Software Suite 2021.1

THE LUMISCAPHE ECOSYSTEM

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Headquarters:

Espace France
4 voie Romaine
33610 Canéjan
France

Documentation lead: P. Peyrevidal

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LUMISCAPHE PRODUCTS AND THEIR WORKFLOW

This chapter aims to explain the added value of the use of all of our products, of digital continuity.

What do we mean by "Software Suite"?

A Software Suite corresponds to all of the software designed to function together. This software is grouped together by an official Software Suite version.

Example: The Enterprise Software Suite 2018 update A includes Patchwork 3D 2018.1, Accel VR 2018.1, Lumis 3D 2018.1, etc...

	Enterprise Suite	Community Suite	Premium Suite
Patchwork 3D	✓	✓	✓
Patchwork Explorer	✓	-	-
Accel VR	✓	-	-
Lumis 3D	✓	-	-
Lumis 3D iOS	✓	-	-
Web Render	✓	-	-
Workshop SDK	✓	-	-

What does the Lumiscaphe Software Suite do?

Lumiscaphe's Software Suite implements photorealistic visualization and manipulation of products, without having to rely on a physical object that may not yet exist.

Lumiscaphe's 3D prototype, called a Digital Aspect Mockup (DAM) helps solve problems related to analysis or to visualization where there is a need to take into account the final appearance of a product before the product can be placed before the person who needs to evaluate it.

By using a photorealistic 3D prototype, a company can resolve a variety of issues.

Marketing and Sales

• Provide material to support sales to showcase configurable 3D products to the needs of prospects/customers.

• Produce images, videos, and other marketing assets, from very large ads to animated publicity spots.

• Display all of the variants of a product, even when a point of sale cannot have all of them in stock .

• Reassure the consumer by giving him the ability to visualize the chosen options (colors, customization, ergonomy...)

• Sell online by using a 3D configurator of products (selected and customized by the customer).

• Allow customers to customize their product without intervention or by limiting the intervention of the design office (text, engraving or printing styles, positions, ...)

Engineering

- Build digital services to share the DAM in all departments of the company.
- Reduce costs by producing few or no physical prototypes
- Analyze certain design elements that require the accurate perception of volumes and aspects
- Have decision-makers validate final aspects before production

Design

- Reduce delays in design by shorter validation cycles
- Facilitate creativity in design teams

The DAM is the only 3D prototype that is designed to meet company-level challenges. A single DAM can be used by different departments to meet entirely unrelated challenges.

When the use of a DAM is optimized, it also encourages data sharing between different departments in the company.

The process
The Software Suite is implicated in multiple points in the product lifecycle, from design to sales.

Creating the DAM
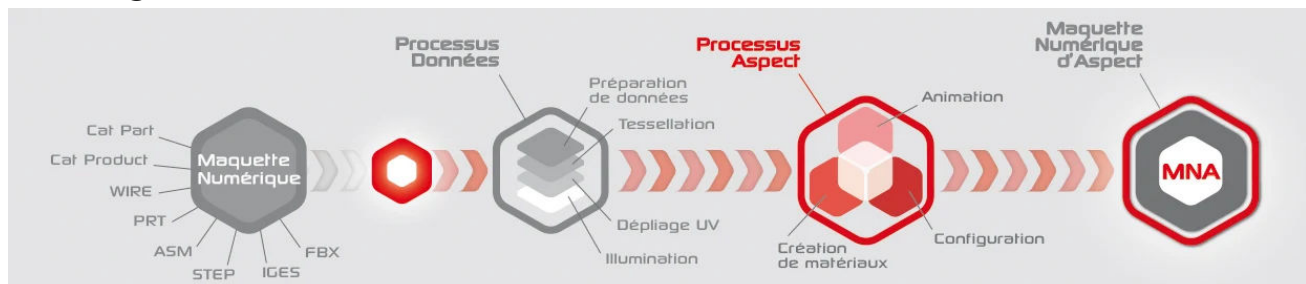
Lumiscaphe's Software Suite creates a 3D prototype based on a modelization created in separate software earlier in the process.

