exocad

The complete software solution for digital dentistry

exocad.com

exocad provides the complete software solution for digital dentistry

SCANNING

exoscan

DESIGN
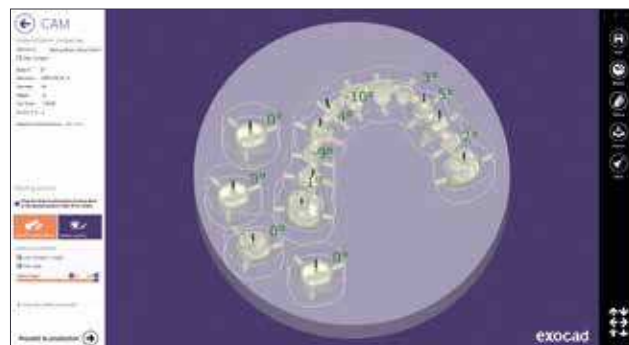
exocad

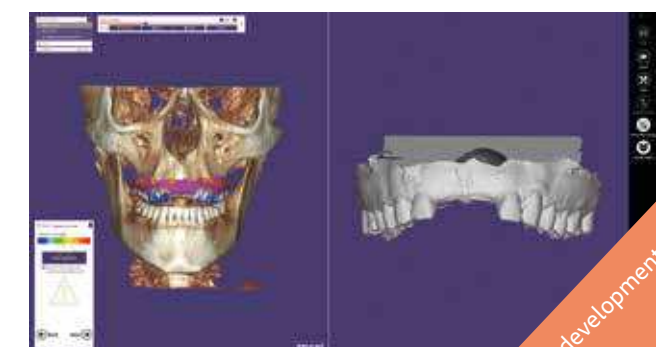**PRODUCTION**

exocam

COMMUNICATION

dentalshare

IMPLANT PLANNING

exoplan

in development

ORTHODONTICS

exocad ortho

in development

exocad and exoscan are registered trademarks of exocad GmbH.

Why choose exocad-based dental CAD/CAM systems?

Hightech tools for high precision dental professionals

Our software solutions cover a wide variety of indications, making it an attractive choice both for expert users and newcomers in the dental CAD field. The strength really lies in its simplicity. There is no point in creating software that makes your job harder, so it doesn't.

The user is the center of our efforts

You, the dental technicians and clinicians, are the experts. We continue learning from and with you to provide a software that fits your needs perfectly. Our development model ensures efficient communication paths between dental professionals and our software engineers, to ensure optimal usability in day-to-day usage and to anticipate emerging trends in digital dentistry.

Chances are that you already know someone who uses exocad – why not ask one of your colleagues about their experience with our platform? There's also a thriving on-line community of exocad users, including an independently managed Facebook group with more than five thousand members.

Robust and well-established platform

Leading OEMs have chosen exocad software for their dental CAD/CAM offerings, and thousands of exocad DentalCAD licenses are being sold each year. Our mission is to expand the possibilities of digital dentistry, and to provide solid, reliable and easy to use software solutions for a rapidly evolving market.

Flexible and integrated

As an independent software provider, we're open for integration with a wide range of 3rd party devices. For system integrators it is the perfect choice to build up their systems – and end users can choose the best system fit to their particular needs.

Future-proof solution

A decision for exocad is a future-proof decision. In just 5 years, exocad has become the leading dental CAD/CAM software provider for the OEM market. Our software is under sustained active development by our highly specialized development team and in close collaboration with our partners. Our pragmatic and flexible business model enables our product's success in over 120 countries.
Since 2013, exocad GmbH is an ISO 9001:2008 and ISO 13485:2012 certified company.

exocad DentalCAD

Powerful dental CAD software

exocad DentalCAD is the leading OEM branded dental CAD software: great for beginners, yet powerful in the hands of an expert.

Our CAD software is known for its speedy operation and ease of use, helping you minimize training costs and maximize productivity. It is reliable and robust even when dealing with complex cases on a daily basis.

The possibilities grow with your experience

Once you're familiar with the base functionality of our software, there's more to discover:

• Work with pre-op models, and adapt your restorations to them
• Copy previous designs or mirror healthy teeth
• Load 2D images (captured by your webcam) during the design
• Take advantage of our advanced mesh editing and matching features
• Save real 3D PDF files to send out design previews that can be viewed in 3D using a standard PDF viewer
• Exchange large 3D data sets with dentalshare
• And much more

Already the standard version, exocad DentalCAD, covers a wide variety of indications

Anatomic crowns

Simple and anatomic copings

Bridge frameworks

Inlays, onlays

Waxup-based frameworks

Primary telescopes

Veneers

Waxup digital copy milling

Attachments

Add-on modules to exocad DentalCAD Standard Version

It is easy to upgrade your exocad DentalCAD Standard Version according to your needs. Choose among many add-on modules for advanced indications.

Implant module
For designing of abutments and screw-retained bridges

Virtual articulator
For dynamic occlusion

Bar module
For advanced dental bar design

Model creator
To create physical models

Provisional module
To create temporary crowns and bridges

exoplan viewer
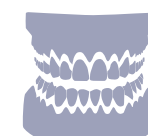For visualization of voxel data from CT machines during the design process

Bite splint module
For designing night guards

TruSmile Technology
For realistic rendering of dental restorations

Full denture module
For the digital design of full dentures

new in 2016

Partial Framework CAD
A proven solution, soon available from exocad

in development

An exocad DentalCAD add-on module

Implant module

For the design of abutments and screw-retained bridges

Custom abutment design

With exocad's implant module, the design of custom abutments is easy and straightforward. When designing bridges on custom abutments, the software will ensure that all abutments holding the bridge will have the same insertion axis.

