

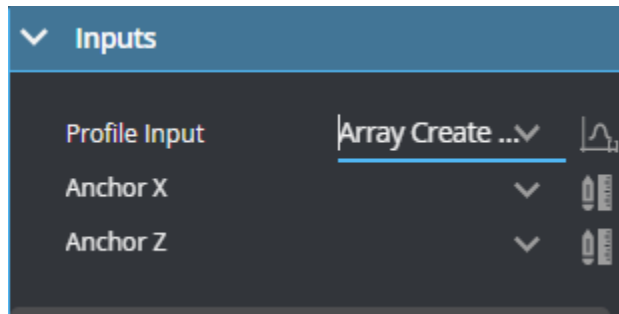
Profile Closed Area

Purpose

The Closed Area tool determines the cross-sectional area within a region using point cloud data from a dual- or multi-sensor system.

The tool supports both convex profiles and concave profiles. The tool renders a polygon corresponding to the profile in the data viewer. Use this polygon to decide whether the tool can correctly calculate an acceptable representation of the profile. Minor gaps in the profile are permitted; the size of these gaps is configurable.

Inputs



Name	Description
Profile Input	The profile point cloud that the tool will apply measurements to.
Anchor X Anchor Z	Lets you choose the X or Z measurement of another tool to use as a positional anchor for this tool.

