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PLANMECA CUSTOMER MAGAZINE 2019



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Introducing Planmeca Compact™ i5 **6**

Low dose CBCT imaging **12**

Planmeca CALM™ algorithm **16**

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PLANMECA CUSTOMER MAGAZINE

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Always one step ahead



IT has been a busy year, with thousands of great people visiting our headquarters in Helsinki, as well as our stands at exhibitions all around the globe.

I am grateful of the fact that we have the best and most enthusiastic distributor partners and end users in the world. Healthcare technology is a rewarding field to work in, because we get to create innovations and to come up with new ways to do things every single year. Our main goal has always been to improve treatments and to make work more enjoyable. I humbly hope that we have succeeded at helping the field move forward, but there is forever more to achieve!

Last autumn, we were very excited to present our new dental unit – **Planmeca Compact™ i5**. Living up to its name, the unit has been built around five central themes: design, wellbeing, cleanliness, intelligence, and evolution. Planmeca Compact i5 is a dental unit everyone dreams of and I am glad to say it is now finally a reality.

You can read more about Planmeca Compact i5 and our other newest products and features in the pages of this magazine. They are another important step forward in the ongoing evolution of dentistry, but far from the end. We are introducing many more innovations in March at **IDS 2019** in Cologne. I hope you join us there to explore our complete solution for digital dentistry in person!

SINCERELY,

Heikki Kyöstiä
Planmeca founder and
President





Introducing Planmeca Compact™ i5

COPY HANNA KORLIN
IMAGE DINO AZINUR

Our new Planmeca Compact™ i5 dental unit has been built around five central themes – design, wellbeing, cleanliness, intelligence, and evolution. All of these principles are carried through in every detail of the dental unit, resulting in a perfect combination of functionality, durability, comfort, safety, and aesthetics.

DESIGN USER-CENTRIC THINKING

Planmeca Compact™ i5 has been designed not only to withstand time, but also to evolve with time. Its compact and lightweight design complements any dental clinic and can be easily tailored to different working preferences. From smooth delivery arm movements to the intuitive touch panel offering user guidance in 25 languages, every detail of the dental unit has been designed to make everyday work as smooth as possible, both now and in the future.

WELLBEING A RELAXED DENTAL TEAM AND PATIENTS

Planmeca Compact i5 has been designed to support the wellbeing of both the entire dental team and the patient. The floating chair with a narrowing backrest and the small cuspidor base enable convenient access to the treatment area, while the balanced instrument arms guarantee an ergonomic use of instruments. Patient comfort is by no means forgotten: the foldable leg rest enables easy entry and exit, and the custom-molded upholstery guarantees an enjoyable patient experience.

CLEANLINESS A SAFE WORKING AND TREATMENT ENVIRONMENT

In Planmeca Compact i5, all the essential infection control functions are integrated and neatly organised in their own compartments. The cleaning procedures are automated, and the LED indicator on the dental unit informs about their status. These practical solutions help to speed up infection control, which in turn means a faster patient flow and improved quality assurance.

INTELLIGENCE SMART TOOLS FOR SMART DENTISTRY

Just like all of Planmeca's digital equipment, Planmeca Compact i5 can be easily connected to a network in order to produce valuable data. With Planmeca's intelligent software solutions, clinics can track and follow their patient flow, optimise their capacity through real-time information, and monitor the use of their equipment. Furthermore, the dental unit's smart sign-in system allows fast access to personalised dental unit settings with a flash of a card.

EVOLUTION CONTINUOUS IMPROVEMENT

The rapidly changing world of dentistry – with its increasing quality assurance demands and the constantly growing patient flow – sets new demands for dental clinics, and Planmeca Compact i5 has been designed to cater to these demands. The dental unit is guaranteed to have a long life span: it has been built so that it can be upgraded with new features any time. This makes it a truly future-proof investment. ■

Extended volume size for Planmeca ProMax® 3D Classic



The Planmeca ProMax® 3D Classic X-ray unit has been designed to obtain complete information on a patient's anatomy in the minutest detail. This intelligent and multipurpose X-ray unit supports digital panoramic, cephalometric, and CBCT imaging as well as 3D photos and 3D model scans. Planmeca ProMax 3D Classic now also offers an extended volume diameter size which is optimal for full arch scans.

THE extended volume size increases the maximum diameter from Ø80x80 to up to Ø110x80 millimetres. This allows capturing a larger diagnostic area without increasing the effective patient dose as well as enables single rotation scans without stitching.

Planmeca developed the extended volume size by utilising its proprietary 3D reconstruction algorithms. Developing everything from hardware to software in-house allows us to constantly introduce new features to all our users, both old and new. Our mission is to ensure that Planmeca equipment is always a future-proof investment, as clinicians can upgrade to and take advantage of the best possible diagnostic tools – today and for years to come. ▀



Make any dental unit your own — personal settings with a flash of a card

Planmeca PlanID™ is our sign-in system that allows users to conveniently access their personal settings on any dental unit with a flash of a contactless card.

CUSTOMISATION has quickly become a driving force for consumer products. Whether we're talking about smartphones, cars, or something as simple as sneakers, users across the board have shown just how much they value the freedom to personalise either the appearance or usability of various products.

As an example of this strong trend, Tesla CEO **Elon Musk** recently revealed that the company has plans to soon move all car info and personal settings to a cloud – allowing drivers to use personalised seat, steering wheel, map, and radio settings in any Tesla in the world. In dentistry, Planmeca has for long been a forerunner in providing customised solutions. Last year, we launched a unique sign-in system that allows Planmeca users to make any dental unit their own with a fast flash of a contactless card.

Planmeca PlanID™ provides instant access to personalised treatment positions, instrument and language settings, theme colours, and more. The sign-on system is especially beneficial for dental universities and hospitals as well as large clinics and chains with many users. With dental units that adapt to the needs of different users instantly, the use of treatment facilities becomes much more flexible – significantly improving overall efficiency. Planmeca PlanID supports an unlimited number of users and is available for all Planmeca dental units. ▀



Planmeca's intraoral scanners approved by orthodontic solution providers

The Planmeca Emerald™ and Planmeca PlanScan® intraoral scanners are now approved by several orthodontic solution providers.

THANKS to these approvals, the users of Planmeca's intraoral scanners can enjoy a completely digital orthodontic workflow. After scanning the upper and lower arches as well as the bite of the patient, the scans can be sent directly to the solution provider for the designing and manufacturing of the desired orthodontic appliances.

"We're thrilled that the users of our intraoral scanners can now benefit from these new partnerships and enjoy a smooth and integrated workflow", says Jukka Kanerva, Vice President for Planmeca's dental care units and CAD/CAM division.

"We always want to ensure that doctors have the best possible orthodontic tools and systems to work with."



Planmeca Emerald™ is compatible with, among others, the following providers:



For a full and up-to-date list of all the orthodontic solution providers, go to www.planmeca.com/orthocompliance

Planmeca Sovereign® Classic Give patients the royal treatment

- Instant personal settings with the contactless Planmeca PlanID™ card
- Symmetrical positioning – can be swiftly converted from left to right-handed dentistry
- Intelligent infection control



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PLANMECA

Set the highest standards with the lowest doses



PROVEN LOW DOSE IMAGING

While standard patient doses have been lowered significantly over the years, the pioneering Planmeca Ultra Low Dose™ imaging protocol further allows lowering effective patient doses. It can be used with all voxel sizes and in all imaging modes to capture 3D images at a significantly lower dose than standard imaging. All this can be done without a statistical reduction in image quality.

