What is the Digital Smile Design Concept (DSD)

by Christian Coachman

...But above all, the DSD seeks to present to the public a new face of dentistry, more humanistic, emotional and artistic, further enhancing our noble profession before the society, because after all there are not many things in life more important than a healthy, natural, confident and beautiful smile!

The concept aims to assist the dentist in 3 aspects:

-Improve the Esthetic Planning and Smile Design.

-Improve communication between specialists involved in the case.

-Improve communication with the patient, increasing their participation on the designing process of their own smile design, motivating and educating them about the benefits of the treatment and increasing the case acceptance.

Dentistry developed in order to meet the patients, more demanding, esthetic expectations,. Nowadays having a mouth free of biological and functional problems is not enough ... Patients want beautiful smiles that are integrated with their physical characteristics but also in harmony with their emotional aspects.

To achieve this kind of result the modern dentist needs to go beyond just being a good dentist. We need to become Smile Designers!
The DSD Concept aims to help the dentist in this matter, improving the esthetic visualization of the patient's problems and giving insights about possible solutions.

The ideal esthetic outcome also depends on teamwork. The ideal treatment is the result of an interdisciplinary approach which is a challenge in itself due to the difficulty of implementing a protocol for efficient communication among the team. The DSD also aims to facilitate the process of communication in a simple manner.

Finally, the process of transformation of a smile must take into consideration the wishes of the patient. The fundamental question is: what the patient wants to express with their smile? We can create different smile designs, each one with a specific character. The key is in discovering what is the design that will harmonize with the morpho-psychological aspects of the patient. The DSD also aims to help in this quest by creating a channel of communication between dentist and patient that facilitates the process.

We believe that these three key aspects can be facilitated through visual communication, which improves the visualization and understanding of aesthetic problems. So DSD is based on this: better visual communication in daily treatment planning, better integration of the interdisciplinary team and better interaction with the patient.

The concept has been spreading rapidly around the world mainly because of its simplicity and not require any special equipment, software or major investments.

Everything is based on video and photographic facial esthetic analysis of the patient to better understand the relationship of the teeth, gums, lips and face in motion. Organize these information in a simple software for slide presentation (Keynote-Mac or Powerpoint-PC) to create the digital smile design, share those images with the specialists through the internet, visual and attractive presentation of the treatment plan to the patient and transformation of digital design into something that can be tested and approved by the patient before the treatment itself begins.

But above all, the DSD seeks to present to the public a new face of dentistry, more humanistic, emotional and artistic, further enhancing our noble profession before the society, because after all there are not many things in life more important than a healthy, natural, confident and beautiful smile!

So... What is dsd?

Dsd is not only a software, a video, photos or drawings...

Dsd is a working philosophy

A new wave that brings dentistry to an emotional level... Trying to connect with people through emotions, visual communication and real care.

Dsd is becoming a smile designer

Dsd is linking design to function

Dsd is team communication, not only on lectures but also on daily real dentistry made for real people

Dsd is bringing the patient into his own smile design process

Dsd is linking the missing gaps to create a new dental vision for the 21 century... The century of customization!

Odontologia Emocional y el Diseñador de Sonrisas

Hoy en dia tener una boca libre de problemas
biológicos y funcionales no es suficiente para los
pacientes odontologicos. Ellos desean poseer sonrisas bonitas integradas con sus caracte
rísticas físicas y en armonia con sus aspectos emocionales.

Para conseguir esta meta, los dentistas de hoy deben traspasar las barreras de
la odontologia tradicional y adquirir una serie de habilidades artisticas y
emocionales ademas de poseer la vision necesaria para
convertirse en autenticos "diseñadores de sonrisa".

 El Diseñador de Sonrisa debe de ser un nuevo integrante del equipo interdisciplinar.
Las habilidades
que se requieren para este nuevo trabajo sobrepasanlas barreras tecnicas comunes que y
a controlan los dentistas, los especialistas y los tecnicos de laboratorio.

 El Diseñador de Sonrisa debera conectar la transformación de
la sonrisa a lo que quiera que el paciente desee trasmitir emocionalmente con su
sonrisa cuando ríe.

