**Eclipse Tangle EE Working Group**

Rolling Meeting notes

# Next Scheduled Call:**11th June** Proposed time: 16:00 – 17.00 Hours CET

# **Resources**

Tangle EE Member Contacts:
[Member Contacts](https://drive.google.com/open?id=1fMVT3vxRMZhtqUHrQXkiOW8o2Bv_D6Vt4IIlCposB0w)

Mailing list:
tangle.ee-wg@eclipse.org
*To post a message to all the list members, send email to* *tangle.ee-wg@eclipse.org**.
You must be* [*subscribed*](https://accounts.eclipse.org/mailing-list/tangle.ee-wg) *to the list before you can post.
To access a web archive of this list, visit the* [*tangle.ee-wg Archives*](http://www.eclipse.org/lists/tangle.ee-wg)

Tangle EE Shared drive:
<https://drive.google.com/open?id=1vZWMUziyjhjd-yHu-jwUpfBBdLUOYLah>

Slack workspace:
tangleee-wg.slack.com

Slack invite link:
 <https://join.slack.com/t/tangleee-wg/shared_invite/zt-ci1v1wio-eHiQjNpC_Od2Jamgii0mng>

Tangle EE WG Charter:<https://www.eclipse.org/org/workinggroups/tangle_ee_charter.php>

Eclipse Unified Identity Project:
<https://projects.eclipse.org/proposals/eclipse-unified-identity>

Eclipse Decentralized Marketplaces Project:
<https://projects.eclipse.org/proposals/eclipse-decentralized-marketplaces>

**Tangle EE General WG Call**

**Purpose:** Members discuss and update each other on Project status & ongoing activities

**Thursday, June 11 2020**

**Attendees: (Please add, Name (Company)):**

* Johannes Mayer (Laboratory for Machine Tools and Production Engineering (WZL) of RWTH Aachen University)
* Akash Goswami (IoTIFY)
* Aleattion Dogan (Helmut-Schmidt-Universität, Automatisierungstechnik)
* André Bryde Alnor (Energinet)
* Martin Schmidt (Energinet)
* Maria teresa Delgado (Eclipse Foundation)
* Paul Buck (Eclipse Foundation)
* Michael Estrin (Dell Technologies)
* Steve Todd (Dell Technologies)
* Nino Ulrich (AKITA)
* Philippe Calvez (Engie)
* Stéphane Dider (Calypso Network Association)
* Antonio Vilei (STMicroelectronics)
* Thale Gartland (IF)
* Jan Pauseback (IF)
* Jelle Millenaar (IF)
* Alex Westerhof (IF)
* Alexey Sobolev(IF)
* David Sønstebø (IF)
* Jan Pauseback (IF)
* Jelle Millenaar (IF)
* Mathew Yarger (IF)
* Wilfried Pimenta (IF)

**Agenda (Add your topics below):**Working Group General Update
Project progress information session

Upcoming calls - Relevant content **Captured minutes (please add if anything critical is missing):**

This call is recorded. Everything that is being discussed in this call is public.

Some members are more experienced with WG than other members. Not always clear where the responsibilities lie.

***Question****:* How does the work in the community, in terms of the project proposal which requires people to write code? Who writes the code?

* It will be **challenging to start writing code if we lack the understanding of what we are actually going to build**. Need more specificity on what is being built. We need to agree on some specific challenges to address.
* We could break down the challenges, and turn them into concrete action items. With the more specific action items in place, we could have a discussion with all the members in the WG regarding who is willing and capable of actually starting to write the code. (Alex, IF)
* Another consideration could be to contribute with existing code that members may have and want to bring into the project, along with code development. (Paul, Eclipse Foundation)
	+ [AKITA](https://m2m.akitablock.io/#/) has a machine to machine open source project. This provides a bunch of code to get started with any kind of IOTA-based projects. Could help as a starting fase. (Nino, AKITA)
	+ Energinets code base could be a starting point.

***Question****:* Is there a requirements document, with a template that people typically would use? Is there some other way of identifying the requirements for people to code? How is this process going to run?

* There is a document that provides an overview of the suggested way of working and where people could submit their interest in what objectives and topics they want the WG to work on.
* The document was shared both in the mailing list & in the Tangle EE slack on 28th of May. You can access the document [here](https://docs.google.com/spreadsheets/d/1YtHl_nXPbGYlpgq4LTRyFz_n0Hwm5S0cSXFjtY329as/edit#gid=0).
	+ Action Item: Add a column to indicate whether or not a member has a code to contribute to the project.

***Question****:* Are the documentation and the code only stored in the Google Shared Drive?

* The code developed will be stored in Github repositories and is open source. The documentation will be stored in Google Drive, unless the WG chooses to take a different approach.