This modelization can be composed of surfaces, such as when created for product design or product creation purposes. The Software Suite imports commonly used formats: SolidWorks, Alias, Rhino…

When the model comes from an engineering department and is composed of geometries, it is imported in a CAD format. The Software Suite supports NURBS formats and part-assembly formats (Nx, Creo, Catia…)

Once imported, work is done on a model to improve how it is rendered and to allow it to accept materials, cinematic structures, or a configuration system. Examples of workflow steps include:

- Moving surfaces in the 3D world in order to position or orient them differently,
- Duplicating a surface, possibly symmetrically,
- Moving a surface to a different geometry layer,
- Modifying the tessellation of a surface,

- Modifying the UV mapping of a surface,
- Associating a surface to a cinematic helper to be able to animate it,
- Adding lighting to the model,
- Creating a material and assigning it to a surface,
- Importing textures and using them as backgrounds, texture/depth, or as material patterns,
- Using materials to create the product's shadow,
- Using materials to create reflective or transparent surfaces,
- Adding a lighting environment,
- Using a lighting environment as an image projected onto a skydome,
- Placing cameras,
- Adding backgrounds, overlays, and 2D post-processing,
- Adding configurability:
  - Setting up geometry, position, lighting, environment, and aspect layers,
  - Creating configuration rules that indicate when each layer is visible,
  - Saving certain combinations of rule activations (and therefore combinations of visible layers) as bookmarks.
- Adding real-time lighting to a product,
- Animating the product,
- Creating a raytracing render of the product to underline the realism wherever reflections and refractions of light are present,
- Generating high definition videos and images,
- Exporting the product to use it in the views and other Lumiscaphe applications.

Using the DAM

This section lists some of the principal uses of the DAM in the main industries represented by Lumiscaphe's clients.

Aeronautics

In the aeronautics industry, aircraft seat manufacturers and cabin design creators use the Lumiscaphe Suite for:

- Product design
- Pre-sales
- Validation cycles with clients and prospects

Automotive

In the automotive industry, the Lumiscaphe suite is used:

- By color and trim departments to create concept cars or to create a series of vehicles
- By design and engineering departments to approve the vehicle look
- By communication and marketing departments to provide visuals for catalogs and websites, including those used in 3D configurators.

Design Studios

Design studios use the Lumiscaphe suite to:

- Obtain a very realistic preview of a design
- Evaluate perspectives and volumes in 3D, often using virtual reality

What software is included?

The Software Suite is composed of multiple software, which play various roles.

Patchwork 3D

From a raw CAD model, **Patchwork 3D Enterprise** provides information about the final appearance of a product. This appearance can include materials, lightings, animations, a realistic environment or configurable options.

Patchwork 3D Community is a free software intended for non-commercial use only.

Premium 3D Patchwork, meanwhile, can be used for commercial purposes. It uses the same features of Patchwork 3D Community plus Iray without limitations and technical support.

> 💡 **TIP**
>
> **Patchwork 3D Community** or **Premium 3D Patchwork** needs a Lumiscaphe user account to be able to use it. The creation of the account is free.

Patchwork Enterprise offers all the functionalities of a 3D prototyping software.

In addition to the features of Patchwork 3D Enterprise, **Patchwork 3D Engineering** offers the ability to integrate into an industrial process. Often associated with existing product lifecycle management (PLM) or interoperability with existing digital process steps, Lumiscaphe offers flexibility beyond that of Patchwork 3D Enterprise through integration and development services so that Patchwork 3D Engineering can use existing digital data and processes to meet customer needs.

You will find below the features available depending on the chosen version of Patchwork 3D.

Table 1. 3D Patchwork Versions

Features	Community	Premium	Enterprise	Feature explanation
Licensing				
Pricing	Free	Annual subscription	Subscription or Permanent	-

Features	Community	Premium	Enterprise	Feature explanation
License	User	User	Seat	"User" license means that the license is locked to your name, regardless of the device you are using. "Seat" license means that the license is locked to hardware such as a computer, a network server, a USB key, whoever uses it.
License term	Account lifetime	Subscription duration	Annual, Monthly, Weekly, Tokens	When the Patchwork 3D Premium subscription expires, its license changes into a Patchwork 3D Community license.
Perpetual license	-	-	✔	-
Custom license contract	-	-	✔	Company contract, volume and usage management.
Offline use	✔	✔	✔	Community version: maximum 72h offline Enterprise version: nodelock, USB key, token, borrowing from a license server for several days.
Commercial use	-	✔	✔	Non-commercial use includes: evaluation, students, education, hobbyists and enthusiasts.
Free Student License	✔	-	✔	For the Enterprise version with a Lumi'School contract.
Lumi'School license	-	-	✔	For teachers, staff and students.
3D and rendering				
Real-time Digital Aspect Mockup rendering	✔	✔	✔	Dress the models with materials, labels. Configure scenes with realistic lighting, animation, post-processing effects, overlays, etc. OpenGL rendering and raytracing.
Product configuration	✔	✔	✔	Configurable products for design review, product demonstration, online configurators, etc.
UV Unfolding Workshop	✔	✔	✔	-

