ABSTRACT

This contribution aims at proposing “simplified assemblage” wooden building strategies, to face the problems linked to the self-help building of temporary structures in border-line areas. To manage the whole process, “driven procedures” have been adopted, using a multimedia system for handling information. Main results of the research are:

Allow users’ independence in construction operations, respecting every kind of environment
Adopt self-help building and “dry assembly” procedures
Define and realize easy-to-handle 3D details and an “all in one” tool to build up all the structures
Simplify shape of elements, promptly interchangeable
Foresee repeatable construction phases, easily and quickly understandable
Separate units in parts simple to be reproduced
Conceive comprehensible procedures for anyone, to avoid injuries of operators and minimize risks of erroneous lying
Manage “driven choices” which define typology of territorial development, geometry of plant, foreseen use and number of people hosted in temporary houses
Print and fill out Gantt diagrams to link processing
Overlap digital and paper supports (self-help building manual, specifications and instruction fiches), so that everyone can choose the most familiar and clearer ones
Organize data and handle 2D/3D models simultaneously
Guarantee interaction of users with multimedia, to support self-builders in construction phases;
Permit flexible consultation and usability of topics, especially on web (http://www.polito.it/eas/);
Design building system with details and tools able to:
  Suit the context found on site;
  Employ recyclable and easy to work materials, functional to possible adjustments during assembly phases [4 & 5].

The final outcome is a Multimedia CD-Rom in which all these contributions are related, helping users to attend self-building of a “self management village”. Due to flexibility of use of prototype, the expression “self management village” will be referred to different contexts, to point out all the management and construction phases. Some examples are emergency situations preceding reconstruction steps, self-help building communities or houses useful for meetings, shows.

Keywords: Self-help made viable; Users’ construction autonomy; Self-help building manual; Gantt diagrams; Specifications and instruction fiches; Simplified and dry assemblage; Self-help construction nodes; Temporary wooden structures; Management of buildings in border-line areas; Sustainability