Commons4EU

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D7.2.1 Report on Activities to Enlist BuB Organizations – a
D7.3.2 Report on Building Support for BuB4Europe - a

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Abstract

Community networking, together with the Bottom-up-Broadband initiative, is an emerging model for the Future Internet across Europe and beyond where communities of citizens build, operate and own open IP-based networks, a key infrastructure for individual and collective digital participation. Although community based networks often extend or complement the coverage of networks of commercial ISPs, they differ in several key aspects: There is usually no central authority that is responsible for a precise network planning. Support is decentralized and open, provided by the community. The network nodes are often inexpensive off the shelf equipment and the network elements exhibit a high degree of heterogeneity in the hardware, software, and capacity. The network infrastructure belongs to the user and is shared to build the network. The network is very dynamic: the number of nodes may rapidly grow and change as new members join the network, or when nodes overload or fail. These community networks are usually built with low cost point-to-point wireless links, MANET networks, and an increasing presence of optical fibre links.

Work Package 7 of Commons4Europe project aims to support the creation of a pan European organization that could provide structure and support to the existing Bottom-up-Broadband initiatives in Europe from either public organizations or emergent from citizen activism. The present document reports on the achievements during the first year of this Work Package.

Deliverables D7.2.1 and D7.3.1 merged

Due to the fact that tasks T7.2, *Enlisting BuB organizations*, and T7.3, *Building Support for BuB4Europe* are strongly related to each other and that they involve relative small amount of man power (2 and 4 respectively for the first WP year and 2 and 5 for the second -the last), the lead beneficiary of them (guifi.net) has decided to merge their reports, D7.2.1, *Report on activities to enlist BuB organizations - a* and D7.3.1, *Report on Building Support for BuB4Europe - b* , into single present document. This decision has been approved by the project leader (ESADE) and is totally aligned with the recommendation of optimising the paperwork efforts made during the first review process.

Index Terms

Bottom-up-Broadband (BuB), Community Networks (CNs), International organisation, Organisation of organisations

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I. Introduction

Despite the scepticism of some people about the capacity of community networks (CNs) to incorporate the optical fiber (OF) technology in guifi.net there are many on-going initiatives[1] to do so. The fact that some of these projects are already in the stage of being fully operational, bringing of Gbs/s broadband Internet access to places (such as rural areas) where the traditional telcos are currently offering connections of few Mbs/s at most, proves that it is totally feasible to deploy and operate OF infrastructure according to the CNs principals following a bottom-up approach. Hence, the aforementioned scepticism is totally unfounded.

The present document reports the presence of OF in guifi.net, paying special attention to the three projects that have been selected as OF pilots [**?**] in the Commons4Europe project and how they have progressed over the first year. The Gurb project has been selected as a pilot because it was the first OF project started and it is the most advanced one. The Vic pilot has been selected because it is a case of OF in an urban area. Finally Rubí has been selected as a case where the project at the moment is blocked.

Several new terms have appeared for this new way of deploying OF, such as *Fiber From The Farm (FFTF/FFTx)*[2] or *Bottom-up Broadband (BuB)*[3], etc. all of them referring to the high degree of the implication of the end user in all the phases of the network deployment and operation.It is worth to mention that the BuB term was introduced in the Digital Agenda for Europe as the result of the guifi.net participation in the Stakeholder Day 2010[4].

FO connections are all end-to-end (Point-To-Point) connections[5]. Hence, the active parts concentrate in the edges. While the intercity connections usually form a mesh

[1] In the guifi.net jargon these initiatives are referred as *projects*

[2] A play on words (i) referring to the active-*from* vs. passive-*to* role of the end users of the CNs models vs. the traditional telcos models, and (ii) reaffirming the popular origin of the initiative *farm* vs. *home*.

[3] Despite this term does not strictly refer to FO the reference is implicit since many people think that FO is the only way to grant the broadband.

[4] http://ec.europa.eu/digital-agenda/events/cf/dae1009/item-display.cfm

[5] Precisely speaking Passive Optical Network (PON) technologies allow Point-To-Multipoint connections. Despite they are widely used, also in guifi.net, for the sake of clarity in this document they are usually treated as a group of PTP links.

network, the so called *backbone*, the intracity connections usually form starts, the so called *user loop* or *last mile links*, centred in the nodes of the intercity mesh. OF wires are passive, so all the electronics and logical configurations concentrate in the edges. While the next Section focuses on the physical part of the deployments, called *deployments* itself, the following focuses on the nodes, named *Points-Of-Presence (POPs)*. Section **??** summarises the results achieved before Commons4EU was started, the results of the first year of the project, and the expected results for the next two years . Finally Section **??** sets the conclusions of the present document.

II. About this document

This report has been produced using open source tools such as LaTeX [**?**] and *git* [**?**]. LaTeX is widely used in academia to prepare print-class documents. It automatically takes care of numbering, cross-referencing, tables of contents, bibliography, etc. *Git* is a high performance distributed revision control which is used in many open source projects, such as the linux kernel. Git makes it easy and safe to collaborate as each contributor works on his or her own personal copy. Good contributions can be easily shared with others, and it is always possible to revert to a previous version.

Our git repository is publicly available in *github*:

https://github.com/jbarcelo/C4EU-deliverables

Anyone who is familiar with LaTeX and *github* can contribute to this document. The first step is to make a copy (a *fork* in *github* jargon). The contributor can work on this copy and make changes to improve the document. After that, it is necessary to request that these changes are merged into the original copy of the document (a *pull request* in github jargon).

If you see anything that can be improved, feel free to contribute. This document is alive in the sense that it will keep evolving as long as contributors make changes and improve it.

The system automatically keeps track of all the contributors and their contributions. It is possible to see who is contributing more actively and which are the exact changes made by each contributor. And everything is public on the web.

III. Related work

TODO

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