Building a BuB Community (C4EU 5.5.1: Report on support actions - training and networking)

Name Name, and Name Name

Abstract

This is the abstract

Index Terms

Bottom-up-Broadband (BuB), wifi, super-wifi, fiber, sensor networks

Affiliation

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I. Introduction

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II. Mentor program and academic advice

The students selected to participate in the Commons for Europe (C4EU) project do so as part of their education at the university. Specifically, this training is divided in two different blocks: *practicum* and *degree thesis*. The practicum involves real-world work in which the students have the opportunity to use the skills they have learned in regular courses. It is also the opportunity to realize that real-world work is far away from the courses taught at the university, which means that the students have to make an extra effort to get acquainted with technologies and work-flows that they have not learned in class.

The *practicum* is not a controlled environment as the course lab assignments are. Things can go wrong, and it is important to understand and accept it. Furthermore, there is not a teacher that *knows the solution*. This means that the level of effort to achieve results is much higher in the practicum than in a course assignment, as it is possible to get stuck and it may take days or longer to find a solution or a workaround. The effort is measured in the European Credit Transfer System (ECTS). The *practicum* has a value of 20 ECTS credits, which is equivalent to 400 hours of work.

The students are not alone in this quest. A *mentor* is assigned to each student to indicate the tasks that the student has to do and provide the necessary help and guidance. As the practicum is tied to a real-world work, the *mentor* needs to be someone that has been working in this real-world for some time.

Besides the actual technical skills acquired in the execution of the *practicum*, the students are also expected to practice *soft* skills such as participation in meetings, effective communication, organization of work to meet schedules, generation of documentation, etc. For some people, the practicum can be the starting point of a professional career.

In the next months, we will assign a mentor to each of the student participating in the C4EU project. It is important that the mentor is someone from outside the university that

is very familiar with bottom-up-broadband and with the pilot. We have already taken the decision for two students:

- Nacho Justel will be mentored by Giovanni Calcerano in the FreeEuropeWiFi pilot.
- Jorge Beltran will be mentored by Roger Baig in the fiber-from-the-home (FFTH) pilot.

In addition to the *practicum*, the students also have write their *degree thesis*. This thesis is an academic document that is necessary to obtain the degree. In the thesis, the students will comprehensively describe their pilot. As an academic document, it has to be carefully written, well structured and profusely documented. It is necessary to include introductory material, related work and references. It is also important to include a detailed work-plan with descriptions of the tasks. The work should be described in such a way that an external evaluator can understand what is the contribution and why it is important.

The *thesis* has also a value of 20 ECTS credits, which means 400 additional hours of work. This part of the work will be supervised by an academic advisor from the university. There is hard deadline for the *thesis* in June. Not meeting this deadline would represent a delay of one year in the obtention of the degree. For this reason, it may be a good idea to plan the work in such a way that the thesis is finished considerably earlier, to have some *safety margin* in case of unexpected events.

LaTeX is a popular document preparation system in the academia, that we will also use in the preparation of the thesis. It is convenient to structure a large document in chapters, sections and subsection. It also provides support for references and cross-references. And automatically generates tables of contents, tables of figures, bibliography, etc. Our idea is to use LaTeX also for the preparation of the documentation of the C4EU project, in such a way that it can be re-used in the preparation of the thesis of the students.

Another tool that can be helpful in the preparation of the documentation is github. Github is a web based extension of the git revision control system, and makes it possible that different people work in parallel on the same document, suggest changes, rollback modifications, etc. in a distributed fashion.

