

TERMS AND DEFINITIONS

".OBJ"	A geometry definition file format first developed by Wavefront Technologies for <i>The Advanced Visualizer</i> animation package. It is an open file format and has been adopted by other 3D computer graphics application vendors. The OBJ file format is a simple data format that represents 3D geometry alone – namely, the position of each vertex, the UV position of each texture coordinate vertex, vertex normals, and the faces that make each polygon defined as a list of vertices, and texture vertices. Vertices are stored in a counter-clockwise order by default, making explicit declaration of face normals unnecessary. OBJ coordinates have no units, but OBJ files can contain scale information in a human readable comment line. More information available at: https://en.wikipedia.org/wiki/Wavefront_.obj_file
".PNG (Portable Network Graphics)"	A raster-graphics file format that supports lossless data compression. More information available at: https://en.wikipedia.org/wiki/PNG
".JPG or JPEG (Joint Photographic Experts Group)"	A commonly used method of lossy compression for digital images, particularly for those images produced by digital photography. The degree of compression can be adjusted, allowing a selectable trade-off between storage size and image quality. JPEG typically achieves 10:1 compression with noticeable, but widely agreed to be acceptable perceptible loss in image quality. Since its introduction in 1992, JPEG has been the most widely used image compression standard in the world, and the most widely used digital image format. More information available at: https://en.wikipedia.org/wiki/JPEG
".FBX"	A proprietary file format developed by Kaydara and owned by Autodesk since 2006. It is used to provide interoperability between digital content creation applications. More information available at: https://en.wikipedia.org/wiki/FBX
".MTL (Material Template Library)"	A companion file format to .OBJ, also defined by Wavefront Technologies, that describes surface shading (material) properties of objects within one or more .OBJ files. A .OBJ file references one or more .MTL files (called "material libraries"), and from there, references one or more material descriptions by name. .MTL files are ASCII text files that define the light reflecting properties of a surface for the purposes of computer rendering, and according to the Phong reflection model. The standard has widespread support among different computer software packages, making it a useful format for interchange of materials. More information available on: https://en.wikipedia.org/wiki/Wavefront_.obj_file#:~:text=The%20Material%20Template%20Library%20format,to%20the%20Phong%20reflection%20model
".STL"	A file format native to the stereolithography CAD software created by 3D Systems. Chuck Hull, the inventor of

	stereolithography and 3D Systems' founder, reports that the file extension is an abbreviation for <i>stereolithography</i> , although it is also referred to as <i>standard triangle language</i> or <i>standard tessellation language</i> . An STL file describes a raw, unstructured triangulated surface by the unit normal and vertices (ordered by the right-hand rule) of the triangles using a three-dimensional Cartesian coordinate system. More information available on: https://en.wikipedia.org/wiki/STL_(file_format)
"Thumbnail"	A reduced-size version of a picture or video, used to help in recognizing and organizing them, serving the same role for images as a normal text index does for words. In the age of digital images, visual search engines and image-organizing programmes normally use thumbnails, as do most modern operating systems or desktop environments, such as Microsoft Windows, macOS and others. More information available at: https://en.wikipedia.org/wiki/Thumbnail
"3D data"	Data where the geometry of spatial objects is represented in three-dimensional space. 3D data means standard digital 3D models, 3D meshes, visual textures associated with 3D meshes, 3D point clouds, or other spatially located information produced by or derived from data gathered with a 3D scanner. More information available at: https://www.lawinsider.com/dictionary/3d-data
"3D viewer"	A software or application designed to visualize, interact with, and explore three-dimensional models in a digital environment. Unlike static images, 3D viewers provide an interactive experience that allows users to rotate, zoom, and inspect objects in detail. More information available at: http://visao.app/what-is-a-3d-viewer-features-benefits-and-applications/
"Accessible"	That can be reached, entered, used, seen, etc. More information available at: https://www.oxfordlearnersdictionaries.com/definition/english/accessible?q=Accessible
"Agisoft Metashape"	An advanced image-based 3D modelling software developed by Agisoft LLC, designed to create professional-quality 3D content from still images. More information available at: https://www.agisoftmetashape.com/product/agisoft-metashape-standard-edition/?gad_source=1&gad_campaignid=22447928281&gbraid=OAAAAADwoiSH2tQsFNN4zDjBc9uV_IhNuz&gclid=CjwKCAjwqKzEBhANEiwAeQaPVW0HEDGfuU6PuUfmd42EERJB67qAU69QIB1mOJk64P_aPd7V-2SKwxoCHh8QAvD_BwE
"Alignment"	The process of aligning multiple scans of the same object. To assemble all scans into a single whole, the data must be converted to a unified coordinate system — that is, alignment must be performed using the <i>Align</i> function. More information available at: https://docs.artec3d.com/as/19/en/process.html#sec-scan-align , https://docs.artec3d.com/as/19/en/qsg.html
"Annotation on Sketchfab"	Represented by the pin-drop icon. It includes options to add annotations anywhere on your model. In addition to the

