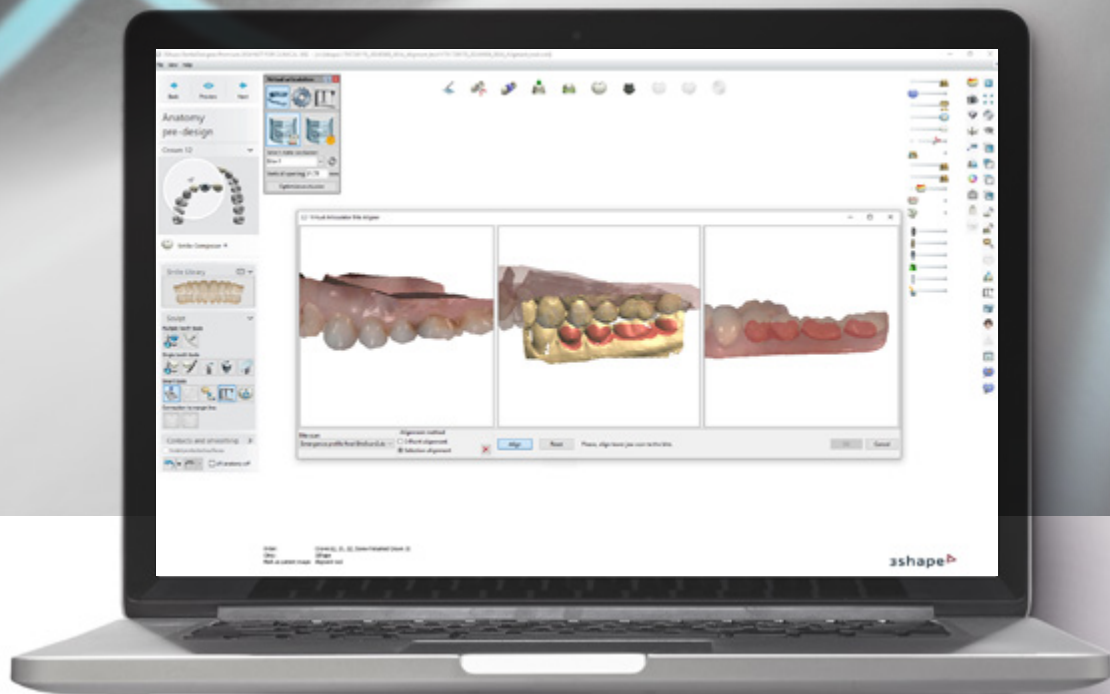


What's New

in 3Shape Dental System 2024



September 2024

Overview of new functionality, improvements, and changes

3shape 

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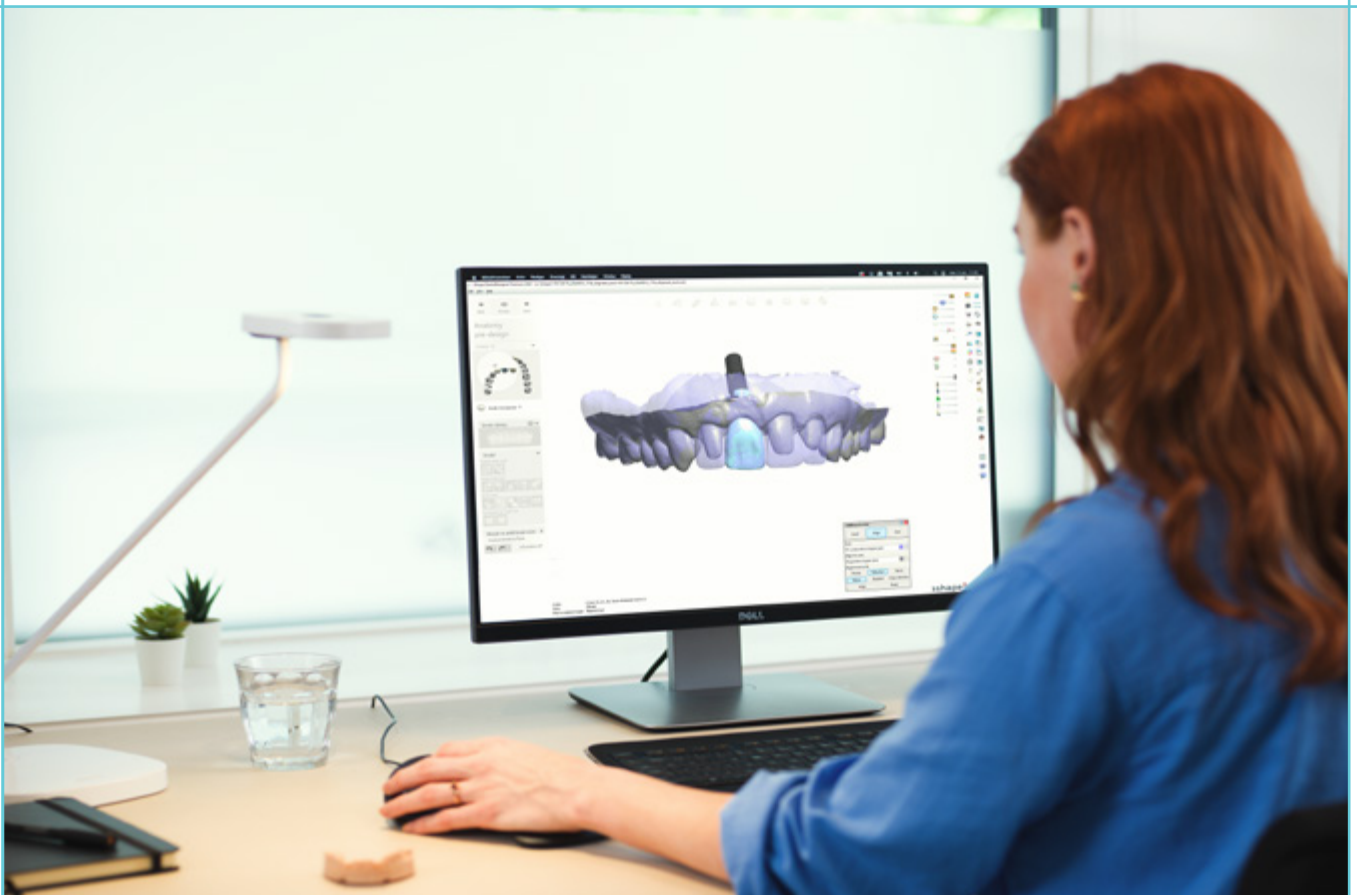
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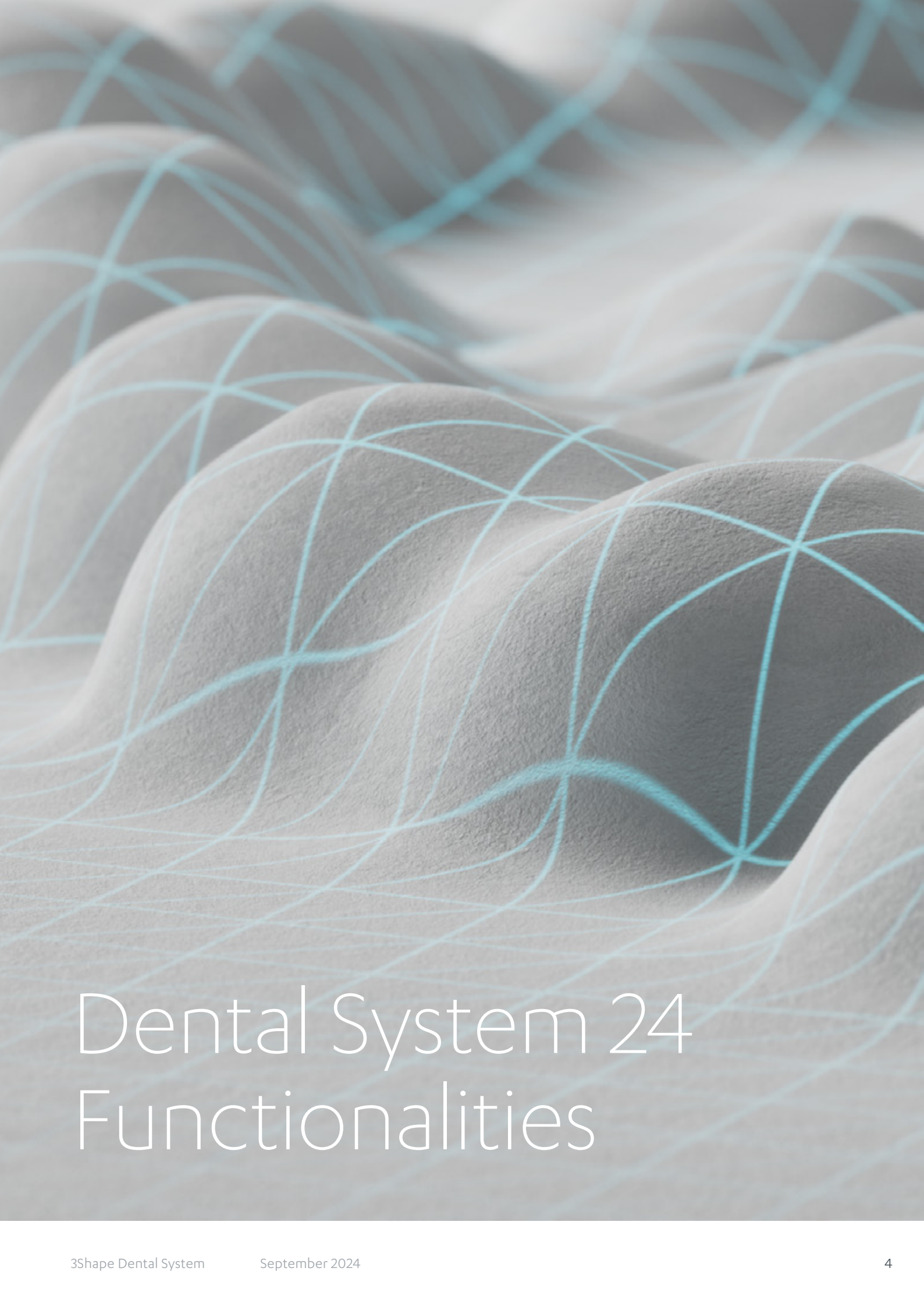
Introducing 3Shape Dental System 2024

