


Modular wooden building system

Serge Schoemaker has designed a prefab building system with real architectural merit.

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The Plan Libre – one of the Five Points for a New Architecture that Le Corbusier formulated in 1926 – represented a revolution in architecture. Away with load-bearing walls! All power to the frame and the open-plan layout! Will architect Serge Schoemaker's Plan Libre 2.0 spark a similar revolution?

Plan Libre 2.0 is a study for a modular wooden building system. The number 2.0 refers to the fact that the system complies with the 'demands of the current period', as Schoemaker puts it; it is not just freely subdivisible but also ecologically

↓ Interior with patio



sound and demountable. According to the architect, 'It is a plea for trying to find unconventional, sustainable construction principles that permit a viable use and reuse of raw materials and buildings'.

The study was prompted by a design commission for a house and several visits to producers of prefab building components. The architect was struck by the fact that although the simple prefab systems were practical, quick to assemble and affordable – ideal for housing – they were nearly always pretty straightforwardly applied. Architecture seldom played any role. So he set himself the task of developing a construction principle that did have architectural merit.

The end result of the study is a circular structure consisting of six glulam timber columns and 24 prefab timber frame floor elements. The structure has three storeys, is ten metres high and has a diameter that increases from 12 metres at the bottom to 17 metres at the top. The round shape and the void in the middle minimize the facade surface and weight. The patio also brings light and air into the building. The choice of a timber frame derives from a desire work with locally available, recyclable materials. Plan Libre 2.0 can be erected in one day and later easily dismantled and reassembled elsewhere.

↓ Construction scheme



Another design impulse was the architect's fascination with architecture that derives its expression from structural logic (Schoemaker works exclusively with models and not with 3D software). In the design, the building system is an integral part of the architecture. Thus the intermediate floors, which are installed from bottom to top, provide the building's stability.

The elaboration of the floor plans and facades is, of course, flexible. Depending on the function – the architect's ideas include a luxury patio dwelling, public viewing platform or pavilion – the facades can be entirely transparent or more closed. It is also possible to link several units together or to scale up the design to create a larger building, at which point an apartment building, school or theatre becomes conceivable.

The final price will, especially in the current adverse economic conditions, largely determine whether Plan Libre 2.0 is able to compete with existing prefab systems. But Schoemaker is not yet ready to talk about costs. One way or the other, his intention is to build a prototype this year; he is already in discussions about this with a number of clients and producers. ←

PLAN LIBRE 2.0, 2011 –

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↓ The thirty prefab elements

