

Digital images

Tracing, cephalometric analysis, and treatment planning is performed in Facad with the use of digital images.

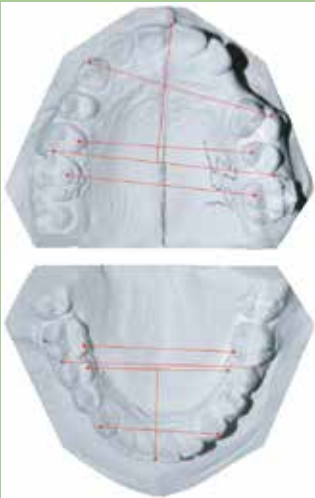
A digital x-ray image can either be a scanned x-ray film or a digital image file in JPEG, TIFF, BMP, or DICOM format.

Superimpose profile photo and lateral x-ray

In Facad, you can display both the x-ray image and the profile photo simultaneously with see-through effect, and also adjust the balance of the image blending.

PA x-ray and Study Model analysis

As well as for lateral x-ray images, you can as easily place landmarks on a PA (frontal) x-ray image or a 2D depicted cast model, thus calculating analysis values for these image types.



Arch Len U	34.1	mm
Arch Wid U3	46.6	mm
Arch Wid U5	42.8	mm
Arch Wid U6	46.5	mm
Arch Len L	23.5	mm
Arch Wid L3	29.2	mm
Arch Wid L5	34.7	mm
Arch Wid L6	37.0	mm

Producer

The software is developed by the Swedish company Ilexis AB in co-operation with the maxillo-facial unit at the University Hospital in Linköping, Sweden, and has been in clinical use since 1990.

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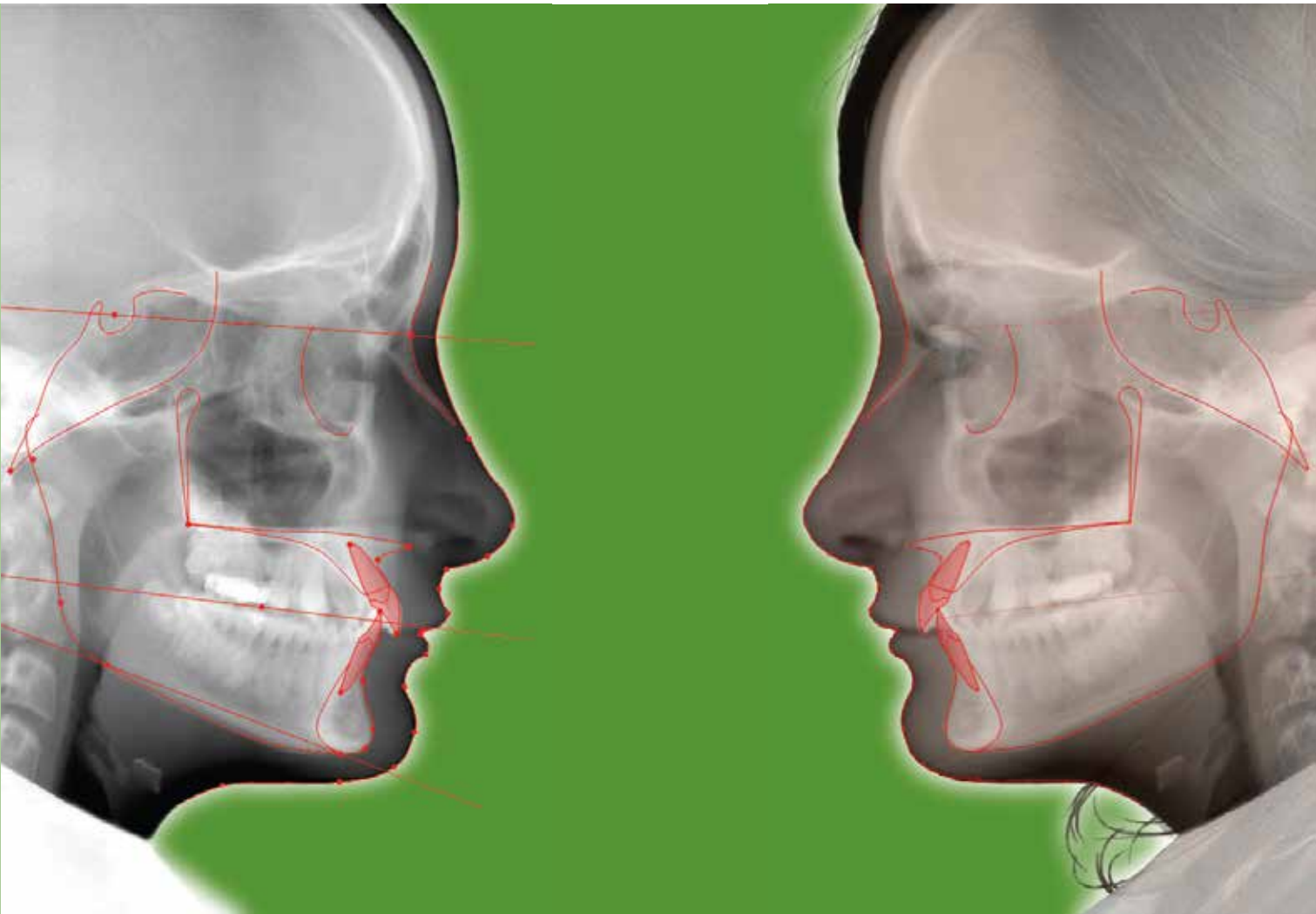


