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## D7.3.2 Report on Building Support for BuB4Europe - b

**Revision:** v1.1

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V1.1	12/11/2014	R. Baig et al.	Guifi/UPF	Typo fixing

**Statement of originality:**

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

### Abstract

The present report accounts for the progress made during the second year of Work Package 7 (WP7), *Bottom-up-Broadband for Europe*, of Commons4Europe project (C4EU), which corresponds to the third and last reporting period (Nov 2013 - Oct 2014), since the activity of this work package was scheduled for year two and year three (month 13 to month 36).

The second year of was aimed at exploring the needs and possibilities for 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. It consisted of two tasks, T7.2, *Enlisting BuB organizations*, aimed at creating awareness and enlisting the existing BuB organizations to the project, which should have materialized with the constitution of a Steering Committee representing the major players in the field, and T7.3, *Building Support for BuB4Europe*, aimed at enlisting support for the nascent organization and creating a favourable opinion towards it among policymakers that could facilitate its integration in the existing forums. To this ends, since last year we have attended the most relevant Bottom-up-Broadband meetings in Europe and we have interviewed with several Community Networks, specially from Europe, but also from North and South America.

The first conclusion of our investigations was that the creation of a formal organisation was not appropriated because the general feeling among the practitioners is that the already existing tools such as IS4CWN and WBM meetings and the FNF and guifi.net websites and mailing lists suffice for the coordination among their organizations, and that these tools are adjusted to their realities, that is to say, mostly voluntary organisations with very limited budgets, or in other words, they do not have the capacity to be members of a formal structure, specially because of the economic implications.

Nonetheless we identified other tools which efficiency could benefit from formalisation and standardisation. Thus, we decided to reorientate our efforts towards these goals. The results are a proposal for the systematisation of the resolution of conflicts, a methodology for the balance OPEX and CAPEX among the professionals using the infrastructure held in commons, the development of software tools to put this methodology in practice, the translation of the guifi.net license into English, etc. In addition, the activities at the website and at the mailing list have been kept during this reporting period.

We assess results of T7.2 and T7.3 very positively because not only some of the developed tools have been already adopted by other community networks, e.g. the FNF has used our network license as the base to rewrite theirs, but many of them have been identified by GAIA, an IRTF, as effective tools to achieve their goal, that is to say, to fight *digital exclusion due to socio-economic barriers*. We also consider that these results are well balanced with the

resources allocated by the project.

In year one, as set by the project's Document of Work, two reports were produced, one for T7.2 and the other for T7.3. This year, following the suggestion of the reviewers of the second review meeting, the activity of WP7 has been reported in this single document. This has not only alleviated the reporting tasks, but has increased the quality of the report due to the strong relationship between T7.2 and T7.3.

### **Index Terms**

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

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## I. INTRODUCTION

Work Package 7 (WP7), planned for the second and the third and last year of the Commons for Europe project, was based on the following premisses. First, although there are community networks (CNs) and Bottom-up Broadband (BuB) initiatives all around the world and some of them being rather active and successful, the movement remains largely unknown to the general public, and to the public administrations and the policy makers in particular. Second, although these initiatives have many aspects in common such as targets, principals, background, etc., the degree of interaction and collaboration among them is negligible in general. As a result, many of them are tackling with the same obstacles alone and only with their own resources.

The working hypothesis for T7.2, *Enlisting BuB organizations*, and T7.3, *Building Support for BuB4Europe*, was that an international organisation would provide structure and support to the existing BuB initiatives, would stimulate the emergence of new ones, and would contribute to the effectiveness of dissemination, lobbying and influencing the policy makers processes. Nonetheless, after several meetings with practitioners of many initiatives and public administrations, we determined that such organisation was meaningless because, although its creation could be significantly sponsored by C4EU project, its sustainability was not guaranteed. Indeed, those organisations which showed interest, that is to say, BuB initiatives and small local administrations, had not the resources to contribute to it and those which, in our opinion, had the capacity to contribute were not interested in participating. Moreover, we also concluded that the general opinion among the practitioners that contribute in the already existing tools (e.g. mailing lists, international meetings, etc.) is that these tools meet their requirements and are adjusted to their capabilities (i.e. light structures with light maintenance costs).

Nevertheless, during our investigations we found that there were tools that could be beneficial for the BuB initiatives were not in place. Given this reality, we decided to reorientate most of the remaining resources that were allocated to the creation and promotion of the formal organisation towards compensating these lacks. Some of the tools have been developed from scratch such as a proposal for the systematisation of the resolution of conflicts, or a methodology for the balance of OPEX and CAPEX among

the professionals using the infrastructure held in commons, and others have been taken from guifi.net, such as the translation of the guifi.net license into English, etc. During this year we have also contributed to the maintenance and improvement of those tools that showed to be useful during the first year, that is to say, the BuB mailing list and the bubforeurope.net website.

The remaining of this document is structured as follows. Section IV accounts for the activities aimed at enlisting organizations and building support for BuB initiatives and section V for the tools for BuB initiatives that either have been developed or improved. Sustainability of the outcome of WP7 and future work are analysed in Section VI. Finally results are discussed in Section VII and the conclusions are presented in Section VIII.



## II. ABOUT THIS DOCUMENT

This report has been produced using open source tools such as  $\text{\LaTeX}$ <sup>1</sup> and *git*<sup>2</sup>.  $\text{\LaTeX}$  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 software 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  $\text{\LaTeX}$  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.

<sup>1</sup><http://www.latex-project.org/>

<sup>2</sup><http://git-scm.com/>

### III. RELATED DOCUMENTATION

Results of year one of T7.2 were reported at *D7.2.1 Report on activities to enlist BuB organizations - a* and of T7.3 at *D7.3.1 Report on building support for BuB4Europe - a. Report on Opportunitites & Best Practices* reported on the results of T7.1, *Analysis of opportunities and best practices*, also carried out during year one.

#### IV. ACTIVITIES FOR ENLISTING ORGANIZATIONS AND BUILDING SUPPORT FOR BUB INITIATIVES

This section reports on the meetings attended and other activities carried out aimed at enlisting organizations and building support for BuB initiatives. It focuses on those belonging to this reporting period, but the previous ones are also listed for completeness.

##### *A. Community Networks and BuB initiatives*

As in many other community projects, face-to-face meetings are a key component in BuB initiatives. They play a key role in strengthening relationships and the experience shows that most of the projects are debated and started in this kind of events. Thus C4EU allocated resources to attend the most relevant of these events, to present there its proposals, seeking debate and interested parties.

During the current reporting period the following events were attended:

- Namibia's National ICT Summit, Windhoek (Namibia), 6-7 July 2014
  - Presentation of C4EU/BuB initiative in the closing session
- Participatory Networks Workshop, collocated with Participatory Design Conference 2014 (PDC14), Windhoek (Namibia), 6-10 July 2014
  - Presentation of C4EU/BuB initiative and guifi.net project
- 10th International Fab Lab Conference and Fab Festival (FAB10), Barcelona (Catalonia), 2-8 July 2014
  - Presentation of BuB tools in a plenary session
- 50th Internet Corporation for Assigned Names and Numbers meeting (ICANN50), London (UK), 22-26 June 2014
  - Private meetings
- Salut, Amor i Xarxa (SAX) guifi.net meeting, Morella (País Valencià), 7-8 June 2014
  - Presentation of the Free Network Foundation and the BuB initiative in a plenary session
- Association for Progressive Communications (APC) member meeting, Barcelona (Catalonia), 1-9 June 2014

- Presentation of the BuB initiative in a plenary session; together with the Free Network Foundation
- Wireless Battle Mesh v7 (WBMv7), Leibzig (Germany), 12-18 May 2014
  - Update presentation
- WIPJam@MWC214, WIPJam collocated with the Mobile World Congress, Barcelona (Catalonia), 24 February 2014
  - guifi.net invited
- Barcelona The Lab, Barcelona (Catalonia), 20-21 February 2014
  - C4EU/BuB4EU presented in a working session
- Free and Open Source Software Developers' European Meeting 2014 (FOSDEM14), Brussels (Belguim), 1-2 February 2014
  - Presence at the Community Networks stand. Participation in the FFDN meeting.

