



# A CLINICIAN'S GUIDE TO Atlantis® BridgeBase



Atlantis is a registered trademark of Dentsply Sirona

Dear Doctor,

Digital technology is creating a new world of restorative options for patients and very efficient workflows for today's clinicians. The drive to find a fully digital workflow, with which to restore all-on-x cases has historically been hindered by the analog cementation of the titanium interface. This analog process is required as the final step in the fabrication of a zirconia hybrid.

Once an analog step is introduced into the workflow, the digitally captured data is potentially compromised and the true value of the digital impression is negated.

At Absolute Dental, we define a digital workflow as a "no PVS, fully modeless" fabrication process. This means that the prosthesis will be produced directly from the digital data, with zero analog processing steps during fabrication.

Dentsply Sirona is supporting this digital fabrication process through the Atlantis® BridgeBase system. The BridgeBase is fabricated directly from the digital impression by milling the MUA connections on a Titanium Select Laser Melted support bar. This extremely accurate support structure also acts as a support structure for the zirconia or acrylic overlay.

The Absolute Dental team is very excited to answer any questions and assist you with your next case!

Kind regards,  
Conrad & Jack



# Atlantis® BridgeBase—Overview

## CLINICAL

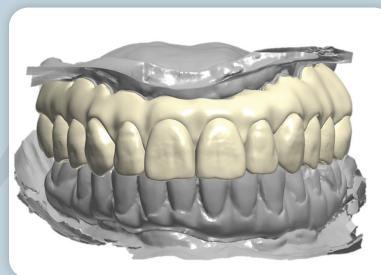


1. DIGITAL IMPRESSION

## DIAGNOSTIC DESIGN



2. BRIDGEBASE DESIGN



3. DIAGNOSTIC DESIGN

## PROCESSING



4. BRIDGEBASE MILLING



5. GREEN-STAGE ZIRCONIA



6. MiYo® SHADE

## DELIVERY



7. BRIDGEBASE AND TOOTH  
MATCHING



8. FINAL DELIVERY



\*Clinical pictures courtesy of Dr Mark Ludlow, University of Utah.  
MiYo is a registered trademark of Jensen Dental

# BridgeBase IO Scanning Protocols

To process an Atlantis BridgeBase case the clinician must capture five STL data sets: Transitional hybrid in the mouth, opposing arch, bite, tissue level scan with the hybrid removed to expose the MUA abutments and the restorative arch with IO Atlantis Flow scan bodies to index the implant positions. Patient must be scanned with a converted temporary hybrid denture. Patient must be at SmartFix® or Multi Unit Abutment (MUA) restorative level – Implant level scanning not accepted. Scanning MUST be done with Atlantis IOS Flow scan flags only. Include diagnostic notes regarding esthetic changes, bite adjustments, tooth shape, etc. to allow for accurate diagnostic design. Include patient pictures: high smile, lips at rest and retracted. Include ears and eyes to facilitate accurate design.



1. SCAN OPPOSING, BITE AND  
CONVERTED HYBRID



2. REMOVE HYBRID, SCAN TISSUE  
AND MUA ABUTMENT HEADS



3. PLACE ATLANTIS IOS FLOW  
SCAN FLAGS, SCAN TISSUE AND  
FLAGS

## Ludlow Scanning Suggestions

It is crucial to register as many anatomical landmarks as possible (palatal tissue and extend into the tuberosity regions, etc.) when scanning the seated hybrid. These landmarks MUST be scanned in all subsequent scans to allow the laboratory to model match the STL files for BridgeBase processing. Scan the opposing with articulating paper marks to help verify the digital bite registration.

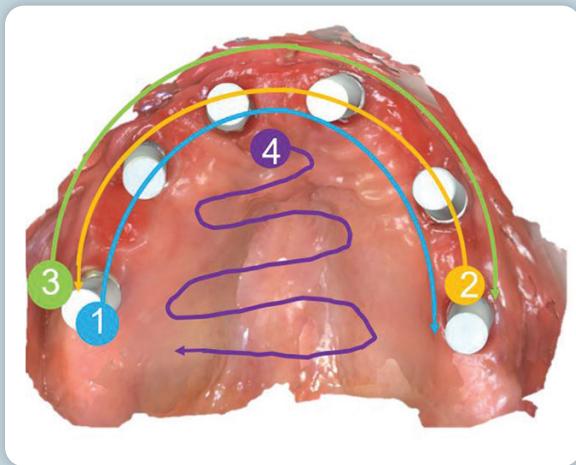


4. INDEX AS MANY ANATOMICAL  
LANDMARKS WITH THE HYBRID  
FOR MODEL MATCHING. ALL  
SCANS MUST HAVE THE SAME  
LANDMARKS

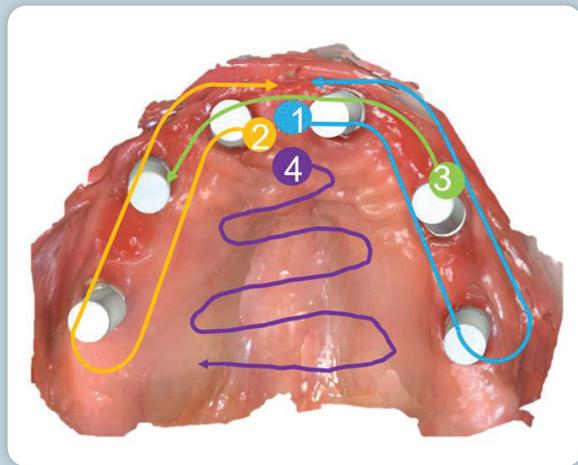


5. MARK OCCLUSION WITH  
ARTICULATING PAPER BEFORE  
SCANNING. THIS ALLOWS THE  
CLINICIAN TO CHECK AND VERIFY  
THE DIGITAL BITE REGISTRATION