Features	Community	Premium	Enterprise	Feature explanation
Seams Workshop	-	-	✔	-
Iray Rendering Engine	✔	✔	✔	Limited functions in Community: • Only one GPU supported • No Iray Server connection • No denoising filter • No AxF materials supported • Rendering limited to 4K UHD format
Materials and Car Paint AxF, flakes layer	-	-	✔	-
Importing				
FBX, DXF, 3DS, OBJ, STL	✔	✔	✔	-
Rhino conversion plugin	✔	✔	✔	Get a Rhino model with just one click.
IGES, STEP, ACIS SAT, SolidWorks, ProE/Creo, Catia v4, v5, NX	✔	✔	✔	-
Parasolid, Alias, DC3D, SolidEdge,	✔	✔	✔	-
Exporting				
FBX, OBJ	-	-	✔	-
P3D XML, Ksc	-	-	✔	-
Ecosystem and integration				
HDR Light Studio	✔	✔	✔	
Scripting	-	-	✔	Python user scripts
SDK Workshop	-	-	✔	C++ and C#
Database format	Community .p3d	Community .p3d	Enterprise .p3d	-
Format KDR	-	-	✔	Digital aspect mock-up file for web / mobile compatibility with Accel VR and Lumis 3D.
Distributed lightmap and raytracing textures	-	-	✔	Dedicated servers

Features	Com-munity	Premium	Enterprise	Feature explanation
Industrial process integration	-	-	Option with Engineering	Integrate Patchwork 3D into the life cycle of your products (PLM). Custom tools and services provided.
Training				
Online training	✔	✔	✔	Online tutorials, free webinar sessions.
Face-to-face train-ing	-	-	✔	At Lumiscaphe or on-site.
Support				
Online Community support	✔	✔	✔	Via the online forum @ https://forum.patchwork3d.com/.
Online personal-ized support	-	✔	✔	Confidential Customer Support Portal.
Direct support	-	-	✔	By phone, email or in person.
Bugfix commit-ment	-	-	✔	
Update detection	✔	✔	-	
Roadmap				
Beta versions	✔	✔	✔	Preview of beta versions.
Incentive roadmap	-	-	✔	Influence roadmap priorities

Patchwork Explorer

Patchwork Explorer is designed to visualize and interact with a DAM by activating configurations or animations previously created in Patchwork 3D. It also allows you to create layouts or scenes with multiple DAMs.

Patchwork Explorer has been designed for quick and easy use for users who do not have technical knowledge in 3D.

Accel VR

Accel VR is a virtual reality software solution designed for the visualization of 1:1 scale a DAM. DAMs can be displayed on multi-screen immersive systems such as CAVE, PowerWall or virtual reality headsets and can be manipulated using configurations, animations, scenography, and real-time presentation elements that have previously been created in Patchwork 3D.

The software uses a system of plugins:

• CADTools: Supports certain types of CAD files and is compatible with 3rd party software (Maya, Rhino, Catia, Alias) via the CADLayout format. CAD Tools adds editing features to Accel VR. It allows you to import a 3D model of third-party CAD software to interact in virtual reality with it. You can deform, rotate, move, and add curves to the imported 3D model. The changes can then be exported to the third-party CAD software that created the 3D model.

• CAVE: supports DAM display and immersive interaction in a CAVE.

- HMD: supports DAM display and immersive interaction in a virtual reality headset.
- zSpace: supports DAM display and 3D interaction on a zSpace.
- Projection Mapping: support for the projection of a DAM on a neutral scaled model ("projection mapping").

Accel VR also offers the possibility of directly importing a DAM by logging in from your Lumis 3D account.

Plugin functions are available via user license options.