Not every member will be able to directly contribute to some of the activities that we envision, Project Origin in this case. If you believe that certain code developments cannot be done through your organization, would it be desirable to work on a separate project initiative.

***Question****:* Where do you (Akash, IoTIFY) see potential steps to collaborate on this particular project initiative (Project Origin)?

* IoTIFY primarily focuses on the scalability and simulation for large scale IOTA networks, and is also where IoTIFY could pitch in, but is probably a bit further down the road at this moment.

***Question****:*  Based on your (Antonio, STMicroelectronics) interest from the last meeting, could you elaborate on who STMicroelectronis could support the Project Origin?

* Should start with the specification of the requirements, from there we can understand how to move forward.

**Action Items (Add action items below):**

* In the [Project Initiative Team](https://docs.google.com/spreadsheets/d/1YtHl_nXPbGYlpgq4LTRyFz_n0Hwm5S0cSXFjtY329as/edit#gid=0) sheet there should be added a column to indicate whether or not a member has a code to contribute to the project
* During the next upcoming call it will be a presentation with up to date research and engineering about IOTAs current scalability roadmap.
* Alex & André: Schedule a conversation to break down each individual challenge. Present this to the rest of the WG.
	+ The rest of the members can then express if they are able to contribute to the specific items.
* Could be a lot of value in setting up a separate [project initiative](https://docs.google.com/document/d/1OF4CAr-v4_-6o2gv6OBpaQvYYatIBoDcWL9h9N_EVvY/edit).
* Invite the IoT WG to present their work on the next scheduled WG call.
* Have some members showcase their work (15 - 30 min).

**Eclipse Tangle EE WG Meeting**

**Thursday 30th of April**

**Attendees (Please Add, Name(Company)):**

* Alex Westerhof (IF)
* Alexander Belyaev (IF)
* David Sønstebø (IF)
* Jan Pauseback (IF)
* Jelle Millenaar (IF)
* Mathew Yarger (IF)
* Navin Ramachandran (IF)
* Wilfried Pimenta (IF)
* Alexey Sobolev (IF)
* Thale Gartland (IF)
* Christoph F. Strnadl (Software AG)
* Antonio Vilei (STMicroelectronics)
* Steve Todd (Dell Technologies)
* Aleattin Dogan (Helmut-Schmidt-Universität, Automatisierungstechnik)
* Bob Hageman (Schluss)
* Johannes Mayer (RWTH Aachen University)
* Nino Ulrich (Biilabs)
* Paul Buck (Eclipse Foundation)
* Peter Lyck Ingerslev (Engerinet)
* André Bryde Alnor (Energinet)
* Stéphane Didier (Calypso Network Association)
* Markus Lücking (Forschungszentrum Informatik)

**Agenda (Add your topics):**

* Update Steering Committee Election
* [Google Drive Access](https://drive.google.com/drive/folders/0AJUmXGO65JTnUk9PVA) - Submit your google id to @thale.gartland@iota.org to get access
* [Project allocation sheet](https://docs.google.com/spreadsheets/d/1YtHl_nXPbGYlpgq4LTRyFz_n0Hwm5S0cSXFjtY329as/edit#gid=0) - Please add your details
* Introduction [Project Initiative #1](https://drive.google.com/drive/folders/1X_P1s2NwZ8mEVsiIwh-VvLsr5zn-1TF7) - André Bryde Alnor (Energinet) + next steps
* Introduction [Project Initiative #2](https://drive.google.com/drive/folders/1X_P1s2NwZ8mEVsiIwh-VvLsr5zn-1TF7) - Steve Todd (Dell) + next steps
* WG & Projects Meeting Cadence (Member Suggestion)
- *WG > Monthly Topic Webinars & Member Spotlights
- WG > Quarterly Project Initiative Call
- WG > Quarterly Project Initiative Showcase & Share
- Projects > Frequency decided by Project Initiative teams based on Project Initiative Needs*

**Captured Minutes (Please add if anything critical is missing):**Recording of the meeting: 30-04-2020 Tangle EE Project Call
<https://drive.google.com/drive/folders/16Zn1_RyZ5pZczq56L5tU4H8mnovtJAiY>

**Update on steering committee election:**

* Ballots have been sent out to all company representatives (of the “Participant Members”)
* Voting is anonymized with 1 vote per Participant member
* Election results will be shared by Eclipse on 6th May

**Project Initiative #2 - Steve Todd (Dell)**

* Instead of inserting data into the Tangle, perhaps write some client software that searches the Tangle, and displays enterprise data assets and metadata associated with them. Try to build some data portfolio tool
→ provides some sort of value.
* How trustworthy the data is, how is the data set more valued than another?
* Build some sort of dashboard where people can view enterprise data assets, compare them.