Facad versions

Facad works with Windows 10 / 8-8.1 / 7 / Vista and is available in two versions; the Full version and the Tracing Only version.

In this table you can compare the two versions.

FACAD	Tracing	Full
Images		
Connection with software programs for x-ray imaging, patient management systems, or PACS	●	●
Import of digital images	●	●
Image calibration	●	●
Image functions (zoom, brightness/contrast, rotate)	●	●
Attach profile photo to a tracing		●
Cephalometry		
More than 20 predefined standard analyses ABO • Arnett • Bergen/Hasund • Bimler • Bjork • Burstone • Downs • Holdaway soft • Jarabak • Jefferson-Sassouni • Legan-Burstone • Mahony FFG • McGann • McNamara • Oslo • Rakosi • Ricketts • Steiner • Tweed • Wylie • Frontal Oslo and Ricketts • Bolton and Moorees study model, and many more	●	●
Analysis editor	●	●
Interactive measurements	●	●
Tracing		
Place markers (landmarks)	●	●
Automatic placement of incisors	●	●
Place/Draw teeth and hard tissue	●	●
Place/Draw soft tissue profile line	●	●
Superimposition		
Superimpose tracings	●	●
Superimpose x-rays (see-through effect)	●	●
Superimpose ceph x-ray with profile photo		●
Output		
Printing	●	●
Copy/Export images and data	●	●
VTO - Visual Treatment Objective		
Planned movement of hard tissue and teeth		●
Soft tissue profile prediction		●
Profile photo prediction		●
Miscellaneous		
Multiple language support	●	●
Documentation in PDF	●	●



Tracing

Cephalometry

Superimposition

VTO - Treatment planning



FACAD

Orthodontic Tracing

Facad enables a quick and easy method to place anatomic landmarks (markers) directly on the digital x-ray image by just clicking the mouse. You will be guided throughout the process allowing you to place the markers necessary for the chosen analysis. Facad helps you to place the markers correctly by visualizing the current landmark in a guide and by automatic positioning of the mouse cursor. The tools for zooming and adjusting the image contrast/brightness enable you to place the markers with great accuracy. Any marker can afterwards be adjusted in order to be accurately placed.

Predefined graphic symbols for teeth are easily placed directly on the x-ray image with two clicks of the mouse. A placed tooth can later be adjusted regarding its position, size, and slope.



Hard tissue segments such as the maxilla and the mandible, and other anatomical structures are placed/drawn on the x-ray image using ready-made templates. The soft tissue profile line is quickly and correctly placed/drawn with the aid of automatic structure recognition. Any traced structure can afterwards be adjusted.

Tracing can be performed on a lateral image that depicts either the patient's right or left side.

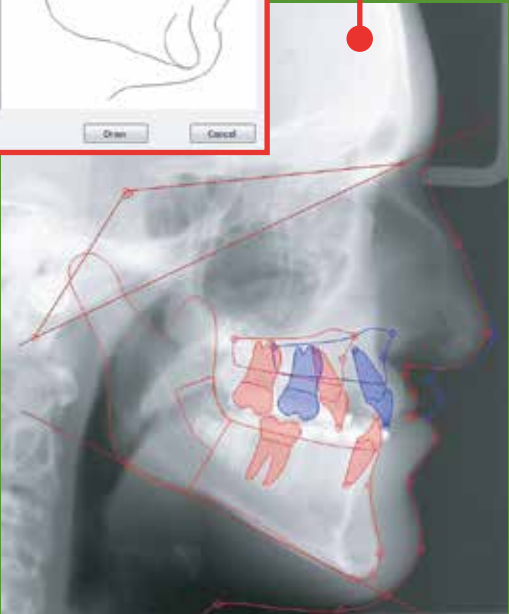
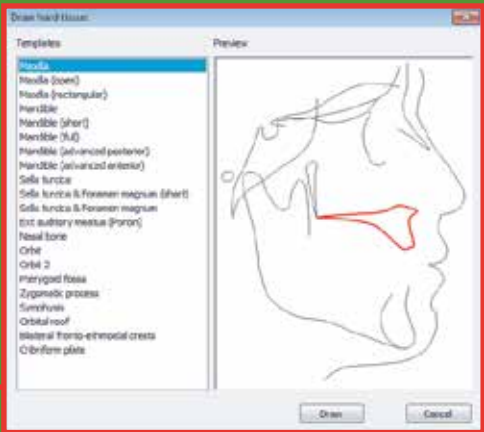
FACAD

Facad® is a very powerful, flexible, and easy-to-use PC/Windows software program used for orthodontic tracing, cephalometric analysis, and visual diagnostic imaging, as well as for treatment planning with soft tissue profile prediction for both orthodontics and maxillo-facial surgery. This program is meant to be used by orthodontists and orthofacial surgeons.