The most relevant events where we had previously presented our initiative are:

- International Summit for Wireless Community Networks 2013, Berlin (Germany), October 2013
- Wireless Battle Mesh v6, Aalborg (Denmark), April 2013
- International Summit for Wireless Community Networks 2012, Barcelona (Catalonia), October 2012
- Wireless Battle Mesh v5, Athens (Greece), March 2012
- International Summit for Wireless Community Networks 2012, Barcelona (Catalonia), October 2012
- FFTH Conference 2013, London (United Kingdom) February 2013
- International Summit for Wireless Community Networks 2013, Berlin (Germany), October 2013

Contacted organistaions:

- FunkFeuer, Austria
- Athens Wireless Metropolitan Network, Greece
- Sarantaporo.org, Greece
- Free Network Foundation, USA

- Altermesh, Argentina
- Sudo Room, USA
- Wlan0, Slovenia
- Ninux, Italy
- FreiFunk, Germany

### *B. Public administrations*

Interacting with the local governments, from city councils to the Catalan and the Spanish government is part of the standard activities of the guifi.net Foundation. Aside of those contacts that are merely formal administrative and legal proceedings (communications, notifications, etc.), the rest are aimed at creating awareness of the BuB model and at exploring forms of partnership. In most of these meetings the BuB initiative has been presented. A non-exhaustive list of public administrations we presented the initiative follows:

- City Councils: Barcelona, Sant Pere de Ribes, Sant Vicenç dels Horts, Sant Bartomeu del Grau, Manlleu, Folgueroles, Sant Julià de vilatorra, Masies de Voltregà, Sant Hipòlit de Voltregà, Sallent, Calldetenes, etc.
- Regional governments: Consorci del Lluçès, Consell Comarcal d'Osona,
- Catalan Government: Members of the Catalan Parliament, Centre Català de Telecomunicacions i Tecnologies de la Informació(CTTI), Direcció General de Telecomunicacions
- Spanish Telecommunications national regulatory authority - standard meetings kept.

## V. TOOLS FOR SUPPORTING BUB INITIATIVES

A set of tools to support BuB initiatives has been developed and integrated in guifi.net's ecosystem.

### A. *BuB mailing list*

Hosted at guifi.net's mailing list manager<sup>3</sup>, this public list<sup>4</sup> was the first public mean of communication set up. Started on May 2012, as of October 2013 it had over 500 mails in total and 59 subscribers, half of them without any kind of affiliation with the Commons for Europe partners. It rapidly became the *de facto* place to discuss not only about BuBforEurope but also about more general BuB issues. For instance, all project pilot's announcements, discussions, etc. have been done via this mailing list. During current reporting period it has accounted over 200 mails and the number of subscribers has increase up to 64.

### B. *bubforeurope.net website*

This is the reference website<sup>5</sup> for the BuB part of C4EU. During the project execution it has been used as a coordination tool for the BuB pilots as well as a gathering place for relevant BuB documentation. Now that the project is over it has been re-engineered to better suit the second goal and to merge with C4EU and codeforeurope websites look and feel. To this end a new website with less features and a clearer and lighter design has been set up, the former has been moved to another URL<sup>6</sup> in order to keep all its contents, and the most significant ones have been integrated with the new one. Fig.1 shows the front page of the new website.

<sup>3</sup>Sympa <http://www.sympa.org/>.

<sup>4</sup><https://lles.guifi.net/sympa/info/bub>

<sup>5</sup><http://bubforeurope.net/>

<sup>6</sup><http://old.bubforeurope.net/>

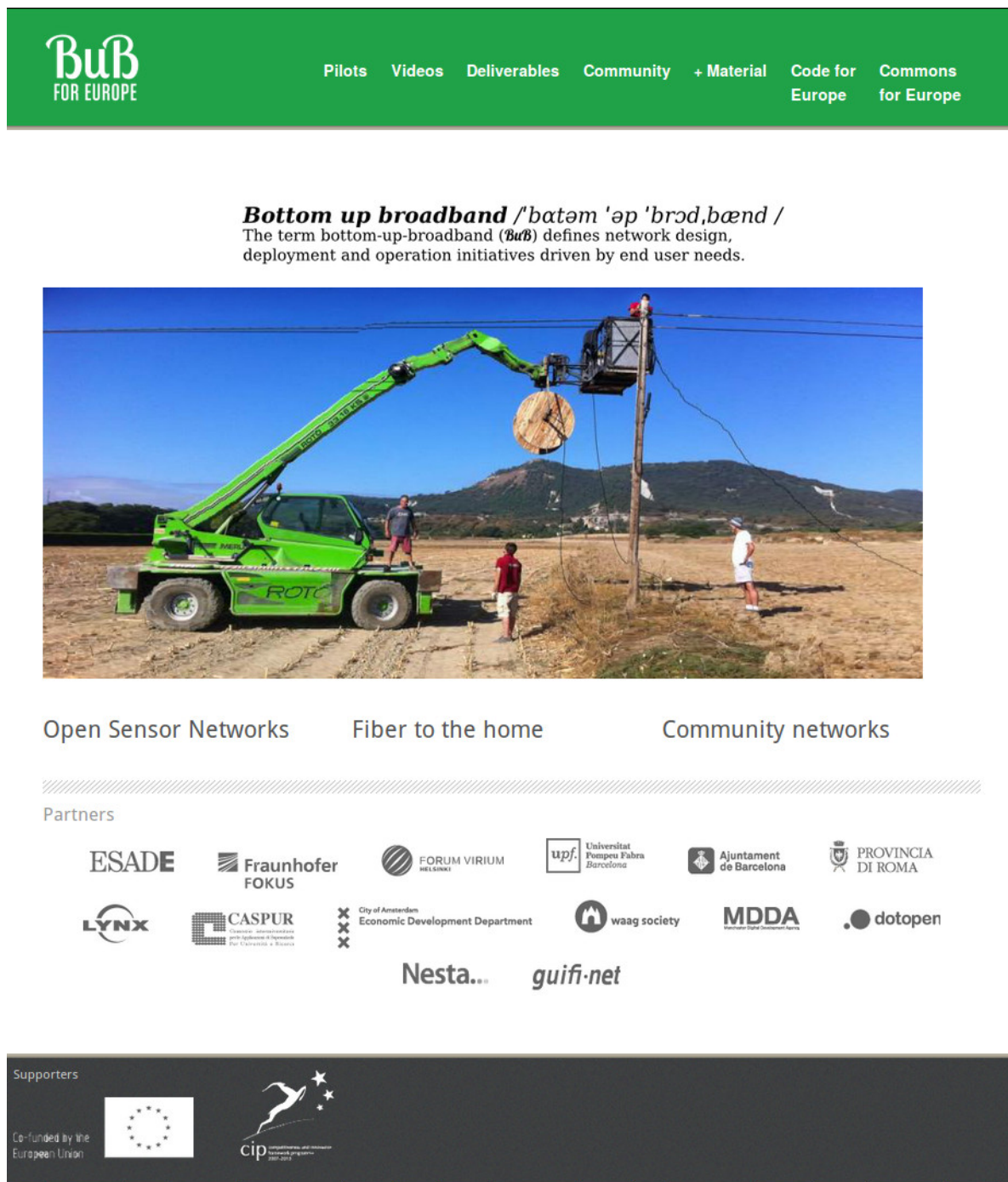


Fig. 1. New bubforeurope.net website front page.

### C. Economic compensation system

To compensate imbalances between investment in the infrastructure held in commons and network usage among the professionals, an economic compensations system has

been developed and implemented in guifi.net. Expenditures declared by the participants (professionals and volunteers) are periodically cleared according to the network usage of these professionals. Calculations are done by a third party entity, the Foundation in the guifi.net case, and are made available to the professionals. The third party centralises and manages the billing system (each professional only makes or receives a single payment). In the guifi.net case, a typical revenue for the Foundation is a percentage depending on each professional type is charged to the result of these calculations<sup>7</sup>. In addition professionals are allowed to charge a reasonable amount for opportunistic connections<sup>8</sup> until their investment is covered.

Fig.2 shows the results of a closed period. This data is publicly available<sup>9</sup>. The screen is divided into four sections. At the top the filters section has several cells to customise the query, the section below shows the summary of the result of the query, next one shows the historic evolution of the results and the last (trimmed in the screenshot) shows each matching item, that is to say, each expenditure declared by the participants.

<sup>7</sup>Type A 10% (to cover administrative costs), Type B 50%, and Type C 100%.

<sup>8</sup>A client node that connects in a DiY manner to a supernode that has been paid by a professional.