Lumis 3D

Lumis 3D is a browser-based document management system including the ability to view and explore a DAM. It includes additional modules for:

- Creating filtered or augmented versions of a DAM, or layouts of multiple DAMs.
- Using DAMs during dynamic presentations for design reviews.
- Creating a non-modifiable presentation based on a DAM.
- Accessing the Lumis 3D mobile app.

Lumis 3D comes in three subscription plans to choose from Enterprise On-Premise, Enterprise Hosted, or Online. All features must be purchased in the same subscription plan.

Lumis 3D iOS

iOS app for iPad and iPhone that allows access to Lumis 3D data. Its functions include an augmented reality viewing module.

Web Render

A set of software components for rendering images and videos of a digital aspect mockup via HTTP web requests.

As the rendering "motor" using HTTP requests, Web Render is the back-end tool that provides the rendering service for independent front-end solutions. It is most commonly used to provide rendering power to solutions running on devices with unknown or limited processing power, such as is the case with web-based front-end solutions. It is therefore used to power mobile applications, internet sites, and online configurators.

Workshop SDK

Software Development Kit for integrators who develop desktop applications that explore and visualize digital aspect mockups. Licenses are available as periodic subscriptions only.

This kit is often used by developers to create interactive kiosks for trade shows, and other personalized viewers for the models created in Patchwork 3D.

Additional tools

Tool name	Description	Marketing policy
USER PACKAGE		

Tool name	Description	Marketing policy
Patchwork Batcher	Batch processing software for various tasks in Patchwork 3D including: • lightmap rendering • Wire file import • Catia v5 file import • tessellation	Must be purchased separately
Patchwork Lightmap Render	Distributed calculation software for rendering lightmaps.	Provided upon request
Raytracing Cluster Unit	Rendering distributed computing software for raytracing.	Provided upon request
Iray server	Distributed rendering tool with Iray	Not distributed (sold by Nvidia)
INTEGRATOR PACKAGE		
Patchwork Material Build	Creates materials used in Patchwork 3D.	Must be purchased separately

Patchwork Batcher

Software for scheduling and grouping ("batching") various tasks in Patchwork 3D.

Patchwork Batcher is most often used for scheduling and batching lightmap calculation for times when the computer running Patchwork 3D is not in use, such as overnight. It is compatible with distributed lightmap rendering when used in conjunction with Patchwork Lightmap Render (see below).

Patchwork Lightmap Render

Software allowing use of a networked computer for distributed lightmap rendering from Patchwork 3D or Patchwork Batcher. It is available upon request addressed to Lumiscaphe.

Distributed lightmap rendering, that is, the ability to use multiple computers to generate (or "bake") the lightmaps used to illuminate products, significantly reduces the time required to create lightmaps. This step is one of the most time-consuming steps in the authoring process, as well as one of the steps that requires the most processing power.

In order to distribute the rendering over multiple computers, the computers a user wishes to use must be running Patchwork Lightmap Render and be connected to the user's computer by a network. Patchwork Lightmap Render is a lightweight application that runs in the background and, when solicited, handles the availability of the computers, the connections between them, and the transfer of data for rendering.

Patchwork Material Build

Patchwork Material Build creates a Patchwork 3D material based on an XML file that describes the material. Patchwork Material Build is most commonly used as a component that is part of a process in which materials are created at a different stage in the process and then made available to designers or technicians using Patchwork 3D.

Patchwork Material Build is also capable of modifying material or group of materials of the same class located in the same folder.

Lumiscaphe file formats

Format	Use	Is created or exported by	Is imported or read by
various CAD formats	process input / external data	third party software	Patchwork 3D Enterprise Patchwork 3D Community/Premium
P3D	editable DAM creation format	Patchwork 3D Enterprise	Patchwork 3D Enterprise Lumis 3D
P3DPRO	editable DAM creation format	Patchwork 3D Professional	Patchwork 3D Professional On migration option: Patchwork 3D Enterprise
KDR	condensed and non-editable DAM format	Patchwork 3D Enterprise	Patchwork Explorer Accel VR Lumis 3D Web Render
P3DXML	intermediary Xml format of a DAM	Patchwork 3D Enterprise	Patchwork 3D Enterprise
KPL	DAM layout format	Patchwork Explorer Accel VR	Patchwork Explorer Accel VR Lumis 3D
FBX	standardized exchange format for 3D objects	third party software Patchwork 3D Enterprise Patchwork 3D Community/Premium	third party software Patchwork 3D Enterprise
KDM	non-editable format of the KMT material	KMT2KDM converter	Lumis 3D
XmlProduct	DAM format	Patchwork 3D Enterprise	Patchwork 3D Enterprise
OBJ	3D object format (geometry)	third party software Patchwork 3D Enterprise Patchwork 3D Community/Professional	third party software