We are excited to introduce the new Dental System 2024, featuring increased efficiency, and significant advancements in digitization. We are now transitioning to Cloud Licensing, ensuring that your licenses can always be updated and managed effortlessly with no need for a physical dongle.

Below some highlights of the release...

1. Accelerate your workflow efficiency with up to 10x faster case management, up to 20x faster reopening of cases, and AI assistance to handle trivial tasks such as occlusal plane positioning, segmentation and annotation placement
2. Simplify your complex cases with improved functionalities in multi-bite handling. An automated toolset for precise scan alignment and correction of problematic scans eliminates common issues during design. Full control is retained, allowing you to easily specify which sections of the scans should be used as a reference for alignment and which parts need correction
3. Optimize your removable workflows with new sculpt tools for teeth in RPD and improved QC tools for dentures. Digitally adjust your RPD teeth avoiding the need for manual adjustments after production. Use the distance map function to check tolerances when needed and have a full QC suite right after the design stage ensuring production readiness.
4. Eliminate the hassle and limitations of physical dongles binding you to a specific system with Cloud License.





Dental System 24 Functionalities

Selection alignment tool

The improved selection alignment tool provides better adjustment capabilities for aligning multiple scans and models, ensuring high-quality results. This tool improves the reliability of the alignment process, making it easier to achieve the desired outcomes. The new tool is added to the articulator and the additional scans manager.

Improved alignment: Solves difficulties in aligning complex scans, ensuring better fit and function of the final product.

Enhanced control: Better control over alignment leads to better-fitting designs and enhanced patient outcomes.



Technical details

- Improved selection alignment algorithm for better precision
- Ability to select specific areas for alignment for better control
- Improved user interface for easier alignment adjustments and better alignment process

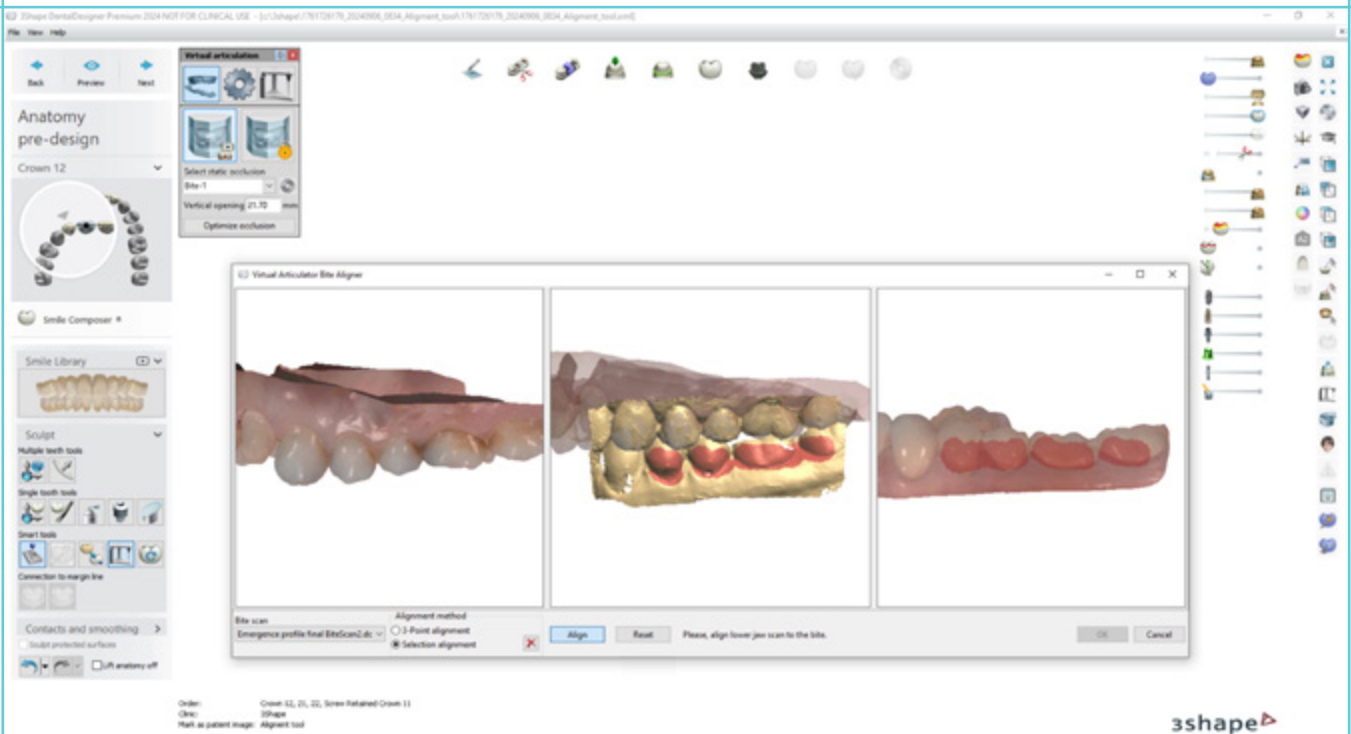
Bite Memory in Virtual Articulator

The bite memory function in the Virtual Articulator allows you to save any jaw position as a new occlusion, facilitating the design of complex cases with multiple bites. This functionality enhances the flexibility and precision of bite alignment, ensuring that the final restoration meets the patient's specific needs.

Flexibility: Enables designing in different jaw positions and the ability to save and switch between multiple bite positions allowing for more customized adjustments.

Time-Saving: Reduces the need to create multiple cases for different bite positions, streamlining the workflow.

Enhanced Design: Improves the ability to design highly aesthetic cases with varied occlusion setups, ensuring better patient outcomes.



Technical details

- Ability to save and switch between multiple bite positions
- Enhanced bite alignment tools
- Bite operations are fully integrated with Virtual articulator

Use cases

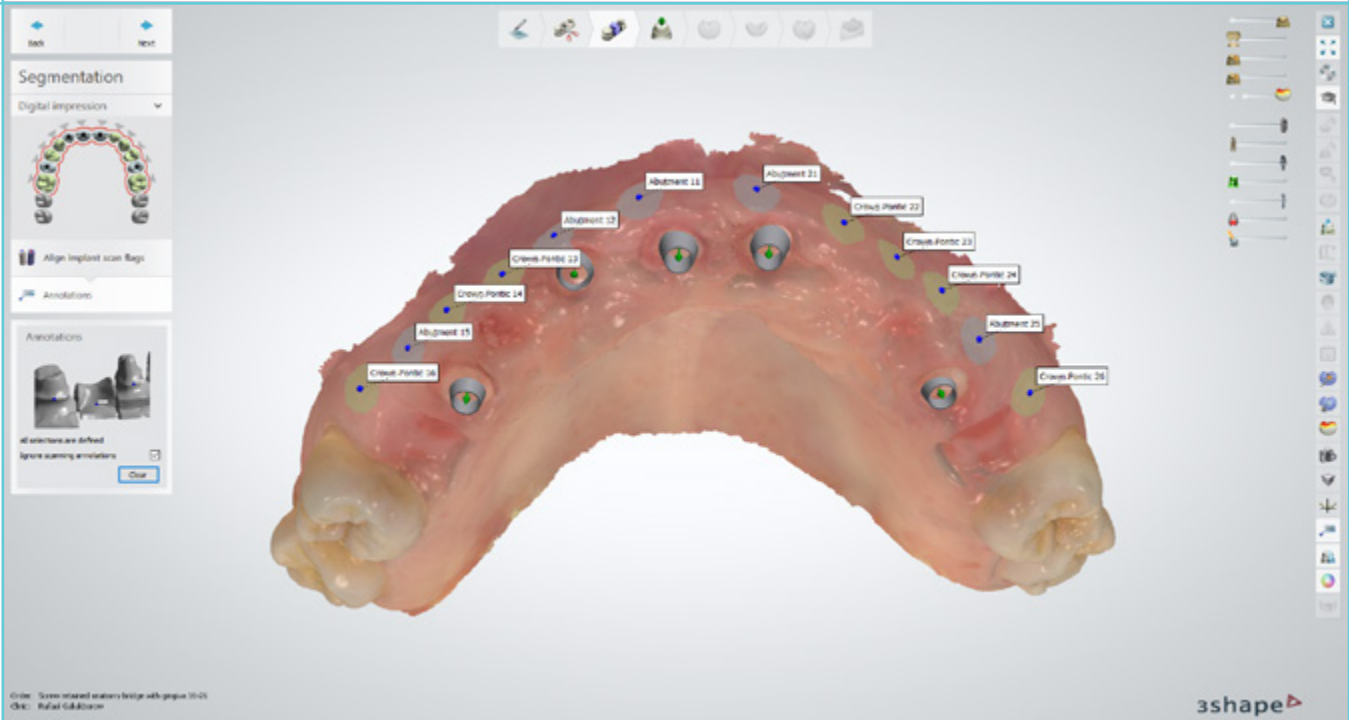
A dental professional working on a complex case can save various bite positions (such as CO and CR), allowing them to seamlessly switch between them and ensure a perfect fit for the final restoration. This is particularly useful for cases requiring multiple occlusal setups to ensure comfort and functionality.