The Planmeca Ultra Low Dose imaging protocol's effectiveness has been confirmed in a scientific study led by the renowned radiologist Dr. John Barrett Ludlow. The study's conclusion states as follows:

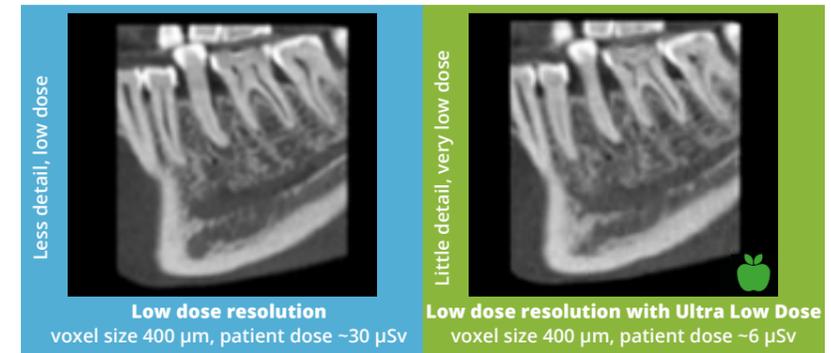
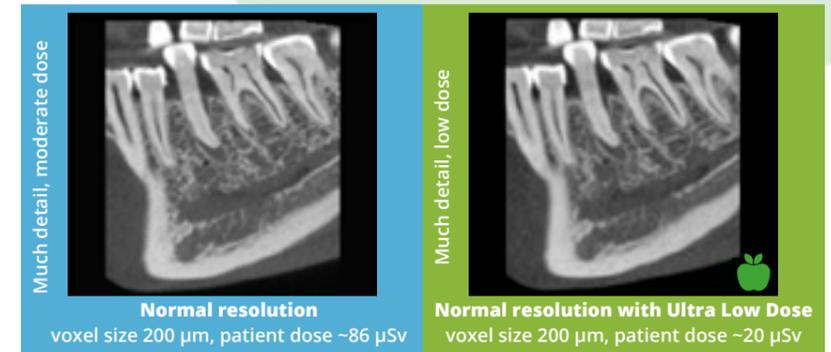
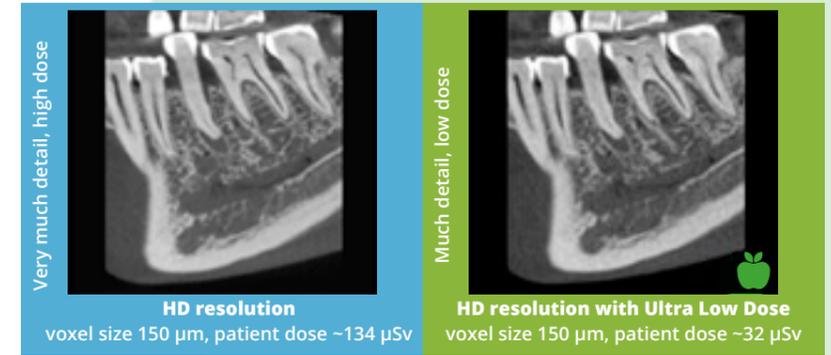
"An average reduction in dose of 77% was achieved using ULD protocols when compared with standard protocols. While this dose reduction was significant, no statistical reduction in image quality between ULD and standard protocols was seen. This would suggest that patient doses can be reduced without loss of diagnostic quality." (Ludlow, John Barrett and Koivisto, Juha: Dosimetry of Orthodontic Diagnostic FOVs Using Low Dose CBCT protocol)

KNOWLEDGE IS POWER

Attentive clinicians can see differences in image quality for themselves, but they still need to rely on others to tell them what the effective patient dose is. Not all manufacturers can reliably provide users with such information

Planmeca can give prospective and existing customers clear information on the effective patient doses of its CBCT units. The Planmeca Ultra Low Dose protocol allows our units to achieve doses so low that some of our competitors do not want to believe it.

When shopping for a CBCT unit, be sure to exercise your right to receive all necessary information on the product. Always ask for accurate info on patient doses and compare the difference in image quality between standard and low dose images. ▀



Planmeca Ultra Low Dose™ is the world's leading method for acquiring CBCT images at low effective patient doses without a statistical reduction in image quality. It allows clinicians to gather more information than from standard 2D panoramic images at an equivalent or even lower patient dose.

CBCT – cone beam computed tomography – has been one of the most essential technological innovations in dentistry over the past two decades. The imaging technique is used to capture high quality 3D images of the oral and maxillo-facial region, revealing intricate information on soft tissues, teeth, nerves, and bone in a single scan.

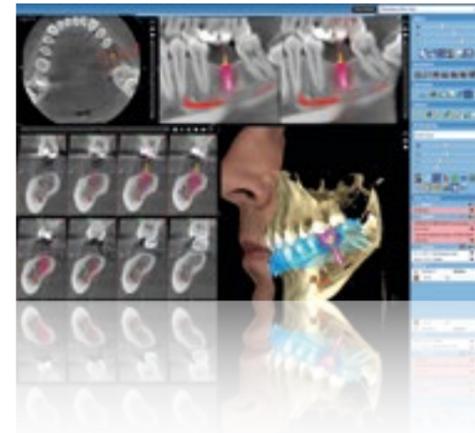
Three-dimensional CBCT images provide clinicians with vastly more information than traditional two-dimensional panoramic images. This enables more precise treatments to take place and consequently improves the overall level of care.



Better care through software

As the world has shifted to a more software-centred approach, dentistry has followed suit – leading to expanded possibilities, increased efficiency and improved levels of care.

COPY OSKU SUNDQVIST
IMAGES PLANMECA OY



FROM televisions to mobile phones and even cars, software has disrupted several industries, as its role has become significantly more important.

Dentistry is no different. With high-tech hardware as a solid foundation to build on, pioneering dental companies have turned to software in an effort to elevate usability to new levels and to make sure users receive extended returns on their investments. The entire experience of working in dentistry is increasingly defined by software.

Users today expect – and deserve – more than ever before. Dental equipment has a long life expectancy, as it is usually used for several years or even for over a decade. This means that equipment users strongly rely on software updates and upgrades to get the latest features, to enjoy optimal diagnostic quality and to ensure patient safety.

We at Planmeca have been leading the charge ever since the late 1990s – first with **Planmeca Dimaxis™** and in the 2000s with the **Planmeca Romexis®** software platform. Our visionary approach foresaw the changing climate in the world of technology and has allowed us to really focus on providing premium usability. We continually introduce new products that work together seamlessly and meet the growing needs of today's dental professionals.

You could even say that Romexis is the brain behind Planmeca's equipment. The software offers several key benefits that our

competitors cannot match and helps make daily work more efficient and enjoyable for users around the world.

Typically, clinicians need to rely on several completely different software programs for different purposes – they will have one software for panoramic imaging, another one for CBCT imaging and a third one for CAD/CAM dentistry, for example. Switching between different software programs can be inefficient, disrupt the workflow and reduce time for patient care.

Fortunately, unlike competing software programs, Romexis allows working on all imaging and CAD/CAM data in the same software. It also provides a wide array of tools to match all types of specialist needs.

We call Romexis an all-in-one software, because it truly is a singular solution for all needs:

- All imaging – support for open file formats ensures smooth importing and exporting
- All specialities – features a wide variety of tools and features for specific tasks
- All clinic sizes – a single centralised database allows easy access to clinical data
- All operating systems – runs on Windows and Mac with applications for iOS and Android also available

Romexis offers a completely integrated digital workflow that

covers all treatment steps – from scanning and diagnosing to planning and creating. Manufacturing can be done either by 3D printing or by milling. Equipped with extensive specialist tools, secure communication options and seamless integration with Planmeca equipment, the software allows users to either complete the entire workflow directly at their clinic or to flexibly outsource any part of it. The choice is entirely yours! ■



Osku Sundqvist
Product Manager,
Digital Imaging and
Applications Planmeca

Planmeca CALM™ algorithm for patient movement correction is “the real deal”



PLANMECA'S R&D DEPARTMENT CONDUCTED TESTS THAT EVALUATED THE EFFECT A SHAKING PHANTOM HAD ON IMAGE QUALITY WITH AND WITHOUT ARTEFACT CORRECTION.



Image 1. The original reconstruction captured at a very low dose



Image 2. A reconstruction with the Planmeca AINO™ 3D noise filter algorithm applied



Image 3. A reconstruction with both Planmeca CALM™ and Planmeca AINO applied

Our Planmeca CALM™ algorithm for correcting patient movement in CBCT images is taking dentistry by storm. As the first end-user solution for motion artefact correction from a dental manufacturer, the feature has already been praised by dentists out in the field. Planmeca's 3D Imaging Specialist Mikko Lilja recounts how the ground-breaking algorithm came to be and why he believes every dentist can benefit from it.