	description of your 3D model (which you can add/change through the Edit Properties page), annotations allow you to highlight specific features and provide additional context for your model. More information available at: https://libguides.union.edu/sketchfab/annotations
"Anti-glare function"	Refers to a technology used in displays, such as computer monitors and mobile devices, that reduces the amount of reflection and glare on the screen. This is achieved by adding a coating to the surface of the display, which helps to diffuse light and reduce reflections. More information available at: https://www.ryans.com/glossary/anti-glare?srsId=AfmBOoptkCegzZaDr0Zoqf1bA6Bs8z6sabykqef0vZkTgE5QrC1X96ox
"Archiving"	To put or store a document or other material in an archive. More information available at: https://www.oxfordlearnersdictionaries.com/definition/english/archive_2?q=archiving
"Artec Leo Scanner"	An ergonomic, handheld 3D colour scanner with automatic, onboard processing, released in 2018. More information available at: https://en.wikipedia.org/wiki/Artec_3D
"Artec Space Spider II Scanner"	A 3D handheld, colour scanner released in 2015. More information available at: https://en.wikipedia.org/wiki/Artec_3D
"Artec Studio 19 Professional"	A software program for 3D scanning and post-processing. More information available at: https://en.wikipedia.org/wiki/Artec_3D
"Augmented Reality"	A technology that overlays real-time 3D-rendered computer graphics onto a portion of the real world through a display, such as a handheld device or head-mounted display. More information available at: https://en.wikipedia.org/wiki/Augmented_reality
"Blur"	A shape that you cannot see clearly, often because it is moving too fast. More information available at: https://www.oxfordlearnersdictionaries.com/definition/english/blur_1?q=Blur
"Building the Mesh"	The process of converting a dense point cloud into a polygonal surface model. More information available at: https://en.wikipedia.org/wiki/Polygon_mesh
"Built-in tools"	Tools included as part of something and not separate from it. More information available at: https://www.oxfordlearnersdictionaries.com/definition/english/built-in?q=built-in
"Canon EOS R5 MARK II"	A full-frame mirrorless interchangeable-lens camera produced by Canon. More information available at: https://en.wikipedia.org/wiki/Canon_EOS_R5_Mark_II
"Captured Data"	Data capture is the process of extracting information from paper or electronic documents and converting it into data for key systems or databases. More information available at: https://www.hyland.com/en/resources/terminology/data-capture
"Camera alignment"	The process of searching for common points on photographs and matching them, as well as finding the position of the camera for each picture and refining camera calibration parameters. As a result a sparse point cloud and a set of camera positions are