Parameters

Parameters

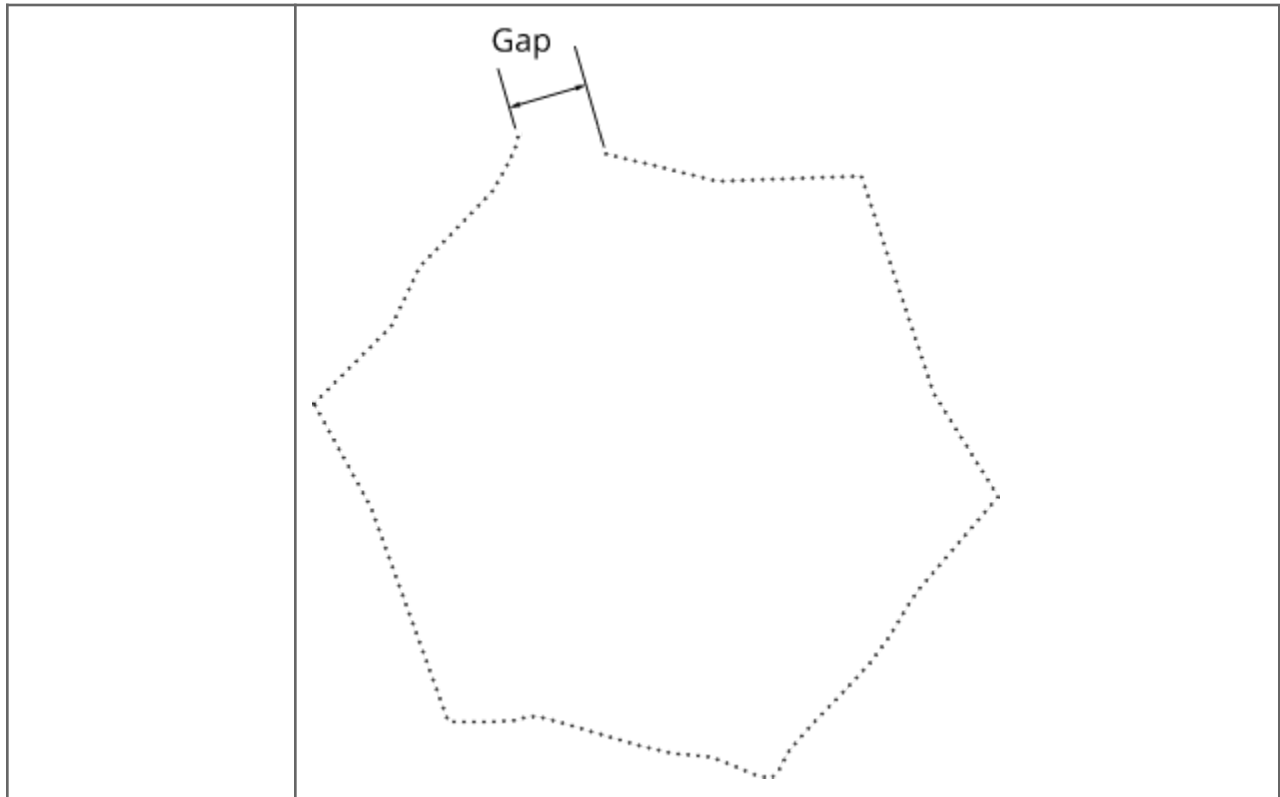
Use Region

Use Max Gap

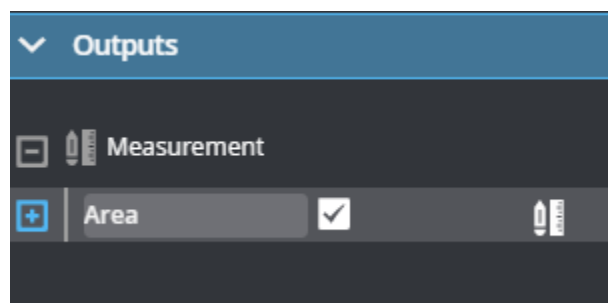
External ID

ProfileClosedA

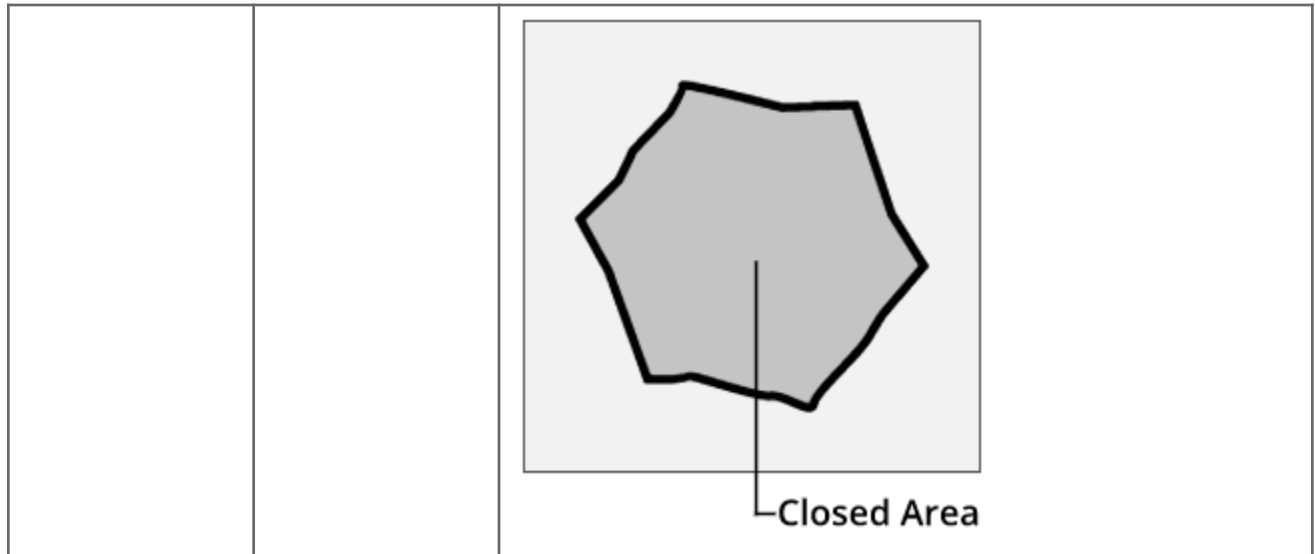
Name	Description
Use Region	When enabled, show a Region parameter.
Region	The region to which the tool's measurements will apply.
Use Max Gap	Indicates whether the tool uses the Max Gap setting (see below).
Max Gap	The maximum gap allowed between any two profile points on the contour of the target, in millimeters. In the following illustration of a profile, if the gap were greater than the value set in Max Gap , the tool would return an invalid value.