“In the past, dentists would send their unsatisfactory images to the manufacturer or just redo the entire scan, but with Planmeca CALM this is now a thing of the past. We are proud to be the first dental manufacturer to provide a solution for motion artefact correction to the end-user”, Lilja says.

COPY ALEKSANDRA NYHOLM
IMAGE PÄIVI TELENIOUS



“It all happened very naturally”, says Mikko Lilja as he describes the background to developing Planmeca CALM™, the trailblazing iterative algorithm for correcting patient movement.

“I had gained a good understanding of movement as an imaging problem in my doctoral research work. When it then turned out this was also a topic of interest for Planmeca, it all came together.”

The name CALM stands for Correction Algorithm for Latent Movement and describes a projection geometry optimisation algorithm which can analyse and compensate for patient movement in CBCT images. The outcome is an improved image which eliminates the need for retakes – saving time and improving patient safety.

UNIQUE END-USER SOLUTION

Patient movement is among the most significant challenges to CBCT image quality. When a patient moves during imaging, it produces artefacts that affect the quality of the image.

“In tomographic reconstruction, the assumption is that the measurements – in this case the CBCT X-ray projection images – are geometrically consistent with one another”, Lilja explains, “but when a patient moves, the data no longer adds up, which shows in the reconstruction.

“What Planmeca CALM does is it restores the consistency of the X-ray measurements by tracking the movement of the patient, resulting in a sharper final image.”

Planmeca CALM works with all volume and voxel sizes and adds only under 30 seconds to the overall reconstruction time. The feature can be applied after the scan is complete, but also before exposure to ensure that the volumes are already corrected when they are accessed in the Planmeca Romexis® software.

HIGH EXPERTISE MEETS HIGH TECHNOLOGY

According to Lilja, an end-user solution for patient movement correction had been on Planmeca's algorithm development roadmap for some time, and was assigned to him upon joining the Planmeca 3D imaging team.

“I think the timing was perfect for everybody. With Planmeca's expertise in medical imaging and image reconstruction and my knowledge of movement correction, we just immediately put our heads together and got to work.”

The development process was not without its challenges, and a lot of effort went into creating a dedicated algorithm for Planmeca CBCT devices.

“My previous experience was related to industrial tomography imaging, where things like reconstruction times and the imaged target itself were very different. So although our first prototype tests were encouraging, we had to go back to the drawing board time and again to produce a new algorithm for dental imaging”, Lilja recounts. ➔



"Thankfully, I had a lot of help from my extremely capable colleagues which allowed me to focus on the core problem."

The final product was presented at IDS 2017 in Cologne to much excitement and industry buzz.

IMPROVES THE QUALITY OF ANY IMAGE

Planmeca CALM offers many advantages for dental imaging. The feature is particularly beneficial when imaging restless or livelier patients such as children, individuals with special needs, or elderly patients. According to Lilja, however, the algorithm can add value to any image.

"On the one end we have of course the images where the patient has moved to such an extent that an image may be unusable without Planmeca CALM, but in my experience it always improves the quality of the image. Even in cases where you might not typically think there has been significant movement, Planmeca CALM can noticeably enhance the image and enable seeing more details", Lilja describes.

"Whatever the case, it is being able to correct movement artefacts 'in house' rather than having to resort to retakes or sending the image for enhancement which is key here", Lilja states. "When the dentist is able to make the correction themselves, the end result is improved diagnostics, time saved, reduced costs, and less exposure to radiation."

THE REAL DEAL

Planmeca CALM has been praised among dentists since its release earlier this year. "The feedback we have received so far has been overwhelmingly positive. It has been truly heart-warming to hear that the hard work that went into it is also bearing fruit", says Lilja.

"I've even heard that the software has been tested by shaking a phantom head around in the X-ray unit, but that all tests have come to the conclusion that it's 'the real deal'. It's a great feeling!"

Planmeca CALM is available as a software update for all Planmeca CBCT units. Contact your dealer for more information on upgrading your Planmeca unit! ▀

Planmeca Viso™ The next generation of CBCT imaging

We designed the most advanced full-skull CBCT unit without cutting any corners. Only the best for you and your patients!



- 
Live virtual FOV positioning
 See the patient live from the unit's control panel for flexible and exact FOV positioning
- 
Freely adjustable volume
 An unlimited field of view range to cover all clinical needs – from a single tooth to a full skull
- 
Planmeca CALM™
 Our new patient movement correction algorithm – for perfect results every time
- 
Planmeca Ultra Low Dose™
 Enables CBCT imaging with an even lower dose than panoramic imaging
- 
Planmeca ProCeph™ option
 Planmeca Viso can also be equipped with the Planmeca ProCeph™ one-shot cephalostat

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PLANMECA

Dr. Walter Renne encourages all to go digital: “There are no limitations to what you can do with intraoral scanning”



Dr. Walter Renne is a busy man. In addition to his position of Associate Professor at the Medical University of South Carolina, he is an active ambassador of digital dentistry. In this interview with PlanWorld, Dr. Renne tells how he originally got into CAD/CAM, shares his experiences using Planmeca products, and urges everyone to hop on board the digital train – sooner rather than later.

COPY DANIEL PURSSILA
IMAGES SAMPPA FJÄDER AND PLANMECA OY

You are very active in the CAD/CAM and digital dentistry community and share a lot of the stuff you do through Youtube and other avenues. How did you originally become interested in the field?

“I originally became interested when I saw the conservative nature of the restorations that were produced with CAD/CAM systems. That was the paradigm shift that occurred which propelled me into digital dentistry.

Instead of preparing the tooth and destroying parts that are not affected by the defect, with ceramic bonding and the ability to scan and do single-visit restorations you can be more conservative and don't have to worry about provisionalisation. If a patient has a defect – a broken cusp or an area that needs attention – I can replace just that for them.”

You have over over 10 years of CAD/CAM experience and have also been using Planmeca's system for a decade already. What has kept you with the company for such a long period?

“The nice thing about Planmeca products is that there is really a whole platform that exists and is integrated seamlessly together. In other words, I can use a digital impression to design and fabricate restorations for patients, but I can also utilise the exact same scanning platform for implant planning and merging with CBCT images – and now even create 3D printed surgical guides in-office.”

What kind of cases do you typically use Planmeca's products for and how have they helped you achieve great results?

“I'm your average general dentist, in a way. I like to dabble in a little bit of everything. I use the **Planmeca FIT**® CAD/CAM system for simple single restorations – such as inlays, onlays, and crowns – and about once a week I also create smiles with the system with



help from the **Planmeca Romexis**® Smile Design software.

In addition, I do veneers and conservative ceramic restorations in the anterior dentition, typically 6–8 units, to transform patients' smiles. I think that is definitely most rewarding. But I also do simple implant cases with 3D printer surgical guides, so I do indeed do a little bit of everything.”

You've also been designing guides with the new Planmeca Romexis® Implant Guide module for a while now and have had good experiences doing so. What makes the process so successful?

“What's unique about Romexis Implant Guide is how open it is. I can take DICOM data from any scanner and an STL file from anywhere and merge them together to fabricate a guide in-office without getting charged every time I use the software.

Simplicity is another key factor. The way that you go about planning is remarkably simple! Anyone could do it. Planmeca has also added options from dozens of implant manufacturers

to their library to make it easy to pick what you like to use in your practice.”

You've used the Planmeca PlanScan® intraoral scanner quite a bit and it was also featured in a study you published with several of your fellow academics. What do you consider the scanner's main strengths to be?

“Planmeca PlanScan has been probably the best quadrant scanner on the market. It excels at bread and butter general dentistry. The scanner is super accurate at smaller scan ratios. Due to this accuracy, it can be used for precision-fit restorations. That's where it excels best.

You know, they increased the scan speeds dramatically with just a software update. It's pretty remarkable. In my experience, it's at least double. That means the older scanner is now pretty much in line with newer scanners in the market – so it's very, very nice that that's just a software update. In addition to that, they're working on really nice abutment and scan body platforms that could be used for single-visit implant restorations.”

