

# CAD/CAM

international magazine of digital dentistry

1 2017

## feature article

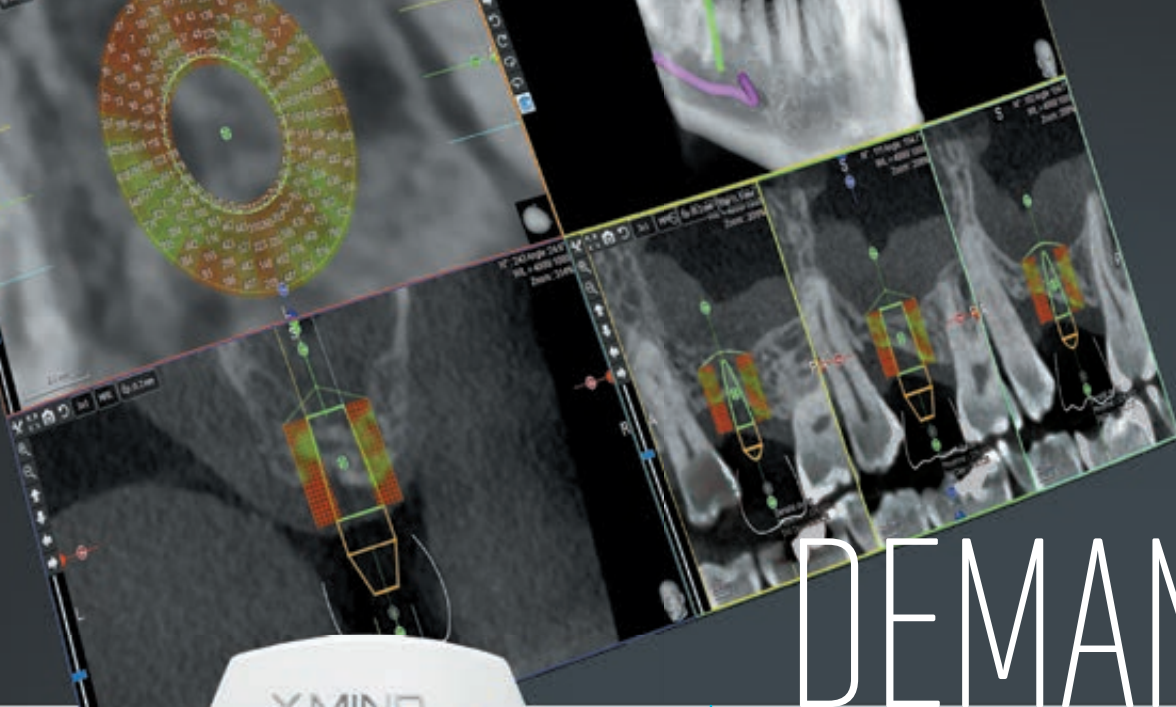
Essential communication:  
The use of technology  
for virtual patient records

## case report

Immediate implant  
placement and loading—  
a digital chairside workflow

## cone beam supplement

One week diary with  
X-Mind Trium 3D  
CBCT in practice



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# Dear Reader,



Dr Scott D. Ganz

The use of computed tomography (CT) in dentistry dates back more than 30 years. The ability to assess a patient's individual anatomy in three dimensions proved to be an invaluable diagnostic tool for dental implant and oral surgery procedures. However, it did not catch on right away. There were many barriers for both doctor and patients because these large and expensive imaging devices were located in hospitals or radiology centers, and the cost of obtaining a scan on film was prohibitive. Of course, there were also issues with patient exposure to increased radiation dosage.

Fast forward to about 17 years ago, with the advent of cone beam computed tomography (CBCT). These devices had a smaller footprint, lower cost, and could be placed in a dental office for a single practitioner or group practice. The reduced radiation was a real breakthrough, and this combination became a new catalyst for the use of 3-D imaging in dentistry: improving the diagnostic capabilities for a wide variety of procedures including, but not limited to, dental implants, oral surgery, bone grafting, TMD treatment, endodontic therapy, orthodontics, and airway analysis.

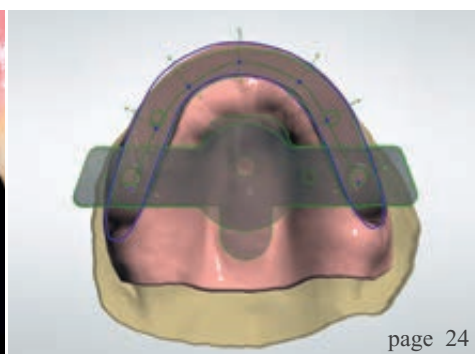
With certain barriers removed, CBCT has become an essential tool that has been utilised to improve accuracy in the diagnostic and treatment planning phase while helping to reduce complications with associated procedures. However, even today in 2017, many practitioners still rely solely on periapical and panoramic radiology, which is why further education continues to be a focus of this and other publications. Fortunately, we have new catalysts for which CBCT is an important foundational step—moving from the diagnostic phase to the desired treatment outcome with important links to CAD/CAM and 3-D printing technologies. As CBCT was the initial catalyst, the ability to export the DICOM data and send it to either an expensive industrial or an in-office low-cost 3-D printer to produce a mandible or maxilla that clinicians can hold in their hand to touch, examine, and plan, has provided the dental industry with a new and exciting catalyst to enhance the acceptance of using these technologies.

