Timber-Link
Interlocking panelized timber building system, Cape Dorset, NU, Canada

Main author
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Project data
Context Architecture, building and civil engineering
Client Self-directed research
Background Research project

Sustainability concept
Progress: Timberlink is a highly flexible system that uses cross laminated timber (CLT) to aggregate inhabitable cells into buildings. Vertically, units stack long above short, producing one regular side of alignment. Intergurating a second stack into the irregular side allows the possibility of expansion in the system by pulling the two stacks apart while maintaining linear utility rows. Different configurations of stacking and expanding produce infinite possible outcomes in both plan and section. Two particular arrangements are shown.

People: Through panelized prefabrication, skilled labor on the building site is displaced to the originating factory. This is intended to address the construction challenges in remote communities in Canada, and allow for a quality of architecture that is currently impossible there. Due to the panelized timber structure, the final site assembly can be performed quickly, by local people using standard tools.

Planet: The CLT structure acts as enclosure for each cell and is high in sequestered carbon. Using timber in place of alternate materials means thousands of tons of CO2 can be prevented from entering the atmosphere. As re-use becomes the norm, new construction must be sustainable. Timber as a building material can absorb CO2, and as re-use becomes more common it will produce sensitive arrangements at the scale of occupation.

Prosperity: Currently remote construction is expensive due to specialized labor and the need to move materials. Timberlink attempts to address both of these challenges by using a maximum amount of prefabrication allowing for cost benefits at the building site. Timberlink’s CLT structure is fully edit-able, with structural redundancy that will allow for changes to easily take place using simple tools and an economy of resources for the local community.

Place: The flexible nature of Timberlink’s aggregation allows for infinitely variable form, at the cost of regular form. Not only does this enable arrangements that can respond to case-by-case requirements, but it also allows for a level of specificity that might not be otherwise feasible – as in remote areas of Northern Canada.

Summary and appraisal by the jury
The jury especially commends the author’s courage to revisit concepts pertaining to prefabrication in architecture such as those explored by Konrad Washkoman and Fritz Haller for the Habitat 67 model community in Montreal. Notwithstanding the criticism to which aggregate housing ensembles were exposed, the proposed scheme aims to learn from history and further develop both construction and assembly to create more adaptable configurations – turning the logic of a quasi-neutral and anonymous system into one producing a site-specific architecture.

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