Abstract—Creating 3D object models is a crucial in many areas such as computer graphics, virtual reality, animations, and computer aided design (CAD). In this paper, we discuss our on-going research on creating traditional building component modelling using component templates. We developed a prototype system that can create building component templates by editing fundamental 3D object primitives using the open source CAD software FreeCAD. Once a building component template is created, it will be segmented and analyzed to select the unit shapes that are commonly and frequently used for a variety of component templates, and they will be registered back into the primitive database so that they can be used in creating other templates in the future. Our system provides easy-to-use editing tool that a user can create the shape of the building component and then the system automatically generate a set of parameters necessary to describe the shape. Our experience showed that users can easily create the component templates they desire to make in a few minutes.

(Pt9)Keyword—About four key words or phrases in alphabetical order, separated by commas. For a list of suggested keywords, send a blank e-mail to keywords@ieee.org or visit http://www.ieee.org/organizations/pubs/ani_prod/keywrd98.txt

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Template-Based Traditional Building Component Modeling

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