We look forward to bringing our readers current techniques, innovative treatment modalities, clinical case presentations, and much more within the pages of our publications, in the hopes that it will have a positive impact on the manner in which we deliver patient care.

Respectfully,

Dr Scott D. Ganz  
Editor in Chief

A handwritten signature in black ink, appearing to read 'Scott Ganz', written in a cursive style.



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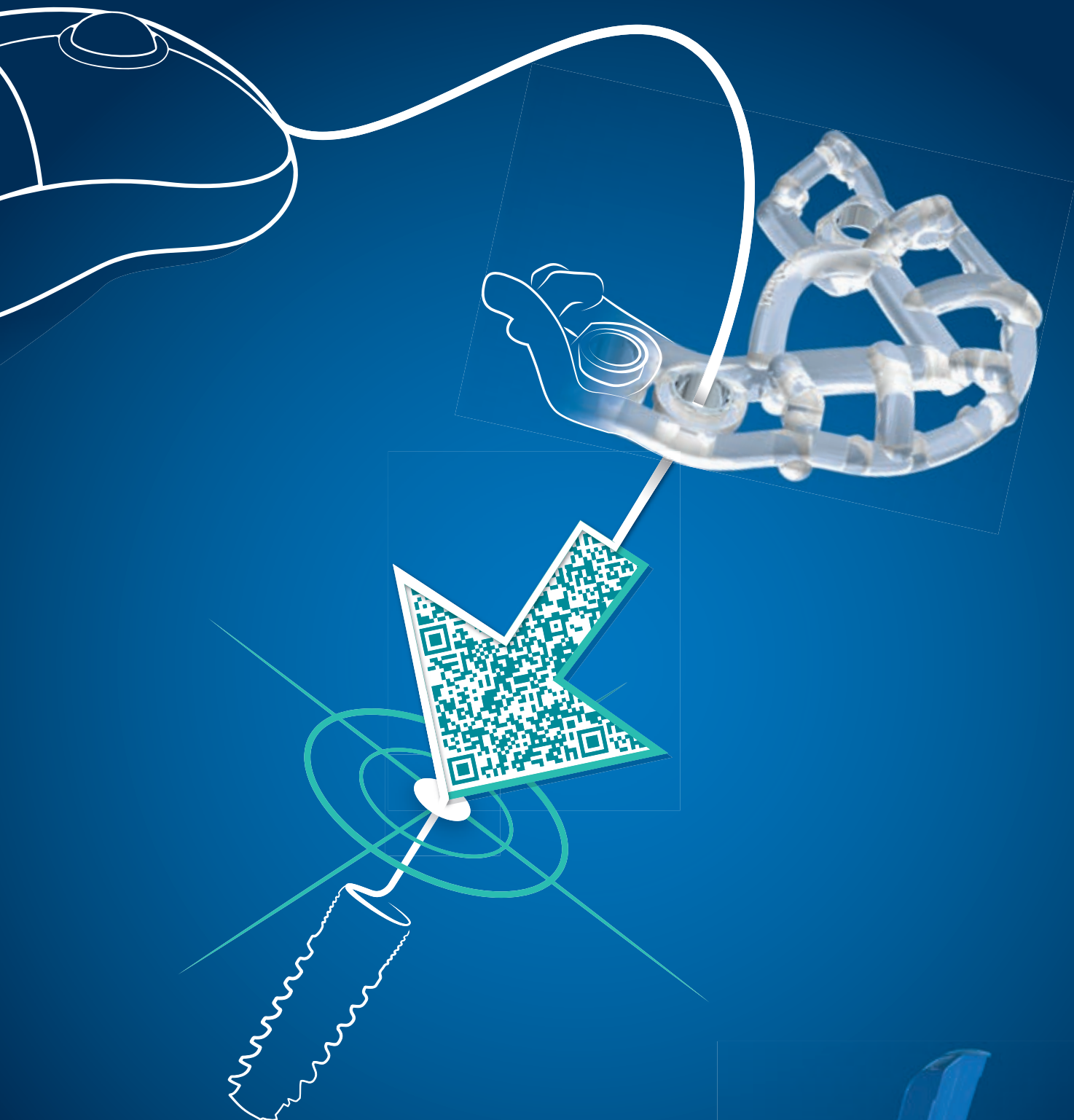
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# Walking among giants

## Marketing dentistry in the global connected economy

Author: Chris Barrow, UK



In an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes. What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention. These prophetic lines were shared by Nobel laureate and social scientist Dr Herbert Simon in 1971. It seems incredible to think that his words predate the Internet by 20 years. Simon lived in a world in which advertisers tried to gain our attention with bill-boards, newspaper advertisements and television commercials. At the same time, the local ma-and-pa business prospered through convenience and human interest.

