



COST Innovators Grant IG15104
Industrial Machine Monitoring Unplugged Network (IMMUNet)

MINUTES

Second CIG Team and Scientific Meeting – Part 1

Microsoft Teams (*online*)

2-3 November 2020

The meeting was a virtual meeting, performed using Microsoft Teams platform. The meeting was attended by the following people:

CIG Chair / Co-Chair

- Chiara Bologna (in Bologna)

CIG Team Members

- Carles Anton-Haro, CTTC
- Laurent Clavier, UoLille
- Guillaume Villemaud, INSA
- Konstantin Mikhaylov, UoOulu

Other participants

- Giampaolo Cuzzo, UniBO
- Lala Rajaoarisoa, UoLille
- Régis Rousseau, INSA

Invited External experts

- ROMAIN VIARD, JMH-Conception, Novembre 2
- ETTIHIR KHALID, JEUMONT Electric, November 2
- Blazek Thomas, Silicon Austria Labs, November 3, 2020
- David Cnockaert, Stratiforme, November 3
- Olivier Beaujard, Carlo Tinella, Olivier Seller, Semtech Corporation, November 3

Day 1: November 2nd

On November 2nd 2020 at 9.00 am, the Meeting started on Microsoft TEAMS.

Firstly, the Chair presented the Agenda, which was accepted. Then she proposed to have the second part of the meeting on November 23 and 24, provided that the boards will be available at the partners' premises. Partners agreed on this.

She then moved on presenting the status of the work in terms of the Business Plan editing. The following chapter assignments have been proposed and agreed:

- Chapter 4: Business Model, assigned to CTTC, first draft due by January 15th , 2021;
- Chapter 5: Financial Projection, assigned to UoOulu, discussion on the content to be done during the meeting in CTTC, first draft due April 1st, 2021
- Chapter 6: Roadmap and impact of money and time, assigned to INSA, discussion on the content to be done during the meeting in CTTC, first draft due by April 1st, 2021.

After that Laurent Clavier presented the status of Chapter 3 editing. The market analysis developed has been presented and discussed among partners. It has been suggested when describing a market sector to include: the number of companies and how much they spend in digitalization. Eurostat database will be checked to see if these data can be available for free.

As for the market research is concerned, the questionnaire to be submitted to potential customers has been discussed: it has been decided to submit to companies a very short questionnaire with some general questionnaire and then to move further in the analysis, submitting a more details questionnaire, for those companies who demonstrate some interest. The questionnaire format will be ready by the next meeting (November 23).

With reference to the section on Competitors Carles Anton suggested to add a value curve, providing a comparison between Immunet and other competitive products, in terms of different features to be properly identified.

Finally, regarding the Market Penetration Strategy section, it has been decided to move the description of the steps to be followed to move from lab to market into section 6.1 (Planned operational Steps: From Lab to Market), since the content of the section should be related to the strategy to enter the market, once the validation will be finished. The section content will be discussed during the meeting in CTTC, together with the content of Chapter 5 and the first draft will be postponed to April 1st.

At the end of the slot, Carles Anton presented the section including the PESTLE analysis which has been finalized.

The first two invited speakers ROMAIN VIARD, from JMH-Conception, and ETTIHIR KHALID, from JEUMONT Electric, entered the meeting. After a brief introduction of all people involved in the project, a short presentation about the Immunet project took place. After that the two invited speakers presented themselves and the company they represented. Jeumont Electric specified the needs and requirements for the sensors network developed on their generators, JMH skills.

After the section, partners agreed that:

- Jeumont Electric is not a suitable potential customer for the Immunet system, because the number of sensors they need to deploy on their machines is very low and in most of the cases they are mounted on fixed parts of the generator.
- JMH-Conception can be considered as a potential key partner for the hardware development.

After the break Carles Anton presented the content of Chapter 4. The following discussions took place.

- SWOT analysis. Partners suggested to add some more strengths (e.g., no need for third party involvement) and weakness (e.g., no experts on legal issues and/or certifications in the team), such as threats (e.g., difficulty to follow the technology evolution), and opportunities (e.g., customers are not experts on telecommunication).
- IMMUNet's Vision: add the keyword monitoring
- IMMUNet's Mission: eliminate the word "safety"
- Growth: 1. Include security and encryption into Immunet release 2; 2. EH and reliability should be part of Immunate release 1; 3. Assuming beginning of May we will setup a start-up it will require 1 year / 1 year and half to finalize the product (increase the TRL) and investigate the market needs (filed trials). In this phase at least 2 employers will be needed.

- Competitive strategy: mainly based on differentiation, no niche market.

Copy of the above presentations were uploaded on the “Files” section of the TEAMS’ group and on the IMMUNet Members Area of the Iracon/ImmuneNet website (www.iracon.org).

The first day meeting ended at 18.00.

Day 2: November 3rd

- Blazek Thomas, Silicon Austria Labs, November 3, 2020
- David Cnockaert, Stratiforme, November 3

Other two invited speakers participated to the first part of the meeting which started at 9.30: Blazek Thomas, Silicon Austria Labs, and David Cnockaert from Stratiforme.

After a brief introduction of all people involved in the project, a short presentation about the ImmuneNet project took place. After that the two invited speakers presented themselves and the company they represented. Jeumont Electric specified the needs and requirements for the sensors network developed on their generators, JMH skills.

After the section, ImmuneNet partners agreed that:

- Silicon Austria Labs could be considered a good partner for possibility future European projects
- Stratiforme presented an interesting use case, that could be of interest to ImmuneNet but not in the short term vision, because of the complexity requested (new design of the HW platform needed and notable issue related to energy efficiency).

After the break ImmuneNet partners met Semtech, represented by Olivier Beaujard, Carlo Tinella, Olivier Seller.

After a brief introduction of all people involved in the project, a short presentation about the ImmuneNet project took place. After that the invited speakers presented themselves and the company they represented. Semtech is pushing the definition of a LoRaWAN protocol stack for the 2.4 GHz version of the chipset and they see industrial IoT as driving use case for such protocol stack. In this regards, they are interested to the ImmuneNet protocol because of its reliability features (no random access foreseen). Advantages of using the 2.4 GHz band: available everywhere in the world, larger data rate, lower delays, no DC limitations, miniaturization, robust w.r.t. interference (Wi-Fi and BT).

Semtech is interested to the ImmuneNet protocols stack, but they request backward compatibility w.r.t. LoRaWAN protocols stack.

As for the HW development is concerned, they stated they are working with Embit s.r.l. (one of our possible key partners), so they are perfectly fine with using gateway and devices developed by them.

The following steps have been defined to move on:

- Semtech will send us an example of NDA that will be signed in order to provide them the specifications of our protocol
- Semtech will check the ImmuneNet protocol and in the meanwhile we will think about how to guarantee backward compatibility
- Another call will be setup.

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The meeting closed at 14.00.