<sup>9</sup>[http://guifi.net/en/node/2444/view/budgets/id\%3D2444\%2Cdetails\%3Ddetailed\%2Ctypes\%3Dw-opex\%2Cstatus\%3DCompensated\%2Cfrom\%3D2014\\$\vert\\$1\\$\vert\\$1\%2Cto\%3D2014\\$\vert\\$6\\$\vert\\$30\%2Cnd\%3D\%2Corderby\%3Daccddate\%2Curl\%3Dview\%5Ebudgets](http://guifi.net/en/node/2444/view/budgets/id\%3D2444\%2Cdetails\%3Ddetailed\%2Ctypes\%3Dw-opex\%2Cstatus\%3DCompensated\%2Cfrom\%3D2014$\vert$1$\vert$1\%2Cto\%3D2014$\vert$6$\vert$30\%2Cnd\%3D\%2Corderby\%3Daccddate\%2Curl\%3Dview\%5Ebudgets)



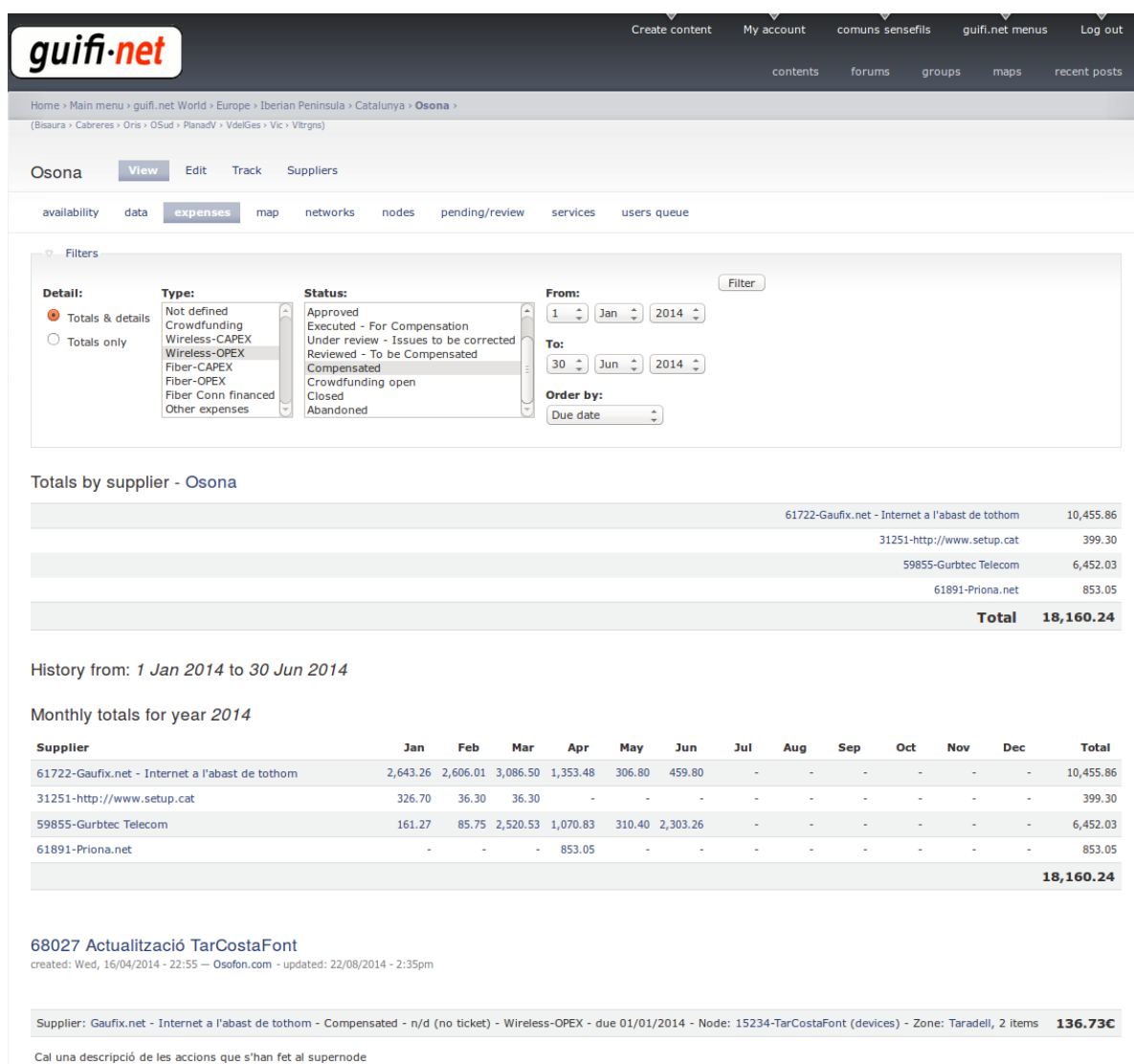


Fig. 2. Economic compensation system. Closed period.

Fig.3<sup>10</sup> shows the result of another selection criterion. In this case the compensation period has not yet been closed. The rest of parameters have not been changed to allow the comparison with the results of the previous selection criterion.

<sup>10</sup>[http://guifi.net/en/node/2444/view/budgets/id\%3D2444\%2Cdetails\%3Ddetailed\%2Ctypes\%3Dw-opex\%2Cstatus\%3DReviewed\%2Cfrom\%3D2014\\$\vert\\$1\\$\vert\\$1\%2Cto\%3D2014\\$\vert\\$9\\$\vert\\$30\%2Cnd\%3D\%2Corderby\%3Daccddate\%2Curl\%3Dview\%5Ebudgets](http://guifi.net/en/node/2444/view/budgets/id\%3D2444\%2Cdetails\%3Ddetailed\%2Ctypes\%3Dw-opex\%2Cstatus\%3DReviewed\%2Cfrom\%3D2014$\vert$1$\vert$1\%2Cto\%3D2014$\vert$9$\vert$30\%2Cnd\%3D\%2Corderby\%3Daccddate\%2Curl\%3Dview\%5Ebudgets)

