17TH INTERNATIONAL ARCHITECTURE EXHIBITION
LA BIENNALE DI VENEZIA
PAVILION OF TURKEY

INFORMATION-RICH OBJECTS

AMELYN NG

Architecture 12 as 2 Measure 7
Ölçü 4 Olarak 6 Mimarlık 8

WWW.PAVILIONOFTURKEY21.IKSV.ORG

Paperwork[14]
INFORMATION RICH OBJECTS

Words by:
AMELYN NG

Keywords:
BIM, ETHICS OF BUILDING INFORMATION, SUPPLY CHAINS

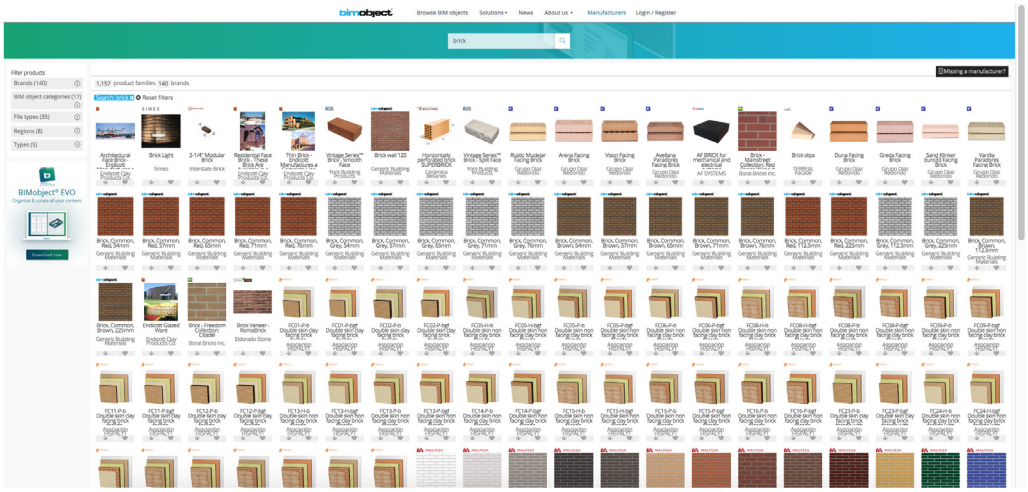

Image source: BIMobject.

With Building Information Modeling (BIM), something has epistemologically changed in the digital management of building materials. As architectural models become more calculable, complex, and connected to real supply chains, it is no longer visual verisimilitude that is of key concern (as with hyper-realistic rendering), but rather, information richness—that is, the quality of machine-readable representations as real products-in-the-world. Beset by the proliferation of parametric data, new platforms have emerged to wrest the virtual object economy into an integrated organization.

BIMobject, "the world's largest platform for manufacturer-specific BIM content," is a virtual cloud library with "485,676 parametric BIM objects to download"—and counting.[1] No longer generic textures, brick, carpet, and paint swatches are now embedded with exacting product data. Even air gaps and clear enamel—invisible to the modeler's eye—are downloadable commodities.

These fastidious screenshots show how the exigencies of smart modeling can turn anything into a comprehensively measurable asset for ease of coordination and specification by the machine. Digitally modeled materials are no longer mere graphic placeholders but durable proxies promising stakeholders a fully foreseeable, error-free, data-lossless future.[2] As the adage goes, "pixels are cheaper than bricks."[3] Having supplanted the trade catalog library, the proprietary BIM object becomes a new site of competition for suppliers and manufacturers. Product lines offering software-compliant digital doubles tend to be adopted into 3D models, which may, in turn, lead to real project

1 See BIMobject, https://www.bimobject.com/en-us. Other BIM object library platforms include BIMsmith, RevitCity, MEPcontent, ARCAT, Autodesk Seek, and NBS National BIM Library.

2 Having transcended XYZ geometries, a BIM model is now capable of simulating time (4D), estimating costs (5D), predicting sustainable outcomes (6D), and coordinating long-term building operations (7D). Digitally modeled materials now submit to engineering analysis, track construction and delivery schedules, and flag clashes and site safety issues. All these efforts in pre-emptively managing building construction inside the model are, ultimately, to guarantee project certainty, time, and costs ahead of reality itself. See "BIM dimensions – 3D, 4D, 5D, 6D, 7D BIM explained," BibLus, Acca Software website, April 18, 2018, http://biblus.accasoftware.com/en/bim-dimensions-3d-4d-5d-6d-7d-bim-explained/, and, for example, "Synchro Software 4D BIM/VDC Construction Project Management," YouTube video, 2:53, post by "Synchro Software," October 30, 2016, https://www.youtube.com/watch?v=sX0NUKDJ3b4.

3 See for example, "Suffolk Construction talk BIM adoption: 'Pixels are cheaper than bricks'", bimcrunch, October 5, 2015, https://bimcrunch.com/2015/10/suffolk-construction-talk-bim-adoption-pixels-are-cheaper-than-bricks/, and "BUILD IT VIRTUALLY, THEN BUILD IT RIGHT!," Chandos, accessed February 18, 2020, https://www.ipda.ca/site/assets/files/1112/chandos_case_061.pdf.

specifications.[4] As BIM continues to be a de facto managerial medium of the global Architecture, Engineering and Construction (AEC) industry, one can't help but wonder how its proxy materiality might be critically redirected.

Might default object properties and automated materials' schedules be intercepted with parameters around fair labor, geological time, or fossil fuel complicities? Can construction supply-chains be reshaped from our desktops? What would an ethics of building information richness look like?

4 "The BIM process has dramatically altered the way manufacturers and specifiers interact and cooperate. Offering high-quality BIM objects that are easy to access and download enables manufacturers to integrate their products into the design process at an earlier stage, and become a valued resource of knowledge that is invited to participate in and contribute to decisions about the design." See Nina Quist, "10 benefits of BIM and manufacturer-specific BIM objects," January 17, 2018, BIMobject, https://www.bimobject.com/en/news/articles/10-benefits-of-bim-and-manufacturer-specific-bim-objects, and BIMsupply, https://www.bimsupply.com/

About the author

Amelyn Ng is an Australian architect, cartoonist, and 2019-2021 Wortham Fellow at Rice University School of Architecture, whose work seeks to expand discourses on architectural formats, systems, pedagogies, and practices. Situated somewhere between architecture, interface, and infrastructure space, her research and design work rethinks systems of banal power toward more inclusive modes of existence.