AI Supported Design

The new AI algorithms in Dental Designer automates routine operations, such as occlusal plane positioning and annotation point placement, allowing you to focus on the final restoration design. This integration of AI technology enhances the efficiency of the design process. You retain full control of the AI assisted steps and can always adjust if needed.

Increased Efficiency: Automates tedious tasks, reducing the workload and speeds up the design process.

Focus on Creativity: Frees up time for you to concentrate on creative aspects of design, and less on trivial routine tasks.



Technical details

- AI algorithms setting occlusal plane positioning and annotations
- Automated segmentation and scan preparation
- Works with all types of scans – gypsum, impressions and intra-oral
- Integration with existing design workflows for seamless operation

Use cases

- You can use AI to handle initial scan preparations, allowing you to dedicate more time to perfecting the aesthetic and functional aspects of the final restoration.
- You can inspect all proposals and correct them if necessary, retaining full control.
- With the new AI-supported annotation placement it is possible to achieve good segmentation results that influence insertion direction calculation and anatomy positioning as the AI not only considers anatomical aspects, but also optimal placement for avoiding errors in subsequent calculations.

Caching for dentures

The caching significantly enhances the design workflow by saving the results of each intermediate step. This new functionality allows you to load results without the need for recalculation when reopening an order or move between steps.

Reduced Waiting Time: Eliminates the need for recalculations, allowing for immediate access to design steps for instant adjustments

Increased Efficiency: Enhances workflow speed by enabling quick navigation and instant adjustments.

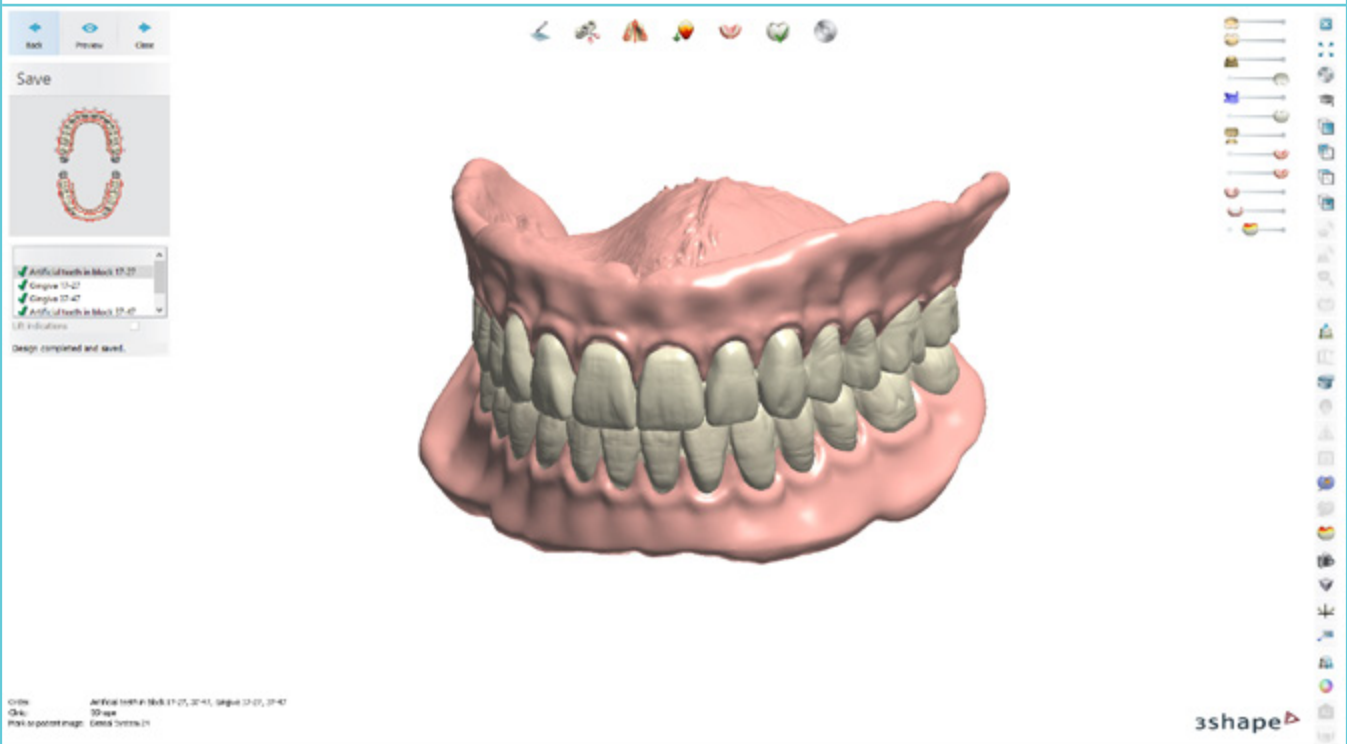
Improved User Experience: Reduces frustration by providing a more responsive and fluid design process.

Technical details

- **Step Saving Mechanism:** The software automatically saves the results of each design step, enabling instant loading without recalculations.
- **Quick Navigation:** Provides options for you to directly access and modify any step in the design process without delays.
- **Data Integrity:** Ensures that all saved steps maintain data integrity, preventing errors when reopening and editing cases.

Use cases

- **Quick Adjustments:** When making minor adjustments to an existing case, you can now jump directly to the desired step without waiting for recalculations, enabling faster turnarounds and improved workflow continuity. Keep in mind that even minor adjustments will require Dental System to recalculate all steps after the step with adjustments.
- **Complex Cases:** For cases requiring multiple iterations and refinements, you can navigate through design steps swiftly, making the process more manageable and less time-consuming.
- **Review and Approval Process:** When cases need to be reviewed or approved by senior technicians or dentists, they can quickly access specific steps to review changes, providing a more streamlined review process.



Improved responsiveness

The ability to “Cancel” build has been introduced to a denture workflow.

Reduced Frustration: Allows the user to abort long wait times and software no longer becomes unresponsive during recalculations.

Increased Control: Allows you to cancel lengthy calculations, avoiding waiting time if you realize that something should be changed before continuing.

Enhanced Confidence: By providing the option to cancel long calculations, you can maintain productivity and avoid the frustration of being unable to interact with the software.

Technical details

- **Cancel Button:** The software features a Cancel button on the top left corner of the interface.
- **Enabled Steps:** Applicable for steps involving long calculations, such as Refine scans, Maxillary/Mandibular base, and Pre-manufacturing.
- **User Interface:** The UI is designed to remain responsive, allowing you to interact with designed models even while calculations are in progress.

Use cases

Error Correction: If you identify a mistake in the settings, you can cancel the ongoing recalculation. This allows you to make the necessary corrections, and resume work without any significant delays.

Distance Map Tool

The improved distance map tool for all indications and improved algorithm allows you to select any visible model for comparison, providing real-time distance visualization and enhancing quality control during design.

