

Evolutionary Modeling as a Mean of Mass-Customization for Industrialized Building Systems -Two Cases Explored-

by

Hicham Zakaria,

(Groupe de Recherche en Conception Assistée par Ordinateur)

University of Montreal, Montreal, Canada.

Abstract. Traditional modes of production, in the construction field, are no more able to deliver quality buildings for all people. Actually, industrialized building systems are indeed reducing the cost of buildings in a significant way and promises to make quality more available. Everyone is however different from the other and from himself -through time-. His needs often do the same so the likeness feature of industrialized building products did rarely satisfy all individualities. This research project aims to examine how evolutionary modeling could help manufacturers of building systems to introduce Mass-Customization within their Mass-Production lines and also help clients to adapt their buildings for new needs. Two cases of building systems are explored within a new modeling environment: the first focuses on building component's shape flexibility while the second case explores the combination among these components. Experiments are discussed at the end of the paper and, perspectives are drawn for next developments.

Keywords: Evolutionary modeling, Building systems, Industrialization, Mass customization