Models of discrete event material flow simulation are of increasing complexity. By using partial models of different complexity, the complexity of the model as a whole can be reduced or adapted to the available computer resources. In an immersive simulation environment the complexity, and with it the model accuracy, can be adjusted dynamically to the user focus by exchanging partial models of different complexity. This dissertation deals with the question how simplified partial models with specific properties concerning complexity and behavioral deviation can be generated automatically, starting with an original model of high complexity. Additionally, how can simulation state mappings for the real time exchange of partial models are created. These problems are solved by firstly defining a set of component classes, whose parameterized and linked instances build the models. These models are simplified in a control loop to reduce model complexity with hardly affecting model behavior. Therefore metrics for complexity and behavioral deviation are developed and a control loop algorithm is created. For simplification the techniques aggregation and omission are used and integrated into the control loop. The state mapping uses the creation-relation between components in the partial models of different complexity created by simplification. Along these relations, token, representing jobs, are transferred and following these, the rest of the state elements. Concluding the developed methods are validated with realistic test models.