

# ASSESSMENT OF THE USABILITY OF BIM SOFTWARE IN ARCHITECTURAL DESIGN PRACTICE AND EDUCATION IN BRASIL – GRAPHISOFT ARCHICAD 23: OLGA BAETA HOUSE

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## Objectives

This research aims the assessment of the use of BIM software Graphisoft ArchiCAD in design of a representative residence of Brazilian architecture, the Olga Baeta House, designed by João Batista Vilanova Artigas and Carlos Cascardi.

## Materials and Methods

The proposed method consists of the confrontation between elements of a building to be represented and their virtual counterparts in the model obtained by the use of the studied software. The presentation and representation requirements, as specified in National standards, are verified according to the design phase. Also, the software's ability to support the design process is assessed. For the assessment, two tables are produced, starting from templates with the corresponding requirements and gradually filled with the corresponding findings. This research also addresses the use of a classification system for construction, based on ABNT ISO 12006.

## Results

As a result, we have a step-by-step guide about the model development and good practices for software usability that can work as courseware. Another research product was two summary tables. The first one, Requirements for an Architecture Project Representation, describes the development level of each object represented in the model. The second one, Efficient Parametric CAD Process

Requirements, shows requirements that must be met by the parametric software related to the design process.

## Conclusions

The search for a logical and efficient design process implied several challenges during the modeling, but did not deter from reaching the intended level for the stages of design considered. The analysis of the information carried with the model in IFC format showed that the house was represented correctly, although with small losses of information, but maintaining geometries and relations between the elements.

## References

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