Screw-retained bridges

The design of screw-retained bridges, crowns and copings also becomes an easy task. Take advantage of our advanced screw channel design, to simplify subsequent ceramic layering and to minimize risk of chipping.

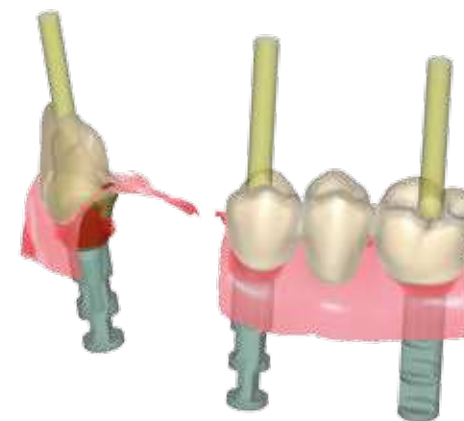### Implant libraries already included

exocad's implant module ships with an extensive set of implant libraries, both for usage of titanium bases and for designing one-part abutments or screw retained bridges.

High productivity and process reliability

Custom abutments and suprastructure can be designed together in a single CAD session. Since milling parameters for both abutment and suprastructure are correctly considered during the design phase, optimal fitting is possible when producing all parts in one go – without the intermediate step of rescanning the produced abutment in order to design the suprastructure.

It's your choice wether you mill in-house or send out your files for production. A wide range of in-house milling systems are supported and leading production centers will accept files written by exocad software.

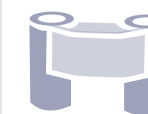

Screw-retained crown with angulated screw channel.

Virtual articulator

For dynamic occlusion

exocad's virtual articulator allows users to consider dynamic occlusion when designing crowns and bridges. The positioning of the stone models within the physical articulator can be precisely transferred into the software (with the aid of a scanner that supports virtual articulation as well) for perfect patient-specific results.

Parameters such as condylar angle, bennet angle and immediate side shift can be adjusted just like on a physical articulator and can also be imported from 3rd party measurement systems through an open, XMLbased format.

Different articulator types available with automatic occlusion adjustment.
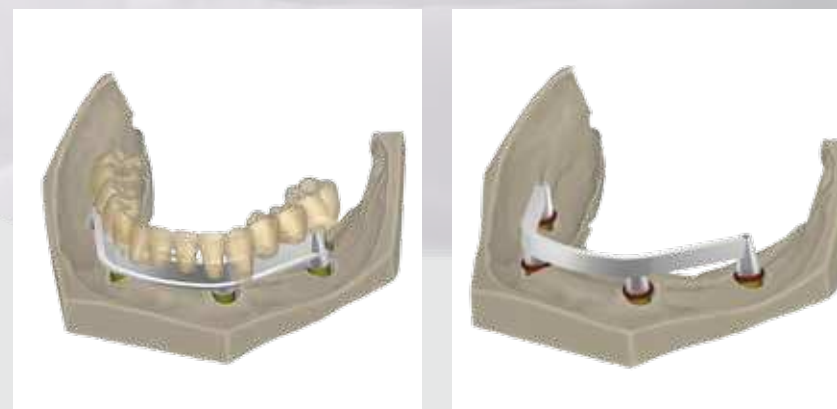
Bar module

For advanced dental bar design

exocad's bar module allows both fast and easy realization of standard dental bars, as well as advanced custom bar design. The bar is designed within the context of full anatomical restorations to be supported. Attachments or retentions can be added to the design; cylindrical holes or even arbitrary geometries can be cut out in order to bolt or glue pre-fabricated attachments onto the bar.

Thanks to its elaborate design options, exocad's bar module allows you to design dental bars that deal gracefully with complex clinical situations and provide maximum comfort for patients.

Producing bars with optimal fitting requires an ultra-precise scanning system. Our software features workflow integration with high-precision measurement devices, including tactile scanners, to ensure high process reliability.

An exocad DentalCAD add-on module

Model creator
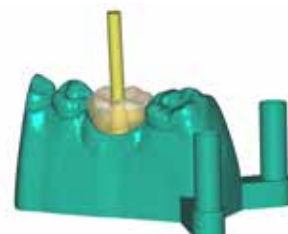
To create physical models

exocad's model creator module helps you create physical models from intra-oral scan data or impression scans.

Both the design of models with detachable segments (using premanufactured bases) and the design of monolithic models (where only the prepared die is removable) are supported.

Model with detachable segments

Designing models with implant analogs

Different model/die styles available

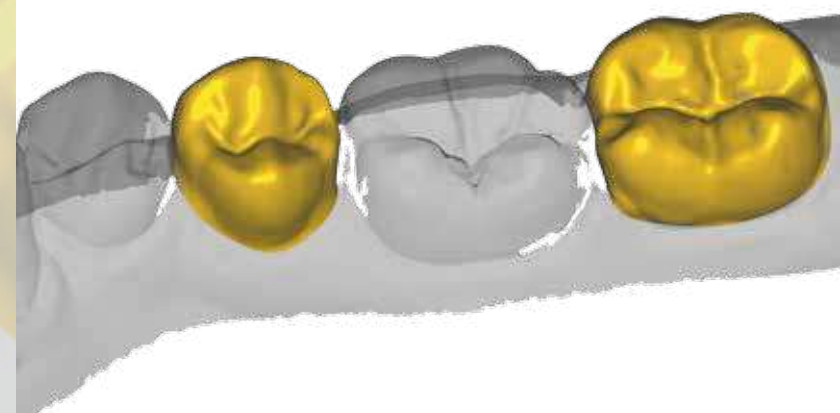Hollow models allow extremely cost-efficient printing
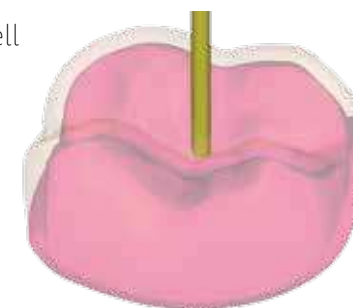

An exocad DentalCAD add-on module

Provisional module

To create temporary crowns and bridges

With the provisional module, individual temporary crowns and bridges can be designed using the eggshell technique. The temporaries are created based on scans of the preoperative situation; the shape of the provisional crown/bridge can either be copied from the original anatomy (if the original tooth is still in reasonably good shape), or the tooth libraries can be used.