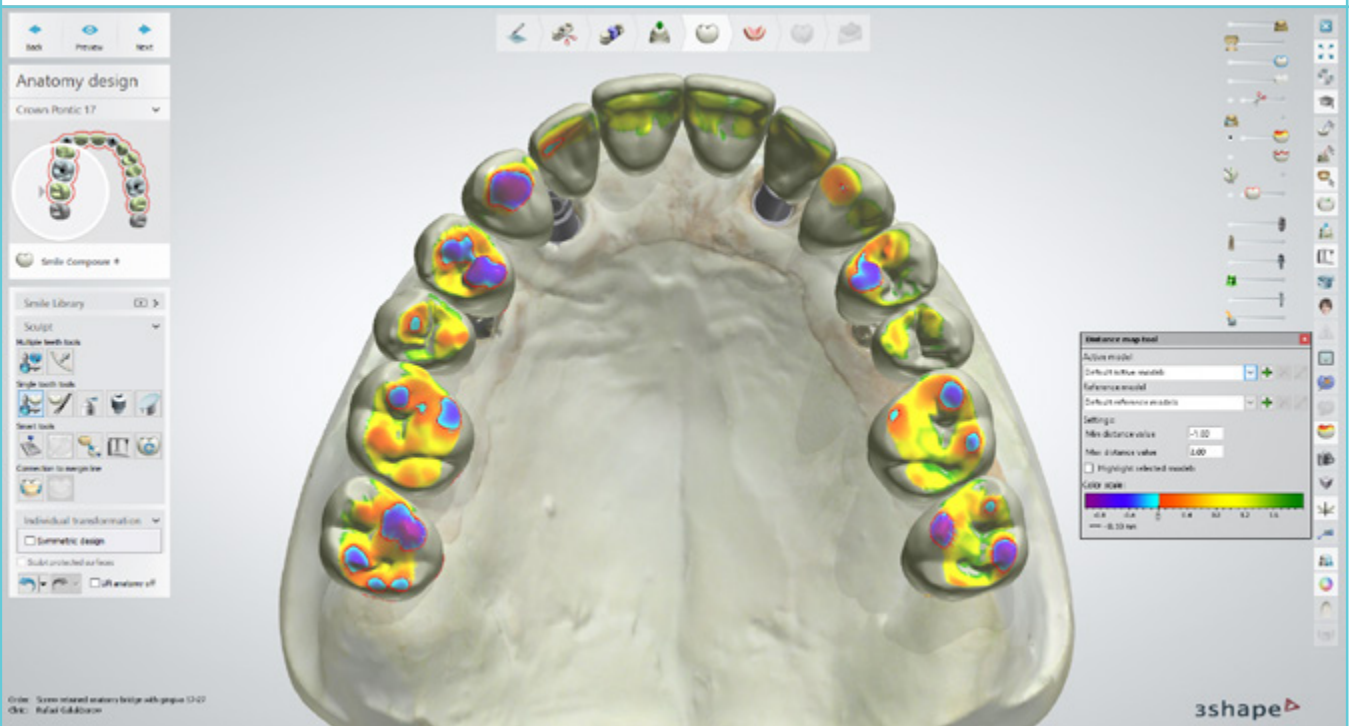
Enhanced Precision: Allows for measurements between design models and scans, ensuring each step of the design process meets the required specifications.

Real-Time Calculations: Improves workflow efficiency by providing immediate feedback, allowing full visibility of distances while making adjustments.

Better Quality Control: Ensures all steps of the design are measured and controlled, leading to higher quality and more reliable outcomes.

Use cases

- You can quickly visualize the distance between different models and scans during the design process, ensuring each step meets the required specifications without delays. This is especially useful when working on complex cases that require precise measurements to ensure a close fit.
- It is possible to create a custom set of measurable and reference models at any design step.



AI enhancements for Copy Dentures

The new AI algorithm for the Annotations Points feature in the Copy Denture workflow enhances efficiency by automatically analyzing dental scans and placing annotation points on each tooth.

Efficiency: This automated process eliminates the need for manual annotation, reducing workflow time.

Control: You can easily inspect, approve, or adjust the proposed annotations, ensuring a seamless blend of automation and manual control. You can still adjust or manually set points as needed, ensuring high customization and accuracy.

Technical details

- Automation Algorithm: Utilizes machine learning algorithms to analyze dental scans and identify optimal annotation points for each tooth.
- Manual Adjustment Tools: Integrated with existing toolsets to allow for manual adjustment or complete manual placement of annotation points if needed.
- Improved processing speed to handle scan analysis and point placement swiftly, ensuring minimal wait time.

Use cases

Assistance during design: When working on a Copy denture case, you can use the automated system to place annotation points quickly. They can be reviewed and adjusted as needed, ensuring each denture is crafted with precision without spending excessive time on initial point placement.



Digital accuracy for teeth in RPD workflow using sculpt toolkit

It is now possible to adjust the denture teeth geometry during the design phase using the new Sculpt toolkit.

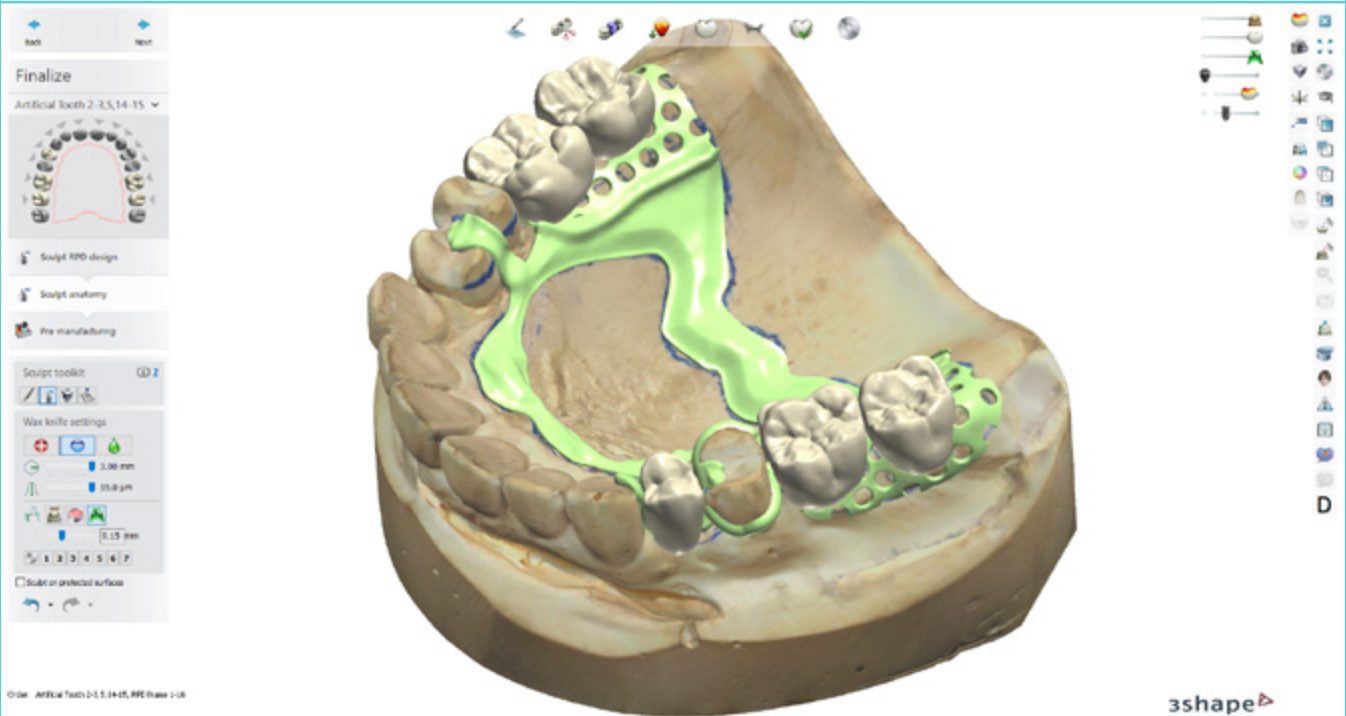
Increased Precision: This functionality enables a digital level of accuracy in fitting teeth instead of analog only, which reduces errors and improves the quality of dental work.

Time Efficiency: Save valuable time by eliminating the need for manual adjustments, speeding up the design and manufacturing process.

Enhanced Workflow: Simplify the design process with a user-friendly toolkit that integrates seamlessly into existing workflows.

