Гумметов Рустам, Б18-191-2

Modeling is the process of representing a model which includes its construction and working. This model is similar to a real system, which helps the analyst predict the effect of changes to the system. In other words, modeling is creating a model which represents a system including their properties. It is an act of building a model.

Simulation of a system is the operation of a model in terms of time or space, which helps analyze the performance of an existing or a proposed system. In other words, simulation is the process of using a model to study the performance of a system. It is an act of using a model for simulation.

Modeling and simulation can be applied in the following areas − Military applications, training and support, designing semiconductors, telecommunications, civil engineering designs and presentations, and E-business models.

Moreover, it is used to study the internal structure of a complex system such as a biological system. It is used when optimizing system structure such as a routing algorithm, assembly line, etc. It is used to test new designs and policies. It is used to validate analytical solutions.