

# Progetto grafico 30

## Open Source Technologies

*edited by Massimo Banzi, Serena Cangiano, Davide Fornari*

At a time when technological innovation is profoundly and increasingly affecting professional fields related to design, communication and publishing, it seems important to reflect on the relationship between technology and graphics.

Democratization and simplification of digital publishing technologies extends to the world of electronics, robotics and systems for physical computing: graphic designers can build their own design tools and experiment with new languages now more than ever. Computational design plays a leading role in this new scenario, shifting the centre of gravity of design to the development of “aesthetic” rules that make up the graphic artefact, both in digital and paper form. Although the creation of design tools is a domain that has always been explored in visual communication, today’s accessibility to shared resources on the Internet enables graphic designers to avail themselves of the techniques. The open source technologies and technological resources shared by the maker culture movement bring digitalized production machines within the reach of graphic designers. These are the ingredients of what is defined an industrial revolution, but they are also the pillars of a resurgence of visual communication based on common practices, shared, but above all open.

One of the topics that remains hidden when considering the relationship between technology and design is very often the sense of appropriation of the technological artefacts we make use of in many areas of our daily lives. Movements such as electronic DIY and the maker culture suggest how technology is not a mere tool of our doing, a black box whose mechanisms are incomprehensible, but rather material that when opened and developed collaboratively gives designers new responsibilities and capabilities. Users become connoisseurs and inventors of their own technology over which they have complete control, including hardware, software and interfaces: rapid open source prototyping technologies make it possible to rethink the techniques of printing with movable type; industrial robotic arms become automated brushes to leave signs on large areas.

What impact does the sense of appropriation of technology enabled by access to open resources have on the graphic designer and, in general, on the evolution of visual communication languages?

A second very important factor closely related to the question of appropriation is the emergence of an open design which in different forms – co-design, participatory design, open source design – proposes collaboration as an effective methodology applicable during the different stages of the design process, from concept to completion of a physical or digital artefact. What are the implications of the spread of these practices in visual communication? Can open source design – which implies producing public documentation of an artefact and the consequence that anyone can study it, modify it, distribute it, make it and sell it – be an interesting paradigm for graphic designers? Can it offer the opportunity to generate new languages and processes through collaboration and exchange of resources on the Internet?

What happens instead when visual communication is involved in these processes of open design, facilitating learning or designing shared and mediated by technology? We are witnessing the rebirth of graphics for DIY, through the creation of tutorials and digital and paper manuals teaching us how to use the electronics, programming and assembly of open source products.

And finally, information, data and algorithms are the elements of a code and a syntax that determines new ways of composing and producing artefacts. Programming in visual communication is not new if we think of the fruitful meeting between computers and design that started in the sixties, but what are the implications of using the computer code like a “brush” that allows you to generate graphics rather than draw them? The explosion on the Web of systems and interfaces that enable graphic designers to design “by parameters” and “variables” opens a whole scenario of computational design that involves the base material of communication: typography. What is the contribution of computational design to visual communication design?

Shifting the point of view, the possibility of DIY and the horizontal access to design tools makes designing an act within the reach of everybody, even an amateur in the design world. The results, in this case, are an aesthetic expression, that do not necessarily respond to the cultural context in which they occur. Are we running the risk that tools bypass the context that made them first necessary and then possible and that they are used only as an end in themselves? How can a designer use computational design and still participate to cultural considerations?

**In brief, the aspects we wish to explore:**

– Technological applications that offer new ways of development for graphics, tools and machines that amplify design opportunities in particular;

projects and reflections on the application of co-design and open collaboration in visual communication;

– The relationship between visual communication and the widespread development of technological DIY artefacts and the support of visual communication in the development of electronics and hardware and software systems;

– Considerations on the application of open source software principles to visual communication;

– Computational and parametric approaches to communication design at all levels.

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Send your proposals to: [redazione\\_progettografico@aiap.it](mailto:redazione_progettografico@aiap.it)

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