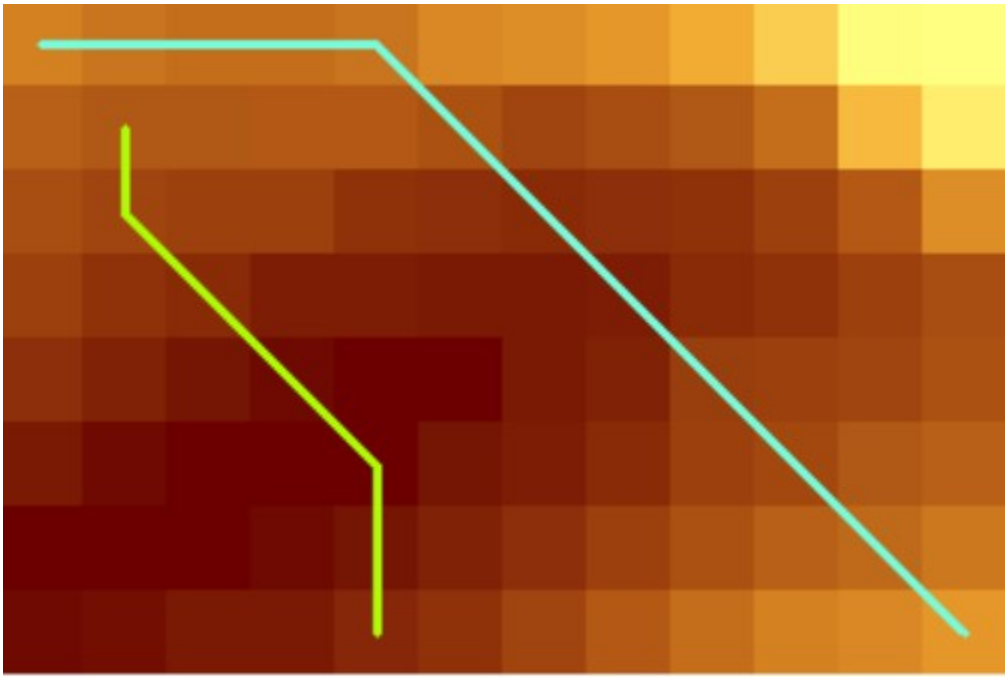
shortest distance path with gradient

Title shortest distance path with gradient

Summary

Calculate a shortest distance path from the input DEM TIFF data under a given gradient threshold.

Illustration



Usage

This tool can be used in many case that demand a smooth shortest path.

For example, railway route planning and design, highway route planning and design

Syntax

shortestDistancePathWithGradient (Input_DEM_Raster_TIFF_File___tif_, Start_Point_Row_Number__eg__1_, Start_Point_Column_Number__eg__1_, End_Point_Row_Number__eg__8_, End_Point_Column_Number__eg__12_, Gradient_Threshold__degree__eg__5_, Output_Route_Shape_File_Path)

Parameter	Explanation	Data Type
Input_DEM_Raster_TIFF_File___tif_	**Dialog Reference** The input data must be a TIFF DEM raster data. (.tif) There is no python reference for this parameter.	Raster Layer
Start_Point_Row_Number__eg__1_	**Dialog Reference** The input should be the start point row number and must be a Integer start from 1.	Index

	This number must not exceed the max of the row number of input raster data There is no python reference for this parameter.	
Start_Point_Column_Number__eg__1_	**Dialog Reference** The input should be the start point column number and must be a Integer and start from 1. This number must not exceed the max of the column number of input raster data There is no python reference for this parameter.	Index
End_Point_Row_Number__eg__8_	**Dialog Reference** The input should be the end point row number and must be a Integer and start from 1. This number must not exceed the max of the row number of input raster data There is no python reference for this parameter.	Index
End_Point_Column_Number__eg__12_	**Dialog Reference** The input should be the end point column number and must be a Integer and start from 1. This number must not exceed the max of the column number of input raster data There is no python reference for this parameter.	Index
Gradient_Threshold__degree__eg__5_	**Dialog Reference** The input should be the gradient threshold. the number should be a positive integer. For example. 5 means gradient of the whole path should be between -5 and 5 There is no python reference for this parameter.	Index
Output_Route_Shape_File_Path	**Dialog Reference** The output is the shortest route and saved as a shape file.	Address Locator

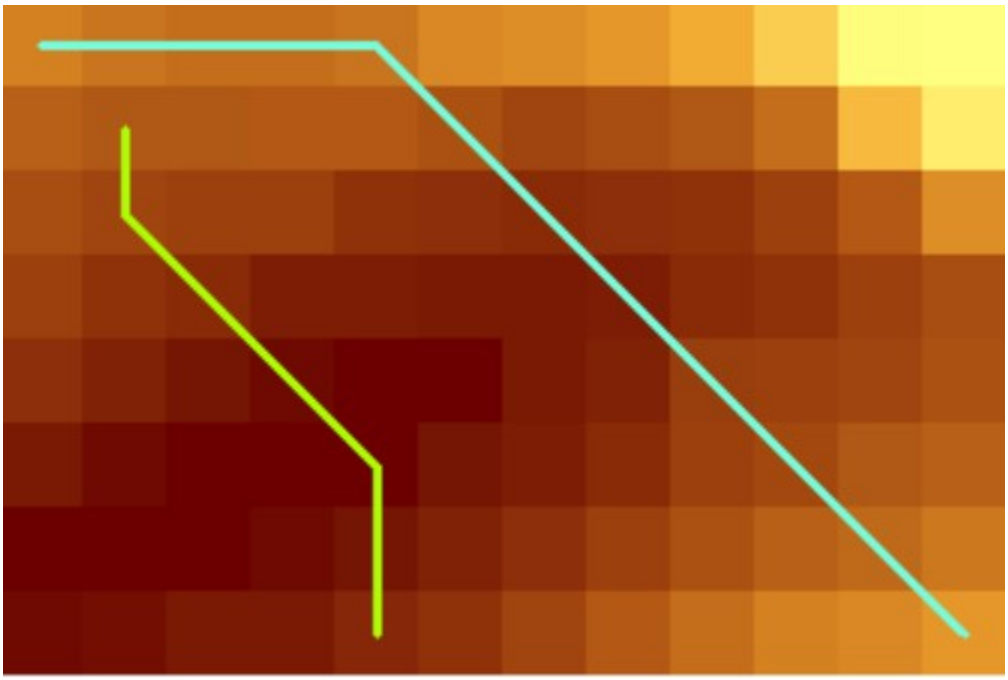
the Extension (.shp) should not be added in the name

There is no python reference for this parameter.

Code Samples

There are no code samples for this tool.

Side-panel Help Illustration



Tags

The shortest distance, Dijkstra, Gradient threshold, Smooth path

Credits

This tool is design and developed by Lin Che //chelinn.cn@gamil.com 27.19.2019 GIS Application course project at TU Dresden

Use limitations

There are no access and use limitations for this item.

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