# Data Space / CLOG

**27 JUN 2012**
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Publications CLOG Data Center Gensler

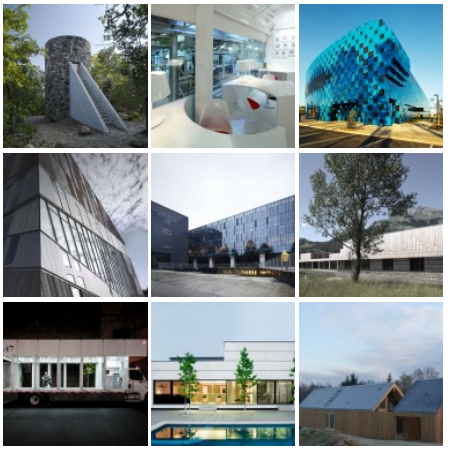



*"Every second, 2.8 million emails are sent, 30,000 phrases are Googled, and 600 updates are tweeted. While being absorbed into this virtual world, most rarely consider the physical ramifications of this data. All over the world, data centers are becoming integral components of our twenty-first city infrastructure [...] As cloud storage and global Internet usage increase, it's time to talk about the physical space of data."* - CLOG (5)

What does it look like to give the virtual, physical form? As every CLOG edition, *Data Space* explores "from multiple viewpoints and through a variety of means, a single subject particularly relevant to architecture now" (5) and this subject, how to design "the infrastructure of invisible data" (103), could very well be *the* defining question of our age.



## SELECTED BUILDINGS



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*Data Space* ponders what kind of building typology will emerge to reflect our digital age, and offers a number of innovative ideas, solutions, and complications. But it also offers another important question, one that will predicate this typology: how transparent do we want/need technology to be in our lives?

Up to now, Data Centers have followed in the line of phone equipment buildings of the past, impenetrable behemoths of "unbroken blank facades [and] highly-secure perimeters" (13). Data centers, particularly those which house sensitive information, have been built isolated away from society, often in repurposed military structures, even in an anti-atomic underground bunker (the home of 2 of Wikileaks' servers).

Beyond security, there are other, less than savory, reasons for these centers' isolation. Data centers require a tremendous, non-stop consumption of electricity, and produce massive quantities of heat as a byproduct. One of the most eye-opening essays in *Data Space,* "Why Clouds Aren't Green," by Greenpeace, explains how the occultness of these centers has contributed to their environmental irresponsibility:

"While data centers don't have big smokestacks, their tremendous electricity appetite often

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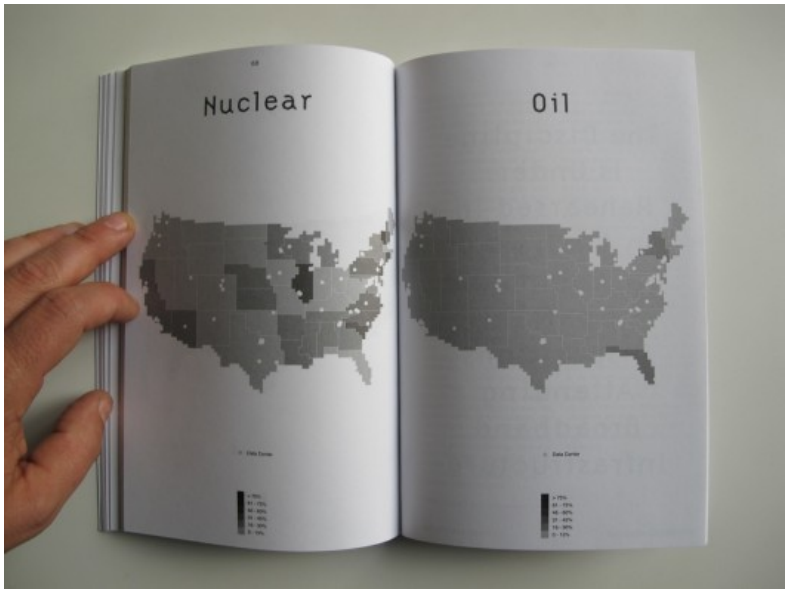
means that they're driving significant demand for energy from power plants that do. Already, the data centers and telecommunications network that bring us the Cloud, if ranked among countries, would be in the top five global energy users in the world." (55)

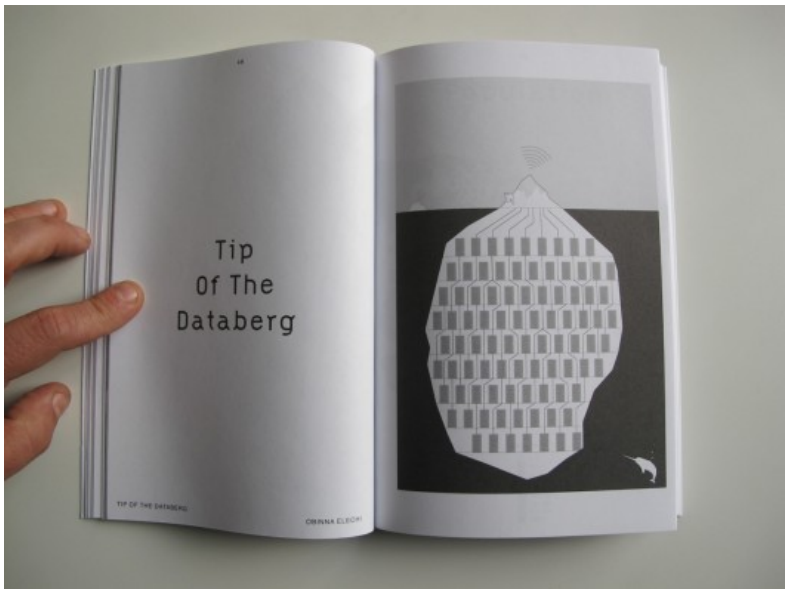
Of course, placing a data center in an isolated spot in Scandinavia makes certain sense (the low ambient temperature can then be harnessed for cooling purposes); however, the intersection of site location and energy consumption has tremendous implications. If transparency remains limited, our insatiable need for data space may mean the environmental havoc wreaked by these data centers goes unchecked.

