Release Notes

Simodont Courseware v4.22

v4.22.0 and v4.22.1

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1. VERSION HISTORY

Release month/year		Description	Version
February	2025	Middleware	v4.22.1
December	2024	Periodontics extension Renewed Calibration Wizard User rights improvement Optional Procedures	v4.22.0
June	2024	Periodontics basics Federated Authentication Adjacent teeth statistics Patient Scans; Support for non-haptic color model Teacher approval for restarting an exam	v4.20
February	2024	Implantology Support for patient scan with color (PLY) Support for selection of region of interest (ROI) from patient scan Mirror turns dark when touched with drill	v4.18
January	2023	Added PRO700 dental models Added support to multiple teeth per tooth position Added Target in Tooth models Added list view mode to the curriculum planner Improved the Bridge procedure Improved the snapshots feature Improved the attempts reports	v4.16
August	2021	Bridge procedure New patient scan page Support for larger intra oral scans Improved load snapshot menu on the Simodont Improved Reporting page New curriculum planner view modes	v4.14
November	2020	Faster Installation New system Settings page Updated instrument icons Extended course deletion options Extended case deletion options Reduction of data size Applications support Korean language	v4.12
September	2020	Styling improved in the Courseware Download a STL from the Evaluation environment	v4.10.1
June	2020	Dental Anatomy (DAN) Module added Ability to create smoother preparations Translation and rotation settings revisited Applications support Arabic, German, Polish, Portuguese, Italian Procedure filtering on models	v4.10.0

2.   RELEASE V4.22.0

Within the v4.22 release there are two distributed releases, version v4.22.0 and version v4.22.1. The difference is based solely on the RealTime software platform used, all new features and improvements for the user are available in both versions.

2.1   Software release notes

New functionality		
Reference	**Category**	**Description**
#187312651	Periodontics – Hand scaling	It is now possible to use the hand scalers and curettes in all directions, where before it was only possible to use these tools only in the direction of the long axis of the tooth.
		Angulation of the scaler and curette is now checked against the tooth surface at the location of contact. Before, the angle against the long axis was checked.
#185983386 #188332457 #183402614	Calibration wizard	The calibration wizard has been redesigned to have a more modern user interface.
		The new wizard:
		• gives direct access to the different calibration procedures
		• saves automatically the newly calibrated values after successful calibration
		• allows cancellation of a started calibration to return to main menu
		• automatically identifies the haptic display configuration to set for the correct gain. When this happens, a dialog opens with the option for the user to replace the current values. Typically this is only applicable after a hardware replacement.
		Not available anymore are:
		• download report
		• information panel
		• side navigation menu
		• manual save button
#187829726 #187829729 #188310188 #188598258	User rights	A user with a "Teacher" role now has the following additional user rights for models and cases created by his own institute:
		• publish a case
		• import, publish, edit, export and delete a model
		• create and edit a new model by importing a patient scan
		A user with a "Student assistant" role now has the following additional user rights for models and cases created by his own institute:
		• create a new model by importing a patient scan

#188441730 #187594679	Periodontics - Case editor	At the model selection page of the case editor workflow: • intra oral tooth images can be enlarged from the tooth details section. Especially for viewing the location of calculus deposits this is a useful extension of functionalities • all selected main teeth can be easily deselected, by using the "Reset main teeth" button
#187970168	Patient scan	When confirming the selected region of interest, it is automatically checked against the maximum supported size. When too large, the user can reset the selection and select a smaller region of interest to continue.
#188012973 #188013377 #188013367 #187405485 #188013386	Optional procedures	Technically, procedures can now be made available upon request and/or could be deactivated at a later moment in time. By default periodontics is not enabled.

