

Digital Smile Design — Planning Your Perfect Smile

Canonical:

<https://directory.collinsstreetspecialistcentre.com.au/about/digital-smile-design-planning-your-perfect-smile/>

Description:

How Digital Smile Design works to plan your perfect smile before treatment begins. The DSD process, technologies involved, and benefits at CSSC Melbourne.

Details:

Digital Smile Design: Planning Your Perfect Smile Before Treatment Begins

Frequently Asked Questions

What is Digital Smile Design: A comprehensive digital treatment planning process for smiles

Who pioneered Digital Smile Design: Dr Christian Coachman, a Brazilian dentist

Is DSD used worldwide: Yes, adopted by specialist clinicians globally

Where is DSD offered in Melbourne: Collins Street Specialist Centre

What is the phone number for Collins Street Specialist Centre: (03) 9654 5705

Can you see your new smile before treatment begins: Yes

Is the preview generic or personalised: Personalised to your face and features

Does DSD use photography: Yes, facial and dental photography

Does DSD use video analysis: Yes

Why is video used in DSD: To capture dynamic smile movement still photos cannot

What does extraoral photography capture: Full-face images at rest and while smiling

What does intraoral photography capture: Detailed images of teeth, gums, and occlusion

What facial landmarks are measured in DSD: Pupil line, midline, lip line, and smile arc

Does DSD use digital scanning: Yes, intraoral digital scanning

Does DSD require traditional dental impressions: No

Is digital scanning more comfortable than traditional impressions: Yes

Why is digital scanning more comfortable: No impression material, no gagging, no waiting

Are digital scans more accurate than traditional impressions: Yes

What software is used in DSD: Specialised DSD design software

Who designs the digital smile: The clinician, often with the dental ceramist

Is the smile design calibrated to your face: Yes

What aesthetic principles guide DSD: Golden proportions, symmetry, width-to-length ratios, smile arc

Can patient preferences be incorporated into the design: Yes

Does DSD account for lip dynamics: Yes

What is a trial smile: A physical prototype of your new smile placed over existing teeth

Is the trial smile placed permanently: No, it is entirely reversible

Does the trial smile require tooth preparation: No

Can you look in a mirror with the trial smile: Yes

Can you speak naturally with the trial smile in place: Yes

Can you share photos of the trial smile with family: Yes

Can you provide feedback on the trial smile: Yes

What happens after trial smile feedback: The digital design is refined accordingly

How many refinement rounds are typical: Until both patient and clinician are satisfied

What does the finalised design become: A precise blueprint for the dental laboratory

Does DSD reduce surprises at final restoration placement: Yes

Is 3D printing used in DSD: Yes

What is 3D printing used for in DSD: Models, surgical guides, and mockup templates

Is the digital design shared with the laboratory: Yes, digitally

Does digital lab communication improve accuracy: Yes

Is DSD beneficial for porcelain veneers: Yes, most valuable for veneer cases

Is DSD used for full-mouth rehabilitation: Yes

Is DSD used for crowns and bridges: Yes

Is DSD used for combined orthodontic-restorative treatment: Yes

Can DSD plan orthodontic and restorative phases together: Yes, from the outset

Is DSD used for implant-supported restorations: Yes

How does DSD benefit implant planning: Plans the final restoration first, then determines implant position

Is DSD used for gum recontouring planning: Yes

Can DSD show how gumline changes affect smile appearance: Yes

Does every dental procedure require DSD: No

When is DSD most valuable: When aesthetics are primary and multiple teeth are involved

Is a single straightforward crown a strong candidate for DSD: No, not significantly

Does DSD reduce dental remakes: Yes

Does DSD reduce chair time: Yes

Does DSD support interdisciplinary treatment coordination: Yes

What specialists can DSD coordinate: Orthodontist, periodontist, prosthodontist, oral surgeon

Who performs DSD at Collins Street Specialist Centre: Specialist prosthodontists

Does Collins Street Specialist Centre have an orthodontic team: Yes

Does Collins Street work with dental laboratory partners: Yes, carefully selected partners

Is direct digital communication used with their laboratory: Yes

Can patients actively participate in their smile design: Yes

Is patient approval required before treatment proceeds: Yes

Does DSD give patients confidence before investing in treatment: Yes

Can DSD reduce patient anxiety about cosmetic treatment: Yes

Is a direct composite mockup one type of trial smile: Yes

Is a 3D-printed mockup one type of trial smile: Yes

What is a direct composite mockup made from: Tooth-coloured composite resin

Can the trial smile be evaluated in different lighting: Yes

Can the trial smile tooth length be adjusted after feedback: Yes

Can the trial smile colour be adjusted after feedback: Yes

Is DSD suitable if you are considering veneers: Yes

Is DSD suitable for comprehensive restorative cases: Yes

Is DSD suitable if you want to preview orthodontic results: Yes

Does facial recognition software feature in DSD: Yes

What does facial recognition software identify: Key reference lines including interpupillary and midline