 Esto lleva la sonrisa a un nivel emocional… Tratando de conectar con
la gente a traves de las emociones,mediante la comunicacion visual, y mediante un
cuidado de verdad.

Convertirse en un diseñador de sonrisa significa unir diseño a funcion, y la sonrisa a
la cara, significa comunicación con el equipo, pero no solo para los
casos de las conferencias ,sino en la odontologia real,
la odontologia del dia a dia, hecha para personas
reales. Significa llevar al paciente a traves de su
propio proceso de diseño de sonrisa, conectando los

puntos que faltan para crear una nueva visión dental para el siglo 21. El siglo de la customizacion, de la salud emocional y de las sonrisas bonitas.

:: Digital Smile Design (DSD) ::

The Digital Smile Design (DSD) is a multi-use conceptual dental treatment planning tool that is used in esthetic dentistry to strengthen diagnostic vision, improve communication and enhance predictability throughout the treatment.

Nowadays having a mouth free of biological and functional problems is not sufficient for dental patients. They desire to own beautiful smiles that are integrated with their physical characteristics but more so in harmony with their emotional aspects and hence dentistry has evolved further to meet demands and esthetic expectations of the modern day patient by virtue of using DSD. And to achieve this modern day dentists need to go beyond the boundaries of traditional dentistry and acquire set of artistic skills and vision to become "Smile Designers" and this is where DSD plays a pivotal role.

The DSD concept was discovered by a Brazilian Dentist/Dental Technician (Ceramist) Mr. Christian Coachman in 2007 and over the years has evolved markedly. Since the discovery it has already made its way in the global market of Esthetic Dentistry and thousands of dentists / dental technicians have been trained to use it across the seven seas. The beauty of this technique is that it does not require special equipment, software or major financial investment and the digital equipment already present in a modern dental practice can be utilized for the process of Digital Smile Design. Gradually it is also finding its beneficial esthetically driven treatment planning role in various other dental specialties namely Implant dentistry, Periodontics, Orthodontics and Orthognathic surgery.

The whole concept is based on analyzing a patient's facial and dental proportions using series of digital videos and set of high quality digital photographs to acquire the knowledge of relationship of teeth, gums, lips, smile, facial features in motion and emotion. Once all this data in gathered, it is transferred into a computer followed by image calibration using a digital ruler and then manipulation of images and redesigning the smile using presentation software (Apple Keynote for Mac and MS PowerPoint for PC). Once a final digital smile design has been customized using smile design principals and fulfilling patient's desires, the digital images in form of PDF, keynote or power point files can be shared with dental technicians, specialists using the internet and the treatment plan can also be presented elegantly to the patient. Once it is digitally approved by the patient it can be transferred and tested esthetically in the patient's mouth by means of a mock-up created by a dental technician using the same calculated analysis. This will let the patient experience their new esthetical, functional and emotional new smile, hence increasing their confidence in the process and acceptance of the proposed treatment.

DSD concept aims to assist a dentist in following three aspects of the process:

1.   Improve esthetic planning and smile design - by improving the visualization of the patient's esthetic problems and giving insights about possible solutions.

2.   Improve communication between interdisciplinary dental team - by facilitating the process of communication in a simple manner. As the ideal treatment is a result of an interdisciplinary approach which is a challenge in itself due to the difficulty of implementing a protocol for efficient communication among the team.

3.   Improve communication with the patient - by visually involving them in the smile design & decision process as per their wishes and desires. The fundamental question is: what the patient wants to express with their smile? Multiple smile designs can be created, each one with a specific character. The key is in discovering what design will harmonize with the dental morpho-psychological (visagism) aspects of the patient.

But over all, the DSD seeks to raise the curtain of a new era of digital dentistry to the general public which is more esthetically driven, humanistic, emotional and artistic thus further enhancing the prestige of the noble dental profession in the eyes of the society, because there are not many things in life more important than a healthy, natural, confident and an elegant beautiful smile!