Fixes & improvements		
Reference	**Category**	**Description**
#187991390 #187829424 #187706421 #187866350 #187822371 #188462088 #188462079 #188581391	Periodontics	Multiple improvements and bug fixes have been implemented for Periodontics. For the Dental Trainer: • The performance of scaling is improved, especially for cases where calculus teeth are located next to each other. • Calculus pieces that get disconnected from the tooth during scaling will automatically be removed. • Invisible small chunks of calculus that fall within the tooth surface will be removed automatically. This makes it possible to always reach a 100% calculus removal when all visible calculus is removed. • For a tooth without calculus, the shown treatment statistics removal target will be as defined at case level. This statistics is only used for the Dental Trainer and will not be shown on the evaluation page in the Case Manager. • The segment order defined by the teacher in the case editor is now also followed for Calculus. • When the enamel segment is selected in the case editor for treatment statistics, it will be shown for all teeth in the case. For reporting: • The values for calculus detection in the CSV export of a report of an exploring case are changed to YES/NO to match what is seen in the user interface of the Dental Trainer and on the Evaluation page of the Teacher Station. When editing a case: • (un)selecting a tooth position no longer resets the selection of

		teeth details for each tooth position.
		• Calculus statistics are no longer automatically enabled when selecting a tooth with calculus.
#187829359	Moved distance	In the Course data report the column name "rightToolMovedDistance" is changed to "movedDistanceInstrument".
		The related text shown in the grey box on the Execution page of the Dental Trainer and on the Evaluation pages on the Dental Trainer and Teacher Station is changed to Moved Distance Instrument.
#187652207	Instrument editor	Corrected the confirmation message when creating a new instrument.
#188622280 #187418774 #188414024 #188626762 #187529437	Import case	Some technical improvements have been implemented and bugs are fixed:
		• Increased the timeout for importing a model or a case to 2 minutes.
		• The process of copying or importing cases with case specific instruments is made more robust. This better prevents situations where the instruments are not properly copied or imported.
		• The import mechanism for models, cases and instruments, now always imports institutes as the non-default institute, respecting the default institute defined.
		• The "support" button in the overview dialog after importing content, is now always functional, even if the import failed.
		• Importing an exported Patient scan case will not fail anymore when loading the model in the Simodont.
#187933801 #187933821	Case Wizard - Instrument selection	In a previous software version, it was possible to create a case with duplicated instruments when using case-specific instrument set and then adding a global instrument set into the instrument selection. This is now being fixed.
		Next to that, users will receive a pop-up to confirm their action when trying to replace or adding instruments to or from an instrument set in the case editor. This will prevent accidental instrument changes.
#188289361	Case Wizard - Models	Fixed a bug in the model selection page, where the selected tooth in the dropdown is deselected when saving or navigating away from the model selection page.
#187830981	Case Wizard - Dental Anatomy	The Dental Anatomy case editor now uses the dental notation system as configured on the settings page, previously it showed the FDI/ISO dental notation system.
#187238494	Groups	Fixed a bug where the scrollbar in the details sidebar on the groups page did not update automatically when selecting a different group.
#188573992 #186943160	Groups	Implemented the following situations:
		• A user can now be removed from a group when the group was not planned in a course yet.
		• Removing a selected group from a user now removes the

		selected group instead of the last assigned group.
#187970168 #187824686	Patient scans	Fixed the following bugs: • A large offset in a scan original position is now automatically corrected, avoiding the import to fail. • The "next" button was not working when an example scan was loaded after uploading a file with an invalid extension. This scenario will no longer result in an error. • Uploading files larger than 50MB showed the incorrect error message "file extension not supported". Now the user receives the error "File too large".
#187984077	General user interface	The usability of scrollbars across the Teacher application and the Dental Trainer application have been improved.
#187829682	Reports	Attempts will now also be shown in the "Course Data Report" when: • the case is configured with predefined stages, but the attempt is saved without selecting the stages. • new attempts were not submitted or saved. This could be relevant for when a teacher wants to investigate a request from a student to start a new attempt for an exam.
#187831005	Predefined stages	A warning will be given when submitting an attempt with predefined stages when not all stages are linked to an actual snapshot. Independent on if a snapshot was linked, all stages are visible on the results page.
#188368123	Federated Authentication	The stability of logging in with the university account is improved, this was especially noticeable on the Dental Trainer.
#188442146	Statistics	Fixed a bug where, in some situations, the statistics did not show: • a black progress bar until reaching the target removal percentage. • a green progress bar and a green checkmark icon after reaching target removal percentage.
#188302158	Implantology - Instruments	Fixed a bug where the haptic length of some of the preparation gauges was not in line with visual length.
#188389147	Dental Trainer - Case overview	In the Dental Trainer case overview all courses in the assigned cases tab and all procedures in the free practice tab are now by default collapsed.
#188414022	Settings	The value that can be put in the Settings field "auto log out course manager" is now limited to 900 minutes, preventing a faulty automatic logout when a user tries to log in.
#188310214 #188309969 #188599021	User rights	Various improvements and bugs fixes: • Users with viewing rights of a model can now open the model details without a warning notification about insufficient