The connected economy and growth in population have created statistics that are beyond our comprehension. There were 60 trillion websites at the last count and every year the Internet grows by eight million new songs, two million new books, 16,000 new films, 30 billion blog posts and 182 billion tweets. Google handles 35 billion e-mails every day alone, and 1.8 billion photographs are uploaded to the Cloud from everywhere around the globe. I speculate as to how many of those photographs are of happy, smiling faces.

IBM tells us that we are "a world awash in data", 80 per cent of which is currently invisible to our computers; however, with the IBM Watson project,



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### Template for end-of-treatment protocol

So Mr Patient, now that we have arrived at the end of your course of treatment, I'd like to ask a couple of questions:

- Are you happy with the clinical outcome?
- Are you happy with the customer service that the team delivered?

If so, I'd like to ask some favours:

1. We are growing the practice at the moment and we would like to see new patients and would love to see more people like you, because we like you! Would it be OK to give you three of my referral business cards to pass on to any family, friend or colleague who may be interested in visiting our practice?
2. We have noticed that online reviews are growing in importance and would like to invite you to submit a review of your experience on Google, Facebook or any other review site that you may be connected to.
3. We love to collect testimonials from happy patients. They are great for our marketing and can give confidence to others who may be nervous. We find that 90% of those who do consent to a testimonial prefer a written commentary, as they are uncomfortable with a video camera recording, whereas 10% are happy to be filmed and photographed. May I ask, are you a 90%'er or a 10%'er?
4. If a 90%'er, I'd love to organise a written testimonial from you.
5. If a 10%'er, we would like to invite you to one of our quarterly video testimonial evenings here at the practice. Every three months, we set aside some time early evening and invite four to six of our 10%'ers to come along for some light refreshments and to have their photograph taken professionally (at our expense) and to be filmed for four minutes or so. The questions we ask on video are: How did you find us originally? What was it that had you looking? How was your customer service experience? What difference did the treatment make? It would be lovely to invite you to our next event. The dates are...

the company intends to use cognitive computing to bring that data into a useable domain. With global health care data expected to grow by 99 per cent in the next 12 months, the search is on to find a new unified theory that will bring all of this information to the fingertips of government, business and individuals.

The question is, can we cope with this? In his book *Homo Deus: A Brief History of Tomorrow*, Israeli author Prof. Yuval Noah Harari visualises a completely connected world in which "Data-ism" dominates. There he writes: "Sapiens evolved in the savannah thousands of years ago and their algorithms are not built to handle 21<sup>st</sup> Century data flows. We might try to upgrade the human data-processing system, but this may not be enough. The Internet-of-all-Things may create such huge and rapid data flows that even upgraded human algorithms won't handle it. When cars replaced the horse-drawn carriage, we didn't upgrade horses—we retired them. Perhaps it is time to do the same with Homo Sapiens."

A rather grim and ominous suggestion perhaps, but by jolting our sensibilities, Harari makes us pause for thought. Let us narrow our field of vision from these impossible numbers and facts. Pundits suggest that you and I are interrupted by advertising and brand exposures 5,000 times in an average day and mentally register around 350 of these. We note 150, think briefly about 80 and pause at 12 to think about whether they are relevant to us at this time. Thus, the challenge facing the dental marketer is how to become one of 12 out of 5,000 at the right time, on the right day, for the right person.

Big business has a simple solution to this problem; it is called big money. Whether it is a Super Bowl television commercial, a giant bill-board on a motorway or, nowadays, massive expenditure on Internet visibility via paid media, those with the deepest pockets offering the best products and services are the winners in the race to attract that poverty of attention first mentioned in 1971. So where does this place the independently owned dental practice? You are a mouse, wandering between the legs of a herd of bull elephants, all trumpeting their mating call. No matter how loudly you squeak, at best your sound will be drowned out and at worst you may be trampled in the rush.

I have watched the world of digital marketing in dentistry very carefully over the last five years and have reached some conclusions that are likely to land me in trouble with traditional digital marketers. However, I did not get where I am today without stepping on the fenced-off grass every now and then, running along the side of the swimming pool





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