



Fig. 1: The ADT held its 50<sup>th</sup> annual conference this year.

# Fifty years of experience— strategies for the future

Dr Rolf Vollmer, Germany

**This year**, the Arbeitsgemeinschaft Dentale Technologie (dental technology working group; ADT) celebrated its 50<sup>th</sup> annual conference in Nürtingen in Germany from 16 to 18 June. The ADT offered visitors a wide-ranging overview of relevant new publications and the latest research results and promoted exchange between dental technology, dentistry, academia and industry, creating opportunities for exchange on an equal footing.

In six workshops and 28 lectures, those interested in dental technology and dentistry had the opportunity to learn about the current state of development of dental technologies. The topics ranged from the transformation of dental technology and the shortage of skilled workers in the industry to technical topics such as the use of digital technologies for removable dentures and minimally invasive prostheses. The lectures were analysed in detail

by dental technician Oliver Beckmann and Vice President of the German Association of Dental Implantology Dr Rolf Vollmer regarding their significance in practice.

Digital impressions were met with great interest overall, and the high percentage of dental practices and laboratories that already use them, both for the fabrication of crowns, bridges and splints and for printed models in the laboratory, was surprising. It was interesting that studies have shown that printed models do not have permanent volume stability. Consequently, before the models are sent to the customer with the finished work, they must be printed out again and the model has to be adjusted manually, if necessary.

It is also possible to implement the corresponding occlusal concepts in the digital world. The participants agreed



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Fig. 2: Discussion in the expert panel (from left): Axel Springer, dental technicians Werner Gotsch and Florian Schmidt, Dr Ingo Baresel and ADT board member Dr Jan-Frederik Güth. Fig. 3: Dental technician Oliver Beckmann, Frederik Schroll and DGZI Vice President Dr Rolf Vollmer at the DGZI booth.

that milling removable partial dentures, for example, is very time-consuming and wasteful of material, but ultimately delivers good quality. A favourable option is the additive technology of powder bed fusion which allows the printing of several removable partial prostheses in one job. The long-term quality of this remains to be seen. There are also possibilities for the production of complete dentures. Both the dental crowns and the base of the dentures can be produced by printing or milling, but like the milling of removable partial dentures, the large amount of material required must be considered. The excess material must then be recycled again. Furthermore, there are currently no plastics that allow relining or repair from the same material. Although it is possible to print complete denture bases, studies have shown that the surface is too rough and therefore very susceptible to plaque adhesion.

Another interesting topic was the shade consistency of artificial teeth. It was impressively explained that Shade A3 is not always Shade A3. In an elaborate investigation, samples of the same shade were produced by different companies, and the result was that almost every sample appeared to be of a different shade to that of the shade guide. The shade is determined by the different layer thicknesses of the materials solely. There is certainly still much to be done in this respect, and unfortunately it is

not possible to prescribe standards for the individual shade. In this area, like in others, the manual skills and experience of the technician are indispensable.

Under the topic of treatment without implants, various cases of and indications for all-ceramic adhesive bridges in the anterior and posterior regions were presented. These were indicated mainly for adolescent patients who were too young for implant placement or for whom orthodontic treatment was not able to adequately retain the space for an implant. Durability was reported to be very good, to the extent that many patients later decided not to have implants.

As a conclusion of the event, one could say that analogue knowledge and skills are indispensable for digital work. Finally, innovative processes and possibilities in referral networks were presented in an impressive way under the topic of digitalisation for surgery. In this respect, team spirit and practice are of enormous importance.

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