Sirona Dental Systems recently launched a new user-friendly software that has been developed for its inLab system, which is based on Sirona’s patented biogeneric technology.

Like fingerprints, no two human teeth are identical and each tooth has its own unique characteristics. A group of researchers led by Prof Albert Mehl (University of Zürich) and Prof Volker Blanz (University of Siegen) found that the shape of natural teeth is based on a person’s genetic make-up. Sirona has harnessed this understanding in its new biogeneric inLab software, which enables dental technicians to create lifelike reconstructions, even while working with completely damaged occlusal surfaces.

On the basis of a single intact tooth, the programme extrapolates the natural morphology of that tooth to the patient’s damaged tooth structure. “Biogenerics is based exclusively on the patient’s individual dentition status,” remarked Prof Mehl. “This is a major advantage in terms of clinical reliability. The more individual the occlusion, the better the resulting functionality.”

Currently, all occlusal design approaches are based on limited dental libraries and databases containing data records of various teeth of standard types. Conventional CAD/CAM programmes retrieve a matching tooth from the archive, and then generate a design proposal for the given clinical situation. The user then manually edits and adapts this proposal. This selection is not justified according to any objective principles. Furthermore, using matching databases can be subjective and time consuming.

“Biogenerics will revolutionise occlusal surface design,” said Bart Doedens, Vice President of Dental CAD/CAM Systems. “With a single mouse click, the user will obtain a natural and individually designed restoration that requires hardly any manual adjustment. Such made-to-measure restorations are simpler, quicker, and, above all, more precise than their off-the-rack equivalents.”

The biogeneric design feature will replace the dental database feature in previous inLab software versions. With the new software, which can be used for all single-tooth restorations and three-unit bridges, it will be possible to create crowns, veneers and anatomically sized bridges easily. The user will only require an intact reference tooth of the same type, that is anterior or posterior.

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