Outputs



Type	Name	Description
Measurement	Area	Measures the cross-sectional area within a region using data from a dual- or multi-sensor system.

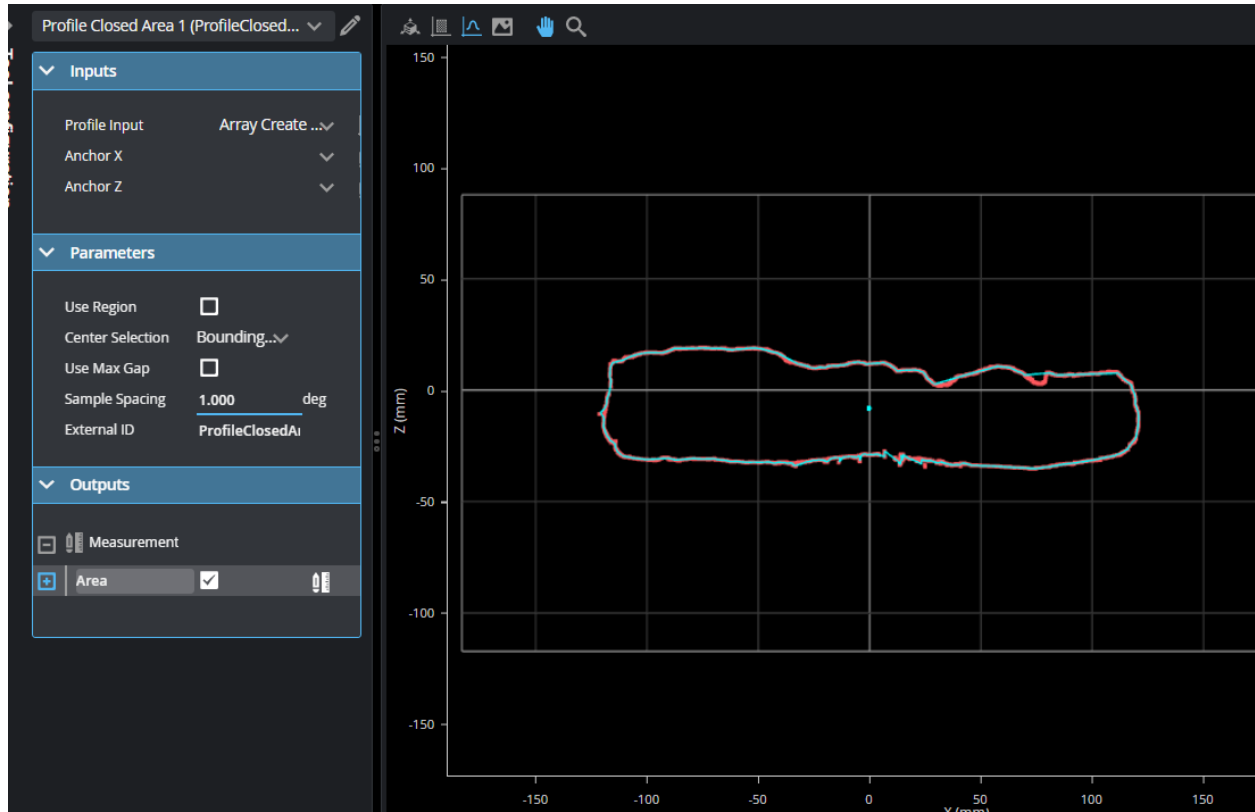


Major Revisions

- Using the Green Formula to compute the area of the contour consisting of profiles instead of the method of dividing profiles into many sectors in the Classic

Application Examples

Test data https://drive.google.com/drive/folders/1QXZA_is-iMLisg9LG1wo-3Ltqj2_Qk2o



Algorithm Details