The DSD certification courses are currently in high demand for both dentists and dental technicians. These are regularly conducted by Mr. Christian Coachman in partnership with Mr. Livio Yoshinaga across the world and further information can be obtained by visiting www.digitalsmiledesign.com

:: Digital Smile Design ::

The "'Digital Smile Design (DSD)'" is a multi-use conceptual dental treatment planning tool that is used in esthetic dentistry to strengthen diagnostic vision, improve communication and enhance predictability throughout the course of the treatment.

Nowadays having a mouth free of biological and functional problems is not sufficient for modern day dental patients. They desire to own beautiful smiles that are integrated with their physical characteristics but more so in harmony with their emotional aspects and hence dentistry has evolved further to meet highly esthetic demands and expectations of the modern day patient by virtue of using DSD. To achieve this, today's dentists need to go beyond their boundaries of traditional dentistry and acquire set of artistic skills and vision to become "Smile Designers" and this is where DSD plays a pivotal role.

The DSD concept was discovered by a Brazilian Dentist/Dental Technician (Ceramist) "Mr. Christian Coachman" in 2007 and over the years has evolved markedly. Since the discovery it has already made its way in the global market of Esthetic Dentistry and thousands of dentists / dental technicians have been trained to use it by Mr. Coachman in partnership with "Mr. Livio Yoshinaga" across the seven seas.

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The beauty of the DSD technique is that it does not require special equipment, software or major financial investment and the digital equipment already present in a modern dental practice can be utilized for the whole process of Digital Smile Design. Gradually over a period of time, DSD aldo found its beneficial esthetically driven treatment planning role in various other dental specialties namely Implant dentistry, Periodontics, Orthodontics and Orthognathic surgery.

The whole concept is based on analyzing facial and dental proportions using series of digital videos and set of high quality digital photographs to acquire the knowledge of relationship between teeth, gums, lips, smile, facial features in motion and emotion. After acquiring this data, it is transferred into a computer followed by image calibration using a digital ruler. Manipulation of images and redesigning of the smile is carried out utilizing tools of presentation software (Apple Keynote for Mac and MS PowerPoint for PC). Once a final digital smile has been customized using well established smile design principals and fulfilling patient's desires, the digital images can be shared in form of PDF, keynote or power point files with dental technicians or specialists using the internet and the treatment plan can also be presented elegantly to the patient. After the patient's approval of the digital image it is transferred and tested esthetically in the patient's mouth by means of a wax-up created by a dental technician using the same calculated analysis and eventually the wax-up is transferred in the patient's mouth through a mockup or provisional restoration to let them experience their new esthetical, functional and emotional smile, hence increasing their confidence in the process and acceptance of the proposed treatment.

The DSD concept also seeks to raise the curtain of a new digital dentistry era for the general public which is more esthetically driven, humanistic, emotional and artistic thus further enhancing the prestige of the noble dental profession in the eyes of the society, because there are not many things in life more important than a healthy, natural, confident and an elegant beautiful smile!

Smiling By Design – Dr Christian Coachman at the BACD 2014 Conference

Whether you are passionate about cosmetic dentistry or just want to keep up to date with exciting developments in the industry, the 2014 BACD Annual conference is the place to be. This year's Conference will be taking place between Thursday 6th November and Saturday 8th November at the Arena and Convention Centre in Liverpool, alongside the famous Mersey riverfront, and close to Tate Liverpool.

The focus of this year's Conference is "Life LIKE aesthetics". Those who attended last year's BACD Conference may recall the theme was "Evolution of the smile" and this theme is echoed on Friday 7th November this year in one of the many lectures that will be taking place. Presented by Dr. Christian Coachman, his all-day lecture "The smile designer: a new speciality beyond conventional dentistry" will explore the exciting new concept of Digital Smile Design which has been developed by Dr. Coachman.

Communication is a vital part of life and something we spend a lot of time doing, both with and without words. Non-verbal communication is all around us in gestures, body movement and of course, facial expressions.[1] Our expressions are an important way of communicating emotions and how we may relate to others. A baby's first smile can produce tears of parental joy, while throughout our lives a smile can mean many different things.