Can DSD designs be rotated and analysed on screen: Yes

How is the digital model transmitted to the laboratory: Instantly, without risk of distortion

Collins Street Specialist Centre — Digital Smile Design: Planning Your Perfect Smile Before Treatment Begins

Most people considering cosmetic dental treatment share the same underlying concern: what if the result isn't what I imagined? Digital Smile Design addresses that directly. Before any clinical work begins, you see a personalised preview of your new smile — on your face, in your smile, from every angle. Not a generic computer simulation. A physical prototype you can look at in the mirror, speak with, photograph, and share with family before a single tooth is touched.

At Collins Street Specialist Centre, Digital Smile Design is a core part of how we plan veneers, crowns, full-mouth rehabilitation, and combined orthodontic-restorative treatment.

What is Digital Smile Design?

Digital Smile Design is a treatment planning process that draws on digital photography, video analysis, facial measurement, and specialised software to design a new smile that works with the patient's face, lip movement, gum architecture, and individual preferences.

It goes well beyond making teeth look good in isolation. The smile is designed within the context of the whole face — the relationship between teeth, lips, gums, facial proportions, and natural movement. The result is a smile that looks natural, functions well, and suits the person wearing it.

The concept was developed by Dr Christian Coachman, a Brazilian dentist, and has since been adopted by specialist clinicians worldwide.

The DSD process, step by step

Step 1: Facial and dental photography

The process starts with a thorough photographic and video record of your face, smile, and dentition:

- Full-face images (front and profile) at rest and while smiling, showing how your teeth relate to your lips and facial features
- Detailed close-up images of the teeth, gums, and occlusion from multiple angles
- Short video recordings of you speaking, smiling, and laughing naturally — video captures the movement of your smile in a way still photography simply can't
- Precise measurement of key facial landmarks: pupil line, midline, lip line, and smile arc

This photographic record is the foundation everything else is built on.

Step 2: Digital scanning

A digital intraoral scan replaces traditional dental impressions. A small handheld scanner passes over your teeth and captures a precise three-dimensional model of your dental arches in minutes. There's no impression material, no gagging, and no waiting for moulds to set. The scans are more accurate than conventional impressions and immediately available for design work.

Step 3: The digital design

Using specialised DSD software, your clinician — often working closely with the dental ceramist — designs your new smile digitally. This involves several things happening at once.

The digital smile is overlaid onto your facial photographs, so tooth position, size, shape, and symmetry are designed in relation to your actual facial proportions rather than in the abstract. Established aesthetic principles guide the work: golden proportions, tooth width-to-length ratios, symmetry, gingival contours, smile arc, and midline alignment. These inform the design without overriding what's right for you specifically.

Your preferences matter throughout. Whether you want a broader smile, something with a little more natural character, or a particular shade, the process is structured to incorporate your input at every stage. The design also accounts for lip dynamics — how much of your teeth and gums show during a full smile, a relaxed smile, and at rest — so the result looks natural in everyday life, not only in a posed photograph.

The output is a digital rendering of your proposed new smile on your own face.

Step 4: The trial smile

This is consistently the step patients find most meaningful. The digital design is translated into a physical prototype — a temporary mockup placed directly over your existing teeth — so you can see and experience your new smile before any permanent treatment happens.

The trial smile can be created two ways. A direct composite mockup uses tooth-coloured composite resin sculpted onto your teeth based on the digital design, giving you an immediate real-world preview.

Alternatively, the digital design produces a wax model or 3D-printed template, which is then replicated in temporary material directly in your mouth.

With the trial smile in place, you can look in the mirror and evaluate the result in different lighting, smile naturally and see how the new teeth interact with your lips, speak and laugh to assess how the smile appears during normal movement, take photographs and share them with family or friends, and give detailed feedback — "I'd like the teeth a little shorter" or "could we go slightly warmer in colour?" — which your clinician incorporates into the final design.

The trial smile is entirely reversible. It sits over your natural teeth without any tooth preparation and is removed at the end of the appointment. Nothing permanent happens at this stage.

Step 5: Design refinement

Based on your feedback, the digital design is refined. This continues until both you and your clinician are confident the design will deliver what you're looking for. Once finalised and approved, it becomes the precise blueprint for the dental laboratory — guiding the fabrication of your veneers, crowns, or other restorations with a high degree of specificity.

