

## Getting on Board with Digital Lab Technology



Mark Chan, DD

Mark Chan DD, Techno/Clinical advisor at Swiss NF Dental, looks at the latest digital technology that's transforming laboratory workflows



Today's digital technologies are working to transform every aspect of the dental industry, and dental laboratories are no exception. The advances, especially in state-of-the-art milling systems, CAD/CAM software, materials and 3D printing, not only offer technicians the chance to deliver custom-made solutions with speed and precision, but ultimately make laboratories more productive, efficient, and profitable.

reducing the often lengthy 'drying out time, while also speeding up overall production.

The high dynamics and efficiency of the machine result in fast and precise manufacture and technicians have

process and production can run 24/7 without constant supervision, freeing up technicians' time for the next design or characterisation.

The PM7 features an integrated ioniser and automatic self-cleaning function that removes minute particles of dust and plastic in the milling chamber that can be a cause of milling source failure.

This feature also helps to lengthen the life of the tools.

### Future-proof milling

When it comes to in-lab milling, the Programill PM7 from Ivoclar Vivadent is a high-quality bench top milling machine. With an 8-disc changer, the PM7 is capable of milling a wide variety of materials in wet and dry mode, from wax and PMMA through to glass ceramic and zirconia.

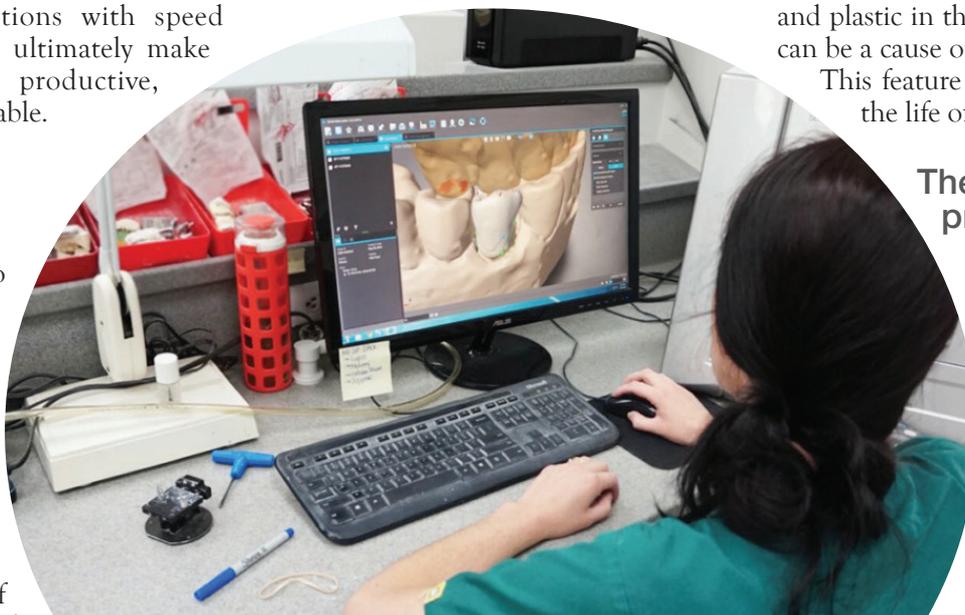
The machine automatically switches from wet to dry extremely quickly,

commented that the detail on the occlusal surfaces of restorations is superb. Its 20-position tool changer means a multitude of different tool sizes can be selected during the milling

In the case of implant work, technicians need an articulated model to work from to ensure an accurate fit. A printer such as the Asiga Max 3D can produce such models in less than an hour. Offering exceptional

### The rise of 3D printing

3D printing is now starting to have quite an impact in digital dentistry and the application of this technology is now starting to gather pace, especially with the advances in materials that can now be 3D printed.





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accuracy and speed, the Asiga is also ideal for the manufacture of orthodontic aligners, crown and bridge, surgical guides, custom trays, and partial dentures.

The Asiga Max 3D uses projection technology. This involves projecting a light onto the resin to cure an entire layer in one go before moving on to the next. Its Smart Positioning System (SPS) uses a series of positioning encoders that read the exact position of the build platform during each layer approach. This ensures that subsequent layers are only exposed and formed once the build platform target position has been reached. It has an open material system, so technicians have the freedom to choose the most suitable material for the job in hand, from any material manufacturer.

## Looking forward

I first began working with digital technology over 5 years ago and even then it was obvious that the future for dentistry was going to be digital. We are now seeing digital techniques become the norm and this is really starting to change the dental landscape.

Digital technology is improving technicians' lives, doing away with more routine manual tasks and allowing them to benefit from faster, cleaner, more efficient and optimised digital workflows. For anyone looking at the future of their business, investing in digital technology really is the only way forward. **SI**

## About the Author

**Mark Chan, DD**, received his diploma from Denturism in Toronto at George Brown College with honours. Currently Mark is practicing in Ontario with a main focus on high-end removable and implant prosthetics. With a passion for both technical and clinical techniques he is certified in Biologic, BPS and SDC denture concepts and is a KunstZahnWerk "Art of Denture" award-winning Denturist, he is a sought-after consultant and opinion leader in the Denturist and Lab community.

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