	formed. More information available at: https://www.agisoft.com/pdf/metashape-pro_1_5_en.pdf
"Cleaning data"	Process of removing unwanted parts of the scan, such as noise, base surfaces, or irrelevant objects, to prepare the data for further processing. Tools and methods vary depending on the software used. More information available at: https://docs.artec3d.com/as/19/en/qsg.html
"Cluttered environment"	An environment characterized by a disorderly arrangement of objects, making it difficult to navigate or find specific items. More information available at: https://getidiom.com/dictionary/english/cluttered-environment#:~:text=noun,space%2C%20chaotic%20surroundings%2C%20messy%20area
"Colour-coded indicator (in Artec Studio 19 Professional) "	A visual cue used in Artec Studio 19 Professional to identify the quality or status of scanned data. This can be checked by enabling the Scene Settings option Max error, which highlights problematic frames—such as those with misalignment or tracking issues—using colours like red for easy review before registration and fusion. More information available at: https://docs.artec3d.com/as/19/en/process.html
"Comparative analysis of results"	A side-by-side comparison that systematically compares two or more things to pinpoint their similarities and differences. More information available at: https://dovetail.com/research/comparative-analysis/
"Compressing models for web use"	The process of encoding information using fewer bits than the original representation for web use. More information available at: https://en.wikipedia.org/wiki/Data_compression
"Configuring"	To arrange something in a particular way, especially computer equipment; to make equipment or software work in the way that the user prefers. More information available at: https://www.oxfordlearnersdictionaries.com/definition/english/configure?q=Configuring+
"Coordinate system"	A system that uses one or more numbers, or coordinates, to uniquely determine and standardize the position of the points or other geometric elements on a manifold. More information available at: https://en.wikipedia.org/wiki/Coordinate_system
"Data"	A collection of discrete or continuous values that convey information, describing the quantity, quality, fact, statistics, other basic units of meaning, or simply sequences of symbols that may be further interpreted formally. More information available at: https://en.wikipedia.org/wiki/Data
"Data Editing of a 3D model"	Refers to the post-processing stage where surface defects caused by scanning or registration errors are corrected using specialized tools. This process involves repairing triangulation errors, removing small unwanted objects near the model surface, filling holes semi-automatically or automatically, smoothing the mesh to reduce noise, and simplifying or remeshing the mesh to maintain accuracy while optimizing the model. These editing algorithms process the scan data and replace the original mesh, with the option to undo changes if necessary. More information

	available at: https://docs.artec3d.com/as/19/en/process.html?highlight=editing#edit-models
"Data Management"	Comprises all disciplines related to handling data as a valuable resource, and it is the practice of managing an organization's data so it can be analysed for decision making. More information available at: https://en.wikipedia.org/wiki/Data_management
"Data Pre-selection"	The process of selecting and organizing raw scan data before detailed processing steps such as alignment, fusion, and editing. It involves choosing relevant scans, filtering out poor-quality or redundant data, and preparing the dataset to improve efficiency and accuracy in subsequent modelling steps. More information available at: https://docs.artec3d.com/as/19/en/qsg.html#scan-data-management
"Data Processing"	A set of operations performed on raw data to convert it into meaningful, usable information. In the context of 3D scanning, this involves cleaning, aligning, merging, and optimizing scan data to create accurate 3D models. More information available at: https://docs.artec3d.com/as/19/en/process.html
"Data Publishing"	The act of releasing data in published form for use by others. More information available at: https://en.wikipedia.org/wiki/Data_publishing
"Data quality"	Refers to the state of qualitative or quantitative pieces of information. More information available at: https://en.wikipedia.org/wiki/Data_quality
"Dense cloud generation"	The process of creating a highly detailed point cloud by computing a large number of points that represent the surface of the scanned object. This step follows initial sparse point cloud creation and is essential for producing accurate and detailed 3D models, enabling precise surface reconstruction. More information available at: https://docs.artec3d.com/as/19/en/process.html
"Digital preservation"	A formal process to ensure that digital information of continuing value remains accessible and usable in the long term. More information available at: https://en.wikipedia.org/wiki/Digital_preservation
"DSLR camera"	A digital single-lens reflex camera (digital SLR or DSLR) is a digital camera that combines the optics and mechanisms of a single-lens reflex camera with a solid-state image sensor and digitally records the images from the sensor. More information available at: https://en.wikipedia.org/wiki/Digital_single-lens_reflex_camera
"Dublin core"	A set of fifteen "core" elements (properties) for describing resources. More information available at: https://www.dublincore.org/specifications/dublin-core/dces/
"Editing the Mesh"	To make changes to a mesh, deciding what will be removed and what will be kept in, in order to prepare it for printing or display. More information available at: https://dictionary.cambridge.org/dictionary/english/edit
"Embed code"	A short line of text that you can copy and paste from one website to another in the HTML coding language. It includes the source link, height, and width of the content you are adding. An embed

