Home-Office
Automated Architecture (AUAR) Labs
February-March 2020
The Building Centre, London

Design and technology consultancy Automated Architecture (AUAR, pronounced 'our') builds their temporary Home-Office using robotically fabricated, reconfigurable timber building blocks.

While looking for new office space, AUAR designed and built a temporary installation at The Building Centre in London, which acts as home, office and co-working space. The installation is based on 'ALIS' (Automated Living System), AUAR's automated construction system for housing. ALIS uses robotically prefabricated plywood building blocks, with reversible connections that allow for quick reconfiguration and adaptation of the system over time. The installation is an active laboratory for AUAR to test the use of the ALIS system for different applications as well as acts as a live prototype for ongoing projects.

The ALIS building blocks construct all elements of the Home-Office from private workspaces, to a large meeting table, load-bearing walls, floors slabs and a lounge corner with cushions. The space is designed as a chunk or volumetric section of a building that can accommodate both housing, work space and public functions constructed using only one repeating, pixel-like building block. The building blocks are lightweight and can be quickly assembled without the need for specialised toolv, cranes or an extensively trained workforce. The blocks themselves were used also as scaffolding and supports during the assembly of the Home-Office. The whole installation fits in a single Luton van, allowing it to be easily and quickly transported to a new site after the AUAR residency at The Building Centre is completed.

Up to 10 people can work and relax in the space at the same time, while visitors can join in and reserve a workspace using an online application. Potential users can spin around a 3D model and click on a timber building block to book it for a given amount of time. A number of blocks are reserved for AUAR employees, who use them as fixed workspaces. The workspaces are arranged around the central lounge corner, with every workspace creating a private, semi-enclosed setting where users can focus on their work without being distracted by visitors to the installation.

ALIS is based on a single, repeating building block, which can be cut by a CNC machine and robotically assembled by two industrial robots. Once prefabricated, the building blocks can be assembled into a variety of home typologies, from single family houses to backyard extensions and complete multi-story housing units, which can all be reconfigured and adapted over time. A set of algorithms was produced to generate and evaluate different building assemblies.

Credits:
Design and fabrication: Automated Architecture Ltd (AUAR) Labs
Design Team: Gilles Retsin, Manuel Jiménez García, Vicente Soler, Mollie Claypool, Kevin Saey, Joana Correia
Fabrication Team: Kevin Saey, Danae Parisi, Clara Jaschke, David Doria, Kim Van Poeteren, Mollie Claypool, Gilles Retsin, Manuel Jiménez García
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Drawings: AUAR Labs