DAM production workflow dependencies

Operating soft-ware	Function	Required preparation
Lumis 3D	Automatic animation thumbnails	Patchwork 3D See Lumis 3D documentation
Lumis 3D	Automatic animation thumbnails	Patchwork 3D See Lumis 3D documentation
Lumis 3D	Configuration zones (material replacement)	Patchwork 3D See Lumis 3D documentation
Accel VR	Trigger surfaces for configuration cycles	Patchwork 3D See Patchwork 3D documentation
Accel VR	Trigger surfaces for animations	Patchwork 3D See Patchwork 3D documentation
Accel VR	Automatic configuration thumbnails	Patchwork 3D See Patchwork 3D documentation
Accel VR	Exclude tagged surface when using clipping planes	Patchwork 3D See Patchwork 3D documentation

SOFTWARE AVAILABILITY AND FUNCTIONALITIES

Software Suite 2021.1

S2 (Jul-Dec)	Version	IN	OUT	Main Features (non-exhaustive list)	Release Date
Patchwork 3D	2021.1	≲2021.1	2021.1 X5	SSAO integration | Viewing & modifying cameras | Alias plugin (Enterprise/Engineering version only) | Changing the color of an AxF CPA2 (Enterprise/Engineering version only)| Improvements of: the behavior of stitches on surfaces (Enterprise/Engineering version only) and the database size. | Multilayer export in PNG format |Environnement material support in Iray [experimental] .	08/03/2021
Patchwork Batcher	2021.1	≲2020.1	2021.1	Support of Patchwork 3D 2021.1 files	08/03/2021
Patchwork Explorer	2021.1	≲X5	n/a	-	08/03/2021
Accel VR	2021.1	≲X5	n/a	New UI for advanced system settings. | Scene layout import/export with KPL files. | Loop animation playback. | New hand avatar | Canon MREAL Support | Improvements of the intersection behavior in CAD Tools.	08/03/2021
Lumis 3D / Lumis 3D iOS	2021.1	≲2019.1 ≲X5	n/a	Patchwork 3D 2021.1 file supports	08/03/2021
Web Render	2021.1	≲X5	n/a	Patchwork 3D 2021.1 file supports	08/03/2021
Workshop SDK	2021.1	≲X5		Support of Patchwork 3D 2020.2 files	08/03/2021

Software Suite 2020.2

S2 (Jul-Dec)	Version	IN	OUT	Main Features (non-exhaustive list)	Release Date
Patchwork 3D	2020.2	⪅2020.2	2020.2 X4	Scaling (All versions)	Import of materials from Catia / Solidworks / NX / ProE / Step (All versions)	Improved imports (All versions)	Improved scripting (Enterprise)	07/09/2020
Patchwork Batcher	2020.2	⪅2020.1	2020.2	Support of Patchwork 3D 2020.2 files	07/09/2020
Patchwork Explorer	2020.2	⪅X4	n/a	-	07/09/2020
Accel VR	2020.2	⪅X4	n/a	Addition of the interocular distance	Addition of the possibility to adjust the rotation speed of turntables	Addition of the possibility to rebuild local environments when changing the configuration	Addition of the possibility to recover surface colors when importing a Catia file (CAD Tools license required).	07/09/2020
Lumis 3D / Lumis 3D iOS	2020.2	⪅2019.1 ⪅X4	n/a	Support of Patchwork 3D 2020.2 files	07/09/2020
Web Render	2020.2	⪅X4	n/a	Support of Patchwork 3D 2020.2 files	07/09/2020
Workshop SDK	2020.2	⪅X4		Support of Patchwork 3D 2020.2 files	07/09/2020