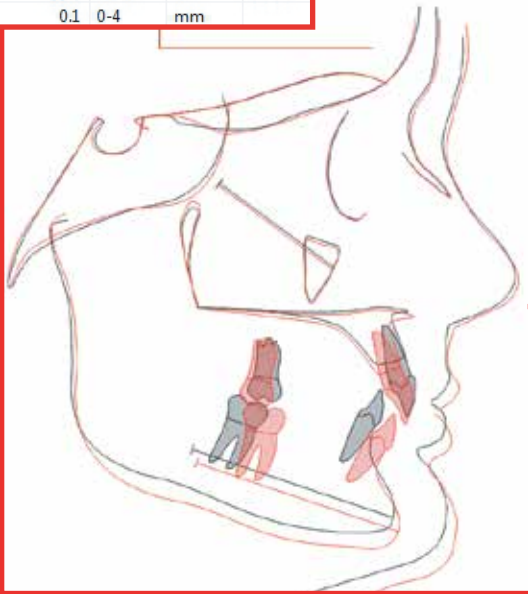
Integrates with other software

Facad is adapted to be able to receive patient data and digital images from other software such as programs for digital x-ray imaging, patient management systems, or PACS. The following list shows some examples of systems and software that Facad already is adapted to:

- Planmeca Romexis • Sirona Sidexis • Soredex Digora • Soredex Scanora • Instrumentarium CliniView • Gendex Vixwin • Dürr DBSwin • Schick CDR Dicom • Onepix • Carestream Dental • VisiQuick • DentalEye • Tieto Effic Viewer • Sectra IDS7 • Philips iSite • DICOM compatible systems, and more.



Bergen				
Ceph Name	Original	Norm	Unit	Dev O
SNA	85.5	80-89	°	
SNB	86.0	75-82	°	++
ANB	-0.5	2-4	°	---
SNPog	88.4	81±3	°	++
NSBa	119.8	130±5	°	--
Gonial angle	121.8	126±10	°	
ML/NSL	16.8	33±4	°	----
NL/NSL	1.9	7±3	°	-
ML/NL	15.0	25±5	°	--
Nasolabial	103.7	110±10	°	
Interincisal	126.5	130-150	°	-
ILs/NA	36.1	22±3	°	++++
Is-NA	6.4	4±2	mm	+
ILs/NSL	121.6	102±6	°	+++
ILI/NB	17.8	25±3	°	--
Ii-NB	1.6	4±2	mm	-
ILI/ML	95.0	94±4.5	°	
Pog-NB	3.6	4±2	mm	
UFH	45.7	55-60	mm	----
LFH	46.2		mm	
U:L Facial Hgh	99.0	79±5	%	++++
Wits	0.1	0-4	mm	



Cephalometric analyses

You can select the cephalometric analysis to be calculated during tracing from a list of standard analyses that come with the Facad program, or from a list of local, custom-made analyses. Any analysis can be modified or completely custom-made by yourself using the built-in analysis editor.

Facad automatically calculates accurate values for the measurements defined by the chosen analysis, and presents the result together with a symbolic presentation of the value's deviation from the norm mean value. Further measurements can be made interactively, directly on the digital image.

Superimposition

You can easily superimpose tracings, to be able to visually compare them simultaneously.

Facad allows for both automatic methods for alignment between tracings, and a manual method for aligning using stable anatomical structures.

The "Structural Method" by professor Arne Björk is fully implemented in Facad.

It is also possible to superimpose two x-ray images simultaneously with see-through effect.

VTO

Treatment planning

The graphic symbols for teeth and hard tissue segments such as the maxilla and the mandible, can interactively be moved (translated and rotated) with high precision to planned positions in order to simulate a maxillo-facial surgery treatment. It is also possible to enter numeric movement values (sagittal and vertical values in mm), when planning movement of hard tissue and teeth. Hard tissue segments can be split into several parts and the use of distractors can be simulated.

Soft tissue prediction

Using a model for soft tissue movements, a predicted soft tissue profile line is automatically presented during planned movement of hard tissue and teeth. A predicted photo can be generated by modifying the profile photo, based on the planned movements in the treatment plan.