

Open possibilities

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D4.2 - Intellectual Property and Entrepreneurship

The world is in a steady movement towards the digitisation of practically all aspects of contemporary life. From manufacturing to entertainment, from personal health to social interaction, from the dissemination of science to tax collection, we rely increasingly on networked devices, software and protocols to facilitate and maintain life in our societies. It is obviously essential to be aware of this reality and of all its implications in terms of equality, security and dependability so as not to reinforce power asymmetries already present in the world. On the other hand, this very scenario allows for innovative forms to address and overcome contemporary challenges. Flexible arrangements of intellectual property play an important role in this matter. The training module on Intellectual Property and Entrepreneurship offered by Northumbria University as part of the OpenDoTT programme offered a good overview of the practicalities of licensing schemes and business models. Combined with Mozilla's extensive experience with open methodologies, it brought light to some possibilities.

My PhD research explores the reduction of waste in contemporary societies by promoting the reuse of goods and materials. I am adopting methods and tools associated with the field of open design, which benefit from a two-way relationship with free and open source licenses. For starters, alternative regimes of intellectual property that go beyond restrictive copyright licensing have already enabled me to develop concept ideas into prototypes without the need to start from zero. What follows is a reflection on the role of flexible intellectual property in my work:

- ThingWiki is an experimental implementation of a public database providing information on objects and their potential for reuse. The prototype was set up with free/open source software (js.wiki), which allowed me to focus on the data structure instead of web development. ThingWiki stores information on a public repository on GitHub under a creative commons license (CC0). A hypothetical fully-featured version of ThingWiki would gain from integrating other repositories and public databases. That setting would be informed by examples of open platforms such as Wikipedia and the Linux Kernel, with the use of flexible licenses and inter-organisational open governance protocols.

- E-I is a piece of hardware designed to act as an interface for ThingWiki. The prototype uses off-the-shelf open-source hardware such as a Raspberry Pi system-on-a-chip, an Arduino board and sensors, as well as a combination of free/open software (Arduino IDE and Node-RED). If reaching a maturity point that justifies its production, E-I could develop a business model similar to the one adopted by Arduino and other open-source hardware - by releasing schematics under flexible licenses, thus enabling distributed manufacturing.
- Transformation Labs is the proposal to establish public facilities dedicated to the re-use of materials through repair, upcycling and re-circulation. At the moment they take the shape of a simple blueprint containing considerations about space, a list of equipment suggestions and recommendations about governance. Inspired by efforts such as the one led by the Fab Foundation, the blueprint is to be widely shared under open licenses. Transformation Labs would become themselves spots for education about free/open methodologies and licensing. Based on that context, each Transformation Lab could also become a local incubator for zero waste initiatives, promoting the development of open business models for social-environmental ventures.

Flexible intellectual property can achieve its greatest potential when adopted since the inception of projects. That might be done both by recognising the importance of free/open IP available for us to start new projects as well as by promoting abundance, catering to the maintenance of a collective pool - in other words, a commons - of ideas and technologies. If that is true enough in the case of for-profit ventures, it becomes even more important when it comes to effecting the required system change for complex issues such as the ones I am trying to address with my research.