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Development of green template for building life cycle assessment using building information modeling

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Recently, building information modeling (BIM) research has been attracted as a means of coping with green building policy. The purpose of this study is to develop BIM template to evaluate greenhouse gas emission efficiently and quanti-evaluation at the design stage. For this study, database which was reflected in template was constructed considering environmental performance and 6 kinds of environmental impact categories were analyzed by major building material derived from literature. Based on this analyzed data, the main building material library was developed. When users conduct modeling by utilizing that library established, evaluating result can be confirmed in the Revit BIM Modeling program by using the schedule function of the Revit. The decision-making environment performance of users is possible through the modeling. In addition, a guideline was proposed for the steps required to build an additional established family.

Biography

Sungho Tae is an associate professor at Hanyang University, South Korea. He received his PhD from University of Tokyo in 2005. He has been teaching Sustainable Building Materials and LCA Analysis of building since 2005. Dr. Tae focuses his research on development of sustainable building materials, building LCA program, development of sustainable durability design system and building optimum design technology. He was a research professor of Sustainable Building Research Center (ERC). He is a board member of the International Sustainability Council. And he is also a member of Journal Editorial Committee of Korea Concrete Institute, Committee of Korea Industrial Standards Commission (ISO TC 184/SC 5), ISO/Fairness Committee, Journal Editorial Committee of Architectural Institute Korea, Green Store Institution Committee and Green Building Certificate Deliberation Committee of Korea Environmental Industry Technology Institute.

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