	code allows web developers to add third-party media, applications, or feeds to their website, saving time and ensuring real-time updates. More information available at: https://ca.indeed.com/career-advice/career-development/embed-code
"Embedding"	To include text, sound, images, video, etc. in a computer file, email message, or on a website. More information available at: https://dictionary.cambridge.org/dictionary/english/embed
"Enhance"	To increase or further improve the good quality, value or status of somebody/something. More information available at: https://www.oxfordlearnersdictionaries.com/definition/english/enhance?q=Enhance
"Erase tool (Artec Studio 19 Professional)"	A tool in Artec Studio 19 Professional used for rough cleaning of scans and removal of the base surface and side objects. More information available at: https://docs.artec3d.com/as/19/en/qsg.html
"Exporting Data"	The output of data sets between different software applications. It involves "translating" from the format used in one application into that used by another, where such translation is accomplished automatically via machine processes, such as transcoding, data transformation, and others. True exports of data often contain data in raw formats otherwise unreadable to end-users without the user interface that was designed to render it. More information available at: https://en.wikipedia.org/wiki/Import_and_export_of_data
"Exposure"	The length of time for which light is allowed into the camera when taking a photograph. More information available at: https://www.oxfordlearnersdictionaries.com/definition/english/exposure?q=Exposure
"Face count"	The number of flat surfaces of a solid shape. More information available at: https://thirdspacelearning.com/us/blog/what-are-vertices-faces-edges/
"Faces"	The flat surfaces of a solid shape. More information available at: https://thirdspacelearning.com/us/blog/what-are-vertices-faces-edges/
"Fast fusion (Artec Studio 19 Professional)"	A process that produces quicker results and constructs a noisier geometry at the same time. More information available at: https://docs.artec3d.com/as/19/en/process.html#sec-fusion
"Fidelity"	Denotes how accurately a copy reproduces its source. More information available at: https://en.wikipedia.org/wiki/Fidelity
"File size"	A measure of how much data a computer file contains or how much storage space it is allocated. More information available at: https://en.wikipedia.org/wiki/File_size
"File format"	The way that information is encoded for storage in a computer file. More information available at: https://en.wikipedia.org/wiki/File_format
"Fix holes (Artec Studio 19 Professional)"	A tool in Artec Studio 19 Professional that semiautomatically fills holes and smooths the model edges. More information available at: https://docs.artec3d.com/as/19/en/qsg.html
"Floating geometry"	Refers to individual pieces of geometry that are placed near or on top of a base mesh but are not directly connected to it. More

	information available at: https://polycount.com/discussion/89532/a-quick-explanation-of-floating-geometry#:~:text=What%20is%20floating%20geometry?,each%20hole%20and%20screw%20individually.
"Fusion"	A process that creates a polygonal 3D model by merging the captured and processed frames. Fusion is the key step because the polygonal model is what most people expect to see after a 3D scan. More information available at: https://docs.artec3d.com/as/19/en/process.html#sec-fusion
"Fusing the mesh"	Creating a mesh model based on the scans. More information available at: https://docs.artec3d.com/as/19/en/qsg.html
"Generic format"	File types that are compatible and allow sharing between different devices and software programs. More information available at: https://www.savemyexams.com/igcse/ict/cie/21/revision-notes/8-managing-files-and-compression/manage-files-effectively/file-formats/
"Geometry extraction"	The process of identifying and extracting meaningful geometric features from a digital representation of a shape, whether it's a 3D model or an image. More information available at: https://www.sciencedirect.com/science/article/pii/S2405844023069025?via%3Dihub#:~:text=In%20order%20to%20be%20able,%2C16%2C17%5D.
"Glare"	The difficulty of seeing in the presence of bright light such as direct or reflected sunlight or artificial light such as car headlamps at night. More information available at: https://en.wikipedia.org/wiki/Glare_(vision)
"Global registration"	The process that converts all one-frame surfaces to a single coordinate system using information on the mutual position of each surface pair. To do so, it selects a set of special geometry points on each frame, followed by a search for pair matches between points on different frames. Global registration is a resource-intensive operation. Processing of large data sets may take a long time and require a large amount of RAM. More information available at: https://docs.artec3d.com/as/19/en/process.html#sec-global-optimization
"Handheld structured light scanner"	A handheld device used to capture the three-dimensional shape of an object by projecting light patterns, such as grids or stripes, onto its surface. The deformation of these patterns is recorded by cameras and processed using specialized algorithms to generate a detailed 3D model. More information available at: https://en.wikipedia.org/wiki/Structured-light_3D_scanner
"HDRI"	High dynamic range imaging (HDRI) refers to the set of imaging technologies and techniques that allow the dynamic range of images or videos to be increased. It covers the acquisition, creation, storage, distribution and display of images and videos. More information available at: https://en.wikipedia.org/wiki/High_dynamic_range#High-dynamic-range_imaging