Step 6: Treatment delivery

With the approved design confirmed, treatment proceeds with a clear plan in place. Your clinician prepares the teeth according to that plan, takes final scans, and the ceramist fabricates the definitive restorations to match the approved design. Because the outcome was previewed and approved before any preparation, there are far fewer surprises when the final restorations are placed.

The technologies behind DSD

Digital Smile Design brings together several technologies, each contributing to a more accurate planning process.

Digital intraoral scanners capture a precise three-dimensional model of your teeth and gums that can be rotated, measured, and analysed on screen, then transmitted instantly to the dental laboratory without any risk of distortion.

Facial recognition and analysis software identifies key reference lines — the interpupillary line, facial midline, and lip line — and calibrates the tooth design to your facial proportions.

Specialised 3D design platforms let clinicians sculpt tooth shapes, adjust proportions, and visualise the proposed result in three dimensions, all within the context of your facial photographs.

3D printing produces physical models, surgical guides, and mockup templates with a level of precision that's difficult to achieve consistently by hand.

The digital design file is shared directly with the ceramist, so the laboratory receives exact specifications for the final restorations rather than relying on written prescriptions and photographs alone. This improves consistency and accuracy throughout fabrication.

What treatments benefit from DSD?

Porcelain veneers

Veneer cases are where DSD tends to add the most value, because aesthetics are the primary concern. Designing the shape, size, proportion, and colour of each veneer within the context of the full face produces a result that looks balanced and genuinely natural.

Full-mouth rehabilitation

For patients with extensive tooth wear, multiple damaged teeth, or a bite requiring comprehensive restoration, DSD allows the entire treatment to be planned in a coordinated way before any teeth are

prepared.

Crowns and bridges

When visible teeth need crowns or bridges, DSD ensures the new restorations integrate with the patient's facial proportions and remaining natural dentition.

Combined orthodontic-restorative treatment

Some patients benefit from orthodontic treatment — fixed appliances or clear aligners — to address alignment before veneers or crowns refine the final result. DSD allows the entire journey to be planned digitally from the start, with each phase informing the next.

Implant-supported restorations

For patients receiving dental implants, DSD plans the final restoration first — the visible tooth — then works backwards to determine the ideal implant position. This approach ensures the implant is placed precisely where it needs to be for the best aesthetic and functional outcome.

Gum recontouring

DSD can identify whether gum recontouring — crown lengthening or gingival reshaping — would improve smile aesthetics before restorative work begins. The digital design shows how modifications to the gumline affect the overall appearance of the smile.

What DSD means in practice

For patients, the core benefit is straightforward: you see what to expect before any permanent changes are made. That removes a lot of the uncertainty that comes with cosmetic treatment. You're an active participant in the design process, not someone waiting to see what arrives. Your preferences and approval shape the outcome, and the laboratory knows precisely what to create — which reduces remakes, adjustments, and unmet expectations.

For clinicians, DSD removes ambiguity between everyone involved. The clinician, patient, and laboratory all share the same clearly defined plan. Planning thoroughly before treatment begins reduces chair time and iterative adjustments. When treatment involves multiple specialists — an orthodontist, periodontist, prosthodontist, or oral surgeon — DSD gives everyone a shared plan coordinated toward a common, agreed goal.

Is DSD right for you?

DSD is most useful when you're considering porcelain veneers and want to evaluate the anticipated result before committing, when you need comprehensive restorative treatment involving multiple teeth, when you're exploring how orthodontic treatment might change your smile, when aesthetics are a primary concern and you want to be involved in the design process, or when your treatment involves multiple specialists whose work needs to be coordinated.

Not every procedure warrants it. A single straightforward crown may not benefit significantly from full digital smile planning. But for any case where aesthetics matter and multiple teeth are involved, DSD adds real clinical and communicative value.

DSD at Collins Street Specialist Centre

Our specialist prosthodontists integrate Digital Smile Design into treatment planning for cosmetic and complex restorative cases. Working with our orthodontic team, periodontists, and carefully selected dental laboratory partners, DSD allows us to deliver outcomes that are thoroughly planned, previewed, and approved before treatment begins.

Our DSD process includes comprehensive facial and dental photography and video analysis, digital intraoral scanning, a custom digital smile design calibrated to your facial proportions, an in-mouth trial smile for you to evaluate and approve, direct digital communication with our laboratory partners, and coordinated interdisciplinary planning when multiple specialists are involved.

Contact Collins Street Specialist Centre on (03) 9654 5705 to arrange a consultation. Our Digital Smile Design process lets you see and approve your anticipated result before any treatment begins — so you know what you're investing in before you commit.