		permissions to update the model.
		• Users with Case creation rights can now create a case without an error about insufficient permissions in the instruments page.
		• The "import model" button is now hidden for all users without sufficient permissions.
#188567854	Snapshots	The student can now delete snapshots from a previously unsubmitted attempt.
#188574050	Evaluations	The text in the Evaluations overview table now shows the whole height of letters such as "g", "p" and "q". This is implemented for both the Case Manager as the Dental Trainer.
#188310023	Treatment results	The reflection text area on the Dental Trainer Results page is no longer resizable. Previously, the user could resize the reflection text area outside the visible screen after which he was unable to resize it again.
#184549124	Course planning - Case grouping	Fixed a bug where the case grouping feature as part of course planning could get unresponsive in certain situations. For example, when submitting a new revision for a case or when deleting the case.
#188569386	Dental Notation System	The order of listing the teeth by tooth position is changed to follow the official Dental Notation System order: 21, …, 28, 18, …, 11, 48, …, 41, 31, …, 38 (Example using the ISO/FDI notation).
		This is implemented for the Case Editor in the Case Manager and at the Treatment execution on the Dental Trainer.
#188574511	Force calibration	Replaced the image shown in the force calibration dialog on the Dental Trainer with a more up-to-date image.
#187239162	Evaluations	When the number of pending evaluations exceeds 99, the number will show "99+". Previously the number would fall out of the badge.
#186970026	Case execution	Fixed a bug where clicking on an image to enlarge it could get the user stuck on the image view.
		Next to that, the enlargement of the images has been improved for all image types.
#188622169	Patient scans	Updated the patient scan workflow to delete the original scan file after creating a Simodont model.
#188658794	Instruments	Fixed the following instrument properties that were missing a translation:
		• Grit 0007 - Right spiral with crosscut
		• Grit 0010 - Left spiral cut
		• Shape Bevelled cylinder
#188636661	Instruments	Fixed a bug in the instrument selection page on the Dental Trainer. Clicking the info button of an instrument to open the instrument details, does no longer automatically select the instrument.
#188666071	Statistics	Fixed a wrong Spanish translation of the title of the Adjacent tooth

		statistics on the Dental Trainer.
#188671700	Snapshots approval	Fixed a bug with the "Load snapshots is only available with teacher approval" feature. The student could bypass the teacher's approval when stopping the case and reloading it.
#187885806	Information panel	In the information panel, located under the (i) button, the "Client" section is removed since that was a duplicate of the "Server" section. Additional information is shown in the "Server - Configuration" section and the "Real Time" section.
#188179538 #187780594 #182651330 #188197232	Technical	Various technical improvements and bugs fixes: • Fixed CSS patcher failing to run. • Fixed Simodont registration issues. • Refactored how the Dental Trainer API and Simulator API are configured in different environments. Fixed a bug where the alignment cross in the simulator screen was incorrectly indicating a failure in the Realtime system.

Removed		
Reference	**Category**	**Description**
#188627606	Cases - Copy Model	Removed the feature to copy models.
#188637531	Dental Trainer - Admin User options	Removed the feature to close the Google Chrome application.

Known issues		
Reference	**Category**	**Description**
#188643068	Dental Trainer - Instruments	When enabling/disabling the long axis, the glass grid gets disconnected from the tooth's long axis.
#188680950	Patient Scan	On the models overview page at the Case Manager, a Teacher is able to export a model. Only for the Patient scan models, the export is not working.