Is this a proposal to develop a client software in the sense of a **graphical dashboard** (i.e., a user interface, UI) **only**, or would the project also include a kind of **abstraction layer, an API layer** in addition to the dashboard/UI?

* The project **shall include both**, a graphical UI (“dashboard”) and (or, rather, on top of) an API layer
* One needs the visualization (i.e., the graphical UI) of a nice tool to help people understand the power of the data, e.g., of creating and browsing a portfolio. This will also support the project in identifying further requirements and functions (e.g., simply by “playing around” with the UI).
* There are a lot of good open source visualization tools available focusing on and satisfying requirements for vastly different roles, user groups or personas. So, including an API in the project is required to make the project attractive to many different industries

Does this potential overlap with the [Project Alvarium](https://blog.iota.org/iota-dell-technologies-and-the-linux-foundation-team-up-for-data-confidence-fabrics-985cb3515364)?

* Project Alvarium focuses on bringing the data **to** the Tangle and annotating it with statements of trustworthiness.
* Alvarium is related to the concept, more IOTA specific. The Alvarium dashboard was only a marketing dashboard to attract attention, not the focus of it.
* Look at to get ideas in terms of how we build a dashboard

How do we envision this moving forward?

* Need to scope out (“refine”) more details of this project
* Include and discuss the refined and/or extended scope with all members of the working group (WG)
	+ What kind of data are we trying to put into the visualization?
	+ How would a user be interfacing it?
	+ More story behind it, justifying why is this built
	+ Could focus on manufacturing use cases (to be decided)
	→ What industry would a data dashboard be more valuable to right now?
* With this information we shall enter discussions on resourcing

**Project Initiative #1 - André Bryde Alnor (Energinet):**

* Overarching problem: To achieve a true climate natural energy system + maintain securities
* Scaling up is not enough → scale out to decentralization
* Need both a shared ledger approach (“SLT”) and a distributed ledger approach (“DLT”)
* use case:
	+ Implementing a system handling the “**guarantees of origin**” of electrical power
	+ For instance, the system has to include functionality to guarantee that any given energy produced and consumed is green energy (i.e., proving the “green” origin of this energy)
	+ The current implementation provides these “guarantees” only on a yearly basis. In the future, this shall be provided in real time.
* Alpha version of the system
	+ built on Hyperledger Sawtooth
	+ Will go life tomorrow (May 11th, 2020)
	+ We know that Hyperledger Sawtooth does not scale beyond 100,000 entities
	⇒ therefore we are looking to the Tangle for scalability!
* What we are asking for (“**project objectives**”):
Within the next three months, creating a proof that the Tangle is actually the right technology (not production ready, but all of the proofs done) to build on for the future of the project.

***(Question)*** *STMicroelectronics:* Any information on the hardware setup?

* Two approaches:
	+ Integrate with the **back office/legacy systems** that are already in place today across most of Europe
	+ Integrate with the **individual smart meters** (directly), currently the trust setup is difficult and need further exploration
* A lot of ways to achieve that (e.g., private Tangles), but as dive into that → urgent need to tab into the other problems

What connectivity are used from the smart meter to the centralized system?

* A bunch of different ways of working
* Push data from the smart meters, gathering that data in their central system via either the electrical wires or WiFi/Bluetooth
* Not at all a decentralized setup, but we aim for this in the future and hope that the rest of Tangle EE will explore this with us.

Any numbers on how many devices are currently operating on the Hyperledger, and how frequent the transactions are/ potential TPS?

* Not sure, opens tomorrow. Currently bundling all transactions once a day, so scaling is not yet an issue but will become in the future when the system is more granular.
* The assumed TPS (transactions per seconds) of such a system is in the range of (at least) 2,500+ (based on a back of the envelope calculation during the meeting ;-)
* Maybe we do one transaction per device every 5 min (in the future), then, nested private Tangles should have no problem enabling this.

A possibility → combine the projects → since the energy industry is so vast and touches on multiple verticals, most members of Tangle EE could have something to contribute and benefit from.

**Action Items:**

* Do a follow up call on project initiative #2
* Do a follow up call on project initiative #1
* Share an overview of both projects
* As per Eclipse Foundation’s policy a **public WG needs to share everything in public** (including meeting minutes, etc.) → from next meeting on
	+ Any objections → take it up in the Tangle EE Slack workspace
* Meeting cadence:
	+ *WG >* ***Monthly Topic Webinars & Member Spotlights***
	+ *WG >* ***Quarterly Project Initiative Call***
	+ *WG >* ***Quarterly Project Initiative Showcase & Share***
	+ ***(Individual) Projects*** *> Frequency decided by Project Initiative teams based on Project Initiative Needs*
	+ Additionally we plan to have one **project progress information session** between the quarterly meetings (i.e., **every 6 weeks**). 3 months between project updates seems a too long period in order to exert any effective oversight or governance.