A. Mentors for the OSN pilot

B. Mentor for the FFTx pilot

C. Mentor for the FEW pilot

III. Internal Workshop

In order to check the progress of every pilot, there have been two workshops. In the first one, all the pilots which are carried out by degree or PhD students of the UPF where introduced to some of the partners belonging to the BuB branch of the C4EU project. These are the papers that where presented in the first workshop:

- **Let the networks grow, let the knowledge flow**: It is an introduction both to the workshop and the BuB concept done by Jaume Barcelo.
- **Introduction to Open Sensors Network**: Describes the main objectives and issues that will affect the OSN Pilot, which is executed by Alejandro Andreu.
- **C4EU Northern Quarter Network**: Describes the bases of the pilot and the main task which are planned to do. This pilot is implemented by Fernando Gros
- **CKAN: An Open Data Portal for Sensor Information Publication**: Describes what the CKAN tool is, and how is being implemented. This pilot is carried out by Manuel Palacin and Ivan Fernandez.
- **C4EU Rubi**: Describes the Rubi pilot, the tasks that have been done and the ones that needs to be done yet. This pilot is executed by Jorge Beltran
- **Spectrum Sensing with USRP**: Describes the progress on detecting TV White spaces using and USRP. This pilot is carried out by Luis Sanabria-Russo
- **Free Europe WiFi**: Describes the main aspects of the pilot and briefly analyzes some of the issues with which they will have to deal with. This pilot is executed by Nacho Justel.

The second workshop, consisted of a set of presentations and demos that tried to show to the partners the current progress of each pilot. The following are the papers that were presented:

- **Open Sensor Networks**: Alejandro Andreu
- **Key aspects and Main factors in NQN**: Fernando Gros
- **Practicum, Mentor, Thesis, Advisor**: Jaume Barcelo

- **FTTF/FTTP**: Jorge Beltran
- **Wireless Data Transmission with Ettus USRP-E110**: Luis Sanabria
- **OpenWISP Modules**: Nacho Justel

Note that there have been some issues related to some of the pilots. The pilot C4EU Rubi has been canceled due to some problems with the city council. Therefore, Jorge Beltran will carry out the FTTF/FTTP instead.

The C4EU NQN pilot has suffered some delays due to issues with the communication between the UPF and the MDDA. We will continue waiting for a reasonable time to see if that problems can be solved and the pilot can start.

IV. Open mailing list

One of the tools we use to communicate progress status, questions or just to maintain contact between the different people who make up this working group, is the list of emails. This list is completely open and free, so anyone who wants can sign up to receive it.

The list is provided by one of our partners, Guifi.net, and is accessible from the following link: https://lists.guifi.net/listinfo/bub. Are signed up to the list some components of this work team, partners and external stakeholders. We remark once again the full and complete opening thereof, to any person interested in the project.

Any help, concern or comment is greatly appreciated and we urge all concerned to participate openly in him.

V. Web

Both *Commons for Europe* and *Code for Europe* have a webpage that present themselves to the world. For obvious reasons having a website is good and BuB should have one too. More people could be reached hence this kind of networks could become more popular.

This website should have a brief description explaining our goal as well as giving access to all the documents we work on, such as presentations, deliverables... A link to the mailing list would be adequate since individuals could be interested in becoming a part of this project.

This website shall not be just a presentation letter but also have advanced functionalities for the parts already involved in it.

VI. International Forums

A. Battlemesh

B. International Summit of Wireless Community Networks

The International Summit of Wireless Community Networks was performed in Barcelona between 4 and 7 of October 2012. The summit was a particular place where the participants could share your diverse knowledge and strategies about new technology infrastructure needs and formulating policy reforms to improve community wireless network. Three partners of our consortium participated in the event.

Ramon Roca spoke in the opening event, but also participated during all summit, first he informed all participants about the advantage of BuB business model against the traditional model - explaining why the BuB business model is better and he ended in agreement that infrastructure as a commons can be much more efficient, Ramon also explained the successful completion of the second phase of BuB fiber deployment in Gurb.

Miquel Oliver (as representative of Univesitat Pompeu Fabra, participant in the Bottom-up Broadband project) talked about the C4EU project, and especially about the BuB branch of the project. And Federico Capoano, from Caspur, presented about the need of creating accessible documentation for non-geeks.

VII. Conclusion

And this is the conclusion.

Acknowledgment

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