Individual provisional designed by using the eggshell technique

An exocad DentalCAD add-on module

exoplan ^{viewer}

For visualization of voxel data from CT machines during the design process

exocad's DentalCAD platform includes an integrated DICOM viewer that allows you to visualize voxel data from CT machines during the design of dental restorations.

Thanks to its integrated HTTP server, exocad's software enables online exchange of implant and tooth position data with third-party programs, such as implant planning software. The exoplan ^{viewer} functionality is available as an add-on module and requires a graphics card with at least 1.5 GB of video memory.

Note: exoplan ^{viewer} is not for diagnostic/medical purposes

An exocad DentalCAD add-on module

Bite splint module

For designing night guards

With exocad's bite splint module, therapeutic night guards can be designed quickly and in high quality. We recommend to use the bite splint add-on in combination with the Virtual Articulator, for optimal patient specific results.
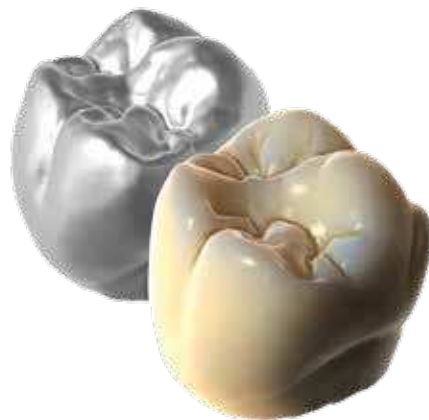
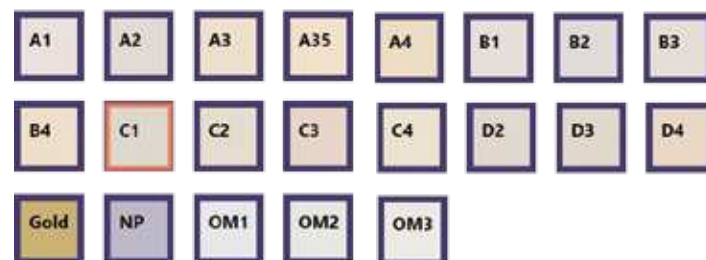Output files can be either milled or printed.

TruSmile Technology

For realistic rendering of dental restorations in real-time

exocad's TruSmile technology provides nearly photo-realistic rendering of dental restorations – in real-time, already during the design process. In addition to providing a "What You See is What You Get" user experience, TruSmile can also become a powerful marketing tool for dentists using chairside CAD/CAM systems – e.g. to convince a patient to get a ceramic restoration instead of a metal crown.

TruSmile with realistic single tooth color selection

A1	A2	A3	A35	A4	B1	B2	B3
B4	C1	C2	C3	C4	D2	D3	D4
Gold	NP	OM1	OM2	OM3			

Full denture module

For the digital design of full dentures

With the new full denture module, exocad provides a digital solution for designing full dentures. Model analysis can be performed digitally and the results will be used for an automatic tooth setup suggestion. The prosthetic can be milled or printed, or produced using a combination of these methods.
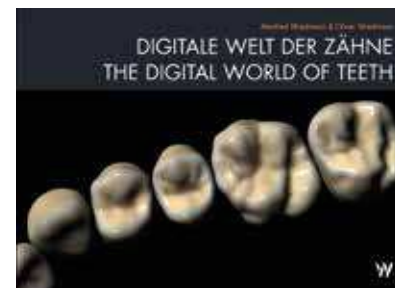
new in 2016

Tooth library add-on „ZRS" by Manfred Wiedmann

exocad DentalCAD ships with a variety of tooth libraries. In the 2015 release, the collection was extended once more and now also includes two new natural tooth libraries.
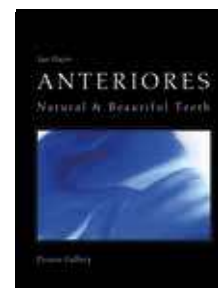
For those who would like even more choice, a more extensive library of beautiful natural teeth is available as a reasonably-priced add-on for exocad. With the module purchase, you'll get a total of:

