P3D? or Point Cloud? then Point Cloud Basic? or Point Cloud Advanced?

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With their 2023 release, Carlson Software has made dozens of improvements to both Point Cloud Basic and Point Cloud Advanced. So, I thought it was appropriate to "re-purpose" this blog post from 2019 as an FAQ and update it as the products continue to improve.

Here is a handy chart – current as of the 2023 product release: Comparison: Point Cloud Basic vs Point Cloud Advanced

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From the 2019 post:

> *I don't know about you but the new Carlson product offerings for P3D Topo and Point Cloud Basic and Point Cloud Advanced confuse me. Admittedly, these are products I*

haven't dived into much and have relied on Mark Long and Doug Aaberg for their advice and direction. So, I put the question to them, "Who Needs Point Cloud? And Who Needs P3D Topo?"

Doug Aaberg: I feel that while Carlson P3D topo is a good solution for producing, manipulating surface models as well as some hydrology capabilities while Carlson Point Cloud is a good solution for performing virtual surveys and extracting existing data out of a cloud. It is probably to simple to surmise by saying Engineers would like P3D while Surveyors would like Point Cloud but I sort of think that way. The truth is, there is a lot of overlap between the two products.

Mark Long says: Carlson P3D Topo is intended to take large point clouds and create surface models for design professionals via Drones or Lidar.

And as to the difference between Point Cloud Basic and Advanced? Doug says: Point Cloud Basic – designed to work within a CAD environment to manipulate and extract data from a point cloud. It has a very large capacity (up to a billion points) and is a great program for performing a "virtual survey" directly in a cloud. It allows the creation of Carlson points and 3D polylines utilizing a typical Carlson Field to Finish code table (FLD file) and draws entities directly into an open CAD drawing with no additional export function. A notable feature is Survey by Grid which sets points at any specified grid spacing.

Point Cloud Advanced – contains all of the functionality of Carlson Point Cloud Basic plus the ability to extract features such as trees, hydrants and poles. It also allows the creation of solids and utilizes typical Carlson cross section alignments (mxs files) to extract cross sections and profiles. You can select cloud data by color or elevation and create regions for isolating portions of a cloud for editing or extracting features.. A notable feature is the ability to simplify a TIN and create

smoother looking contour lines.