**WG Meeting Decentralized Identities & Decentralized Marketplaces
Purpose: Projects kick-off call
Wednesday April 01 2020**

**Attendees: (Please add)**Stéphane Didier (Calypso Networks association)Martin Scheyhing (Dell Technologies)Maria Teresa (Eclipse Foundation)Paul Buck (Eclipse Foundation)Hammad Aslam Khan (ENGIE)Christian Fries (FZI Karlsruhe)Robin Lamberti (FZI Karlsruhe)
Alaettin Dogan (Helmut Schmidt University)
Holger Kother (IF)Alexander Belyaev (IF)
Alexey Sobolev (IF)
Alex Westerhof (IF)
David Sønstebø (IF)
Jan Pauseback (IF)
Jelle Millenaar (IF)
Lisa Schneider (IF)
Mathew Yarger (IF)
Mike Bennett (IF)
Thale Gartland (IF)Wilfried Pimenta (IF)
Christoph F. Strnadl (Software AG)
Johannes Mayer WZL (RWTH Aachen University)

**Agenda:(Add your topics below)**

\* Project Intro Decentralized marketplaces
\* Project Intro Unified Identity
\* Project Discussion all members

**Captured minutes (please add if anything critical is missing)**

Holger: Decentralized Marketplaces Introduction
See slides: <https://drive.google.com/open?id=1j2xUwX8pXf-0sedvNIlXWD5ZSqvDLpRAQH5aHI2WoVI>

Jelle: Unified Identity Introduction:
See slides: <https://drive.google.com/open?id=104rIycNHWg7Ly_oL3OI5EeJlM9QhXsqB3c9iIC6sGh0>

Project discussion - all participants

Christoph: Guidance on how both Projects would work together? What do both Projects need from the WG to flourish?

Holger: Like to understand and get input on requirements from your business perspective E.g. Marketplaces > no rating system > is this a requirement and why What would be needed with regards to hardware integration? Receive input and reflect on business needs & requirements

Jelle: Theoretical part - explore how we can best accommodate business requirements regarding Identity. Tech part - we have both business and tech oriented individuals in the WG. Code and output follow-up. Propose an RFC process. We can do a webinar or call to outline how this could work if there is interest. Discuss what we need to solve > Document solution > start building together

Mike: Lot’s of existing Standards with lots of overlap.Would mapping this out be beneficial?

Christoph: GS1 example > Could run a survey

Mark: Might want to look at Champions defining problem statements to work on with clear value outcomes. Potentially work in 12/14 week sprints to showcase deliverables at regular intervals. Sprint the process within an acceptable time frame, showcase relevancy. Refine roles & responsibilities

Christoph: Structuring & prioritization of the WG needed, Clearer outcomes once the SC has been established

Markus: On the topic of Requirement. How do we capture requirements? How to define what the protocol should deliver?

Holger: Propose to set-up a questionnaire. Google sheet with requirements with indication what is relevant / important, prioritize & who will contribute

Jelle: Counter suggestion > We have devs & non-devs > focus on requirements perhaps later > How would business use Identity / Marketplaces > capture expectations > define the process

Holger: Would be part of it / can combine. Should be an open call to understand benefits and open the discussion

Markus: Consider prototyping and show clear outcomes / benefits

Chris: Next steps > how to work, structure & prioritize, Potential WG Topics, expectations & deliverables, cadence

**Action Items (Add action items below)
\*** Alex to set-up & share meeting minutes (Complete)

**Eclipse Unified Identity Project Webinar + Q&A
Purpose: IOTA Foundation to share insights, current work and Identity activities with members + Q&A**

**Wednesday April 15 2020**

**Attendees: (Please add)

Agenda:(Add your topics below)
\* Webinar (30 Min)
\* Q&A (15 Min)

Captured minutes (please add if anything critical is missing)

Action Items (Add action items below)**

**Eclipse Decentralized Marketplaces Project Webinar
Purpose: IOTA Foundation to share insights, current work and Dec. Marketplaces activities with members + Q&A
Thursday April 16 2020**

**Attendees: (Please add)

Agenda:(Add your topics below)
\* Webinar (30 Min)
\* Q&A (15 Min)

Captured minutes (please add if anything critical is missing)

Action Items (Add action items below)**