"HDRI lighting"	The process of applying a high dynamic range image map (HDRI map) onto an environment light in 3D software. The environment light surrounds the 3D scene and provides HDR illumination, HDR reflections, and an HDR background for the render. More information available at: https://www.lightmap.co.uk/blog/howdoeshdrilightingwork/
"High density mesh"	A mesh that contains a high number of elements per unit area. Higher density meshes usually produce more accurate analysis results but take longer to analyse. More information available at: https://help.autodesk.com/view/MFIA/2019/ENU/?guid=GUID-5C59F2AD-6016-4D02-8755-33732C107FA5
"High-contrast textures"	Surfaces that have a lot of visual variation—such as distinct patterns, colours, edges, or marks—that the software can use to accurately align and reconstruct a 3D model from multiple images or scans. More information available at: https://www.agisoft.com/pdf/metashape-pro_1_8_en.pdf
"Hole filling (Artec Studio 19 Professional)"	A tool in Artec Studio 19 Professional that fills holes in the model automatically. More information available at: https://docs.artec3d.com/as/19/en/process.html
"Isotropic"	Something that is isotropic has the same size or physical properties when it is measured in different directions. More information available at: https://dictionary.cambridge.org/dictionary/english/isotropic
"Isotropic remesh (Artec Studio 19 Professional)"	A tool in Artec Studio 19 Professional that creates isotropic mesh while keeping the processed mesh as close to the original as possible. More information available at: https://docs.artec3d.com/as/19/en/process.html
"ISO sensitivity"	An algorithmic value that indicates the film's or the image sensor's specific sensitivity to light. More information available at: https://www.exposureguide.com/iso-sensitivity/
"Light mesh"	A mesh that contains a low number of elements per unit area. Higher density meshes usually produce more accurate analysis results, but take longer to analyse. Lighter density meshes are usually used in applications where only mobile devices are available, such as augmented reality (AR). More information available at: https://help.autodesk.com/view/MFIA/2019/ENU/?guid=GUID-5C59F2AD-6016-4D02-8755-33732C107FA5
"Masking"	The process of removing unwanted background elements from images used for photogrammetry, especially helpful when the object is placed in a cluttered or reflective environment. More information available at: https://agisoft.freshdesk.com/support/solutions/articles/31000153479-working-with-masks
"Material properties"	A property of a material which can affect how the model will be displayed. More information available at: https://sketchfab.com/blogs/community/how-to-create-materials-and-textures-for-photogrammetry/#:~:text=The%20first%20and%20most%20important,making%20a%20model%20in%20RealityCapture

"Mesh"	The surface geometry of a 3D model; consisting of a series of connected polygons. More information available at: https://docs.artec3d.com/as/19/en/glossary.html
"Mesh density"	The number of elements per unit area in a mesh. More information available at: https://help.autodesk.com/view/MFIA/2019/ENU/?guid=GUID-5C59F2AD-6016-4D02-8755-33732C107FA5
"Mesh formats"	File formats for storing polygon mesh data. Each format is most effective when used for the purpose intended by its creator. Popular formats include .FBX, .DAE, .OBJ, and .STL. More information available at: https://en.wikipedia.org/wiki/Polygon_mesh
"Mesh simplification (Artec Studio 19 Professional)"	A tool in Artec Studio 19 Professional that reduces the number of polygons in a model while minimizing loss of accuracy. More information available at: https://docs.artec3d.com/as/19/en/qsg.html
"Mesh smoothing (Artec Studio 19 Professional)"	A tool in Artec Studio 19 Professional that filters low-amplitude noise over the whole model. More information available at: https://docs.artec3d.com/as/19/en/qsg.html
"Mesh tolerance"	A value used when creating or cleaning up a 3D model made of triangles (called a mesh). It helps the software decide if points (called vertices) are close enough to be treated as the same point. More information available at: https://nexus.hexagon.com/documentationcenter/en-US/bundle/VISI_2025_2_CAD_Online_Help/page/Content/CadMeshTolerance.html
"Metadata"	Data that defines and describes the characteristics of other data. More information available at: https://en.wikipedia.org/wiki/Metadata
"Misaligned scan data"	Refers to frames or sections within a 3D scan whose positions have been incorrectly determined during the real-time alignment process. This misalignment stems from errors in how the software estimates the spatial relationship between newly captured frames and previously captured ones. More information available at: https://docs.artec3d.com/as/19/en/process.html
"Model"	The 3D object that results from the fusion operation (in Artec Studio) or another modelling process in a different software package. More information available at: https://docs.artec3d.com/as/19/en/glossary.html
"3D Model"	A 3D model as a mathematical representation is, at its core, a collection of data about points in 3D space (vertices), along with other information that the computer interprets into a virtual object that displayed on the screen. More information available at: https://en.wikipedia.org/wiki/3D_modeling
"Motion blur"	The apparent streaking of moving objects in a photograph or a sequence of frames, such as a film or animation. It results when the image being recorded changes during the recording of a single exposure, due to rapid motion or long exposure time. More information available at: https://en.wikipedia.org/wiki/Motion_blur_(media)