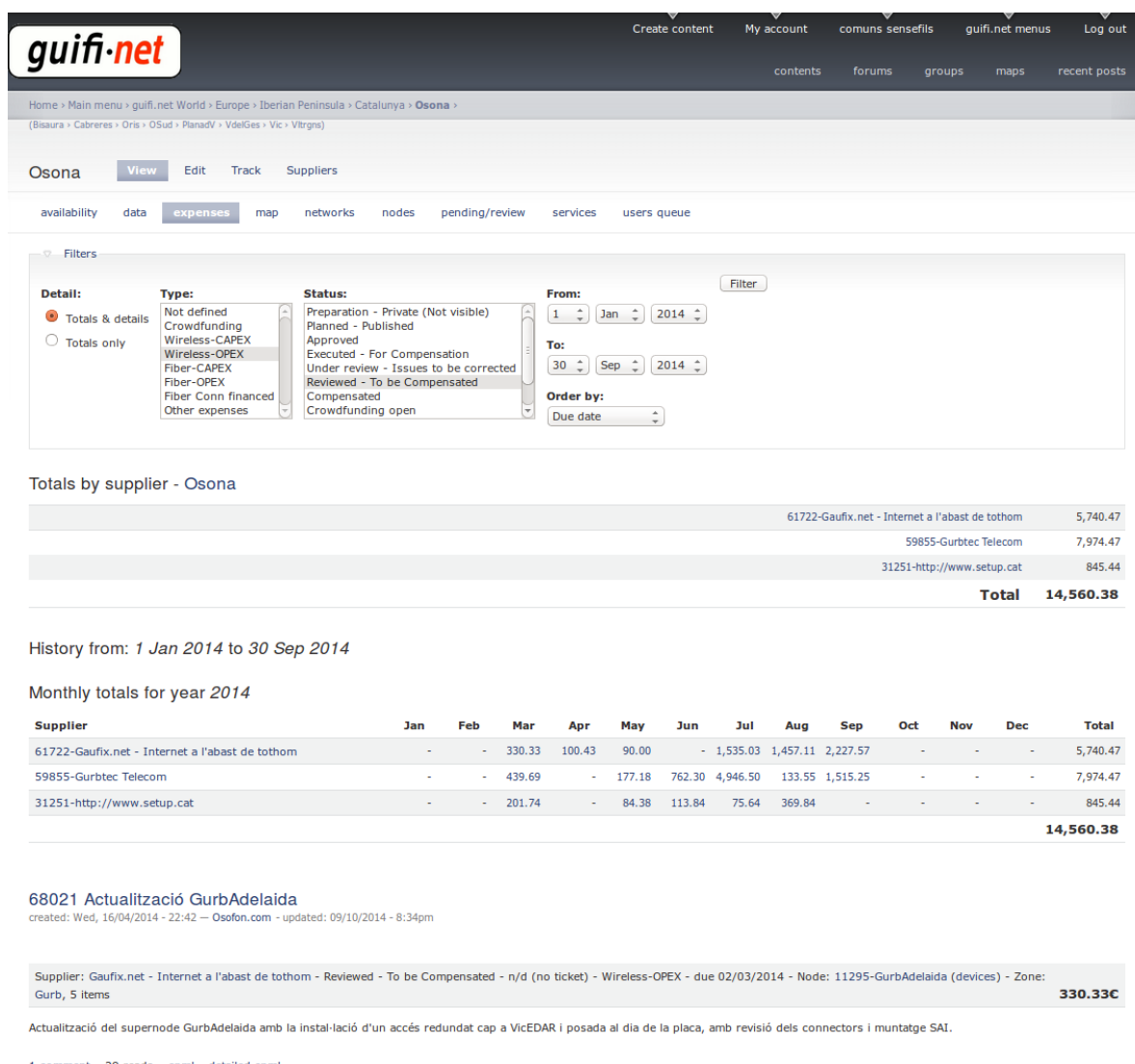


Fig. 3. Economic compensation system. Open period.

Finally, Fig.4 shows the chargeback of a closed period. The total amounts of all participant are positive, that is to say, to pay, due to the recurrent costs of the Points-of-Presence, the internet uplinks, etc. but it can be observed that some of the partial values are negative, that is to say, to be reimbursed, showing that the investment made was above the consumption/usage made of the network. This information is only available to the professionals, thus, it has been appropriately anonymised.

Padrins – Chargeback							1 Set. 2014
A	B	C	D	E	F	G	H
1	Padrins	19	8,516 €				
2				Transits			
3							
4		Quotes	Us BCNZF	Transp. Int.	Trans. Ext.	Base	Tipus
5		205 €	80 €	120 €	44 €	449 €	A
6		75 €	0 €	-22 €	605 €	658 €	A
7		75 €	0 €	-22 €	220 €	273 €	A
8		165 €	80 €	240 €	33 €	518 €	A
9		115 €	0 €	6 €	2 €	123 €	A
10		115 €	0 €	4 €	2 €	121 €	A
11		115 €	0 €	10 €	2 €	127 €	A
12		115 €	0 €	15 €	22 €	152 €	A
13		110 €	0 €	450 €	495 €	1,055 €	A
14		75 €	0 €	-22 €	55 €	108 €	A
15		150 €	0 €	710 €	429 €	1,289 €	A
16		165 €	80 €	160 €	22 €	427 €	A
17		75 €	0 €	-45 €	1,045 €	1,075 €	A
18		75 €	0 €	-22 €	110 €	163 €	A
19		110 €	0 €	50 €	55 €	215 €	A
20		165 €	800 €	16 €	2 €	983 €	A
21		115 €	0 €	6 €	2 €	123 €	A
22		150 €	0 €	150 €	99 €	399 €	A
23		75 €	0 €	150 €	33 €	258 €	A
24							
25							























Fig. 4. Chargeback of the professionals. Closed period.

#### D. Fiber optic web support

The module to support and document Optic Fibre (OF) deployments was of the highest priority because OF deployments had already started long time ago but were not systematically documented due to the lack of this tool. Great efforts have been invested because to solve this problem strong modifications of the database were required and, in consequence, for many of the already existing modules as well. Nonetheless the effort has been worth because support for hybrid wireless<sup>11</sup> nodes has also been introduced<sup>12</sup>. Fig.5 shows the pull-down menu of currently supported devices. It can be noticed that most of the standard OF technologies (e.g. GPON or media converters) are available.

<sup>11</sup>Hybrid wireless nodes had become the *de facto* standard of Supernodes but were not yet supported either.

<sup>12</sup>Main commit <https://gitorious.org/guifi/drupal-guifi/commit/f67eeff8802420cedf2eb8fc79c7d311b797c23a>

trasto	tipus	ip	estat	última disponibilitat	unsolic
SWGURB01	switch	/			 
GurbEISerratCamJardi	cam	10.138.0.12/27	Operatiu	Up (100,00%)	  
GurbEISerratCamCPD	cam	10.138.0.15/27	Operatiu	Up (100,00%)	  
GurbEISerratCamGaratge	cam	10.138.0.14/27	Operatiu	Up (99,95%)	  
GurbEISerratRIQUE	generic	10.138.0.11/27	Operatiu	Up (100,00%)	  
GurbEISerrat-elseri	generic	10.138.0.17/27	Operatiu	Up (100,00%)	  
tdm.gulfbages.net	server	10.138.0.20/27	Operatiu	Down (0,00%)	  
ROU-GURB-04	radio	/		RouterOSv6.x	 

Afegeix un nou trasto:					
<div> <div>xPON Splitter</div> <div>Telèfon mòbil VeuIP</div> <div>Computadora Servidor</div> <div>Tallafocs, Xarxa privada darrera NAT</div> <div>Router ADSL o un altre trasto que proveeix accés a Internet.</div> <div>Càmera en Xarxa, visió en directe.</div> <div>Qualsevol trasto amb una IP pública (PC, consola, portàtil, pda...)</div> <div>Node Confine/Clomunity</div> <div>xPON User Unit (Final)</div> <div>xPON Concentrator (Terminal)</div> <div>xPON Splitter</div> <div>FO Media Converter</div> <div>Torpedo - Joint enclosure</div> <div>Switch</div> <div>Rack</div> <div>Patch panel</div> <div>SAI - Sistema d'Alimentació Ininterrompuda</div> <div>Grup electrògen</div> <div>Panel Solar</div> <div>Bateria</div> <div>Protecció elèctrica (diferencials, magnetotèrmics, sobrecàrregues)</div> </div> <div>afegeix</div>	ip	estat	qms.	az.	
	172.25.1.17/172.25.1.18	Operatiu Up (99,99%)	3.929	282-O	
	172.25.40.125/172.25.40.126	Operatiu	4.915	272-O	
34311-TorelloDipSud (TorelloDipSudPC/TorelloDipSudGurbSerrat)	172.25.206.1/172.25.206.2	Operatiu Up (100,00%)	7.749	19-N	
<b>ROU-GURB-03 - GurbSerratVicSeminari</b>					
45920-VicSeminari (VicSeminariST/VicSeminariGurbSerrat)	172.25.4.25/172.25.4.26	Operatiu	4.464	159-S	
<b>ROU-GURB-03 - GurbSerratSCVDip</b>					
38902-SCVDiposits (SCVDiposit/SCVDipGurbSerrat)	172.25.2.35/172.25.2.33	Operatiu Up (100,00%)	3.264	333-NO	
<b>ROU-GURB-03 - GurbSerratGurbCEPA</b>					
67576-GurbCEPA (GurbCEPAST/GurbCEPAGurbSerrat)	172.25.4.161/172.25.4.162	Operatiu Up (99,90%)	3.806	175-S	
<b>ROU-GURB-03 - GurbEISerrat-TRASTOS</b>					
78647-GurbTecMundo (GurbTecMundoST1/GurbTecMundoST1-Rougurb03)	172.25.0.193/172.25.0.194	Operatiu Up (100,00%)	1.687	202-S	
79578-VicVIT (ROU-VICVIT-03-VM/VicVITGurbSerrat)	172.25.10.34/172.25.10.33	Operatiu Up (99,95%)	5.415	171-S	
<b>ROU-GURB-03 - GurbSerratCalldetenesEscola</b>					

Fig. 5. Fibre optic WEB module.

The developed tool is now being used to document the already existing deployments such as the selected pilots of WP5.

All guifi.net source code is made publicly available through Free Software licences, the OF module included.

*E. Conflicts resolution procedure*

A systematic and clear procedure for resolution of conflicts with a scale of graduated sanctions has been developed<sup>13</sup>. It consists of three stages, conciliation, mediation and arbitration, all of them driven by a lawyer chosen from a set of volunteers. The cost of the procedures are charged to the responsible part or to both parties in case of a tie. This system has defined a precise manner to address conflicts in a quick and standard way, with help from lawyers, that scales well. Its diagram flow is presented in Fig.6.