• 61 sets of upper arch anterior teeth

• 19 sets of lower jaw anterior teeth

• 19 sets of upper arch posteriors

• 19 sets of lower jaw posteriors

The library includes the „Anteriores" collection of anterior teeth by Dr. Jan Hajtó. A whole range of additional tools that can help dental technicians and clinicians in their daily work with the library is available from third parties: Books, 2D Outlines for smile design (available for purchase online at www.anteriores-templates.com), and even physical models.
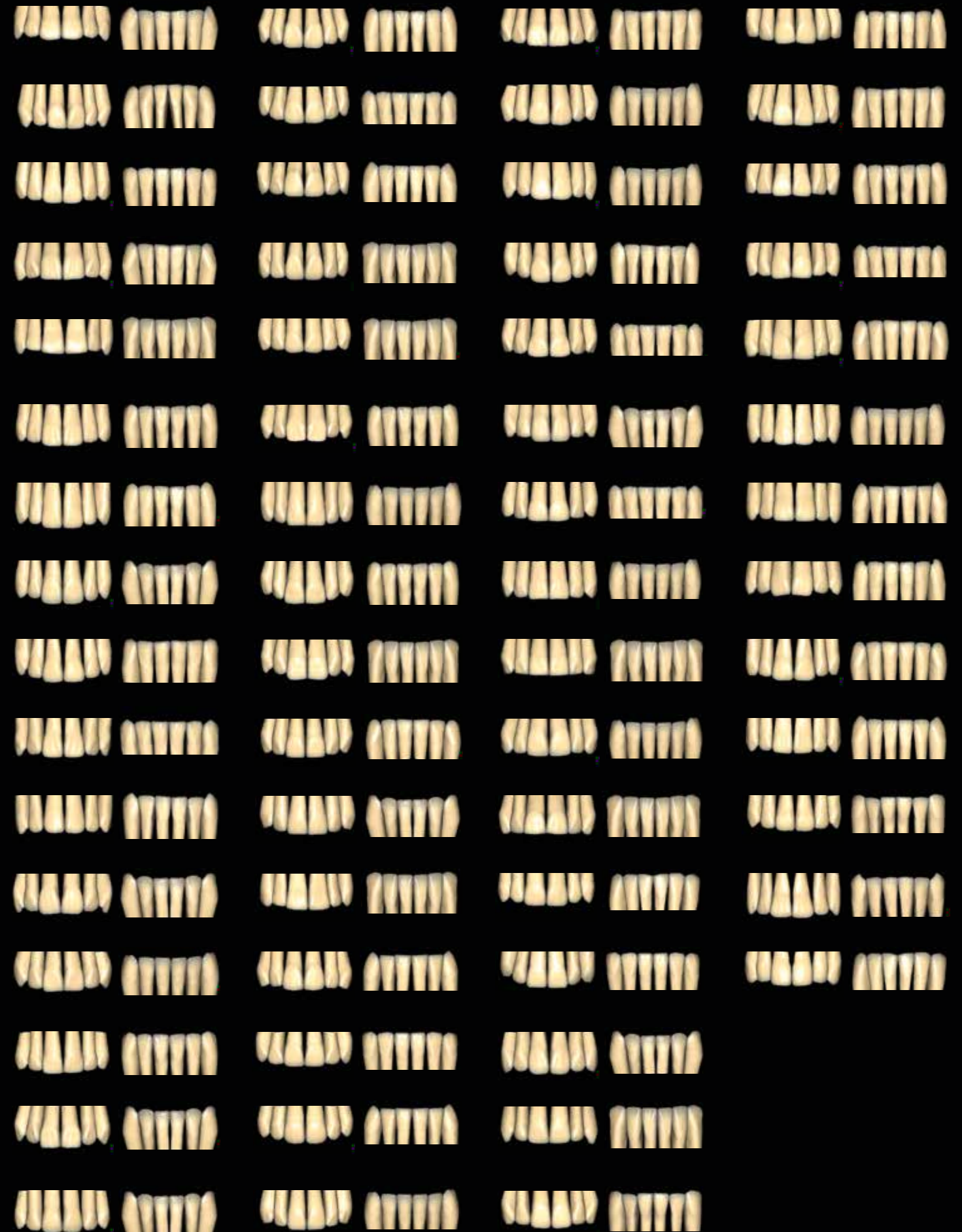

The Digital World of Teeth
Manfred and Oliver Wiedmann
Wolfbach Verlag

Anteriores Picture Gallery
Jan Hajtó
teamwork Media

Anteriores Models
Available at anteriores.de

dentalshare

Fast, secure and easy communication

It's more than just 'upload to milling center'; we aim to cover the full spectrum of multi-directional digital communication between clinicians, dental technicians and production centers. For example, the recipient can start receiving a large file before the sender has finished uploading it.

dentalshare uses latest generation compression technology, combined with a robust transfer protocol, so that even big data sets travel through unreliable mobile network connections and restrictive firewalls with ease. All transfers are encrypted using state of the art encryption technology and fully verified once received.

For maximum reliability and fast network throughput, exocad operates its own redundant, distributed server infrastructure with multiple gigabit internet connections and server locations in Europe and the US.

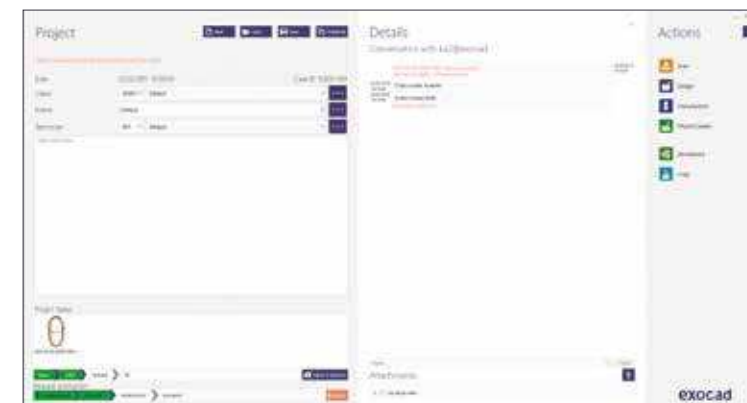Enable rapid collaboration by exchanging cases from within the exocad software platform.

No per-transfer fees, no commission*

With dentalshare, we're not gnawing away your profit margin. There's no per-transfer fee, nor do we accept commissions from production centers.

Transparency and privacy

As a dentalshare user, you're in complete control of what data is being sent, and when. We know that there's some information you will not want to share with the recipient of your data set. For example, a dental technician sending a data set to another lab for milling might not be willing to disclose which dentist he is working for.