In turn, the new Planmeca Emerald™ scanner was released in 2017 and you've been using it right from the start. What have your impressions on the new scanner been?

“Planmeca Emerald is your full arch workhorse scanner. Whereas Planmeca PlanScan I really like for scanning quadrants and things like that, I feel like Planmeca Emerald has been designed from the ground up for full-arch scanning – and it does it remarkably well.

The scanner is very fast and lightweight. You wouldn't think weight is a big thing, but it's something you have to touch and feel to understand. When you pick the scanner up, it's as if you are holding nothing. It flows and moves in the mouth unlike any other scanner I've had a privilege to use.”

Going forward, how do you see intraoral scanning evolving in general? For example, in terms of the available range of indications beyond crowns and orthopaedics.

“There are no limitations to what you can do with intraoral scanning. I do full-mouth reconstructions and large implant cases with it. But diagnostically, it's also good to just take baseline scans of patients coming in. It takes under two minutes to scan a full arch, so why not take digital records of where a patient is at that point in time? It'll allow you can re-scan and analyse down the road. I really see physical impressions going completely out of the average dentist's practice within 10 years.”



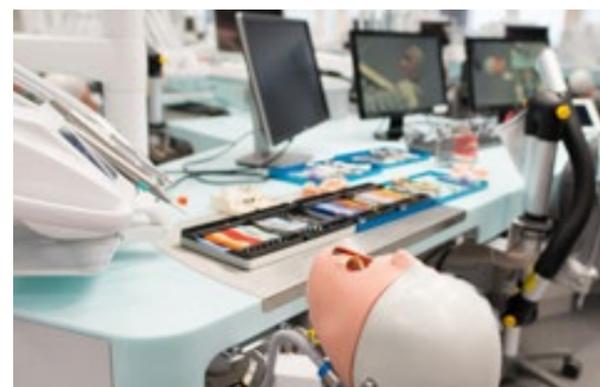
Dr. Walter Renne
Associate Professor
Medical University of South Carolina
Department of Oral Rehabilitation
Division of Restorative Dentistry



Planmeca's university solutions come into their own at Dentopolis

COPY HANNA KORLIN AND ALEKSANDRA NYHOLM
IMAGES MARKKU NAPPARI AND KULMAKUVAAMO/SEIJA LESKELÄ

In Oulu, Finland, dental students train for their future profession using, among other things, Planmeca's state-of-the-art dental units and new CAD/CAM teaching solutions. This helps the students adopt the very latest technologies and ergonomic working methods right from the beginning of their studies.



AN ULTRA-MODERN HUB FOR DENTAL CARE AND EDUCATION

Inaugurated in autumn 2017, Dentopolis is a Finnish dental care, research and education facility jointly administered by the City of Oulu, University of Oulu and Oulu University of Applied Sciences.

Now, the education and research facilities of the University of Oulu's Unit of Oral Health Sciences, the Central Dental Care Clinic of the City of Oulu and the dental hygienist training of the Oulu University of Applied Sciences can all be found under one roof.

Dentopolis serves some 50,000 Oulu residents each year. Basic dental care and emergency services are located on the first floor, orthodontists and other dental specialists have their offices on the second floor, and a teaching dental clinic is housed on the top floor. The teaching clinic is where the students perform their patient training. The building also has lecture halls, study rooms and state-of-the-art phantom and simulation laboratory teaching facilities, where students can practice procedures in a realistic environment.



*In attendance at the inauguration: Dean of the Faculty of Medicine, University of Oulu and Chairman of the Board of the Oulu City Board **Kyösti Oikarinen**, Finland's Prime Minister **Juha Sipilä**; Mayor of the City of Oulu **Päivi Laajala**; Planmeca Group President and founder **Heikki Kyöstiä**, Rector of the Oulu University of Applied Sciences **Jouko Paaso**; and retired Mayor of the City of Oulu **Matti Pennanen**. (Photo: Kulmakuvaamo / Seija Leskelä)*

PLANMECA'S SIMULATION SOLUTIONS USED FOR A NATURAL TRANSITION TO CLINICAL PRACTICE

The teaching facilities at Dentopolis are equipped with 59 Planmeca simulation units, which are similar to the dental units used in the teaching dental clinic. This makes it possible for students to work in a lifelike environment right from the start. The transition from preclinical to clinical work does not seem like such a big leap when working with familiar equipment.

By practising on a real dental unit, students also develop proper working ergonomics straight away, which is essential to preventing neck and shoulder disorders later in their careers. The teaching facilities are equipped with large screens, which are used to display teaching situations. Students can also follow instructions on workstation displays.

In addition to a phantom hall, Dentopolis has a state-of-the-art, eight-place simulation laboratory exclusively developed by Planmeca for the University of Oulu. In this simulation laboratory, students practise, among other things, the use of instruments with the help of haptic feedback.

PLANMECA CAD/CAM SOLUTIONS USED AS A TEACHING TOOL

In the phantom hall, each workstation has a connection for the Planmeca

PlanScan® intraoral scanner. The scanner is used particularly in prosthetics courses. The Planmeca Romexis® Compare evaluation tool is used to compare the work done by students with that done by the teacher – the software allows similarities in the work to be compared in percentage terms.

The teaching dental clinic uses the Planmeca FIT® CAD/CAM system, in which teachers and students are provided continuous training. Students practise, for example, crown work, inlays/onlays and bridges. They also finish the work themselves and learn how to choose the right materials for each patient.

Experiences with Planmeca's CAD/CAM solutions have been positive. Students have adopted the system enthusiastically and have even begun using it in patient work.

STATE-OF-THE-ART DENTAL EQUIPMENT AND CENTRALISED SOLUTIONS ENHANCE EFFICIENCY

In addition to the university's simulation units, Planmeca supplied the City of Oulu with 48 digital Planmeca Compact™ i Touch dental units, some of which are in use at the teaching dental clinic and other in the Central Dental Care Clinic. Another 14 of the same dental units were delivered to the Oulu University

of Applied Sciences for their dental hygienist training.

All of the Planmeca dental units previously in use by the City of Oulu will be updated in the near future. The updatability of Planmeca's dental units makes it possible for new features to be added to older models.

Dentopolis's teaching dental clinic is the first teaching clinic in the world to take into use the new Planmeca PlanID™ sign-in system, which allows dental unit users to access their personal settings with a simple flash of a card. The system enhances operational efficiency particularly in clinics with a large number of different users.

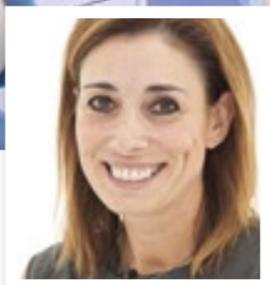
Planmeca's centralised water treatment system, which ensures that the water used in the dental units is always pure, is also in use. The system is entirely chemical-free. Dentopolis has also installed a centralised suction tube cleaning system, jointly developed by Planmeca and Dürr.

"On the whole, Dentopolis is one of the world's finest dental training facilities, both inside and out. It has been a privilege to work with them, and we look forward to continuing our work on future projects", says Plandent Sales Manager Markku Nappari.

"As an equipment supplier, Planmeca has been a very straightforward and honest partner, staying true to agreed timetables and keeping its delivery promises", adds Professor Pertti Pirttiniemi from Dentopolis. ▀



Dr. Maria Terzidou



Dr. Faini Iordanoglou



Planmeca Compact™ i units

"perfect from the start" at dental clinics in Greece

COPY ALEKSANDRA NYHOLM
IMAGES MARIA TERZIDOU AND
FAINI IORDANOGLOU

In Greece, two experienced dental specialists have found the right fit in Planmeca Compact™ i dental units. Dentists Maria Terzidou and Faini Iordanoglou have especially appreciated the units' wide movement range, ergonomic design, and easy patient access which adapt to many specialisations. The user-friendly features have also received praise from colleagues and patients.



ORTHODONTIST Maria Terzidou's relationship with Planmeca goes more than 20 years back. After completing her dental studies in Greece, Terzidou's combined interest in orthodontics and the Nordics led her to apply for the postgraduate programme at the University of Helsinki in 1996. At the university, she was introduced to Planmeca's dental equipment.