Technical details

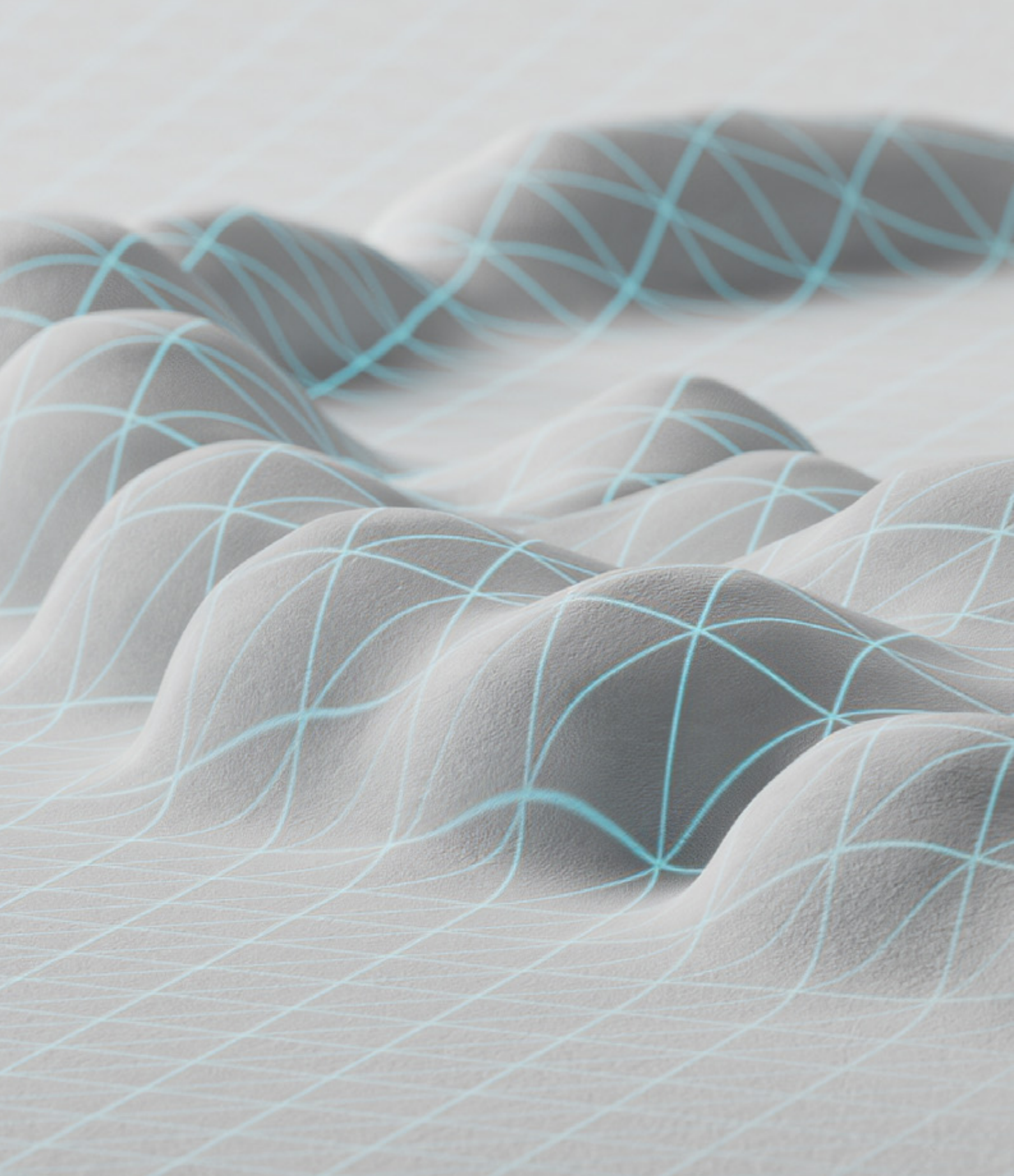
- Sculpt Toolkit is now available for Artificial Teeth in RPD workflow
- Tools Included:
 - Morphing
 - Wax knife
 - Attachments
 - Smart tools
- Integration: Fully integrated with the existing RPD design workflow, no additional setup required



Use cases

You can now quickly and accurately fit teeth into frames, ensuring high-quality dental prosthetics with reduced error rates.

Manufacturing can rely on consistent and precise designs, reducing the need for rework and increasing production efficiency.



Coming Soon

Coming Soon

Cloud License in Dental System

We are transitioning from physical dongles to cloud license, which gives a clear overview of the purchased software and enables seamless updates and remote access to the Dental System licenses. The cloud license is tied to your 3Shape Account, ensuring that licenses can be updated and managed effortlessly, providing flexibility and convenience for you. With no physical dongle, it is easy to access to your software from anywhere with an internet connection.

No More Dongles: Eliminates the hassle and limitations associated with physical dongles, providing a more streamlined and user-friendly experience.

Easy Upgrades: Simplifies the process of updating the software, ensuring that you always have access to the latest functionality and improvements

Technical details

- Cloud-based license management
- Integration with 3Shape Account for license control
- Seamless license updates and distribution

Use cases

A dental laboratory with multiple workstations can now manage their software licenses centrally through the Cloud, ensuring that you have access to the latest version without dealing with physical dongles. This is particularly useful for labs with remote or mobile employees who need access to the system from different locations.

Coming Soon

Easy Upgrade of Dental System

The new easy upgrade functionality automates the process of updating Dental System, allowing you to download and install updates with minimal interaction. This functionality enables you to be on the latest version without the need for extensive manual processes or technical support.

Simplified Process: Reduces the complexity and time required for download and installation of updates with a user friendly upgrade system.

Minimized Downtime: Ensures the system remains up-to-date with minimal disruption to workflows, enhancing overall efficiency.

Automatic Tracking: Tracks new versions and offers upgrades automatically, ensuring that you never miss critical updates.

Technical details

- Integration with cloud licensing system
- User-friendly upgrade interface
- Enhanced update procedure for client-server setup, with automatic upgrade of client computers

Use cases

A dental laboratory can quickly update all their systems with the latest functionality and improvements without the need for technical support, enabling them to always use the most current version of the software. This is particularly beneficial for larger labs with multiple workstations and client-server setup that require synchronized updates.

Coming Soon

Scanning Healing Abutments integration

The new scanning healing abutments workflow allows the use of “3-in-1” healing abutments, simplifying the process of designing abutments based on the shaped gingiva. Scanning healing abutments can be scanned directly with an intra-oral scanner, and the shaped soft tissue reused for improved patient comfort and soft tissue health. It is an addition to the abutment workflow that allows to copy some parts of healing cap to the final abutment design

Streamlined and Efficient Workflow: Simplifies the design process based on healing abutments, making it easier and faster to create custom abutments.

Improved Soft-tissue management: Ensures better fitting and positioning of abutments, enhancing patient outcomes and comfort.

Technical details

- Tools for managing healing abutments in material setup
- Enhanced fitting and positioning algorithms for healing cap
- Precise exit profile design based on healing abutment

Use cases

When designing a custom abutment, you can utilize a scanning healing abutment to ensure a perfect fit, leading to improved patient healing and comfort.

Coming Soon

Integration with 3Shape LMS

Integration with 3Shape LMS reduces the need for double data entry by synchronizing case information between lab case management and Dental System, minimizing errors and saving time. This functionality ensures a seamless flow of information, enhancing overall efficiency for users of 3Shape LMS and Dental System.

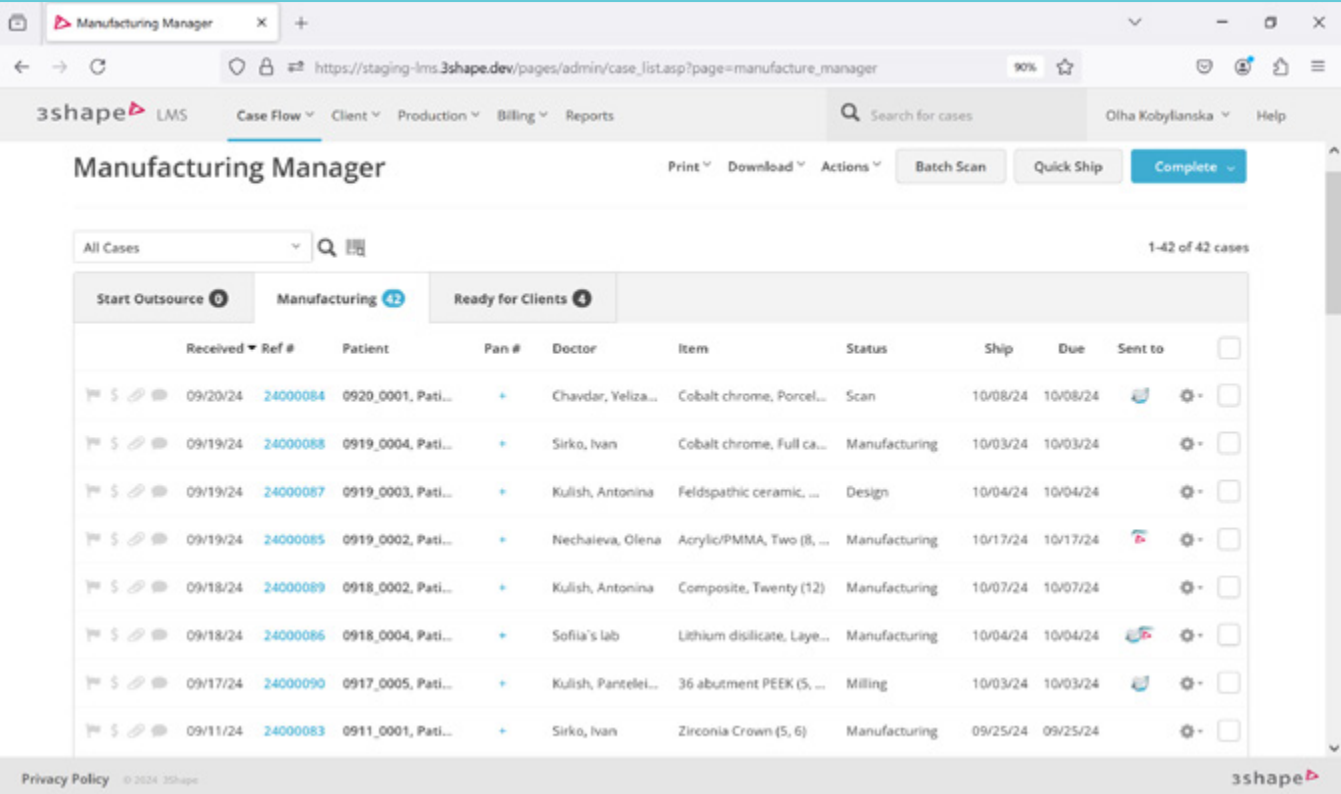
Time-Saving: Eliminates the need to enter data twice, reducing administrative workload and streamlining case management.