2.2 Available content updates

The latest content updates are always performed by Nissin personnel in addition to any software update.

As of the release of the v4.22.0 the following content update is available:

Content Updates		
Reference	Category	Description
#188302980 #188317910 #188302985 #182548639 #181461040 #188407152 #188302992 #186249435	Models Cases Instruments	The v4.22 offers a newer version of the 700HPRO-prototype model. In this new version, the lower front teeth are added with moderate calculus. These are suitable for ultrasonic scaling and hand scaling cases. Two new cases called "PER – Ultrasonic scaling – lower front" and "PER – Hand scaling – lower front" are added to collection of preset cases. Two new periodontic instruments are introduced within the hand scaling case: the H6/H7 scaler and the Gracey 1/2 curettes.
#188302970	Cases	The UNC12 and UNC15 probes are added to the periodontics exploring cases, as these probes are used for exploring in several countries in Europe. The student can choose which instruments to use for calculus detection.
#187955947 #188426552 #188543428	Instruments	New rotary instruments are introduced: FG110-010 red – in electrical red handpiece – flat end cylinder FG110-010 yellow – in electrical red handpiece – flat end cylinder FG111-010 blue - in electrical red handpiece – flat end cylinder FG111-012 blue - in electrical red handpiece – flat end cylinder FG172-019 blue - in electrical red handpiece – flat end taper FG172-020 red - in electrical red handpiece – flat end taper FG540-010 red - in electrical red handpiece – flame FG584-018 red - in electrical red handpiece – round edge cylinder FG584-018 blue - in electrical red handpiece – round edge cylinder
#187874018	Models	In the model "NISSIN-PRO700", the meta data for endo tooth #26 was corrected such that when an STL export is downloaded the tooth does not appear flat (2D) but has the right dimensions.

3. RELEASE V4.22.1

Additional to Release v4.22.0, Release v4.22.1 introduces a new software platform on the RealTime pc that is located inside the Simodont. The new software platform makes the system more future proof for coming developments. Because of technical limitations, this will platform will only be implemented on Simodonts with Windows 10 Simodont PC's, not for Windows 7 Simodont PC's. However, all other released features and fixes as described for release v4.22.0 and v4.22.1 are available on all systems.

3.1 Software release notes

New functionality		
Reference	**Category**	**Description**
#187934221 #187885099 #187885848 #187885828 #187885827 #187885846 #187885806 #187885831 #188149155 #183402614 #187969824 #188441913 #188331751 #187969855 #188511522 #188519849 #188581839 #188550950 #188771873 #188876577 #188693546 #188808320 #188876552 #188693519 #188876499 #188772150 #188637369 #188881558	RealTime software platform	The RealTime software platform change is influencing the following functionalities, none of them have an effect on the user experience: • Removing material • Restoration functionality • Create and restore snapshots • Restart treatment • Calibrate force sensor functionality • Calibration Wizard • The Simodont Information panel showing which RealTime software version is running. • Introducing a new software interface to the RealTime pc. *This only affects Nissin support employees.*

Fixes & improvements		
Reference	**Category**	**Description**
#188907444	Installation script	The instrument migration script is no longer failing when the system contains cases with the status New when no instruments are selected.

Known issues		
Reference	**Category**	**Description**
#188923246	RealTime	When putting too much force with an instrument on a haptic surface, the haptics can go into a fail state. In most situations this is solved by stopping the case and starting it again. In some situations however, the situation cannot be resolved after restarting the case. A restart of the Simodont is at this moment in time the only solution.

3.2   Available content updates

The latest content updates are always performed by Nissin personnel in addition to any software update.

As of the release of the v4.22.1 the following content update is available:

Content Updates		
Reference	**Category**	**Description**
#188930944	Instruments	In v4.22.1, the performance of the US scaler is improved. Before there was very little effort needed to remove the calculus from the teeth, using this instrument. Now, the US scaler doesn't visually move through the calculus anymore and the user has to make multiple stroking motions, instead of just one, in order to remove calculus, which makes the process more realistic.

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