"I completed my postgraduate studies in Helsinki in 1999, after which I went back to Greece and eventually started my own private practice", Terzidou says. "But already before I left Finland I had decided that I definitely wanted Planmeca dental units for my clinic."

Terzidou runs her private practice MT Orthodontics in Katerini, a town of about 85,000 people not far from Greece's second largest city, Thessaloniki. She currently has three Planmeca Compact™ i dental units at her clinic which she has worked with since 2003. She hasn't looked back since.

"It's now been approximately 15 years I've had my three Planmeca dental units and they have always been very reliable and easy to work with. Having worked all these years with my units, I've definitely never had to regret my choice", Terzidou praises the equipment.

A MARKET-DRIVEN DECISION

In the capital city of Athens, periodontist and dental surgeon Faini Iordanoglou is newer to Planmeca dental units. Iordanoglou, who has worked at her family clinic for over 20 years, acquired her Planmeca Compact™ i Touch in 2016 and has

been very impressed with its user-friendly features.

"It's been very pleasant to work with and very comfortable for the patient", says Iordanoglou of her unit. "I especially like the side delivery with which I can take all the unit instruments behind the patient. This way the patient doesn't need to see them when he or she sits down in the chair. It's a nice feature."

Iordanoglou says her decision to opt for Planmeca dental units was strongly influenced by a visit to France, where she had previously completed her degree in dentistry.

"I actually went last year to my friends in France, and I saw that they all had Planmeca", she explains.

"Planmeca is the market leader in France and my friends told me the equipment is great, so I said, okay - I will change, I will take Planmeca as well. I'll do it the French way."

FEATURES FOR MANY SPECIALISATIONS

According to Terzidou and Iordanoglou, Planmeca dental units have responded well to both of their needs as dental specialists.

"For my part, I chose the Planmeca Compact™ i Classic units", says Terzidou, "because as an orthodontist I didn't want something heavy for my work. The Planmeca dental units enable me to work very smoothly around the patient, and of course the soft upholstery is very nice for the patient as well. Because of my specialisation, I have a lot of kids as patients, and it's very, very often that they fall asleep during treatment. That's how comfortable it is."

The patient-friendly design of the chair has also played an important role in Iordanoglou's work. "I do mostly surgery, which is not that pleasant for the patient, but with the Planmeca chair I can at least provide them with a seat that is nice and comfortable."

"When I changed to Planmeca, all my patients started telling me how nice it was, asking 'can we sleep here,' 'do you have a massage...'" Iordanoglou says, laughing. "The memory foam is better in this chair than in your own bed."

EASY TO LEARN, EASY TO USE

Despite having worked with another unit for more than 20 years, ➤



Planmeca Solanna™ operating light For brighter workdays



Iordanoglou had no trouble getting to grips with her new Planmeca Compact i. "All the instructions, everything was on a USB stick, which made the learning process very easy. I also work with an assistant, and she was very excited when we switched to Planmeca. It's so very nice, and certainly different from the old one."

Terzidou agrees: "There are no complex systems as with other dental units", she explains. "Sometimes when you have an assistant or nurse who is unfamiliar with a device, it can be difficult to teach them how to use it, but with Planmeca dental units you just don't have this problem. They are very easy to use."

PERFECT FROM THE BEGINNING

A dental unit is more than just patient comfort or easy instructions – for the dentist, it is one of the most of

important tools of the trade. At the same time, the nature of their work necessitates that dentists sometimes remain in demanding working positions for extended periods of time. This demands a lot of the ergonomic solutions and movement range of the unit.

For both Iordanoglou and Terzidou, however, the Planmeca Compact i units have risen to the challenge. "It's very ergonomic for the dental nurse as well as for my way of sitting and working", Terzidou commends the unit. Meanwhile, Iordanoglou has been particularly pleased with the lighting: "I really like the operating light – it's very focused and intense, which makes it easy to work with."

Still, for Terzidou, perhaps the most valuable feature of the unit has been its user-friendly design which enables easy access to the patient.

"It's the cut of the chair", notes Terzidou. "The whole shape of the dental unit allows the dentist to get very close to the patient's mouth and to work easily around them. For me, this is the most important consideration, because as dentists we live in our practices half of our lives."

As a result, in both Katerini and Athens it looks like the Planmeca Compact i units are there to stay. "I've had my unit for a while now and had no problem at all learning to use it", says Iordanoglou. Terzidou, who has been using her units for 15 years, is just as satisfied with her equipment. "I've never had a bad day at work because of my units."

"That means that the technology has been perfect since 2003 – not only now." ■



- Combines optimum visibility with complete adjustability
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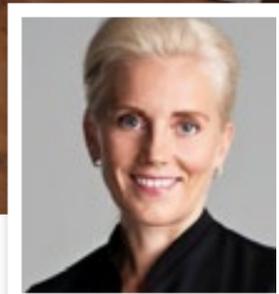
Find more info and your local dealer!

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PLANMECA

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Dr. Annika Korvo

ORIGINAL SWEDISH TEXT BY PERNILLA JANSDOTTER
TRANSLATED BY HANNA KORLIN

A harmonious spa experience – at a dental clinic

As you enter dentist Annika Korvo's Excellence dental clinic in Sundsvall, Sweden, you are immediately greeted with a lovely scent and the sounds of calming music. Natural, soothing colours and wall curtains create a harmonious impression. You might just as well find yourself at a spa instead of a dental clinic.



"I WANTED the clinic's decor to offer our patients a peaceful moment while they are waiting for their appointment. Here they can enjoy a little escape from all the stress of the outside world", says Annika Korvo.

The clinic focuses on aesthetic dentistry. It hosts a small photo studio, and the clinic's own photo art pieces are hung on the walls. Even the treatment room, decorated with plants and large mirrors in silver frames, has a spa-like atmosphere.

"We wanted to pay close attention to little details that, when put together, create a unique experience."



COPY DANIEL PURSSILA
IMAGES PLANMECA OY

Planmeca equips mobile clinics visiting schools in Poland



LAST year, Poland's Ministry of Health launched a campaign targeted at schools and children with limited access to proper dental care. The state acquired 16 Dentobuses – customised mobile dental clinics set up in Mercedes Benz buses – that have toured Poland's provinces throughout 2018, treating teeth and promoting health in general.

Planmeca was chosen to provide the equipment for the Dentobuses – including Planmeca Compact™ i Touch dental units, Planmeca ProX™ intraoral sensors, and Planmeca ProSensor® HD intraoral sensors, as well as ergonomic Anatomat Plus™ Dentist stools.

We are delighted about our role in advancing health and caring for children's teeth in Poland! 🇵🇱

Planmeca is contributing to a campaign organised by Poland's Ministry of Health that promotes health and cares for teeth at schools across the country.



A face transplant operation is a demonstration of advanced surgery and high technology

COPY SANNA TOLMUNEN
IMAGES SAMPPA FJÄDER AND RONI ETELÄAHO



Dr Jyrki Törnwall

The second face transplant procedure in the history of the Nordic countries was performed earlier this year in the Hospital District of Helsinki and Uusimaa (HUS) in Finland. In the first face transplant, performed in 2016, some parts of the facial tissue were transplanted. The most recent operation was more demanding as it involved transplanting an even bigger part of the facial tissue. Planmeca's pioneering 3D technology and expert service contributed to this intricate and rare operation.

PLANMECA and the company's 3D technology were part of the second face transplant operation in the Nordics performed earlier this year in the Hospital District of Helsinki and Uusimaa (HUS). The Nordics' first face transplant operation was performed in 2016 in Finland, and it consisted of transplanting the patient's upper and lower jaw, lips and nose, as well as segments of their skin, midfacial and tongue muscles, and the nerves of these muscles. In this second operation, more facial tissue was transplanted from a larger facial area than in the first one.

The surgery itself took 25 hours and was carried out by a group of 8 surgeons as well as 20 nurses and other experts. Docent, Plastic Surgeon **Patrik Lassus**, led the medical team while Docent, Oral and Maxillofacial Surgeon **Jyrki Törnwall** was in charge of the reconstruction of the bones. The operation was the 41st of its kind in the world to date.