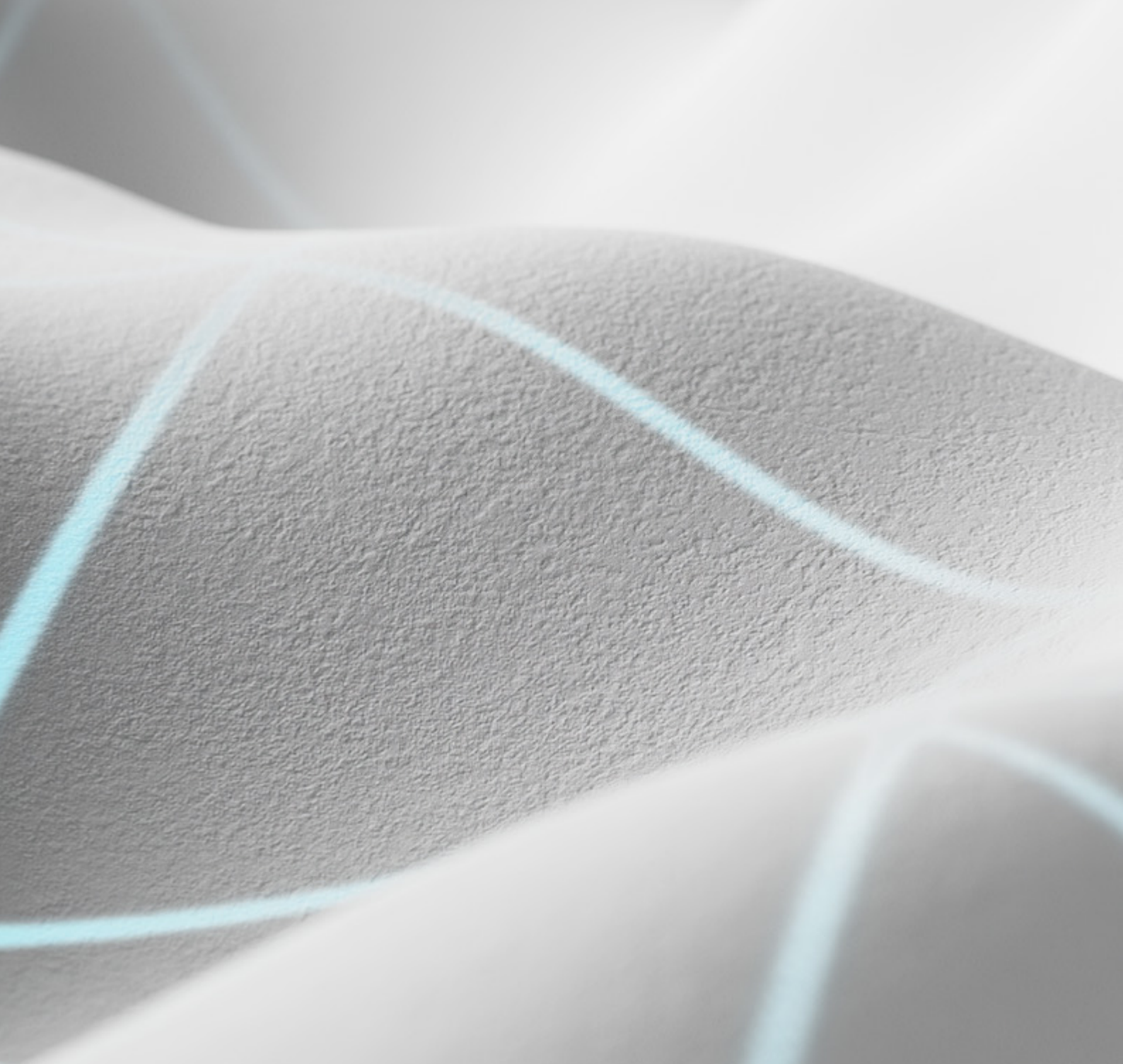
Error Reduction: Reduces the likelihood of manual entry errors, ensuring more accurate and reliable case information.

Seamless Workflow: Enhances overall efficiency by integrating case management systems, allowing for smoother operation and better coordination.

Technical details

- Synchronization of case information between LMS and Dental System
- Automated data entry
- Integration with existing case workflows
- Secure data transfer and storage





Additional Improvements to existing features

Improved Scan refinement

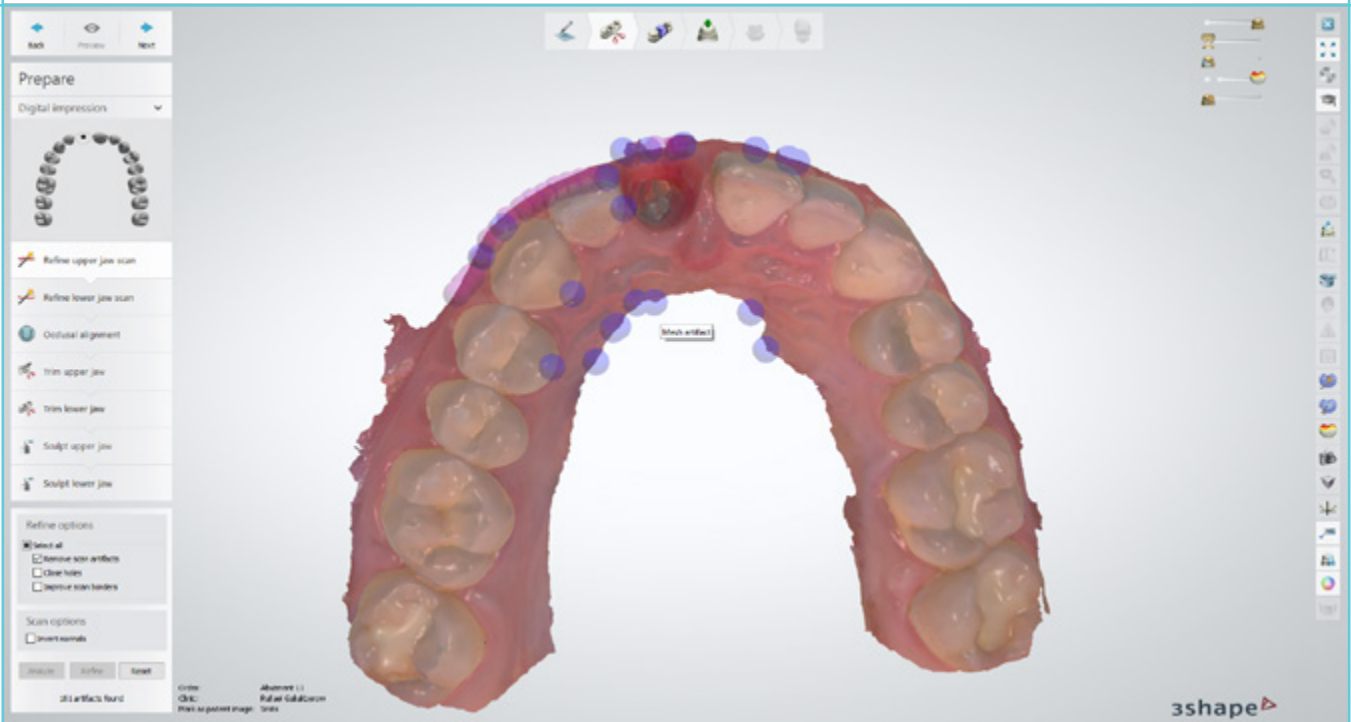
The scan refinement feature now automatically analyzes and fixes problematic areas in IOS and 3rd party desktop scans, with an improved interface for user control. This enhancement ensures that all scans are optimized for design, reducing errors and improving workflow efficiency.

Scan artifacts removal: Addresses issues with scan artifacts and manual refinement, ensuring all scans are ready for further processing.

Improved stability: Ensures all scans are optimized for design, reducing errors and improving workflow efficiency.