<sup>13</sup><http://social.guifi.net/groups/guifi-legal/reglament-dels-procediments-de-resoluci%C3%B3-de-conflictes>

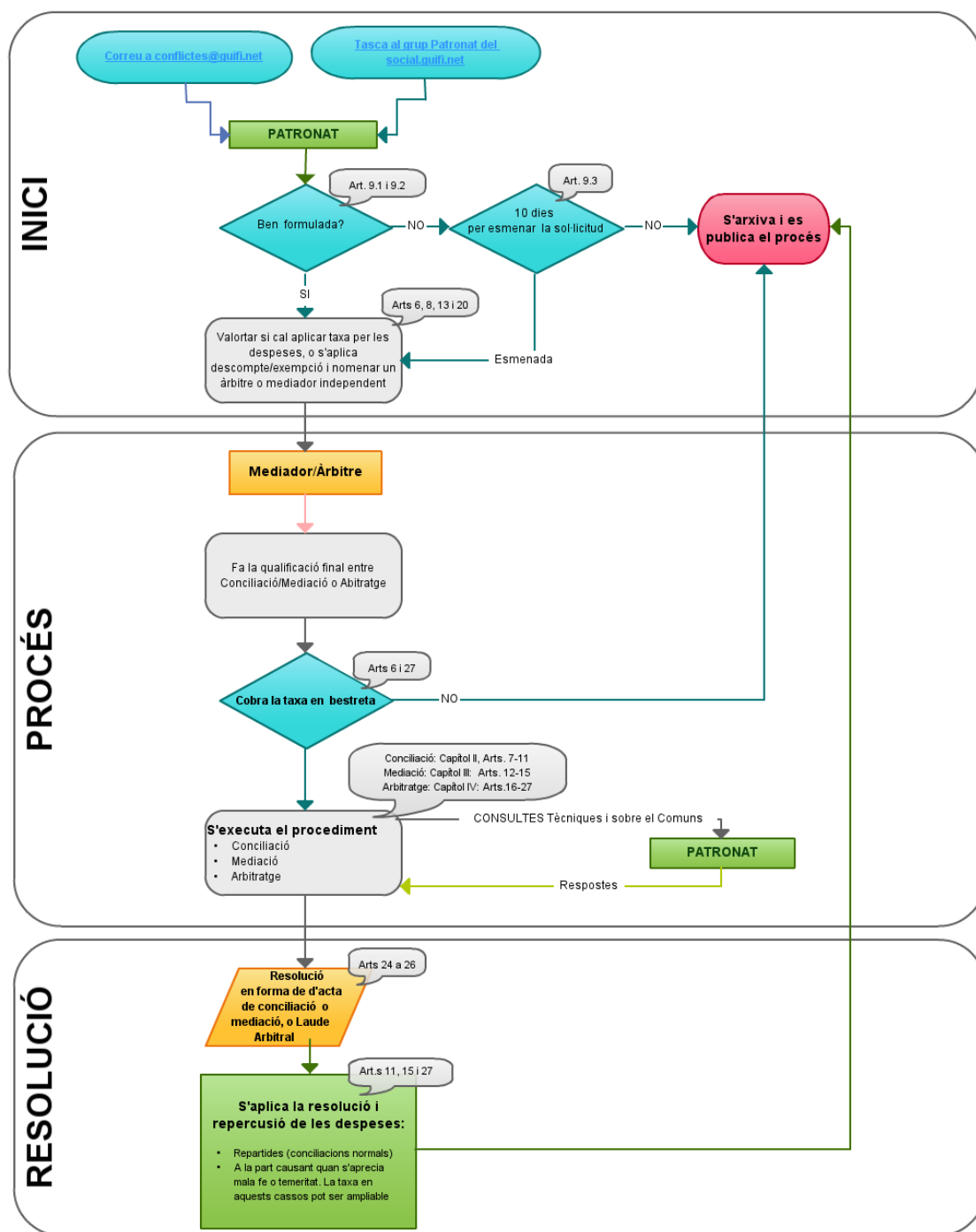


Fig. 6. Conflicts resolution system flow diagram.

*F. The Compact for a Free, Open & Neutral Network (FONN Compact) English translation*

NCL<sup>14</sup> is the license which any guifi.net participant must subscribe. Its preamble<sup>15</sup> sets the fundamental principles and the articles precisely establish the participants' rights and duties. It is written to be enforceable under the Spanish legislation. Legal certainty is essential to stimulate participation and investment, which in turn, is at the base of any economic activity. The license has been developed as part of a long lasting participatory deliberation process over several years, with contributions from many community members, reaching a consensus, revised and approved in several versions by the community assembly.

It has been identified as a key factor of guifi.net growth, thus, we considered that it should be made available to all BuB practitioners. To this end we have translated it into English (see Annex I). All guifi.net documentation, the license included, is made publicly available through free content licenses.

*G. guifi.net website English translation*

The community of guifi.net has developed a set of software tools to ease the design, deployment, management and operation of the network in a self-provisioning style and supporting crowdsourced efforts by members of the community given the intrinsic interdependence in the computer and social network. Most of them are integrated into the

<sup>14</sup><http://guifi.net/en/FONNC>. *Llicència de Comuns per a la Xarxa Oberta, Lliure i Neutral (XOLN)* in Catalan <http://guifi.net/ca/CXOLN>

<sup>15</sup>FONN Compact preamble:

- *You have the freedom to use the network for any purpose as long as you don't harm the operation of the network itself , the rights of other users, or the principles of neutrality that allow contents and services to flow without deliberate interference.*
- *You have the right to understand the network and its components, and to share knowledge of its mechanisms and principles.*
- *You have the right to offer services and content to the network on your own terms.*
- *You have the right to join the network, and the obligation to extend this set of rights to anyone according to these same terms.*

guifi.net website<sup>16</sup>. These tools are, along with the network license, the key tool for guifi.net growth. By participating in its translation into English we have contributed to bring them closer to the BuB international community. Fig.7 shows the guifi.net website front page in English.



Fig. 7. guifi.net website front page.

<sup>16</sup>The guifi.net website uses Drupal as CMS and MySQL as database. All the developed tools are presented as Drupal modules.



## VI. FUTURE WORK AND SUSTAINABILITY

Once the C4EU project is finished, the tools put in place specifically for its execution, that is to say, the BuB mailing list and the bubforeurope website, will be kept operational. Their continuity is guaranteed because they are hosted in guifi.net Foundation facilities and the domain names are owned by this organisation. The activity in the mailing list may decrease due to the pilots completion. The new bubforeurope website has been already designed and implemented rather statically, pursuing to reduce to the minimum the maintenance requirements. The only remaining tasks to be done in the coming weeks are to integrate the documentation of the third reporting period and to introduce the changes resulting of the review process. After that the website will be considered to be finished, being available to anyone willing to contribute and to maintain it.

The rest of the tools presented in the previous section have been integrated in the guifi.net ecosystem, thus, their continuity is guaranteed by the fact of being used by a wide community.

The FONN Compact must be proofread, preferentially by native English speakers. Aside from language aspects, its adoption by another communities would contribute in great manner at making it less dependent of the Spanish legal system and less guifi.net focused. In this sense, one potential approach could be to generate a more abstract document containing the fundamentals of Community Networks to be used by BuB initiatives as a reference and as a starting point for their licenses.

Now that the major efforts to translate guifi.net website have already been done, that is to say, to put the translation facilities in place and to translate the most important documents, it is expected that the translation of the remaining parts will not be abandoned. Moreover, the increase of the participation in international projects such as C4EU is significantly stimulating the generation of English documentation.

The conflicts resolution tools must be translated into English. The adoption by other communities would bring similar benefits as the adoption of the FONN Compact.

Inside guifi, the economic compensation methodology must be extended to all remaining PoPIX and existing OF nodes and hybrid nodes must be documented using the new features.

## VII. RESULTS

We eventually decided not to create a formal organisation as initially planned because we realised that, firstly, there are examples which show that a minimum amount of resources must be committed to an organisation to make it operate properly, and secondly, it was not possible to gather the required commitment to guarantee these resources once the project finished. The comparison of abandoned organisations such as The Open Spectrum Alliance<sup>17</sup> with active ones such as the Free Software Foundation Europe (FSFE)<sup>18</sup> evidenced that to ensure the success of the organisations these resources, either economic or human, must be in place. In addition, we observed that the general feeling among the practitioners is that the already existing tools such as the International Summit for Community Wireless Networks (IS4CWN)<sup>19</sup> and the Wireless Battle Mesh (WBM)<sup>20</sup> gathering events and the FNF and guifi.net websites and mailing lists suffice for the coordination among their organizations, and that these tools are adjusted to their realities. The possibility of not creating the formal organisation was already explained during the second review meeting and was accepted by the Project Officer.

