Framework dataset for an escalator or a moving walkway

The invention relates to a method for creating a three-dimensional dataset for a truss of an escalator or moving walkway.

Escalators and moving walkways are commonplace systems for transporting people that can be used in, for example, public transport facilities such as train stations, airports, subway stations, and so forth. Furthermore, many of these systems are also found in department stores, shopping malls, amusement parks, etc. Depending on the field and place of use, these systems for transporting people are subject to various requirements, which are specified not only by sets of standards such as EN115-1 but also by the client-specific requirements such as conveying capacity and conveyor high.

The core of these systems for transporting people in each instance is a supporting structure, which is typically configured as a truss. All other components of the escalator or moving walkway are mounted in and on this truss. The truss supports the weight of these components, eventually the load to be transported, and its own weight by means of bearing points in the building. The supporting structures configured as trusses typically consist of a multiplicity of profile bars, which are interconnected in a frame-like manner by welding, riveting, etc. The profile bars are designated according to their function; hence a truss comprises top beams, bottom beams, uprights, diagonal struts, transverse struts, and so forth. A supporting structure or truss of the aforementioned type is disclosed in, for example, EP 3121143 A1.

Because of the client-specific requirements, nearly every truss has a batch size of one or to put it another way, most trusses are unique items. They may only differ very slightly from one another, for example one truss otherwise identical in design may differ from the other truss by a centimeter in terms of its conveyor high. For this reason, an individual construction effort is necessary in each instance in order to produce one of these client-specific trusses. This individual construction effort comprises a creation of production documents such as drawings, parts lists, materials lists, and so forth. As a result, the truss of an escalator or moving walkway is not only the largest but also by far the most expensive component.