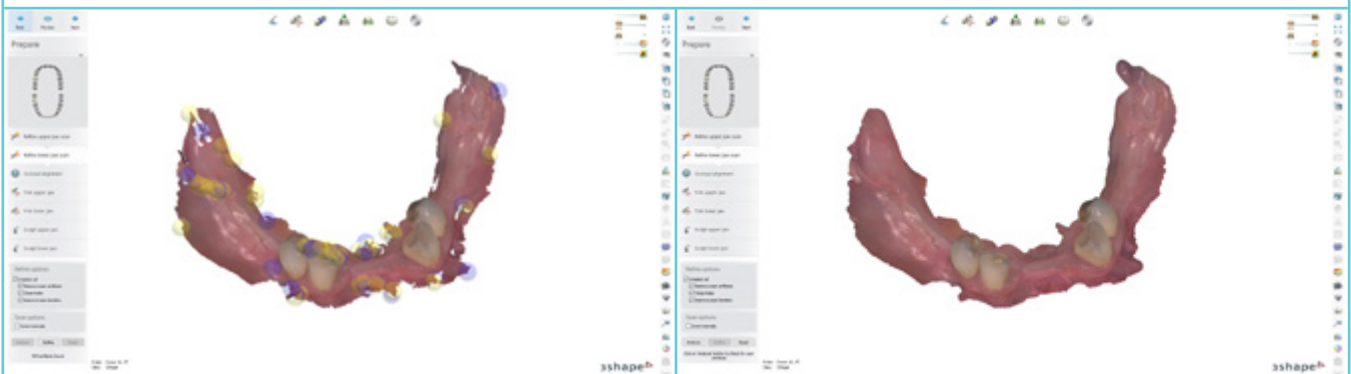
Technical details

- Automatic scan analysis and problem detection
- Enhanced user interface for scan refinement with the ability to set refinement options based on scan type
- Improved algorithms for better interaction and refinement of input scans
- Ability to control the level of analysis and automation



Scan refinement: Before

Scan refinement: After



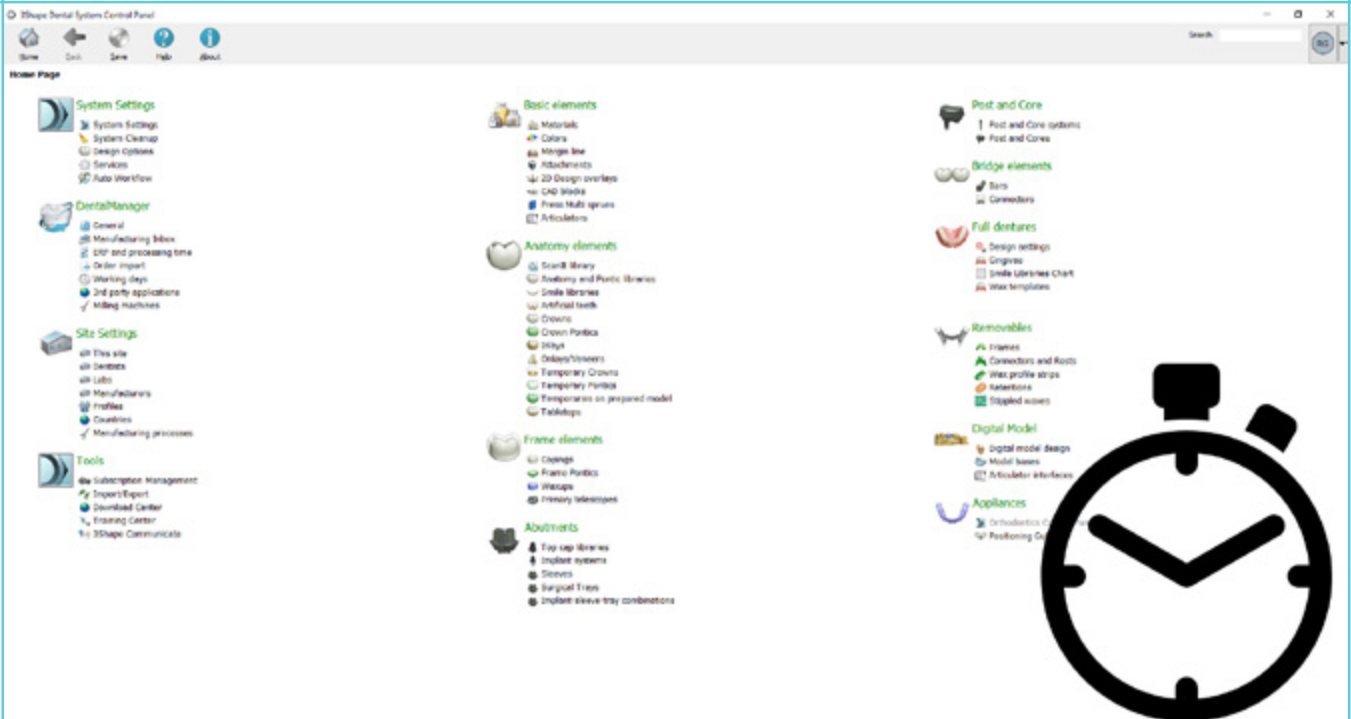
Reduced loading time for Dental Manager and order form

The libraries loading speed in Dental Manager, Control Panel and design modules has been significantly improved, boosting overall performance in both case manager and the order form. These improvements ensure faster access to materials and libraries, reducing waiting times and enhancing the user experience.

Speedup: Addresses slow loading times for material libraries, ensuring faster access and improved efficiency.

Technical details

- New memory and storage management for material files
- Faster read/write operations for improved performance
- Faster opening applications and managing settings



Improved Virtual Articulator

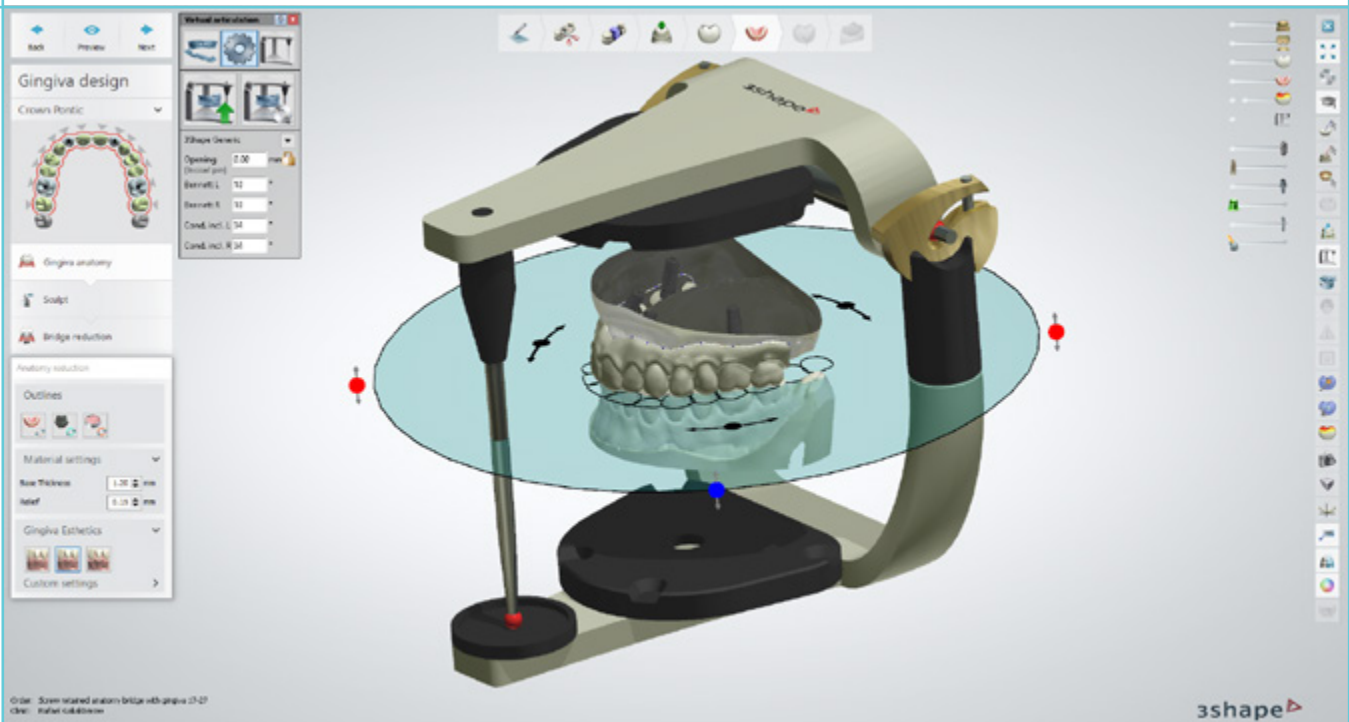
The Virtual Articulator has been enhanced with new functionalities, allowing for better simulation of jaw movements and occlusion settings.

Better simulation: Addresses issues with limited jaw movement simulations and occlusion accuracy, providing more realistic and reliable results.

Enhanced accuracy: Provides more accurate and realistic movements, improving the quality of the final design and patient satisfaction.

Technical details

- Incisal table rotation is calibrated so jaws will not shift in articulator during pin opening procedure
- Static occlusion changes are properly saved for redesign



Improved QC finalized denture design

The latest update to Dental System introduces enhanced visibility tools for denture workflows, including a new “Monoblock” visibility slider. These improvements allow you to evaluate designs immediately after the design stage, ensuring that any issues are detected early.

