of ToIP, you may not participate in meetings by verbal contribution or otherwise take any action beyond observing.** To join ToIP and be able to contribute, please fill out the light weight membership application on our website [here](#).

## Intellectual Property Rights (Copyright, Patent, Source Code)

The WG inherits the IPR terms from the [JDF Charter](#). Until 25 October 2023, these are:

- Copyright mode: [Creative Commons Attribution 4.0](#).
- Patent mode: **W3C Mode** (based on the [W3C Patent Policy](#)).
- Source code: **Apache 2.0**, available at <http://www.apache.org/licenses/LICENSE-2.0.html>.

After 25 October 2023, the IPR terms changed to:

- Copyright mode: **OWFa 1.0** (available at <https://www.openwebfoundation.org/the-agreements/the-owf-1-0-agreements-granted-claims/owfa-1-0>)
- Patent mode: **OWFa 1.0** (available at <https://www.openwebfoundation.org/the-agreements/the-owf-1-0-agreements-granted-claims/owfa-1-0>)
- Source code: **Apache 2.0** (available at <http://www.apache.org/licenses/LICENSE-2.0.html>)