During our meetings to investigate about the conscience of the creation of a formal entity to support BuB initiatives we realised that some of the tools we developed during this reporting period (e.g. the English version of the FONN Compact) were, somehow, expected to have already been put in place by guifi. On the contrary, some others such as the economic compensation or the conflicts resolution systems have been received with great expectation and were totally unforeseen.

The Free Network Foundation has contributed to the translation of the FONN Compact and has integrated its preamble in their license. Now the efforts are put in the translation

<sup>17</sup>At the beginning being this association was very productive and effective in fulfilling its mission, i.e. lobbying the European Commission in favour of allocating more unlicensed electromagnetic spectrum, but once the individual who was doing the vast majority of the work left (at the time of starting the organisation he was unemployed but then he found a job) the activity suddenly ceased and nothing else was done. At the moment, although the domain is registered, the website (<http://openspectrum.eu>) has been down for several months.

<sup>18</sup><https://fsfe.org/index.en.html>

<sup>19</sup><http://wirelesssummit.org/>

<sup>20</sup><http://battlemesh.org/>

of the conflicts resolution system. The ITRF GAIA research group<sup>21</sup> has welcomed the guifi.net tools.

In guifi.net, the economic compensation system has already been implemented in 3 PoPIX and it is expected that the rest will adopt it in the coming months. PoPIX set up from now on will include this system since the beginning.

Now that the OF as well as the wireless hybrid nodes is supported, the efforts have been focused in registering the already deployed infrastructure.

<sup>21</sup>Global Access to the Internet for All <https://trac.tools.ietf.org/group/irtf/trac/wiki/gaia>

## VIII. CONCLUSION

According to the initial plans, a formal organisation to support BuB initiatives should have been created. Nonetheless as a result of our meetings with BuB initiatives from all around Europe, but also from North and South America, we concluded that its continuity once the project had finished was not guaranteed mostly because the very limited budgets of such initiatives. Thus, we decided to focus our efforts on putting in place tools that we had identified as needed during our investigations. The results of this change of strategy are a proposal for the systematisation of the resolution of conflicts, a methodology for the balance OPEX and CAPEX among the professionals using the commons infrastructure, the development of the software tools to put this methodology in practice, the translation of the guifi.net license into English, etc.

We are very satisfied with the outcome of WP7 because most of the tools developed have been very welcome by the guifi.net community and some of them have already been adopted by other BuB initiatives. We also consider that the job done is well balanced with the allocated resources. Thus, we consider that WP7 goals have been successfully accomplished.

## ACKNOWLEDGMENT

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## APPENDIX

### Annex I - The Compact for a Free, Open & Neutral Network (FONN Compact)

## The Compact for a Free, Open & Neutral Network (FONN Compact)

created: Tue, 11/11/2014 - 09:54 — [rogerpueyo](#) [1] - updated: 11/11/2014 - 11:31am

### I General principles and Summary

The fundamental principles of the FONN Compact are:

- You have the freedom to use the network for any purpose as long as you don't harm the operation of the network itself, the rights of other users, or the principles of neutrality that allow contents and services to flow without deliberate interference.
- You have the right to understand the network and its components, and to share knowledge of its mechanisms and principles.
- You have the right to offer services and content to the network on your own terms.
- You have the right to join the network, and the obligation to extend this set of rights to anyone according to these same terms.

### II About this document (FONN)

1. Creation, interpretation and revision of this document. A dynamic and innovative project such as guifi.net requires a continuous process of revision and action to adapt to changing realities and to improve the clarity of the applicable criteria. Because this text may change over time, and because all versions bind users to a set of terms and conditions at the moment of acceptance, the text can only be revised or modified so long as it respects the agreements and obligations made in previous revisions:
  1. A revision cannot modify the terms and conditions which are a result of the acceptance of a previous revision. Such a desired modification would require a rewrite and not just a revision. To implement a rewrite, consent must be expressly renewed.
  2. When a revision addresses new situations such as those concerning new applications or new technologies, it is understood that such updates and extension of the Compact shall be accepted implicitly.
  3. The FONN Compact is a revision of the earlier 'Wireless Commons' which is available in Catalan as a reference at <http://guifi.net/ComunsSensefils> [2].
  4. All revisions of the FONN Compact are archived and published so you can follow the

update process and know the release dates of each revision. If necessary, these can be compared with the dates of acceptance of the Compact to avoid conflicts of interpretation.

5. If a participant considers that a later revision denies one's rights or significantly modifies previously compacted terms and conditions without one's consent as described in II.1.a, then recourse may be made as described in the section "[About Conflict Resolution and Jurisdiction](#)".

#### 2. Definitions

1. The FONN Compact ("[Comuns de la Xarxa Oberta, Lliure i Neutral](#)", or [XOLN](#) in Catalan) is an agreement for the connections between peers that serves as a contract between each participant in the network as a whole, and is the same for each participant of the network. The agreement serves simultaneously a contract for participation in the network and as a license for use, becoming a guarantee for its subscribers regarding the applicable terms and conditions, which are the same for everyone. It is also known as "commons" or "free network commons".
2. The Neutral, Open and Free Telecommunications Network (the "[Xarxa de Telecomunicacions Oberta, Lliure i Neutral](#)" in Catalan) is a public community telecommunications infrastructure regulated by the terms and conditions of the "[XOLN Compact](#)", which is publicly available, in a way that when new participants join it expands. Through the network the participant obtains and simultaneously provides electronic communication services with the rest of participants, directly or via the interconnection with other networks.

In this document the term "the network" refers to the Neutral, Open and Free Telecommunications Network, defined this way because:

1. It is **open** because it is universally open to the participation of everybody without any kind of exclusion nor discrimination, and because it is always described how it works and its components, enabling everyone to improve it.
  2. It is **free** because everybody can use it for whatever purpose and enjoy it as foreseen in the freedoms of the "[General principles](#)" section, independently of his network participation degree.
  3. It is **neutral** because the network is independent of the contents; it does not influence them and they can freely circulate; the users can access and produce contents independently to their financial capacity or their social condition. The new contents produced by guifi.net are orientated to stimulate new ones, or for the network administration itself, or simply in exercise of the freedom of adding new contents, but not to replace or to block other ones.
- It is also neutral with regard to the technology, the network can be built with whatever technology chosen by the participants with the only limitations resulting of the technology itself.
3. [Guifi.net](#) is the set formed by the network and the individuals, the collectives, the enterprises, the institutions and the administrations that support it or collaborates with it in a way that the network becomes operational and offers connectivity to everybody. Thus, they act as telecommunication operators.

4. **Proprietorship and Participants.** The participants are those natural or juridical persons that contribute infrastructure as network segments accepting the FONN Compact. The participants keep the proprietorship of their contributions in a way that the network proprietorship is distributed among the participants. This way, the participants are the network investors. They are called “sponsors,” and the act of covering the investment is called “sponsorship”.

5. **Forms of participation** depending on the network connection format:

1. **Simple connections.** Simple connections are those network segments that end to a node from which the network do not expand no other segments under the same conditions. It is usually the point from where the users enjoy the neutral, free and open network and from where they connect their private networks.
2. **Segments that expand the network.** The segments that expand the network are those network segments where, contrary to the simple connection, it is foreseen to have additional network segments under the same conditions at each edge of them.

6. **Contents.** What give sense to a telecommunications network is the fact that it can be used to transport contents. The contents are published through services.

7. **Services.** Many service formats exist under the scope of the network. The most basic one which is inseparable from the network itself is the connectivity between all the participants and it is called “electronic communications service”. Apart from this inseparable service, two big different categories of services exist:

1. **Services “as they are”.** Are those services offered “as they are”, that is to say, anyone using them is doing so under his responsibility and cannot demand the coverage of any expectations or features to the service supplier. Frequently the free services belong to this category.
2. **Services with compromise.** Is a service offered with a compromise for being delivered, usually in change of a compensation, as when connectivity to other providers or to the internet is supplied or the professional services to offer a given service level agreement.