Software Suite 2020.1

S1 (Jan-Jun)	Version	IN	OUT	Main Features (non-exhaustive list)	Release Date
Patchwork 3D	2020.1	≲2020.1	2020.1 X4	Scripting Python (Enterprise) | Stitching Workshop (Enterprise) | Floating Viewport of Matter (All versions) License tokens (Enterprise) | Select/translate/rotate in Matter (All versions) | Cameras in the configuration (All versions)	02/03/2020
Patchwork Batcher	2020.1	≲2020.1	2020.1	Support of Patchwork 3D 2020.1 files	02/03/2020
Patchwork Explorer	2020.1	≲X4	n/a	-	02/03/2020
Accel VR	2020.1	≲X4	n/a	License tokens | Stability improvement (CAVE, Synchronization, etc ...)	02/03/2020
Lumis 3D / Lumis 3D iOS	2020.1	≲2019.1 ≲X4	n/a	Split GED/Explorer	02/03/2020
Web Render	2020.1	≲X4	n/a	-	02/03/2020
Workshop SDK	2020.1	≲X4		-	02/03/2020

Software Suite 2019.2

S2 (Jul-Dec)	Version	IN	OUT	Main Features (non-exhaustive list)	Release Date
Patchwork 3D	2019.2	≲2019.2	2019.2 X4	Flakes layer | AxF CPA2 support | Simplified import/export	02/09/2019
Patchwork Batcher	2019.2	≲2019.2	2019.2	Support of Patchwork 3D 2019.2 files	02/09/2019
Patchwork Explorer	2019.2	≲X4	n/a	Compatibility with KDR X4 files	02/09/2019

S2 (Jul-Dec)	Version	IN	OUT	Main Features (non-exhaustive list)	Release Date
Accel VR	2019.2	≲X4	n/a	New User Interface | Associated SDK for internal integration projects | Connection to Lumis 3D | Mannequin | VRC Cave functionalities: Turntables, Targeted navigation, Antialiasing | DTrack protocol support | Compatibility with KDR X4 files	20/09/2019
Lumis 3D / Lumis 3D iOS	2019.2	≲2019.1 ≲X4	n/a	WebGL Rendering, Compatibility with KDR X4 files	02/09/2019
Web Render	2019.2	≲X4	n/a	Compatibility with KDR X4 files	02/09/2019
Workshop SDK	2019.2	≲X4		Compatibility with KDR X4 files	02/09/2019

VERSION RELEASE RULES AND PATCH UPDATE SUPPORT

The release rule for versions is as follows.

> ✎ **NOTE**
> **Two (2) versions of the Software Suite per year:**
>
> For example 2020.1 and 2020.2
>
> One version per semester.

> ✎ **NOTE**
> **Patch support is valid for a rolling 2-year period.**
>
> Example for Patchwork 3D:
>
> | Version | Release date | Patch support end date |
> |---------|--------------|------------------------|
> | 2021.1 | 2021-03 | 2023-03 |
> | 2020.2 | 2020-09 | 2022-09 |
> | 2020.1 | 2020-03 | 2022-03 |
> | 2019.2 | 2019-09 | 2021-09 |

NAMES AND VERSIONING RULES

Software Suite

Each quarter, each major or minor software release is grouped into a guaranteed Software Suite to work together.

Each release of the Software Suite is named as follows for each quarter:

[Edition] Suite [year] S1   Ex: Enterprise Suite 2019 S2

[Edition] Suite [year] S2

Products

The complete designation of a Lumiscaphe product version is constructed according to the following scheme:

Software	Edition	year.	m	Xi	release r
Patchwork 3D	Enterprise	2019.	1	X2	release 1[a]

[a]In the name of the software shortcuts, the mention "release r" does not appear.

Ex : Patchwork␣3D␣Enterprise␣2019.1␣X2␣release␣1

␣ = space

The product version number indicates the functional evolutions of the product.

year= major | A new major version of Patchwork 3D Enterprise introduces significant new features or improvements to the use of existing features. A migration plan to accompany the evolution of client processes is required when distributing a major version.

Lumiscaphe releases one major version per year.