Dr. Coachman, well known for his work in digital smile design, feels "there are not many things in life more important than a healthy natural, confident and beautiful smile!" As a dentist, dental technician and lecturer, Dr Coachman advocates a new and "more humanistic, emotional and artistic" face of dentistry. His approach is based not only on planning and design, but on improved communications between both specialists, and specialists and patients.

After graduating in dental technology in 1995, and then in Dentistry in 2002 at the University of São Paulo, Brazil, Dr Coachman has worked internationally. This year he will be travelling globally to destinations ranging from Russia to Japan, delivering lectures and courses on Digital Smile Design. Dr Coachman has described the DSD concept as -

"The concept aims to assist the dentist in three aspects. To improve the aesthetic planning and smile design, to improve communication between specialists involved and to also improve communication with the patient, increasing their participation on the designing process of their own smile design, motivating and educating them about the benefits of the treatment and increasing the case acceptance".

Acknowledging that patients want smiles that not only integrate physically but are "also in harmony with their emotional aspects" the DSD concept harnesses technology readily available in most practices. It also brings together the various specialists involved to ensure the best aesthetic result.

Using digital photography and video, the patient's face is analysed with a view to ascertaining the "ideal smile". A presentation is then prepared using software (Keynote for Mac or Powerpoint for PC) enabling practitioners to work together and with the patient. Dr. Coachman observes: "The

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[1] Bull, P. Nonverbal communcation. *The Psychologist.* Vol. 14, no. 12 Dec. 2001.

fundamental question is: what the patient wants to express with their smile? We can create different smile designs, each one with a specific character. The key is in discovering what is the design that will harmonize with the morphopsychological aspects of the patient." Once the ideal smile has been agreed, a wax-up is produced to aid the design process prior to treatment.

Teamwork in all walks of life is important and for the dental team this is especially so. Indeed, the General Dental Council 2013 Standards for the Dental Team says professionals must "Work effectively with your colleagues and contribute to good teamwork." Dr Coachman's DSD techniques recognise the importance of both teamwork and an interdisciplinary approach between both professionals and the professional-patient relationship – an approach which he considers can help to produce a result meeting the patient's needs as well as their emotional and aesthetic requirements.

If you would like to join this fascinating one-day lecture on Digital Smile Design, you can register and book a place by going to the BACD's website at www.bacd.com. Dr. Coachman says:

"I am looking forward to attending the BACD Annual Conference and the opportunity to share my ideas and concepts. My all-day lecture on the Digital Smile Design process will show how we can move beyond conventional dentistry by not only improving the aesthetic planning of smile design, but in improving communication between specialists and patients too, resulting in better case management."

The BACD Annual Conference is a great way to meet like-minded professionals, keep up-to-date, hear lectures presented by notable speakers, enjoy hands-on sessions and discover information about developments in the profession. Make sure you put the BACD dates in your diary and come along and participate on the 6th, 7th and 8th November 2014.

For further information call 0207 612 4166, fax 0207 182 7123, email suzy@bacd.com or visit www.bacdconference.co.uk

Emotional Dentistry and the Smile Designer

Nowadays having a mouth free of biological and functional problems is not sufficient for dental patients. They desire to own beautiful smiles that are integrated with their physical characteristics but more so in harmony with their emotional aspects

And to achieve this goal, modern dentists need to go beyond the boundaries of traditional dentistry and acquire set of artistic and emotional skills and vision to become real "Smile Designers".

The Smile Designer should be a new participant on the modern interdisciplinary team. The skills required for this new job goes beyond the regular technical ones that dentists, specialists and technicians already control.

The Smile Designer should connect the smile transformation to whatever the patients wants to express emotionally when smiling.

This brings Dentistry to an emotional level... Trying to connect with people throughout emotions, visual communication and real care.

Becoming a Smile Designer means linking Design to Function, means Team communication, not only on lecture cases but also on daily real dentistry, made for real people, means bringing the patient into his own smile design process, connecting the missing links to create a new dental vision for the 21st century... The century of customization, emotional health and beautiful smiles!

The Virtual Lab. The Future Now!