The “electronic communications service” happens through the tools given by guifi.net that emerge as a result of the network interconnection agreement. It deserves a clarification because it can be considered as a “as it is” service and a service with a compromise at the same time. “As it is” because each participant, although he can, has not the obligation to guarantee the availability to third parties, and with compromise because, independently to the availability compromise, he has the obligation to make the interconnection and the traffic possible as soon as the connection becomes active, because, although he does not receive any economic compensation, he receives connectivity with the rest of the participants in exchange of the compromise of integrating a new network segment under the same conditions.

8. **Users.** Are those who enjoy the connectivity offered by the network with its use, usually are the participants themselves, but the participants can open the access to everybody.

9. **The Private Foundation for the Neutral, Open and Free Network – guifi.net** (“Fundació Privada per a la Xarxa Oberta, Lliure i Neutral guifi.net”, in Catalan -henceforth referred to as “The Foundation”) is a non-profit organization registered at the Catalan Government foundations registry with the number 2550 that has the foundational mandate to support guifi.net respecting its genuine nature, its organization and working methods.

3. The **FONN Compact** is elaborated and revised through a public debate among all the network participants

4. **End of agreement.** The FONN Compact may be suspended or ceased for:

1. The will of a subscriber. The will is expressed by the withdrawal the participation in the tools offered by guifi.net or, in the case that the participation remains, by the transmission to the new proprietors.
2. The means described in the section “**About Conflict Resolution and Jurisdiction**”.

### III About the Network

1. The FONN Compact is an expression of the fundamental values such as freedom, equality off opportunities, solidarity and fraternity through the right of free communication and of extracting the maximum benefits possible according to the **general principles**. These fundamental values must be used in case of having to resolve any doubt about the interpretation of the **FONN Compact**.

2. The network allows the access to who ever wishes to, and it is the result of the interconnection of all the participants. In the case of the presence of access control mechanisms they will be use for the correct management of the network, but never to restrict the liberties protected by the **FONN Compact**.

3. The members of the open network are just subject to the terms and conditions of the **FONN Compact**. Any other compromise must be explicitly stated.

4. The accession to the network can be made as an individual or as collective constituency, and implies the acceptance of the terms and conditions of the **FONN Compact**. At any time a member can renounce to the accession by the means described in the point II.4 End of agreement. In case of a renounce the renouncer can recover his goods, equipment and infrastructure of his property, regardless of their location, except in the cases described in the point 4 of the section “**About the Proprietorship and Participants**”.

5. In order to ease the growth of the network and the open connectivity, their participants undertake the commitment to:

1. Allow the traffic of the other participants in his network segment, without manipulation or inspection of any kind more than the absolutely necessary for the network administration.
2. Facilitate and technically foresee how to make the interconnection with other network

segments contributed by other participants without any commercial exploitation nor charging a cost of any kind, neither interconnection nor traffic. The interconnections of the segments that expand the network are free-of-charge because the compensation is mutual because everybody obtains connectivity from the others. If, aside from the free-of-charge of the connectivity and the traffic, other costs are charged, it must be done according to the following provisions:

1. Clearly specify the reason why these compensations are charged. For instance to access a specific kind of contents, connection to other networks such as the Internet, professional services, availability guarantee, etc.
2. Expansions. At the time of setting the interconnection, and without excluding any other kind of agreement between the participants, if an expansion is required at the interconnection point, or the conversion from a simple connection to an extension segment, the cost must be assumed totally by the participant who is contributing the new segment, and from then on the proprietorship becomes shared according to the investing level of each participant. In the case that the initial participant wants to keep the proprietorship without sharing it he must assume the cost of the expansion and he has preference when choosing the model.
3. In the case of the need of having to cover depreciation costs of relevant infrastructure or collocation points, compensations can be foreseen at the time of setting the connections, understanding that then the proprietorship becomes shared as described at the previous point, that there cannot be discriminatory treatments, and that the compensations must be reasonable, cost oriented and sustainability oriented, and that they cannot pursue commercial exploitation margins.
6. There can be other organizations that also promote networks with similar characteristics the neutral, free and open network as guifi.net does. The open networks must be characterized by the willingness of interconnection in the way that it will be taken under consideration what is foreseen at point VII.1 "About Avoiding Duplication of Infrastructure" and the point IX.7 About the Reciprocity.
7. The connection to the network is free and free-of-charge as already stated in point III.5.b. The participants take care of the infrastructure to be connected, either by their own, donations or sponsorship, collectively in the way they freely decide, or through professional services. The economic activity derived of these activities, as charging in compensation of equipment supply, creation of infrastructure or maintenance, is duty of the one who does it, and must clearly inform to the payer which concepts

## IV About Proprietorship and Participants

1. Although the network forms a global unit, it is formed by assets that are the infrastructures that integrate their participants, in a way that the participants keep the proprietorship of each infrastructure they have contributed, and thus, the network has multiple proprietors. The proprietorship is accredited, in order of preference:

1. In the way that freely agree the participants.
2. Provision of documents such as bills or alike.

3. The information provided through the network tools and published.
4. The proprietorship of the estate where the installation is located.
2. At the same time, a single infrastructure can have several proprietors. In this case, and always in the absence of any agreement between the proprietors, the proprietorship is shared according to the investment made by each one.
3. Although there can be different levels of participation for each proprietor, the terms and conditions are the same for all the participants.
4. The proprietors are the responsible for managing their infrastructures respecting the FONN Compact.
5. One of the pillars of the open network is the information about its components. The proprietors must provide reliable information about their contributions and contact details through the network tools, being aware that this information will be made publicly available. They have the right to access, modify or cancel them at any time. The provision of malicious information may lead to the suspension of the FONN Compact agreement.
6. The proprietorship is an asset, and as such it has a value, thus, it can be transferred between participants, either by cession, sale, or any other transfer legal form. The proprietorship transfer to new participants implies their acceptance of the FONN Compact.
7. The integration of assets to the network is essential to promote its growth and development because it is the main way to attract investment and provide sustainability, thus it is advisable to protect and promote it. To this end, when contributing new infrastructure, the participants, aside from getting connectivity with the rest of the network, they can also give themselves priority on the bandwidth available in their segments, on the sole condition of respecting the criteria of section "About Network Management and Traffic Shaping" and leaving the surplus bandwidth available to the rest of the traffic.
8. In the case a participant finalizes the FONN Compact agreement, he recovers all the his infrastructures, except from those which deployment required licenses or permissions from third parties and they were given on behalf of the network or the Foundation, or when the proprietorship is shared. In these cases the parties can agree on how to solve the situation in a fair way for all of them. In the case of a transfer, the rest of proprietors have the right of pre-emption.
9. The exercise of the proprietorship of an infrastructure implies, at least, that meanwhile this network segment is operative, an electronic communication service that allows the connectivity is offered. Although the proprietor is not responsible for the availability given, it is expected that he maintains his infrastructures in a reasonable service level according to their characteristics and in a way that it doesn't harm the proper functioning of the network. In the case of extreme abandonment of these functions by the proprietor, the participant loses the proprietorship, which will be considered orphan.
10. In the case of an orphan infrastructure, the proprietorship is transferred to anybody who wants to exercise it. In the case no body wants to, it is transferred to the Foundation or it is



considered abandoned, in which case it is withdrawn from the network being the last proprietor for its dismantlement.

11. When locations are made available to host network infrastructures without compensation, independently to the rest of proprietors, it is understood that they will facilitate the connection as open as possible according to the nature of the installation. In the case of space or capacity limitations, they must allow the traffic according to the FONN Compact, be reasonable, and applying good practices, being the same for all the users without any discrimination, and without implying the hiring the services of any specific operator although this may be co-proprietor of the infrastructure. What is foreseen in point VI.3 of section "About Network Management and Traffic Shaping (Quality of Service)" should suffice for those operators that offer services with compromise.

This condition is inalienable when it is about public domains managed by public administrations because they have the legal obligation to guarantee the non-discrimination.

For instance:

1. In the case of wireless communications, the coverage antennas meant for simple connections must allow connections from other operators and from the users.

2. In the case of cables and ducts, although the promoters may set point-to-point private connections, there must always be spare space to allocate open network infrastructure.

12. The transfer of space to allocate radio-communication antennas is always reversible at any time at the proprietor request and they do not create any servitude.

## V About the role of the Guifi.net Foundation

1. Give support to guifi.net respecting its genuine nature, its organization and working methods.
2. Give legal personality to guifi.net for any purpose necessary to allow the normal course of the exercise of its activity as an operator of the network on an equal rights and duties respect to whatever other operator, as for, but not limited to, receive licenses, public and private spaces occupation, represent, make agreements and notifications on behalf of guifi.net with public administrations or third parties, make interconnection agreements with other operators and join Internet bodies.