* subject to fair usage policy

Our integrated scan solution

exoscan

Seamless scanner integration with exocad DentalCAD

exoscan is a full-featured dental scanning software, designed to work with a wide variety of scanners and scan technologies. exoscan provides 100% seamless integration between scanning and CAD. Scanning and designing is done in the same application.
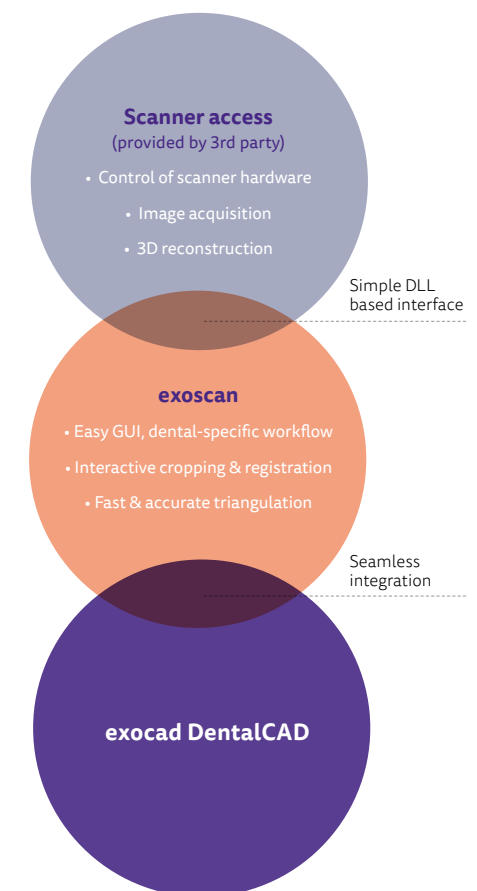

For scanner manufacturers

Are you a provider of 3D scanning solutions and would you like to make your technology available to the dental market? With exoscan, exocad can help you integrate your scanner with our dental CAD platform, with an easy to use, perfectly integrated GUI.

exoscan complements exocad's classical XML-based scanner work flow integration for an even more seamless user experience. More and more scanners are being integrated with exoscan. It is also suitable for integrating legacy dental scanners with exocad DentalCAD – previously used with other CAD software.

exoscan is applicable for both intra-oral and desktop scanners.

Scanner access
(provided by 3rd party)
- Control of scanner hardware
- Image acquisition
- 3D reconstruction

Simple DLL based interface

exoscan
- Easy GUI, dental-specific workflow
- Interactive cropping & registration
- Fast & accurate triangulation

Seamless integration

exocad DentalCAD

Scanner integration

Integrated solutions powered by exocad

Thanks to partnerships with leading dental scanner manufacturers, exocad DentalCAD is the basis for CAD/CAM systems with smoothly integrated workflow – while still leaving the freedom of choice between many different 3D scanners.

Freedom of choice

From inexpensive laser scanners to high-precision devices using structured light, conoscopic holography or tactile technology:

You are free to choose what is best for your budget and your accuracy requirements.

All listed scanners come either with file-based integration and/or exoscan integration. A file-based integration enables an easy work flow integration between exocad DentalCAD and the scanner software.
exoscan provides 100% seamless integration between scanning and CAD. Scanning and designing is done in the same application. For more details visit
http://exocad.com/oem-integration/

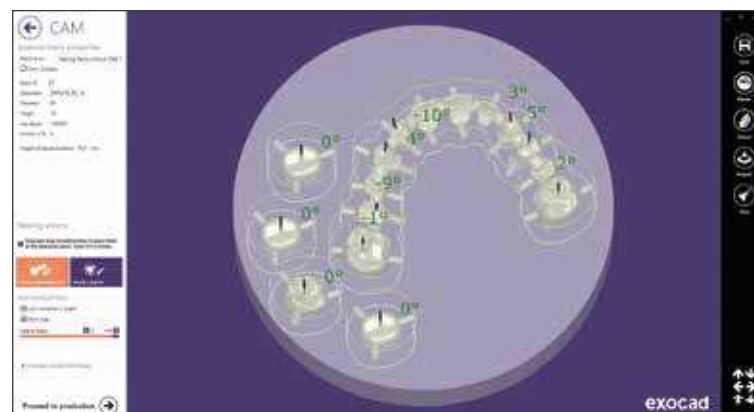| COMPANY	SCANNER	COUNTRY	URL	EXOSCAN
CADstar	CS.ULTRA	Austria	cadstar.dental	✔
DOF Inc.	Freedom, Swing	Corea	dof-lab.com	✔
GC Tech. Europe N.V.	Aadva Lab Scan	Belgium	gctech-europe.com	✔
GT Medical	SCAN-FIT 2 (SF2)®	SPAIN	gt-medical.com	✔
Medit Co., LTD	Identica, Identica Blue & Hybrid	Corea	meditdental.com	✔
MHT S.p.A.	3D Progress (intra-oral)	Italy	mht.it	✔
Open Technologies S.r.l.	SinergiaSCAN, Reveng 3D	Italy	scanner3d.it	✔
Renishaw PLC	DS10 (Incise)	UK	renishaw.com	✔
Steinbichler Optotechnik GmbH	Scan ST I + II	Germany	steinbichler.de	✔
3M	True Definition Scanner (intra-oral)	USA	3m.com	
AGE Solutions S.r.l.	Maestro 3D	Italy	age-solutions.com	
Breuckmann GmbH	d-Station	Germany	breuckmann.com	
Cadent	iTero (intra-oral)	USA	itero.com/	
Carestream	CS3500 (intra-oral)	USA	carestreamdental.com	
Dentium Co., Ltd.	rainbowTM Scanner	Corea	dentium.com	
DIPRO	DORA	Japan	dipro.co.jp	
E.G.S. S.r.l.	DScan 2+	Italy	egsolutions.com	
Imetric 3D GmbH	DScan series, L1 Scanner series	Switzerland	imetric.com	
Laserdentium GmbH	Open Scan 100	Germany	laserdenta.com	
NIVOL S.R.L.	DentalScanner	Italy	nivol.com	
Optical Metrology Ltd.	Dental CAD/CAM Scanner	Israel	optimet.com	
protechno	Ceratomic EVO	Spain	protechno.com	
smart optics Sensortechnik GmbH	Activity series	Germany	smartoptics.de	
Shining3d Tech	AutoScan 3D Dental Scanner	China	shining3d.com	
Zfx GmbH	Evolution	Germany	zfx-dental.com	
Zirkonzahn	Scanner S600 ARTI	Italy	zirkonzahn.com	
Zirkonzahn	FaceHunter (face scanner)	Italy	zirkonzahn.com	