3D TECHNOLOGY AN IMPORTANT PART OF FACE TRANSPLANTS

Demanding surgery requires not only a skilled medical team, but also technology that ensures efficient planning and safe execution of the operation. In this operation, such technology was presented by the **Planmeca ProModel™** service which offers patient specific



Dr Patrik Lassus

3D planning and customised implants for surgical procedures. The technology and expertise of Planmeca's service substantially decreased the operating time and improved the accuracy of the surgery ultimately making the operation safer for the patient.

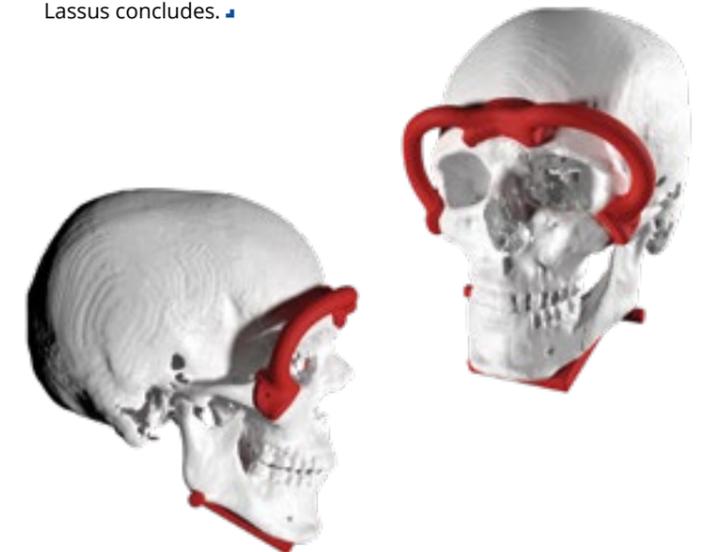
"Cutting-edge 3D technology combined with strong expertise and know-how is the very core of our service. This second face transplant operation in the Nordics was simulated and planned with our 3D technology. For the operation itself, we designed and 3D printed the surgical guides exactly according to the anatomies of the donor and the patient. These guides saved hours of operation time and ensured the accuracy of the operation", Planmeca's CAD/CAM Design Manager **Jani Horelli** describes.

Planmeca has been a trusted partner of HUS in many demanding operations – the collaboration spans nearly a decade. Planmeca participated in planning the second facial tissue transplant right from the start, led by CAD/CAM Design Manager **Jani Horelli**. Surgeons and engineers are working resiliently together, taking the healthcare industry forward.

"We already worked tightly with Planmeca during the planning and execution of the first face transplant operation, which was successful. It was clear to us from the start that we wanted to continue the cooperation

with Planmeca also during this second operation, which was even more demanding than the first one. Our experiences from the first operation brought us certainty for the second one both at HUS and at Planmeca. This know-how made the planning and cooperation even smoother than before", Dr. Lassus describes.

"This time we transplanted more tissue than in the earlier operation, so the role of technology was crucial. Planmeca and their 3D technology decreased surgery time by hours and improved the accuracy of the operation compared to traditional methods. Without advanced technology, operations of this level could not be performed", Dr. Lassus concludes. ▀



Meet the Planmeca ProModel™ team

The Planmeca ProModel™ service has provided 3D surgery planning, patient specific implants, surgical guides and anatomical models since 2009. Meet our experienced and customer-oriented team of medical engineers – we're here to help you achieve the best possible surgical results.

Jani Horelli

Design Manager, M.Sc. (Tech.)

"As a leader for the Planmeca ProModel team, my days consist mostly of developing our service and working on various cooperation projects with customers and stakeholders. The field of medical engineering is changing rapidly and as a global company, Planmeca is able to spot new trends as they emerge. I'm proud to be part of a team of

absolute professionals and to design and manufacture top-of-the-range products. Linking engineering and medicine brings added value and meaningfulness to what I do.

A satisfied customer is the best reward I can get for my work. Knowing that our service can improve a patient's quality of life is a very important thing for me personally."



Our new Sales Manager

Kim Nars

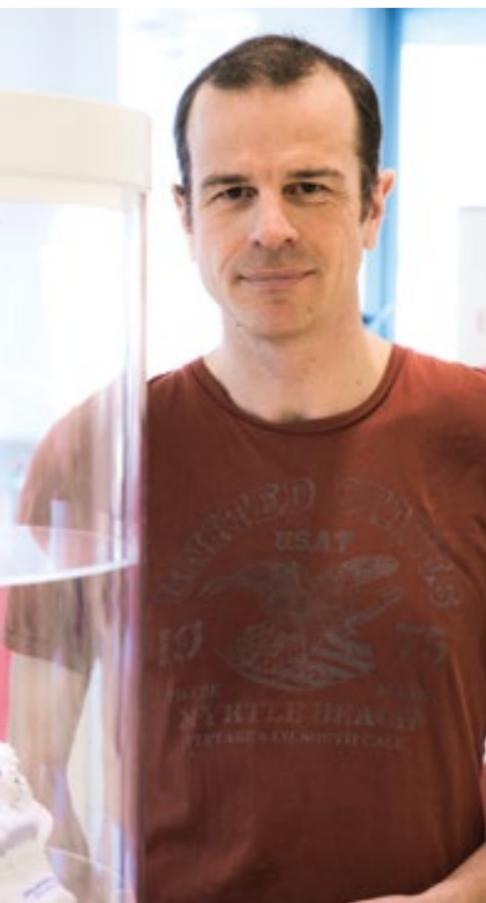
Sales Manager,
M.Sc. (Econ.), Marketing

"As a Sales Manager for the Planmeca ProModel team, my job consists of promoting sales and developing the Planmeca ProModel service. My focus is especially on customer acquisition and customer relationship management. Additionally, I work on productising our service, developing our marketing strategies and other sales related tasks.

I see a tremendous potential in the Planmeca ProModel service and cannot wait for all the exciting projects that we are planning to execute. In addition to our breakthrough

technology, we are able to offer personal service and nearly 50 years of experience in leading healthcare technology solutions to our customers worldwide.

Nearly a decade of experience in 3D surgery planning helps us provide high-end solutions to surgeons. This service, combined with the manufacturing of customised implants, surgical guides and anatomical models, helps significantly improve the patients' quality of life. This is the most rewarding part of what we do."



Tomas Feiring

Biomechanical Designer,
M.Sc. (Tech.)

"My typical workday consists of viewing X-ray images, preparing 3D models for our online meetings with surgeons, planning operations virtually in 3D according to the surgeon's instructions, and designing and manufacturing implants and surgical guides.

It is a multidisciplinary job, and the best thing is being able to carry out the entire workflow of patient case planning from start to finish. I get to work in close cooperation with surgeons and can always count on our close-knit team for support."

Alexander Brink

Biomechanical Designer,
M.Sc. (Tech.), Master of Arts

"As a designer and engineer, I'm fascinated by both the technical and artistic aspects of my job. I want the implants that I design to look beautiful, even though they won't be visible from the outside. Functionality is what determines the form of our products – our goal is reached when the implant functions as intended.

Aesthetics and functionality walk hand in hand. Highly functional products can only be produced with great care, and once this has been done, they automatically become beautiful. In each project, I work in close cooperation with the operating surgeon. The surgeon makes the clinical decisions, while I'm in charge of designing the patient specific implant. Communication is the key to making the right design decisions."



Tuomas Pöysti

Biomechanical Designer,
M.Sc. (Tech.)

"My job consists of designing patient specific implants and surgical guides – for and with surgeons. My responsibility is to offer the surgeon my technical expertise so that the right instruments can be created as smoothly as possible. I am involved in all the stages of the design process from receiving the order to packing the finished product.