Subscribing the FONN Compact the participants accept the delegation of all these functions to guifi.net and to the Foundation, without renouncing to their right to exercise them by themselves.

3. Defend and support the interests of the participants, the good use of the FONN Compact, and the name of guifi.net, being able, when necessary, to undertake legal actions or claim reparation in those bad faith cases where intended damage to guifi.net or its users is sought.

## VI About Network Management and Traffic Shaping (Quality of Service)

1. The management of the network must be public and open to the participation of everyone

who wants to.

2. When necessary due to network management needs, the network traffic implementation priorities are:

1. Interactive traffic (instant messaging, voice conferences, browser, etc.)
2. Massive or deferred traffic (transfers, e-mail, copies, etc.)

3. If priorities are implemented and they are not restricted to self priority (preference in traffic, not in quotas), the network members must make them publicly available. These priorities can neither be arbitrary nor discretionary, and they cannot impede the exploitation of the surplus traffic. There must be well justified technical reasons to implement traffic priorities.

4. As part of the network management tasks, in the case of an abuse of the type described in point IX.5 of section "About Services, Content, and The Internet", the traffic or the connection of the originator may be suspended, with prior notice whenever possible. This suspension does not imply an immediate suspension of the FONN Compact agreement, but it must be taken as a warning.

This option cannot be used, in any case, to impede the free participation and circulation of services and contents described in the FONN Compact.

The generation of inappropriate traffic or the block of other participants traffic, generates a conflict that must be resolved according to the section "About Conflict Resolution and Jurisdiction" and that may lead to the suspension of the FONN Compact agreement with the originator.

5. The network availability is not guaranteed in a global sense. In the case of a participant who wants to self-guarantee service levels he can do it by: doing it himself by acquiring the share proprietorship of those network segments of his interest, making agreements with third parties and/or contracting professional services to reach the desired level of service or availability.

6. The professionals and the operators that accept compromises of connection services with specific characteristics are responsible for clearly informing their consumers about those characteristics as described in point III.7 and for doing their best to fulfil them, including, whenever necessary, the maintenance and improvement of segments that expand the network. In the case of segments shared with other operators they must decide how to carry out these maintenance and improvement tasks. The Foundation may rule how to cover these costs in the case of lack of consensus, always exercising proportionality.

## VII About Responsible Deployment and Environmental Stewardship

1. Because it is an open network, duplication in infrastructures must be avoided, impeding the coexistence of several open networks in a same physical space, specially when it is about resources with limited capacity or exists a potential environmental impact.
2. The common use of unlicensed radio-frequency spectrum prevails over the private or the commercial uses. The governments, the legislators and the regulators are requested to pass the appropriated regulations to make this happen.
3. The radio-frequency spectrum, including the licensed bands and beyond the applicable regulations which may be obsolete due to the fast technological evolution, must be used in

a responsible way, according to the best practices and without exceeding unnecessarily the transmission powers.

## VIII About Security and Responsibility

1. The users are responsible of their security and have the right to protect themselves and protect their intimacy, to avoid the intrusion into their systems and to cypher their communications. The open network provides the appropriated medium to do so.
2. Private networks can be connected to the open network and control access through firewalls may be implemented. Those segments are excluded from the **FONN Compact** and are not part of the neutral, free and open network, and their sponsors are responsibility for their security.
3. The open network is not responsible for any damage a user may suffer during its use.
4. Each user is responsible for his use of the network, the contents he contributes and his acts. In any case the responsible will be the participant that gives access to the user, nor the rest of the participants, nor guifi.net as a whole.

## IX About Services, Content, and The Internet

1. The network provides an electronic communication service available to the public in general. There is the right to add new contents and services of any kind beyond this basic service.
2. The network is the medium on which the free transmission of the contents is made, but it has nothing to do with them nor is responsible for them, as already stated in the section "**About Security and Responsibility**".
3. The copyright holders of the contents choose the terms and conditions of their use. If they are not explicitly stated, it is understood that they can be freely distributed, as stated in the **Creative Commons (by-sa)** [3] license or the **GNU/FDL** [4] license.
4. In the case of services, the provider is responsible for deciding whether the service is "as it is" or with service guarantee. If it is not specified and the service is free-of-charge, it is understood that it is an "as it is" service, thus, it is offered without any guarantee.
5. Freedom of thought, thinking, expression and communication must be respected. This is not incompatible with filtering the malicious traffic generated by unwanted messages, inappropriate or illegal content, intended to restrict these freedoms of other users or to offend them.
6. The network, as neutral, free and open, has the unequivocal vocation to be another network of the big network of networks which is Internet. Thus, guifi.net wants to actively participate in the Internet organizations, and, as an operator, to establish interconnection agreements with the rest of the operators.  
Nonetheless, currently in the Internet, other operators may be more restrictive and less open in regard to the interconnection with their networks, doing, for instance, a commercial exploitation of the interconnection or the traffic. Because in these cases is not possible to apply the reciprocity principle, the Internet traffic towards these operators is considered to be out of the **FONN Compact**, and as such it must be considered as a content. Thus, this type of interconnection is offered to the participants as any other service in the network, the most frequent ways are:

1. The interconnections provided by the participants from the Internet connections they may have with other operators.
2. The interconnections that result from the peering process with other operators.  
Whoever offers these services establishes if they are offered as an "as it is" services or with some services compromises.

### 7. Reciprocity principle.

In the case of an interconnection service with another network which is not under the **FONN Compact** agreement or it is managed in a different way by other organizations but in essence follows the same criteria of neutral, free and open network, keeping the same freedoms and general principles and allowing the free interconnection, a mutual recognition of the same rights regarding the free circulation of contents and services can be established.

## X About Conflict Resolution and Jurisdiction

1. In the case of questions, doubts or conflicts of interpretation or application of the **FONN Compact**, everybody has the right to request clarification to the board of the Foundation

The request must be formalized by an e-mail sent to the board ([patrona\(at\)guifi.net](mailto:patrona(at)guifi.net)), with the topic explicitly stated in the subject (e.g. "Question/Conflict about the **FONN Compact** with regard to..." ) and a clear and well supported description of the facts, the motivations, the affected **FONN Compact** points, the proposals, etc. That is to say, making sure that it is well documented and comprehensible.

Once the e-mail is received by the board, depending on its nature, the following procedure will be applied

1. Decide whether the issue is sufficiently supported to either accept or reject it. If it is rejected the process is finished.
  2. Decide whether the issue will be resolved by the Foundation itself or it will appoint a specific commission with the only mandate to resolve it.  
Nobody effected by the issue can be participate in the group appointed to solve it: If it were the case he should refrain from it.  
The group in charge of deliberating and solving an issue must make decisions by vote, and in order to avoid ties, the number of members must be and odd number.
  3. Decide whether the documentation provided suffices or if a period for public informative processes to collect more data must be opened. When an issue effects third parties this period is mandatory to let everybody to express their opinion on the considered issue.
  4. Once the period for public informative processes is finished the board or the commission must debate and lastly, rule.
2. The resolutions must be based on the **FONN Compact** spirit, and in the case of a conflict or unfulfillment, they must make decisions and propose solutions in order to amend the situation.

3. In extreme cases, the [FONN Compact](#) agreement with a participant can be ceased. The participant can recover his infrastructures according to the section "About Proprietorship and Participants". Penalties and compensations can not be ruled this way. If needed, they must be submitted to the competent court.
4. The resolutions can be appealed or, alternatively, the issue can be submitted to the competent court.
5. The Foundation is established according, "Llei de Fundacions 4/2008 de Catalunya [5]" ("4/2008 Foundations Law from Catalonia"). For legal matters and in the case of a conflict, unless the parties agree otherwise, the applicable jurisdiction by the Foundation and by the FONN Compact is the applicable by the competent court in Barcelona according to in accordance with current legislation in Catalonia.

## XI About the License of this Document

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- 2. We encourage the organizations of the rest of the world to promote the Neutral, Free and Open Network by either adopting the [FONN Compact](#) or adapting it to its organization and working methods to make the interconnection of the networks possible through the reciprocity principle.

**Source URL:** <http://guifi.net/en/FONNC>

**Links:**

- [1] <http://guifi.net/en/user/22970>
- [2] <http://guifi.net/ComunsSensefls>