"Naming convention"	A convention (generally agreed scheme) for naming things. More information available at: https://en.wikipedia.org/wiki/Naming_convention
"Native formats"	Refers to the file format that the application is designed to work with. It captures the internal reality of the program as well as possible. Most likely this is also the default format of the application. A native file format therefore most likely has a one-to-one relationship with the applications features. More information available at: https://en.wikipedia.org/wiki/Native_and_foreign_format#:~:text=A%20native%20format%2C%20in%20the,be%20supported%20by%20an%20application.
"Noise"	Refers to stray points or small, irrelevant surfaces captured during 3D scanning that do not belong to the actual object. These unwanted elements—also known as outliers —are typically unconnected to the main geometry and can negatively affect the quality and accuracy of the final model if not removed. Noise is usually eliminated during the initial data cleanup phase to ensure a smoother and more reliable workflow. More information available at: https://docs.artec3d.com/as/19/en/qsg.html
"Outlier"	Small surfaces or points unconnected to the main geometry that appear during scanning. Outliers may spoil the model or produce unwanted fragments and thus require removal. More information available at: https://docs.artec3d.com/as/19/en/process.html#sec-outlier-removal
"Outlier / noise removal"	The process of removing large outliers and minor noise from scan data. More information available at: https://docs.artec3d.com/as/19/en/qsg.html
"Photogrammetry"	The science and technology of obtaining reliable information about physical objects and the environment through the process of recording, measuring and interpreting photographic images and patterns of electromagnetic radiant imagery and other phenomena. More information available at: https://en.wikipedia.org/wiki/Photogrammetry
"Photogrammetry Data"	Data consisting of digital information derived from multiple overlapping photographs of an object, scene, or area. More information available at: https://en.wikipedia.org/wiki/Photogrammetry
"Photogrammetry reconstruction"	The process of generating accurate 3D models or maps by analysing and combining multiple overlapping photographs. More information available at: https://en.wikipedia.org/wiki/Photogrammetry
"Photogrammetry software"	Refers to specialized computer programs designed to process photographic data and perform photogrammetry reconstruction. More information available at: https://en.wikipedia.org/wiki/Photogrammetry
"Point cloud"	A set of data points in space. The points may represent a 3D shape or object. Each point position has its set of Cartesian coordinates (X, Y, Z). Point clouds are generally produced by 3D scanners or by photogrammetry software, which measure many

	points on the external surfaces of objects around them. As the output of 3D scanning processes, point clouds are used for many purposes, including to create 3D CAD models for manufactured parts, for metrology and quality inspection, and for a multitude of visualization, animation, rendering and mass customization applications. More information available at: https://en.wikipedia.org/wiki/Point_cloud
"Point cloud overlays"	A visualization tool that displays the dense cloud of 3D points captured by the scanner directly on top of the 3D model or scan preview. More information available at: https://docs.artec3d.com/as/19/en/process.html
"Polygon"	A plane figure made up of line segments connected to form a closed polygonal chain. More information available at: https://en.wikipedia.org/wiki/Polygon
"Polygon count"	Refers to how many polygons the resulting model will have. A higher polygon count generally results in better visual quality, but also a larger file size. More information available at: https://docs.artec3d.com/as/19/en/qsg.html
"Polygonal mesh"	A collection of vertices, edges and faces that define the shape of a polyhedral object's surface. More information available at: https://en.wikipedia.org/wiki/Polygon_mesh
"Post-processing"	Refers to mesh simplification, mesh smoothing and other optional steps applied after the initial scan or reconstruction. More information available at: https://docs.artec3d.com/as/19/en/qsg.html
"Project"	A method of managing the scanned material, processed data and user operation history, either in memory or on a disk. More information available at: https://docs.artec3d.com/as/19/en/glossary.html
"Project date"	Refers to the date the model or version was created or last updated. More information available at: https://www.dataacc.org/en/best-practices/establishing-data-management-plan/naming-files-managing-versions-good-habits/
"Project name"	A clear, descriptive title that identifies the specific model or subject being worked on. More information available at: https://www.dataacc.org/en/best-practices/establishing-data-management-plan/naming-files-managing-versions-good-habits/
"Project version number"	Indicates how many times a file has been revised or updated, usually to track changes or improvements over time. More information available at: https://www.dataacc.org/en/best-practices/establishing-data-management-plan/naming-files-managing-versions-good-habits/
"Raw data"	Data collected from a source. More information available at: https://en.wikipedia.org/wiki/Raw_data
"Redundant"	More than what is usual or necessary. More information available at: https://dictionary.cambridge.org/dictionary/english/redundant
"Reference points"	Refers to visually distinct features on the surface of an object—such as cracks, scratches, patterns, or colour variations—that photogrammetry or 3D scanning software can identify and track