> ✎ **NOTE**
> The **major** version number is incremented when there are functional changes.

m= minor	The minor version number is increased when integrated third party products are updated in order to bring minor updates or minor improvements to these products.
	For example, Patchwork 3D Enterprise uses third party products for certain functions:
	• the import of certain CAD formats such: Step, ProE, Catia, NX, Parasolid, Iges, Wire, etc,
	• the handling of a lighting environment with HDR Light Studio.
	A minor version of Patchwork 3D Enterprise may also add new features. It cannot, however, introduce new major features or significantly change the use of existing features. A migration plan is not required for client processes when distributing a minor version.
	Two versions are released per year with a semestrial frequency: one major and one minor OR two majors.
	◢ **NOTE** The **minor** version number is incremented whenever a bug is corrected. The P3D and KDR formats are not modified.
release r or **r**[a]	A corrective version only contains corrections. Functional updates are never included in corrective versions. A corrective version must be able to be released to all licensed users without updating documentation, translations…
	◢ **NOTE** The **revision** number is incremented whenever a bug is corrected. The P3D and KDR formats are not modified.

[a]The release number r may not be displayed in the software shortcuts.

Each new product version corresponds to the incrementation of one of these numbers with regards to the previous version number of the product. Lower-level numbers then reset to zero.

For example:

• Patchwork 3D Enterprise 2019.1 could be the next minor version after the corrective version number 2019.0.

• Patchwork 3D Enterprise 2020.0 is a new major version that might follow the corrective version number 2019.2.

⚠ **WARNING**
The difference between a "major" version and a "minor" version is at the discretion of the marketing and sales departments.

KDR data

The addition of new features in Patchwork 3D affects the data to be exported to KDR. So we decorrelated the software version numbers from the KDR format and added Xi in the software naming.

Compatibility between software within the same release of the Software Suite is ensured.

The version of the KDR named *Xi* may differ between the software components of a release of the same *Sn* version of the Suite.

However, it is guaranteed that Patchwork 3D's KDR export can generate KDR files that are compatible with other products in the Suite.

The mention *Xi*, after the product version number, indicates compatibility with the KDR format from Patchwork 3D.

- For example, when the **Enterprise Suite 2019 S1** contains Patchwork 3D Enterprise 2019.1 **X3** and Patchwork Explorer Enterprise 2019.1 **X3**, it can still use the KDR files from Patchwork 3D because it is the same version (**X3**).
- For example, when the **Enterprise Suite 2019 S2** Includes Patchwork 3D Enterprise 2019.2 **X4** and Patchwork Explorer Enterprise 2019.1 **X3**, the latter can still use the KDR files from Patchwork 3D **by specifying the X3 format when exporting**.

KDR	Version	Description
X1	From v8.0 to v8.2	"Software Suite v8.0"
X2	v8.3	U or V repetition for stickers and textures. Repetition for labels and textures in mirror.
X3	2019.1	Using the roughness map.
X4	From 2019.2 to 2020.2	AxF CarPaint (CPA2) materials. Choice of units for overlays and post-processes.
X5	2021.1	Recolouring of AxF CarPaint (CAP2) materials. SSAO Cameras exposure property addition in configurators.

FILE FORMAT COMPATIBILITY

P3D and P3DPRO format compatibility

The file formats between the different versions of the software are not mutually compatible, that is, they can not be read or modified by the software of a different version.

	Enterprise	Premium/Community
*.p3d (Enterprise)	Native format	Cannot be read
*.p3d (Premium/Community)	Compatible a	Native format
*.p3dpro	Cannot be read	Cannot be read

aWith license option

Compatibility of the P3D format between different versions of Patchwork 3D

In the case of Patchwork 3D Enterprise, the version numbers follow the rules mentioned below.

Major compatibility		
Patchwork 3D Enterprise	**2019.1**	**Compatible** A file **created** in Patchwork 3D Enterprise **v8.0 can be read and edited** in Patchwork 3D Enterprise **2019.1**.
	|	
File generated by Patchwork 3D Enterprise	**V8.0**	
	|	
Patchwork 3D Enterprise	**v7.1**	**Incompatible** A file **created** in Patchwork 3D Enterprise **v8.0 can never be read or edited** in Patchwork 3D Enterprise **v7.1**.

Minor compatibility		
Patchwork 3D Enterprise	**2019.2**	**Compatible** A P3D file **created** by Patchwork 3D Enterprise **2019.1 could be read** in Patchwork 3D Enterprise 2019.2.
	|	
File generated by Patchwork 3D Enterprise	**2019.1**	

> ✎ **NOTE**
> The reasoning on compatibility is the same for other Lumiscaphe software.