

Multimedia exploration is addressing the issue of searching within multimedia collections where the data is not annotated, the user is not able to formulate the text query, does not have any example data or wants to get quickly acquainted with the features of the collection. Part of the exploration is also the presentation of the results which is the main contribution of this thesis. The relations between the pictures in the exploration results are transformed into a graph which is visualised through a particle physics model. To visualize a large number of pictures, it is necessary to optimize the calculation. This thesis describes the optimization of both the basic algorithms and their adaptations for the need of multimedia exploration. The calculation layout is available in 2D and 3D space.