	across multiple images or frames. More information available at: https://www.mdpi.com/2079-9292/13/11/2112
"Refining the model"	Refers to the post-processing stage where surface defects caused by scanning or registration errors are corrected using specialized tools. This process involves repairing triangulation errors, removing small unwanted objects near the model surface, filling holes semi-automatically or automatically, smoothing the mesh to reduce noise, and simplifying or remeshing the mesh to maintain accuracy while optimizing the model. These editing algorithms process the scan data and replace the original mesh, with the option to undo changes if necessary. More information available at: https://docs.artec3d.com/as/19/en/process.html?highlight=editing#edit-models
"Reflective environment"	Refers to surroundings where surfaces like shiny metals, glass, or other glossy materials reflect light in unpredictable ways. More information available at: https://www.dcsdigital.ca/from-a-loft-aerial-imagery-insights-blog/unlocking-the-3d-world-understanding-photogrammetry/unlocking-the-3d-world-understanding-photogrammetry
"Registration"	The process of optimizing the position of frames within one or more scans. More information available at: https://docs.artec3d.com/as/19/en/qsg.html
"Resolution"	The ability of a scanning system to capture fine detail in an object. More information available at: https://docs.artec3d.com/as/19/en/glossary.html
"Saving data"	Storing research materials so that they can be accessed and used at a later date. More information available at: https://laneguides.stanford.edu/DataManagement/Saving#:~:text=Saving%20data%20means%20storing%20research,others%20%E2%80%93%20at%20a%20later%20date.
"Scan"	A sequence of frames captured in a single continuous movement of the scanner around an object or scene. More information available at: https://docs.artec3d.com/as/19/en/glossary.html
"Scan coverage"	Refers to how thoroughly the entire object or area of interest has been captured during scanning. Specifically, it means ensuring that all angles, surfaces, and details of the subject are recorded—without any gaps, blind spots, or occluded areas—so remaining parts don't need to be revisited or rescanned. In other words, it's the completeness of your scan, and good coverage helps you avoid missing anything important, especially when on-site access is limited or temporary. More information available at: https://terrainsurveys.co.uk/news-and-media/3d-laser-scanning-survey-what-is-it-how-it-works-when-you-need-it
"Scan frames"	3D surfaces captured during a scanning session, collectively constituting a scan. The scan rate varies with scanner type. More information available at: https://docs.artec3d.com/as/19/en/glossary.html
"Scan path"	Refers to the visual representation of the scanner's movement during the data capture process. More information available at: https://docs.artec3d.com/as/19/en/scan.html