Our integrated CAM solution

exocam

State-of-the-art CAM technology

With exocam, even novice users can take advantage of state-of-the-art CAM technology – seamlessly integrated with the CAD software.
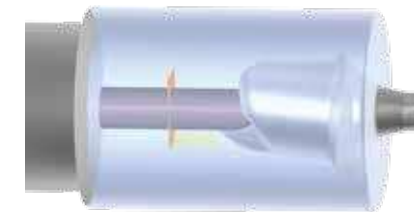
exocam features:

- Nesting of designs within material blocks
- Production queue management
- Material block management
- Visualization of tool paths, milling simulation

Following our philosophy of offering 'open, yet integrated' solutions, exocam is available either as a complete CAM solution (including tool path calculation), or as a 'nesting only' variant for integration with tool path calculation algorithms purchased from 3rd parties.

Two of the three top-selling 5-axis dental milling machines take advantage of exocam's easy to use interface. There's a reason for that.

exocam now supports milling on premill/preform abutment libraries

Multi-layer blanks can be visualized realistically, thanks to our TruSmile technology

Not yet using exocam?

Keep in mind that thanks to our open, XML-based exchange formats, exocad DentalCAD can be integrated easily with other CAM products. Please visit our website for further information.
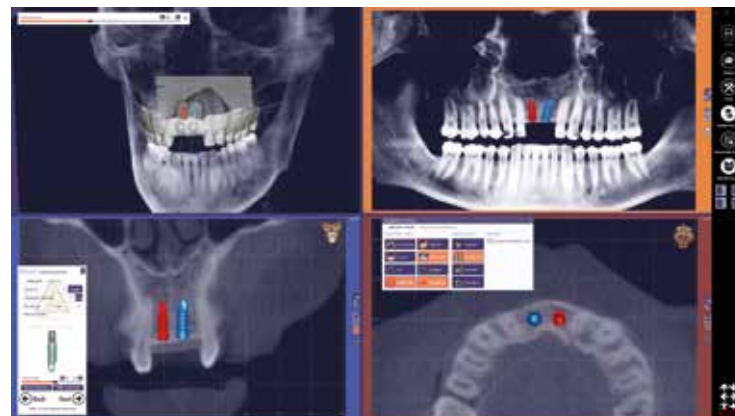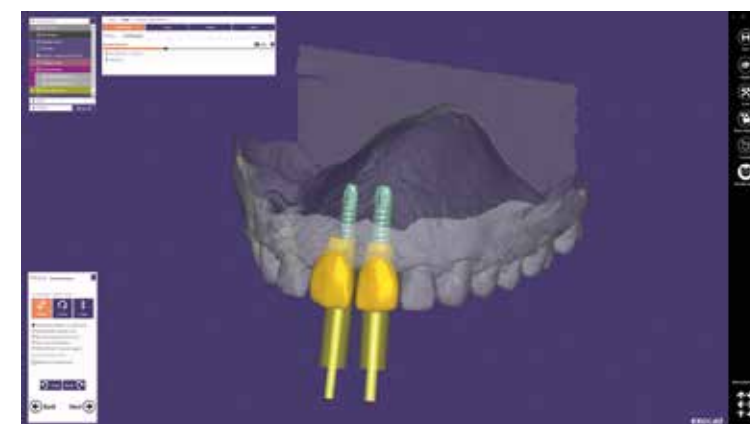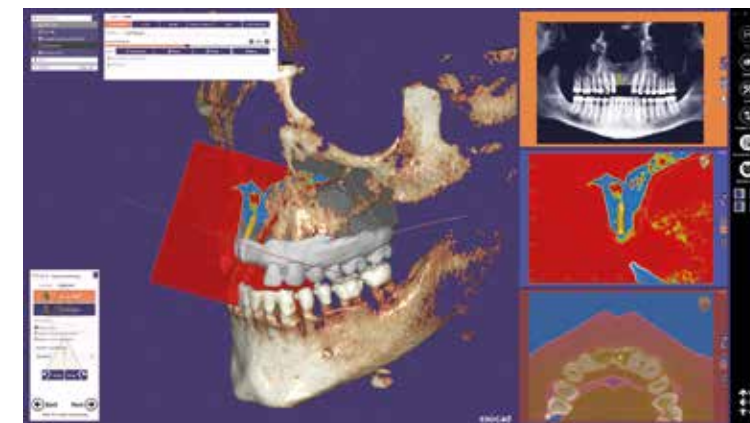
exoplan

An integrated solution for 3D implant planning

What you can expect:

- Load DICOM data from a wide selection of CT/DVT machines
- Advanced 2D and 3D visualization
- Easy matching of optical scan data and DICOM data
- Many analysis features
- Straightforward workflow
- Step-by-step user guidance through the entire process
- Adjust view arrangement and visualization options to your needs
- Produce surgical guides on basis of the exoplan output
- Seamlessly integrated with exocad DentalCAD