I enjoy getting to work with experienced surgeons – the cooperation works really well and the feedback has been great. I have been working for Planmeca for 12 years now. We are a leading high-tech company with all the advantages of a family business, topped with a no-fuss, human approach." ■



Visit the new
Planmeca ProModel website!
promodel.planmeca.com

Finland's CTOs of the year

Planmeca's Vesa Varjonen honoured



Vesa Varjonen, Vice President of Research and Technology at Planmeca and **Matti Heikkilä**, CTO of MetGen have been chosen as CTOs of the Year 2018. The jury consisting of leading Finnish technology influencers emphasized the significant role of the awarded CTOS on renewal of the industry. The CTO of the Year Awards are given by Spinverse together with Technology Industries of Finland and Business Finland to highlight the importance of Chief Technology Officers work on the future competitiveness of Finnish industries.

THE CTO of the year award has been given to the selected CTOs in Finland since 2011. This year, the winners were celebrated at the CTO Forum and CTO Awards Gala at Restaurant Palace, Helsinki on March 19th. The emphasis for deciding the winners for 2018 was on companies that have renewed the Finnish industry with the actions. "Finnish industry is experiencing strong transformation and on the other hand SMEs have got an important role in boosting new

businesses. Planmeca and MetGen are prime examples of these: through systematic investments in R&D and exploitation of digitalization Planmeca has created innovations that have renewed the whole sector. MetGen in turn has had the courage to develop a completely new technology for global markets and has been able to build an impressive partner network", describes the Chairperson of the Jury, **Laura Juvonen** of Technology Industries of Finland.

EXPORTING FINNISH HEALTHCARE TECHNOLOGY GLOBALLY: PLANMECA

Planmeca, founded in 1971, is one of the world's leading producers of dental equipment, with products distributed in over 120 countries worldwide. As an R&D intensive healthcare technology company dynamically developing the world's leading technologies it serves as a role model for the renewal of the Finnish manufacturing industry. "As a company, Planmeca is never 'ready' nor do our products ever stop developing. Without this mentality innovation in the company would die", says the founder and CEO of Planmeca, **Heikki Kyöstiä**. The healthcare technology sector is growing in Finland and most of its turnover comes from exports.

Vesa Varjonen has worked in various roles in medical imaging for over 25 years. He has worked at



Planmeca since 2004, and became the Vice President in research and technology in 2015. "The desire for growth and motivation arise from the power of example, manifested by role models like Vesa Varjonen. He shows the combination of strong knowledge, deep understanding of different technologies and research fields and years of experience", describes Kyöstiä. "In a fast-developing world, the importance of cooperation with different partners e.g. universities, research groups and startups is of great importance, and here Vesa's active role has been crucial."

Varjonen has a Master of Science degree in Medical Technology, Applied Electronics and Computer Technology. "In the jury's discussions it was also emphasized how important multidisciplinary education and knowledge is for the development of future technologies", states Juvonen.

A NEW FORCE CATALYZING RENEWAL: METGEN

MetGen excels in tailor-made industrial enzymatic solutions for the energy, renewable chemicals, and pulp&paper industries. The "ace" of this cleantech-company is the genetic tailoring of its enzymes, which makes them work effectively in demanding conditions. Though a small company MetGen has been able to build extensive partnerships and win a substantial amount of public funding to develop and pilot novel, sustainable and resource-efficient solutions for several industrial processes with its partners.

"CTO Matti Heikkilä is an excellent networker. He is not afraid to approach even the big players, which is an important trait for a fast-growing SME. Heikkilä is a role model for other SME CTOs in showing how new ecosystems are built benefitting from EU funding and how Finland is renewed through the creation of new, sustainable solutions for industry", highlights Juvonen.

One of MetGen's strengths is to bring new solutions from the laboratory to industrial applications effectively. "In practice Matti has created a whole value chain from scratch. He continues to strive in creating new technologies supporting new business", says **Alex Michine**, CEO of MetGen. The company's product development platform is one of Heikkilä's merits - with the platform MetGen can bring new products to the markets in less than five months from the initial idea, which makes it the world leader in its sector. With Heikkilä's lead the emissions in the production process have been minimized in practice down to zero.

Heikkilä is also responsible for marketing and new business development. "The ecosystems built by Matti maximise the benefits of all parties. He has an incredible ability to shape whole industries with his vision", adds Michine. "It's amazing how well he manages to share our vision internally as well as among financiers, especially in such a complex field as ours." ▀

*This year, Finnish CTO of the Year prize is awarded for the eight time to highlight the importance of Chief Technology Officers to the future competitiveness of Finnish industries. The CTO of the Year is an inspiring leader and has an active role in the society. The awardees are chosen by a jury consisting of leading technology experts in Finland. The chairman of the jury is Director **Laura Juvonen**, Technology Industries of Finland. The CTO Forum is a community of Chief Technology Officers and technology leaders to learn from their peers and benchmark against the best practices in the field. The Forum provides a platform for networking across different industries and companies of all sizes, raises awareness of Finnish technology leadership and promotes visibility of CTOs and their companies. CTO Forum and the CTO of the Year Award is organised in collaboration with Business Finland, Technology Industries of Finland and Spinverse.*

Originally published by CTO Forum on 16 March, 2018.

Next steps in medical imaging

Planmed has strengthened its product line with new solutions for mammographic and orthopaedic imaging.

Planmed Clarity™ S mammography system Entry into the digital world

The new, efficient, and cost-effective **Planmed Clarity™ S** digital mammography system is an ideal choice for hospitals and imaging centres looking for a simple and efficient entry into the world of digital 2D mammography.



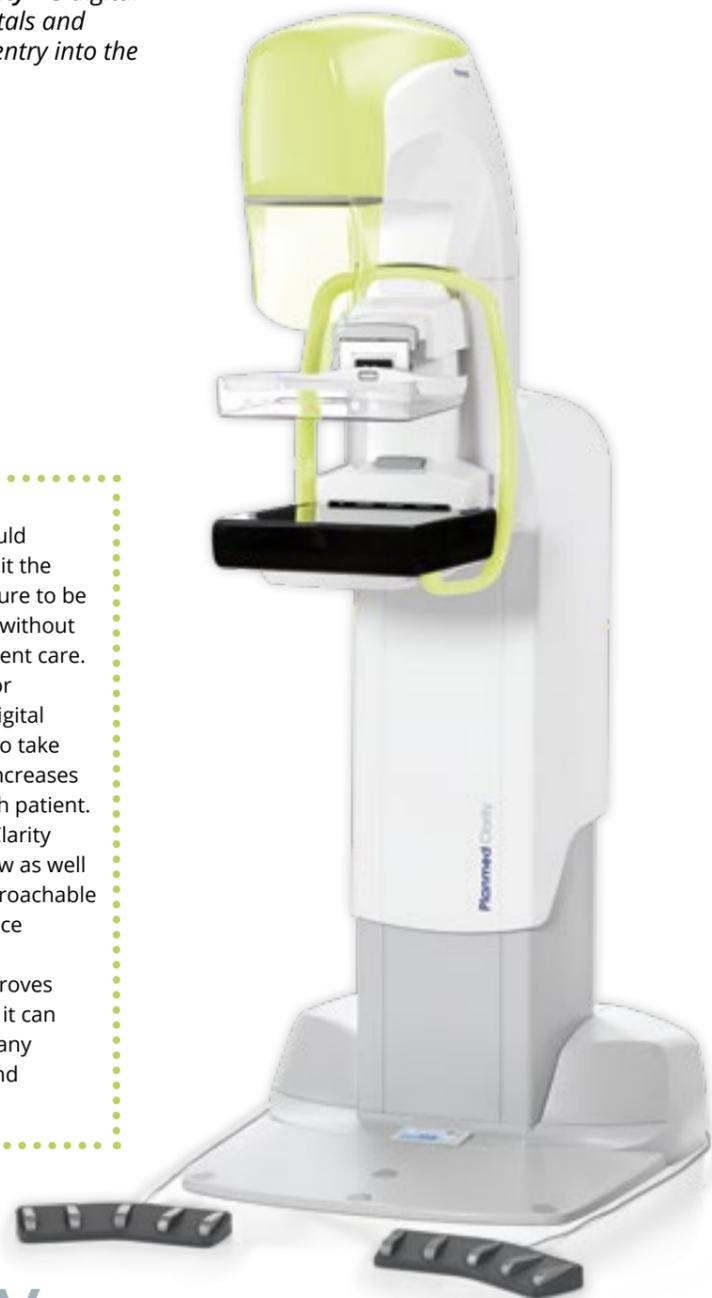
Jukka Erkkilä
Clinical Director
Planmed

“Planmed Clarity™ S is a great addition to our mammography selection. Every imaging centre should be able to enter the digital age and with our new unit the transition from analog to digital mammography is sure to be smooth and easy. This unit is an economical choice without compromising what is most important – quality patient care.