"Scanning"	The process of using a scanner and transferring data from the scanner to a PC or mobile device for further processing. More information available at: https://docs.artec3d.com/as/19/en/qsg.html
"Sharpness (Artec Studio 19 Professional)"	A setting in Artec Studio 19 Professional, within the Smart fusion algorithm, that controls the balance between detail and smoothness in the final 3D model. More information available at: https://docs.artec3d.com/as/19/en/process.html
"Sketchfab"	A 3D asset website used to publish, share, and discover 3D, VR and AR content. More information available at: https://en.wikipedia.org/wiki/Sketchfab
"Sketchfab Model Visibility"	Sketchfab offers three main privacy settings for 3D models: Public (anyone can view the model), Private (only the owner can view it), and Password-Protected (access restricted to those with the password). These settings help control who can view and interact with your 3D content, allowing flexible sharing in different project or institutional contexts. More information available at: https://support.fab.com/s/article/Model-Visibility-Privacy?language=en_US
"Small-object filter (Artec Studio 19 Professional)"	A tool in Artec Studio 19 Professional that removes small objects located near the model's surface. More information available at: https://docs.artec3d.com/as/15/en/process.html
"Smart fusion (Artec Studio 19 Professional)"	A process that accurately reconstructs fine features and is suitable for both industrial objects and human bodies. It can deliver either smoother or more detailed geometry. More information available at: https://docs.artec3d.com/as/19/en/process.html#sec-fusion
"Smoothing brush (Artec Studio 19 Professional)"	A tool in Artec Studio 19 Professional that enables manual smoothing of surface areas with the most noise. More information available at: https://docs.artec3d.com/as/15/en/process.html
"Smoothing tools (Artec Studio 19 Professional)"	Tools in Artec Studio used to refine 3D models by reducing surface imperfections after fusion or photogrammetry reconstruction. They help eliminate noise, uneven textures, and minor artefacts without erasing important detail, ensuring a cleaner, more professional final model. More information available at: https://docs.artec3d.com/as/15/en/process.html#sub-auto-smoothing
"Solid view"	A rendering mode that displays scanned or fused models with a solid fill applied to all faces. It helps you visualize surface continuity and shape more clearly than vertex-only or wireframe modes, making it easier to spot subtle holes, gaps, or misaligned areas that might not be obvious in 2D thumbnails or point-cloud views. More information available at: https://docs.artec3d.com/as/12/en/navigate.html
"Sparse point cloud"	A low-density 3D representation generated during the initial stage of photogrammetry processing. Created by matching common features across multiple images, it provides a rough geometric structure of the scene and helps to estimate camera positions

	before generating a dense point cloud or mesh. More information available at: https://www.readkong.com/page/agisoft-metashape-user-manual-standard-edition-version-8829297
"Textured 3D model"	3D models that have photographic images (textures) applied to their surfaces, enhancing realism. In photogrammetry, this involves mapping colour and detail from photos onto the 3D mesh. More information available at: https://lms.unimelb.edu.au/staff/guides/pedestal-3d/3d-model-metadata-guide/photogrammetry
"Textured models' format"	File formats used to store 3D models that include both the geometry (shape) and the surface textures (colour and detail). More information available at: https://lms.unimelb.edu.au/staff/guides/pedestal-3d/3d-model-metadata-guide/photogrammetry
"Texturing"	The process of projecting textures from individual frames onto the fused mesh. More information available at: https://docs.artec3d.com/as/19/en/process.html#sec-texturize
"Texture mapping"	The process of projecting photographic colour data (textures) from individual scan frames or images onto a 3D mesh. This adds surface detail and realism to the model, transforming a geometry-only mesh into a lifelike representation. Texture mapping is typically done after mesh creation and fusion, using specialized tools to ensure high-quality texture projection. More information available at: https://docs.artec3d.com/as/19/en/process.html
"Triangles"	The fundamental polygonal units that make up a 3D mesh. Each triangle consists of three connected vertices, and together, many triangles form the surface geometry of a model. Reducing the number of triangles through mesh simplification helps to make the file more manageable and improves performance in real-time or online applications. More information available at: https://docs.artec3d.com/as/19/en/process.html
"Usability"	The capacity of a system to provide a condition for its users to perform the tasks safely, effectively, and efficiently while enjoying the experience. More information available at: https://en.wikipedia.org/wiki/Usability
"Vertex (pl.: vertices or vertexes, also called a corner in the context of 3D modelling)"	A point where two or more curves, lines, or line segments meet or intersect. More information available at: https://en.wikipedia.org/wiki/Vertex_(geometry)
"Workflow"	The series of stages that a particular piece or type of work passes through from the beginning until it is finished; the rate at which it passes through these stages. More information available at: https://www.oxfordlearnersdictionaries.com/definition/english/workflow?q=Workflow

*** This glossary is subject to updates and revisions.**

As technologies related to 3D model processing, editing, and management continue to evolve, new terms may be added and existing definitions refined to reflect current practices and advancements in the field. We recommend checking our website periodically for the most up-to-date version of this glossary.