We've applied our expertise in creating easy to use, accessible digital dentistry solutions to the area of implant planning.
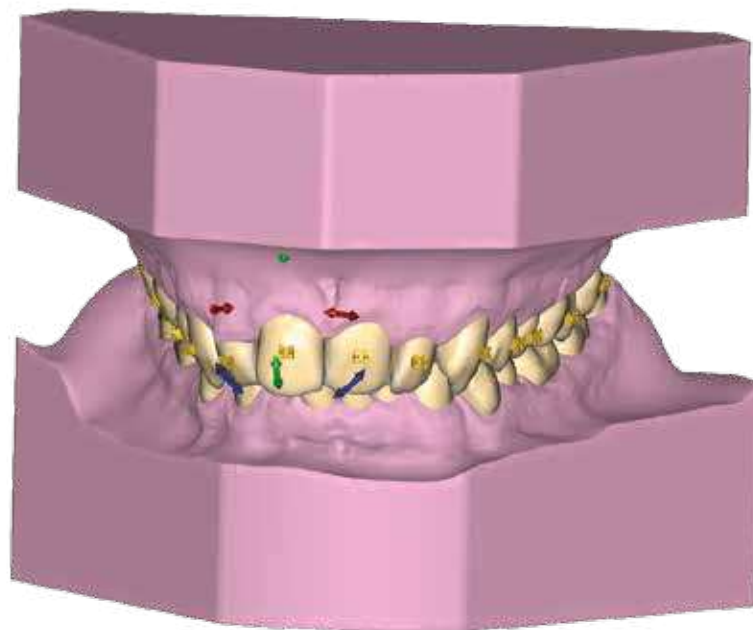
exocad Ortho

An integrated solution for orthodontic indications

exocad Ortho is our upcoming solution for the creation of orthodontic archive models, virtual tooth setups, bracket placement, and more. We're bringing exocad's strong points to the orthodontic world:

• Intuitive usage and fast results, thanks to a high level of automation

• Excellent integration with 3rd party hardware, including intra-oral and impression scanners

• Can be used together with TruSmile module, for almost photo-realistic tooth rendering
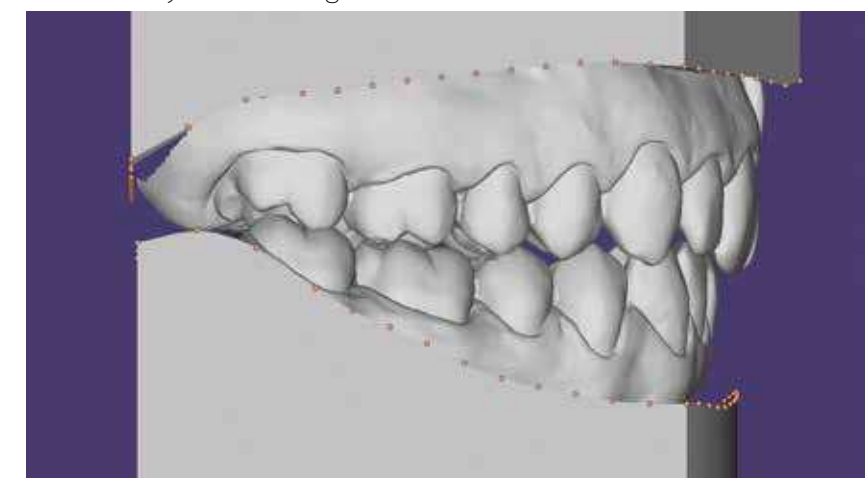
• Open platform

Bracket placement

One click tooth segmentation

Interactive study model design
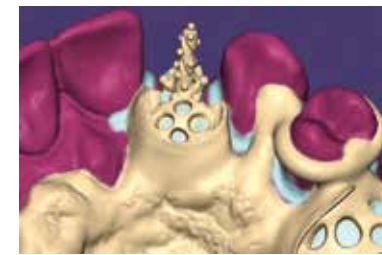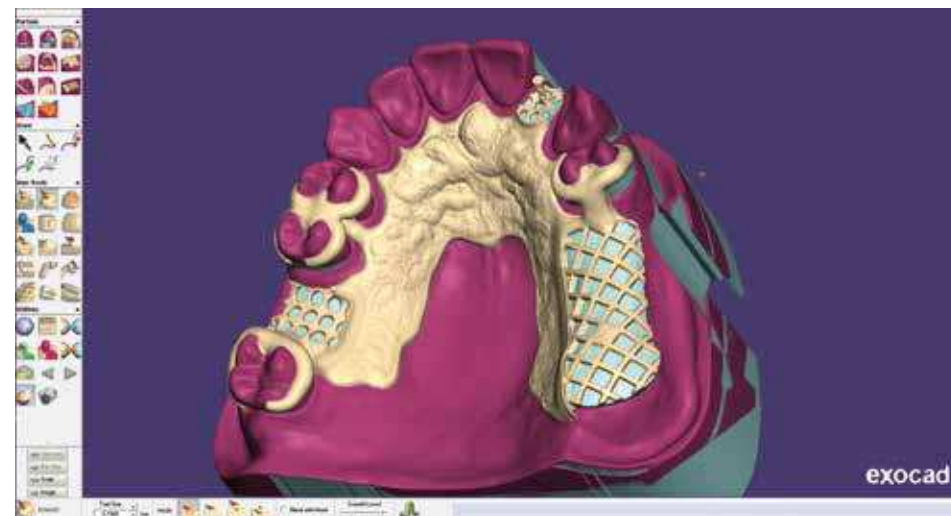
Partial Framework CAD

