



# Stefano Noli

CEO

Engarm S.r.l.

<http://www.engarm.it>

## BILATERAL MEETINGS

Thursday (1:30pm – 6:00pm)

Friday (9:00am – 12:00pm)

Friday (12:00pm – 4:00pm)

### DESCRIPTION

Engarm is a SME company that work his R&D and product fulfillment in industrial and biomedical branch. His main targets are:

1. development of innovative IoT devices;
2. development of predictive algorithm to apply in IoT;
3. development of biomedical and industrial spread of 3D printing.

For first activity we are involved in design and deployment of AHRS modules and IMU moduls for motion capturing and for movement tracking. Each devices have the medical and sport targets to use. The IMU and AHRS development let necessary to develop a software system to manage the data and link them to the motion dynamics of human body and link them to typical pathological patterns. Our algorithm (in development phase) concern a predictive survey of critical behavior.

In the 3D printing field we work on development of new acquisition systems of body parts to achieve a super custom orthopaedic devices

In absolutely prototyping stage is the implementation of an endoscope with a virtualization environment to achieve a better quality of medical care and analysis of potential disease.

**ORGANIZATION TYPE** Company

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**COUNTRY** Italy

**CITY** Milan, via Soperga 2 [Google map](#)

## Request

# SOFTWARE: MACHINE LEARNING FOR MOTION CAPTURE AND NEURODEGENERATIVE PATHOLOGIES

ENGARM is in developing stage of new generation of software health oriented that have their field of deployment in neurodegenerative diseases and orthopaedic rehabilitation monitoring.

The combination with Internet of Things and Software is strategic to drop down the cost trend and offer a complete system to patient.

Main implications are to give to the patient a simple interface that can lead him to a correct rehab path and make they a real key player of therapy.

We work in a deep integration with other IMU and inertial sensors that can bring our software platform even modular and in the same time a monolithic referee in disease control.

The advantages. Our platform run in cloud and the computational costs of data management is reduced thanks to a distributed server, pc architecture, and a management algorithm of computational resource aimed to save energy costs.

The next step is to evaluate some deployment partner to start acquisition data campaign and machine learning testing.

The partner chased are:

1. A little or medium company that aim to sign a partnership agreement;

2. A financial company that could be a good financier and is interested to ENGARM return of investment;
3. Hospital that want to sign an agreement to test our platform;
4. A partner to distribute ENGARM products;
5. technical and know-how skills.

### **COOPERATION REQUESTED**

1. Outsourcing co-operation
  2. Technical co-operation
  3. License agreement
  4. Sales / Distribution
  5. Investment/Financing
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## **Offer**

### **IOT - INTERNET OF THINGS (IOT) - AHRS - IMU - SMART DATA LOGGERS**

The IoT designed by ENGARM allow to bring the best performances and power consumption in a varied number of field (automotive, logistic, health, buildings).

The HEALTH above all is the most interested field in this moment in in ENGARM line of sight. Our solutions are actually TRL6 ranked.

The performance we can obtain are the most high in terms of precision, power consumption in AHRS - IMU platform and efficiency in implemented algorithms. Our focus in fact is not in hardware solution, at this stage, but in algorithm of hardware management and data acquisition.

The advantage granted by monitoring capabilities of this integrated systems is to lead a significant real-time system.

This systems are mainly used in orthopaedic rehabilitation monitoring and in neurodegenerative diseases monitoring. A simple use grant at any patient or at their relatives to execute rehab exercises and to chase the therapy with a simple mobile interface.

The partner chased is:

1. a little or medium company that aim to sign a partnership agreement;
2. a financial company that could be a good financier and is interested to ENGARM return of investment;
3. Hospital and Rehab Center that want to testing our products and discuss a furniture;

3. a partner will be able to distribute ENGARM products;
4. technical and know-how skilled.

Actually the road map of ENGARM IPR is:

1. Design of platform registered;
2. Algorithm design registered;

#### **COOPERATION OFFERED**

1. License agreement
  2. Manufacturing agreement
  3. Sales / Distribution
  4. Investment/Financing
  5. Technical co-operation
  6. Outsourcing co-operation
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## **Offer**

### **3D PRINTING FOR HEALTH**

The manufacturing trend lead to a more extended use of 3D Printing.

The 3d Printing process is recommended not only to a rapid prototyping but for a large scale of product production. This is true not only for industrial application fields but also for Health and Life Sciences.

In the Health field it is important to obtain organs (for example) more detailed even to perform the surgery techniques and to verify the correspondence between data acquisition made by CAT and real organ shapes. Not only for internal surgery but also for orthopaedics aid 3D is very important.

The advantages are multiple. ENGARM focuses on reducing mismatch with data acquisition before a surgery, in the first example. In the second significantly reduce waste material in process of orthopaedics and prosthetic device. In accordance with the 3D printing ENGARM capability are extended in acquisition systems (optical and software above all) of biometrics data, in this way it is possible to design a full custom orthopaedic and medical apparel.

The search of possible partners in this activity is focused on companies involved in Body parts precision prototyping and every company needs aid in 3D render and FEM analysis. Other subjects we have pleasure to join are Hospital for testing and cooperation in materials and

acquisition software systems.

### **COOPERATION OFFERED**

1. Sales / Distribution
  2. License agreement
  3. Technical co-operation
  4. Outsourcing co-operation
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## **Offer**

### **ELECTRONIC DESIGN EXPERTISE**

In the recent the development of embedded electronics lead to chasing a pool of expertise and know-how that allow grow other business.

In the ENGARM know-how are present strong capabilities in:

1. Electronic Board and Microchip Design;
2. Firmware Design;
3. Software interface (when this must show sensors data or environmental data).

The partner of ENGARM should be:

1. Little and Medium Companies that want to refresh their HEALTH products;
2. Little and Medium Companies that want to develop new HEALTH product in joint venture agreements or want to verify some feasible study about products;
3. University that work in Health and Life Science field to develop new product to verify production problems or limits in the path between prototyping and mass production.

### **COOPERATION OFFERED**

1. Sales / Distribution
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  4. Technical co-operation
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