**Procedural landscape generation  
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Summary**

This paper discusses the basic principles and directions of procedural generation of landscapes. Today this theme does not have a has extensive coverage of the IT industry, because of it’s innovativeness, but it’s steadily growing with each passing day finding more and more applications. The aim of this work is to facilitate the creation of landscapes for industry 3d modeling and other related areas such as film, game development, etc. The main goal of the project is to develop a generation tool and the visualization of the landscape using one of the following algorithms for generating heightmaps which can be exported into most modern 3d editors via direct export a model in Wavefront format (\*.obj), or by exporting the resulting elevation map as image. To create was used Unity3d game engine code, written in C# which is part of the Microsoft .Net Framework. In the process of developing was developed cliff generation algorithm based on comparing a calculated Delta gradient between the four neighbors of the considered cell with a certain threshold value, which has been successfully applied in practice. Based on the obtained results, possible further development of the new product by increasing the area of the generated landscape, adding extra biomes and sub-biomes, changing using noise generator, the combination of various modifiers, also applying of lazy evaluations in combination with the fragment calculation system.