Predictable Manufacturing: Visibility of auto-generated monoblocks and other models helps ensure the correctness of designs before manufacturing.

Time Savings: The ability to perform quality checks immediately after the design stage significantly streamlines the workflow, saving valuable time and ensuring that any issues are detected early. This immediate validation process enhances the overall quality of denture models, preventing the need for time-consuming revisions later in the process.

Enhanced Workflow: Streamlined quality checks right after the design stage, enhancing overall efficiency.

User-Friendly Tools: Easy-to-use visibility sliders and Distance map tool facilitate thorough validation of designs.

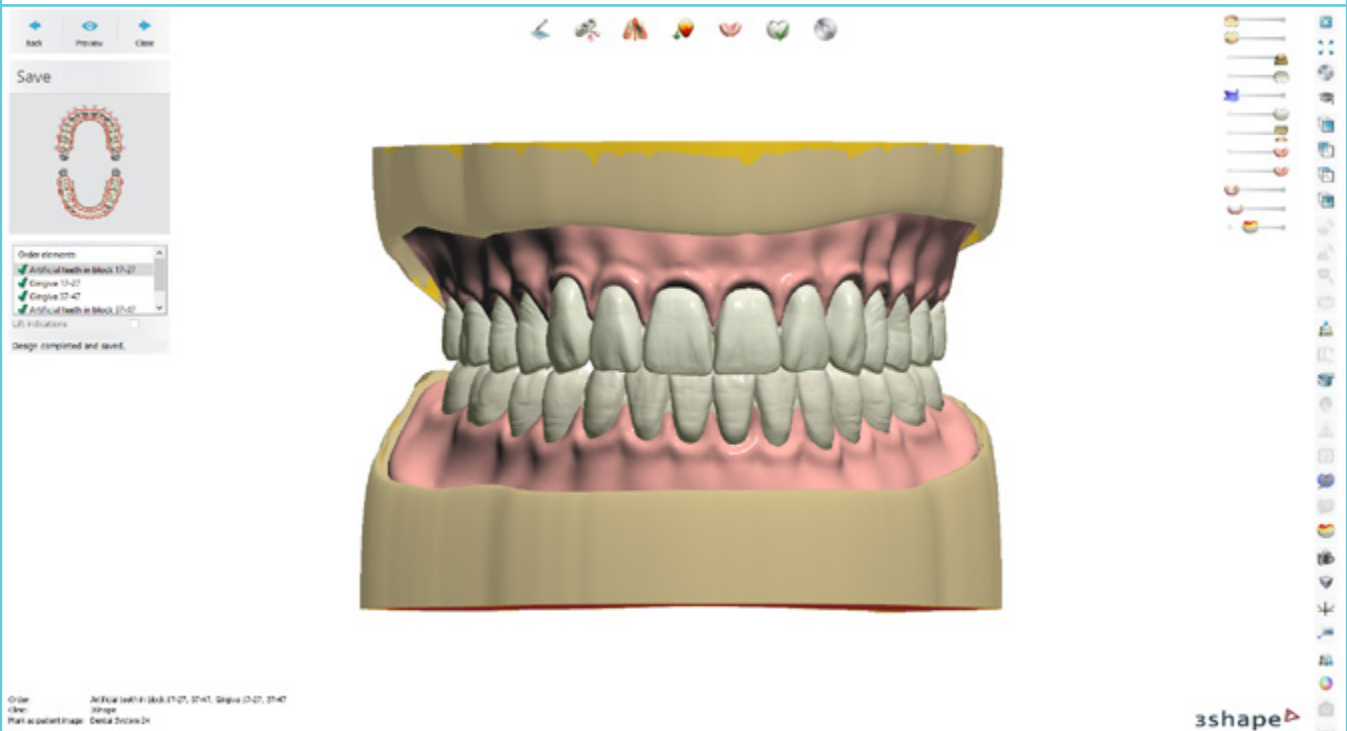
Technical details

- Integration: A new “Monoblock” visibility slider is available at the Pre-manufacturing step, enabling evaluation of the auto-generated monoblock. Additional visibility sliders for all models have been added at the Save step.
- Validation Tools: The Distance map tool can be used with visibility sliders to validate the design and ensure accuracy.
- Real-time Feedback: Provides immediate visual feedback on the correctness of designs, facilitating prompt adjustments if needed.

Use cases

Monoblock validation: You can now visually assess multiple models and validate the auto-generated monoblock, improving efficiency in denture production.

Quality validation: Dentists can ensure the quality and correctness of denture designs before proceeding to manufacturing, reducing errors and need for manual adjustment.





Additional Information

Resolved Bugs, Issues and Stabilization

✔ Infrastructure and case management

- CAD points deduction for MB impressions scans has been fixed
- The preview link for orders received via 3Shape Communicate is re-generated after it expires
- Clone system and restore backup options were stabilized
- Optimized work with multiple profiles and communicate accounts
- Optimized work with computers having multiple graphic cards, selecting the most optimal one
- Installation process has been split into application installation and material update for better integrity
- Added support for encrypted models opening in 3D Viewer on client installation
- 3Shape Communicate features are moved to service for better management
- The issue with order being locked after Model Builder in Design Center mode has been fixed
- Extended support for PLY format
- Multithreading error in Dental Manager plugin system has been resolved

✔ Fixed restorations

- The issue with marking connectors during waxup bridge design has been resolved.
- Enforce wall thickness feature on finalize step has been optimized
- Distance map for frame bridge cases has been fixed
- The issue when occlusion differs in 3D preview from design once the case is designed and closed has been resolved
- It is now possible to select different reference models in temporary crown design
- Exit profile visibility option for screw-retained crowns has been added to Smile Composer
- Waxup scan is added to sculpt on additional scans
- New spline edit mode for implant bridge exit profiles has been introduced
- Scanbody used during alignment is now shown in design, instead of scanbody from library

✔ Removable

- Resolved issue when blocking wax was visible event if it was removed completely from the scan
- It is now possible to re-open a case designed with libraries that are not enabled on a dongle
- Select all button does not select finishing line and retention grid for stippled wax in RPD
- Fixed Access violation when clicking Next if 'Draw window' tool is enabled in Customized Impression Tray workflow
- Improved blocking wax algorithm
- It is possible to set blocking wax as reference for sculpting teeth on Smile Composer for RPD+Crown/Anatomical pontic
- Removed Double-prep/Waxup button in order form for dentures indications
- It is now possible to send case with copied design via Communicate to another lab or to a clinic

Technical details for Dental System 2024

System Requirements for 3Shape Dental System 2024

Item	Minimum Requirements*	Recommended
Operating System	Windows 11 Home (64-bit) Windows 10 Home (64-bit)	Windows 11 Pro (64-bit) Windows 10 Pro (64-bit)
Memory (RAM)	16GB	32(GB) (64GB**)
Video Card	2GB	4GB
	NVIDIA GeForce or NVIDIA Quadro Direx 11 or later*** GPU Compute capability 5.2 or higher	
Storage Media	250GB SSD	500GB SSD (1TB****)
Available HDD/SSD Space	Minimum of 20GB of free disk space	
Processor	Intel Core i5 Gen 10 of higher	Intel Core i5 Gen 12 of higher Intel Core i7 Gen 10 of higher
3D Mouse	-	Space Explorer 3D mouse
Monitor Resolution	1920x1080 1920x1200	
Network	Internet connection Separate ethernet connector for the scanner	
USB Ports	USB 2.0 for 3Shape desktop scanner	
Mouse	Mouse with wheel button support	

* If you are planning to use this system with other 3Shape applications, please check their respective system requirements in the corresponding user manual.

** For Simultaneous scanning and modeling of large cases, we recommend 64GB RAM.

*** NVIDIA driver version 452.39 or higher.

**** We recommend 1TB SSD if used as a stand-alone system or a server with the order folder.

Additional Information

[Latest Dental System Version](#) Supported by Implant Manufacturers

Dental System upgrade [FAQ and best practices](#)

Learning Resources

3Shape Learning Hub

Visit the 3Shape Learning Hub to enhance your use of 3Shape products. Here, you'll find a variety of educational materials, including webinars, e-books, case studies and a blog

www.3shape.com/en/resources

3Shape Online Academy

Your place for digital dentistry courses, training and consultation. Here you will find resources such as treatment and product training

www.3shape.com/en/services/academy

3Shape Community

Explore our selection of online training offerings including Dental System training focusing on the workflow, from order creation to scanning, designing and maintenance.

community.3shape.com/en/training/dental-system

3Shape YouTube – Dental System Training

For video tutorials and demonstrations, check out the training videos on the 3Shape YouTube channel

www.youtube.com/@3ShapeTrainingVideos/featured#

Support and Contact Information

3Shape Help Center

Get started with configuring your lab scanner and Dental System software, manage orders and scans, master design workflows, and handle subscriptions and warranties with our comprehensive support

support.3shape.com

3Shape Support

Get in touch with our support agents via submitting a case, or calling our support line using one of our local numbers

help.3shape.com/en-US