The Dental Laboratory of the future will go way beyond fabricating just restorations and appliances, it will become the starting point of any interdisciplinary treatment plan, the key partner for increasing case acceptance, will utilise softwares to transform our restorative experience into something much more efficient, predictable and beautiful. And the best part of all is that technology is already there and the future is now. Some of the realistic processes that will be shared on this lecture:
- Utilising the Smile Frame to identify the esthetic potential of the case, the key for increasing the perceived value of the treatment.
- Integrate facially guided Smile Design principles to digital wax-ups the key to reduce intra oral esthetic adjustments.
- Developing educational presentations for patient motivation utilising the concept of "Emotional Dentistry".
- Simple dental dynamic documentation with smart phones. Saving time by making photos out of videos.
- Online Asynchronous Team Communication process, the path for a real interdisciplinary dental office.
- 3D Digital Ortho guided by smile design. Integrating Orthodontics to daily restorative procedures.
- 3D Digital Implant planning guided by smile design. Creating precision and predictability on full mouth implant rehabilitation.
- Esthetic Anterior Monolithic CAD/CAM restoration with the Digital Skyn Concept. Beauty without wax-ups and layering.

The Smile Design Revolution - Management, Communication and Implementation.

The goal is to share a conceptual protocol for clinicians and technicians, that strengthens our skill in performing extraoral and intraoral esthetic diagnosis and structural evaluation and gives us the tools and language we need to communicate more effectively with the other members of the treatment team. Furthermore, the protocol allows clinicians to educate and motivate their patients, enhances their patients' visual perception, and ultimately increases case acceptance.

The four main goals of the Concept:

1. How to become a better **Smile Designer**, because Smile Design is the primary principle of any modern treatment plan (**Facially Driven Treatment Plan**).
2. How to implement a realistic team communication protocol, because communication is the key to genuine functional interdisciplinary dentistry (**The Asynchronous Communication Protocol**).
3. How to interact with the patients to enhance the value of our treatment and increase case acceptance through the new concept of **Emotional Dentistry**.
1. How to link the beautiful Smile Design process to the actual treatment using a simple and effective Digital Workflow that will connect the 2D drawings of the **Digital Smile Design Concept** to 3D software systems such as CAD/CAM, 3D orthodontics, and guided surgery.

All of these concepts can be demonstrated on actual patients, live on stage, showing all the steps that can transform a normal dental office into a modern, genuinely interdisciplinary Esthetic Dental Clinic. Following are just some of the details of the steps involved:

• Connecting the working model to the patient's face allows the Smile Designer to develop cases that have **immediate facial harmony**, dramatically reducing the amount of intraoral esthetic adjustments needed.
• A simplified dental **iPhone Photo Protocol** highlights specific angles for better dentofacial integration, resulting in the 3 Views of DSD.
   Video documentation vastly enhances the new **Dynamic Smile Design Analysis** protocol.
   The 8 steps of the **3D Smile Design frame**.
• The DSD Drawing Sequence allows for better understanding of the esthetic issues and better insight into the various possible interdisciplinary solutions. These

drawings enhance the interdisciplinary interaction, patient education and connect the treatment plan to the 3D software systems.

• Transferral of the initial 2D design to the working model leads to the fabrication of ideal facially guided wax-ups, whether performed by conventional or digital means.

• Creation of an Online Digital Chart for each patient is the key to effective and convenient team communication, what we call the "Asynchronous Communication Process": communicating without being available in the same place or at the same time.

• Linking the 2D Smile Design Project (Drawings) to:

--Orthodontic therapy planning, to bring simple orthodontics guided by Smile Design to the daily reality of general dentists

--White and pink esthetic therapy, integrating perio-plasty procedures with Smile Design

--CAD/CAM restorations, Implant rehabilitations and dentures designed in harmony with the face.

• Emotional Dentistry is a concept that creates an emotional connection between the patient and the treatment for better case acceptance.

• The mock-up technique forms the emotional link between patient and treatment. Fast and easy, beautiful mock-ups are created without the need to adjust intraorally.

Emotional photo documentation and slide presentation presents the dream treatment to the patient (The Emotional Smile Design Communication Strategy).