Planmed Clarity S is a simple but strong choice for clinics and imaging centres looking for an optimal digital mammography screening solution. It allows clinics to take advantage of an enhanced workflow that not only increases patient intake but leaves more time to focus on each patient.

The new unit is part of the pioneering Planmed Clarity product family. It enables a quick screening workflow as well as easy diagnostic imaging. The ergonomic and approachable state-of-the-art design of the unit also helps to reduce patient anxiety.

Transitioning to digital mammography often improves both the efficiency of a clinic and the quality of care it can offer. Planmed Clarity S is a reliable companion for any clinic looking to conduct everyday breast imaging and follow-up studies.”



Planmed Clarity

Improved Planmed Verity® CBCT scanner New head and neck imaging options

The improved **Planmed Verity®** CBCT scanner introduces enhanced image quality, the **Planmeca Ultra Low Dose™** imaging protocol for lower patient doses, the **Planmeca CALM™** algorithm for motion artefact correction, and new options for head and neck imaging.



Juhamatti Malm
Director, Product Portfolio
and Business Development
Planmed

“Our new and improved **Planmed Verity®** CBCT scanner is more versatile than ever before, making it a great tool for any imaging centre, clinic, or hospital. It covers ear, nose, and throat imaging as well as basic 3D dental imaging needs.

The high-quality images of Planmed Verity visualise even the smallest bone structures with minimal interference. Combined with new patient and volume positioning options, the scanner’s high image quality allows images of the head and neck region to be acquired with greater precision than ever.

The innovative **Planmeca Ultra Low Dose™** imaging protocol is now available for the Planmed Verity scanner for the first time. The protocol allows reducing the Planmed Verity scanner’s already low effective patient doses by 50% – without compromising diagnostic image quality. This means that 3D images can be obtained at a dose close to standard 2D imaging.

In turn, the groundbreaking **Planmeca CALM™** motion artefact correction algorithm eliminates the need for retakes by cancelling the effects of patient movement. This feature will not only save time for clinicians but also guard patients from unnecessary exposures.

These new features are great examples of the fruits of our deep collaboration with our parent company Planmeca. I’m extremely excited to see the heights our unique Planmed Verity scanner can reach within the world of medical imaging!”

Planmed Verity





LM

feel the difference



100 h saved
 Time needed for manual checking was reduced by more than 100 hours per year at The School of Oral Health Care at the University of Copenhagen (UCPH) with the use of DTS™. Read the full article published by GS1 AISBL in the GS1 Healthcare Reference Book 2017/2018: ©GS1 AISBL.

An advanced RFID chip can be integrated into any material from different manufacturers – enabling complete and reliable traceability of the materials by scanning them with the DTS™ reader.



LM Dental Tracking System™

Improving material flows and enhancing patient safety

The LM Dental Tracking System™ (DTS™) is the first commercially available system in the dental industry to efficiently track and monitor dental instruments and materials using radio frequency (RFID) technology. A tiny RFID chip in e.g. hand instruments, handpieces, and filling materials from different manufacturers allows them to be traced by simple scanning. This built-in identification technology creates a unique dental tracking system together with scanning readers and server software. The system optimises and streamlines material flows at dental clinics – both in maintenance and clinical care.

KNOW THE LOCATION OF ALL MATERIALS

The scanned dental instruments and materials are tracked with readers that record the location and status of all tagged materials. Instruments, handpieces, filling materials, implants etc. from different manufacturers are wirelessly read in a few seconds.

The information is sent to server software that tracks and verifies activity cycles of tagged materials – allowing clinicians to trace where instruments and materials are as

well as who has been using them and on whom. Automating traceability, logistics, and infection control documentation allows the staff to work more efficiently and focus on the patient.

The School of Oral Health Care at the University of Copenhagen in Denmark has used the Dental Tracking System (DTS) from LM-Dental since 2015.

“Each of our instruments have been tagged. With the use of scanners and RFID technology, we can keep track of

the instruments at all times. From the time they are dispensed through their utilisation, processing, sterilization, and return to our storage”, says **Bo Danielsen**, Head of the School of Oral Health Care.

“The LM Dental Tracking System ensures that we always have full control over the hygiene status of our instruments. We can also precisely document which of them students have been using and on which patients, as well as when they have been sterilised. We can define which instruments different students are allowed to use. We can even follow when and for how long students work on different patients”, Danielsen continues.

Just-in-time processes for instrument maintenance have reduced inventory costs at the university by approximately 10 percent.

Overall, tracking instruments serves many purposes and can contribute to better and cheaper operations at a dental office – especially in larger settings. ▀

THE KEY ADVANTAGES OF DTS™

The DTS™ software provides easy analytical reports about the items and activity cycles registered in the system. The information in the reports can improve and ease asset management and documentation, and most importantly increase cost efficiency and patient safety.



PATIENT SAFETY AND INFECTION CONTROL DOCUMENTATION

The server knows the status of each article and allows the clinician to automatically double check that expiry dates have not lapsed and that instruments have passed the proper reprocessing steps, inspections, and validations. The database includes the records for the specified disinfection, maintenance, and sterilisation procedures and includes the detailed history of every instrument and material. Reducing risks through automatic checks and alerts adds an additional layer of safety without cumbersome manual work.



PROCESS OPTIMISATION AND COST REDUCTION

Costs related to logistics and material handling account for approximately 30% of the total operating expenses of health care providers*. LM Dental Tracking System provides the possibility to track the flows of both single use materials and instrumentation throughout the clinic, as well as the decontamination and sterilisation room or central sterile services department (CSSD). Key performance indicators are defined e.g. based on the existing quality system or standard operating procedures. The big amount of data made available by LM Dental Tracking System makes it possible to benchmark the best practices, analyse and optimise process workflows, and systematically strive for continuous improvement.

COST REDUCTION

- Avoid time-consuming manual controls
- Optimise stock
- Improve material flow
- Reduce number of lost items

PROCESS OPTIMISATION

- Ease consumption recording
- Find out indications of demand
- Improve time management
- Enhance patient session planning
- Decrease losses

*[Nachtmann] Nachtmann, H., & Pohl, E. A. (2009). The state of healthcare logistics: cost and quality improvement opportunities. Center for Innovation in Healthcare Logistics, University of Arkansas



EDUCATION SUPPORT

Technology offers new possibilities to support learning and to validate competences in dental education. LM Dental Tracking System can e.g. be setup to document the instruments and materials used in preclinical exercises by each student. Misunderstandings, for example regarding which instruments or materials to use in a certain phase of a restorative procedure, can be identified and rectified without delay. Proof of competence or learning of e.g. a specific procedure can be validated and documented. In the preclinical laboratory, reprocessing steps can be simulated or validated depending on the setup and equipment.



ASSET MANAGEMENT

Having the right instruments and materials in the right place at the right time is crucial at large hospitals as well as small clinics. Having knowledge of the exact location and status of each instrument, handpiece, and material allows for efficient daily planning and long term budgeting. Locating misplaced instruments or balancing uneven inventory levels between rooms or departments is easy with the cloud-based LM Dental Tracking System. Personal accountability through RFID identification of instrumentation reduces loss of assets.



The new DTS™ compatible LM-Servo E cassettes are designed to improve traceability and safety. An advanced RFID chip can be integrated into the cassette to ensure full traceability in maintenance and clinical care. The cassettes are also equipped with protective safety shields to prevent sharp injuries.



HOW MUCH WOULD YOU PROFIT USING DTS™?

Calculate at dentaltracking.com/dts-benefits



Register your products online!

Have you heard that you can easily activate warranty coverage for your Planmeca products by registering them online?

To register, you only need to enter a product's serial number and installation date as well as a valid email address. Registration is available in multiple languages.

Register your products today at www.planmeca.com/register/!



PLANMECA

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