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Public Domains: material feifdoms, entropy, and the built environment

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"Patents originally represented gestures of largesse on the part of sovereigns... to members of their court or Tenantry. They were designed to encourage thoughtful pioneering, the results of which might obviously be productive for greater wealth of feudal lords and indirectly to their subjects... When the democratic idea broke loose in Europe, the popular representatives of that time deemed it a wise and just act to embody the 'kernels patent' idea in their democratic constitution... The necessity of invention and growth where highly apparent... for had not invention itself forecasted man to the possibility of emergent DEMOCRACY?" 


More than 9,000,000 design and utility patents have been issued in the United States since 1836. Richard Buckminster Fuller was awarded 26, representing a .0003% stake in the labyrinthine framework of patent fiefdoms that simultaneously bolster, and inhibit, our democracy. His cartographic devices, tensegrity structures, undersea islands and floating breakwaters, are all preserved in the patent archive. And, as their legal status expired, each transitioned to collective ownership in the public domain. The operating manual for spacearth earth is now partially ours.

In aggregate, patent legalese defines a considerable portion of the world we inhabit, outlining an eerie omnipresent, yet often invisible form of "public space." Patents give form to materials, create places, describe systems, grant rights and represent a landscape of power beyond the aerial and perspective. What does this landscape look like? Thomas Edison's New York? Foucault's Panopticon? London's CCTV? The answer is yes, and more! It looks like an edifice of a few billion words and drawings that, when organized into chains of words and drawings, establish boundaries between ideas, ownership and modes of production. It is the ubiquitous, safe, generic American landscape of goods and materials, outsourced. It is cut and paste specifications on construction documents, your morning French press, a radioactivity bunker and this ink.

The current 20-year lifespan of a utility patent's legal status grants exclusive rights of profit to the inventor, theoretically stimulating innovation and progress in the mechanical arts and culture. Yet, as recent lawsuits have shown, the patent system's most profound contribution may be to the expanded role of jurisprudence and legalese in every aspect of life, where a patent no longer represents innovation, instead representing a defensive stance and posturing designed to protect profits and mitigate risk.

Entropy is at work in this system. Patents expire and enter the public domain, contributing to an ever-expanding sedimentation and deposition of collectively owned ideas, images, words and memes. The accumulation of material in the public domain is simultaneously a waste stream of human ambition and the mountain of new rights granted to the public, evoking a sense of "publicness" never before seen by Marxism, capitalism, or the strange communism of China. As of 2012, more than 5.5 million U.S. patents exist in the public domain, freed of their legal status and available as open source technology for any interested party to replicate or borrow and reinterpret. We own the language and images that define prefabricated bathrooms, artificial ski slopes, and millions of other tools and materials that promise to liberate new forms of open source economy and cultural production. It is not happenstance that as the tailings of a traditional patent system have become a new form of public institution, a productive system has evolved that may rework the vast expanse of this latent public realm. Rapid prototyping with 3D scanners and printers, laser cutters and 5-axis milling machines, as well as the array of local manufacturing and fabrication possibilities have radically altered our proximity to modes of production and the ability for producers and consumers to remix new tools, places and systems. In an era where 3D printing a children's toy is a possible copyright infringement, the public domain offers a position of resistance and the grid with which to stake a defensive stance for tinkers, samplers and DIY designers interested in cultural production free from centralized control.

The promise and lure, of localized manufacturing, architectural-scale rapid prototyping, and crowdfunded public space, must one day confront the entrenched economic and technological systems that define current material culture and production of the built environment. This confrontation is dialectical in nature, as progress towards an ecological urbanism is in many ways technological determinism at work. Nascent communities such as Thingiverse, Wikihouse, Kickstarter, Shapeways, and the Open Source Ecology project have pioneered new forms of disruptive economics and altered the proximity of community to designer, and designer to object and manufacturing. If any of the basic tenets of technological determinism are true—that technology drives history, technological progress is an agent of change and that these changes have cultural and political implications—then mastery of the cultural production of the technologies that rely our future sustainable cities is tantamount to total design, with broad cultural and ecological affect. As resistance mounts against these systems that debunk corporate control and the omnipotence of jurisprudence, I suggest a defensive stance premised on recombinatory processes that mine the patent archive and birlocale new meaning from shared intellectual property. The alchemy of words and drawings aggregating in the public realm can be mined, shung together and returned into chains of new drawings and words that enable future production, destabilize centralized control and liberate creative capital with unforeseen provocations.

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