A proven solution, soon available from exocad

In 2014, exocad has acquired the assets of STI Holdings, the provider of the Sensable Dental Lab System (SDLS) - the industry's most powerful and versatile CAD/CAM solution for partial framework design.

exocad is working actively to further develop the platform, in order to make it available through its distribution partners as part of the exocad software portfolio.
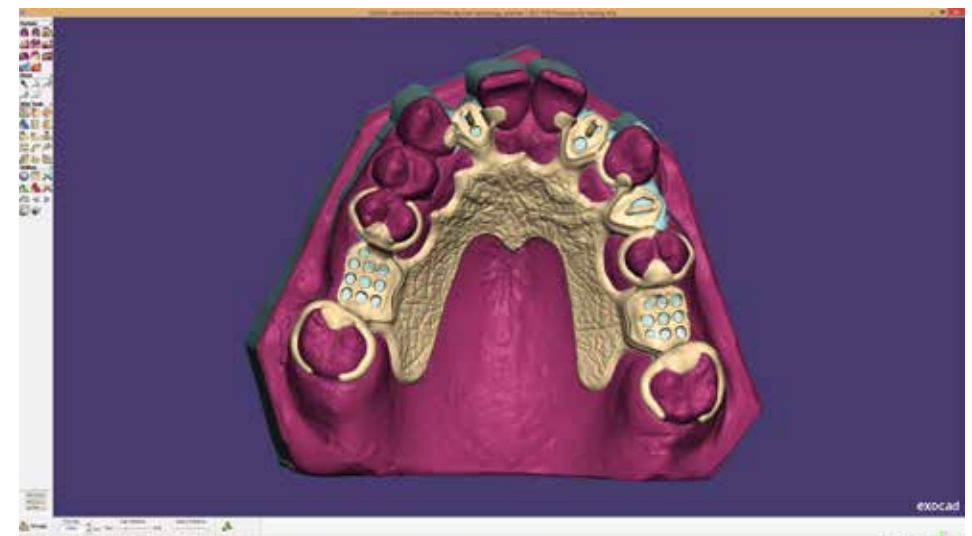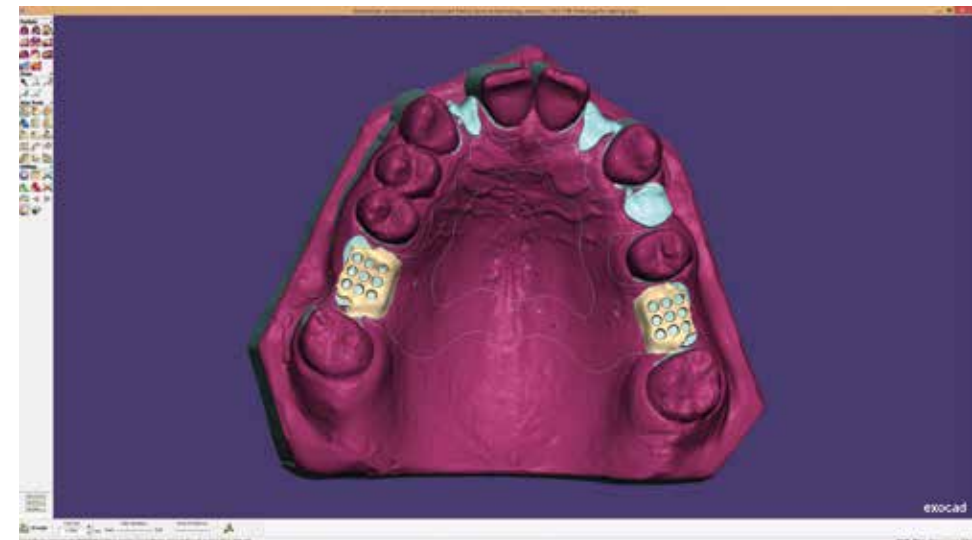
Tech-savy users who would like to get a sneak preview of what's coming up for Partial Framework Design can now download a fully functional, time-limited 'technology preview' edition of the software – it's free of charge for owners of the exocad DentalCAD software.

Find out more at exocad.com.

Outstanding design flexibility

With its outstanding design flexibility, our partial framework design solution meets the requirements of even the most demanding experts in the field.

exocad GmbH
The truly independent software provider for the dental CAD/CAM industry

About the company

exocad GmbH is a dynamic and innovative software company committed to expanding the possibilities of digital dentistry and providing OEMs (Original Equipment Manufacturers) with flexible, reliable and easy-to-use CAD/CAM software for dental labs and clinics.

exocad DentalCAD has been chosen by leading OEMs world wide for integration into their dental CAD/CAM offerings, and thousands of exocad DentalCAD licenses are being sold each year.

The company was founded in 2010 as a spin-off of the world-renowned Fraunhofer Organization, by the team that created the Fraunhofer IGD Dental CAD Platform. For many years, Fraunhofer's Institute for Computer Graphics (IGD) has been providing state of the art innovations in the area of CAD and visualization.

exocad GmbH has an exclusive license for Fraunhofer's dental CAD technology, developed by the founders of exocad while being researchers at Fraunhofer IGD.

Freedom of choice

Rather than selling directly, exocad instead partners with various manufacturers and packages its software tailored for you into their systems.

Thanks to close cooperation with several leading dental scanner manufacturers and CAM software producers, exocad DentalCAD is the basis for CAD/CAM systems with a perfectly integrated workflow – while still leaving customers the freedom to choose between various 3D scanners and CAM programs.

Leading brands such as Amann Girrbach, KaVo, Schütz Dental, Zfx and Zirkonzahn offer perfectly integrated CAD/CAM systems that take advantage of exocad's technology.

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exocad

Your exocad dealer