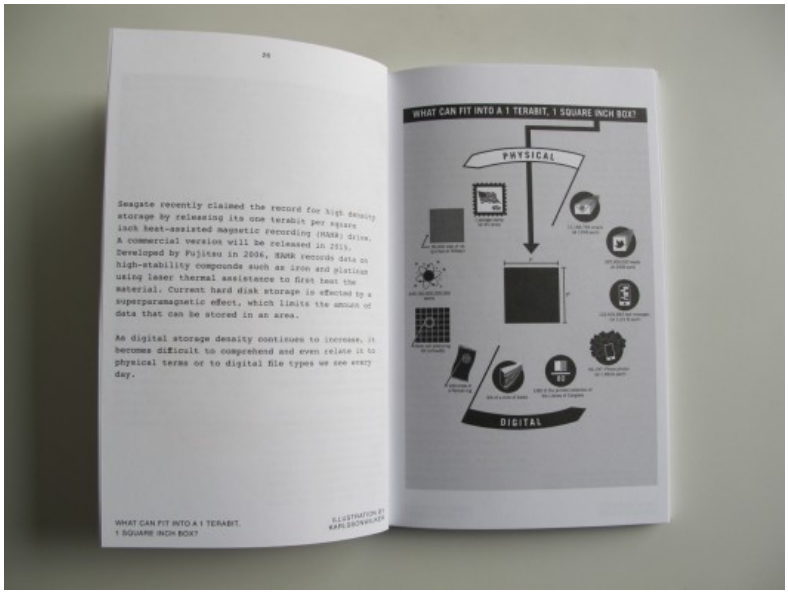


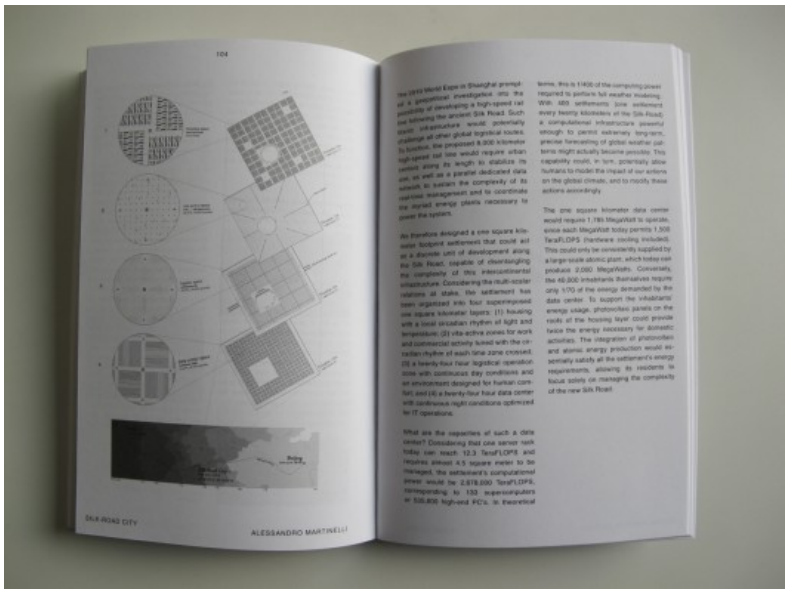

However, *Data Space* suggests a future where data centers could begin to be integrated into our very neighborhoods – scaled-down into rooftop servers or in soon-to-be-obsolete post offices, or kept centralized, but utilized to heat suburban neighborhoods or large pools (solutions that come at the expense of security).

Ultimately, the typology of data centers will depend on the contexts in which they'll be placed – isolated away from human eyes, or integrated into our daily lives. As commercial companies of all shapes and sizes begin to require their own data centers, and wish to design them as physical representations of their brand, this question becomes more and more relevant.

In the culminating interview in *Data Space,* Joseph Lauro, a Principal at Gensler and a leader in data center design, explains that he must design according to the context that the client requires – one which prioritizes security over brand-image, or energy-efficiency over "design." In the end, this is the future quandary that architects will have to grapple with – it will not just be a question of how to best encase invisible data, but of whether that invisible data should be made accessible to us through physical form.





ISSN: 2164-9782
ISBN: 978-0-9838204-1-3

You can subscribe at CLOG's website.

**Cite:**

Quirk, Vanessa. "Data Space / CLOG" 27 Jun 2012. ArchDaily. Accessed 02 Apr 2014. <http://www.archdaily.com/?p=248456>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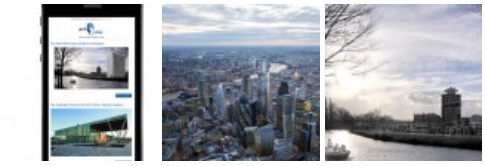

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