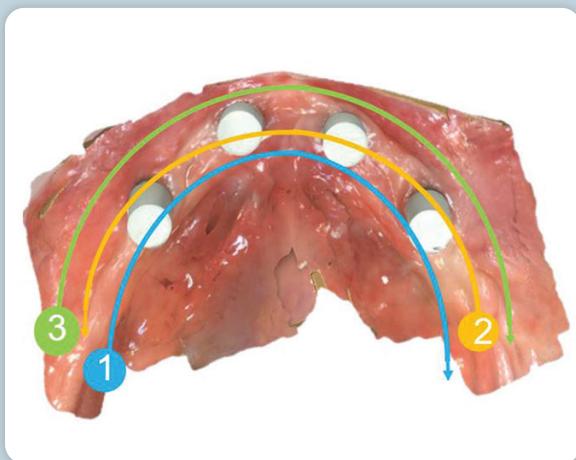
# Suggested Edentulous Scan Path



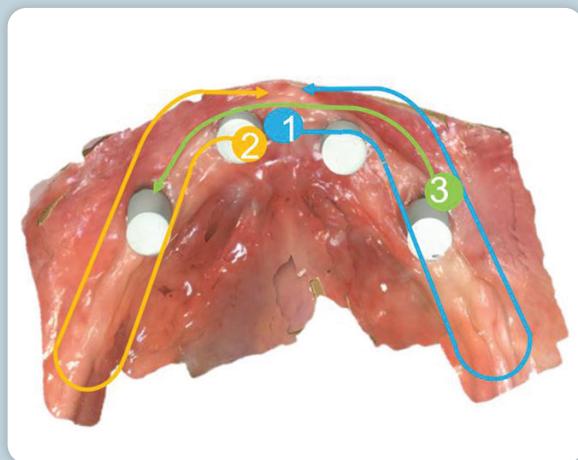
MAXILLARY SCAN PATH OPTION 1



MAXILLARY SCAN PATH OPTION 2



MANDIBULAR SCAN PATH OPTION 1



MANDIBULAR SCAN PATH OPTION 2

The above scan path options for edentulous arch scanning as suggested by Dr Mark Ludlow. Scan options based on the research by Mennito/Ludlow/Renne 2018 as well as Latham/Ludlow/Renne 2019.

## Protocol Case Processing

The Atlantis® BridgeBase case shown in this protocol manual was processed by Dr Mark Ludlow from the University of Utah in collaboration with the Jack Marrano CDT, Director of Signature Prosthetics at Absolute Dental Lab. Jack leads the Advanced Restorative Team (ART team) based in the Triangle Research Area of North Carolina. Clinical photos, scanning protocols, and clinical workflows courtesy of Dr Mark Ludlow.



Dr. Mark Ludlow



Jack Marrano, CDT



*"The strength and beauty of Atlantis® BridgeBase has been a big success in my practice, and I can't thank Jack and the crew at Absolute enough for their expertise and exceptional service"*

*-Dr. Mark Montana*



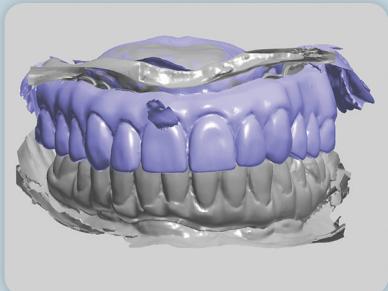


"There is OK and there is AMAZING!!! If you aren't satisfied with just OK, you Absolutely need to try Absolute Dental Lab and the NavaGation guided workflow. Textbook results every time ..."

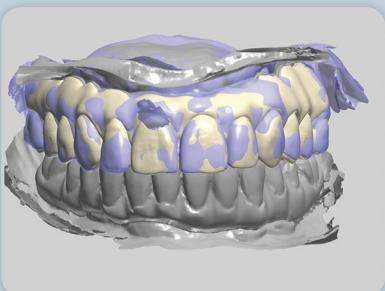
-Dr. Christian Yaste



# Diagnostic Design and Planning



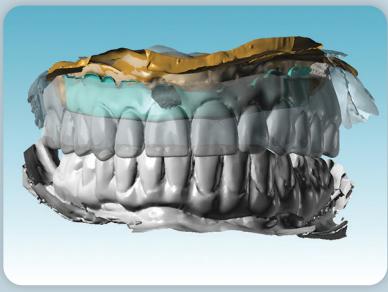
1. INTRA-ORAL SCAN IMPORT



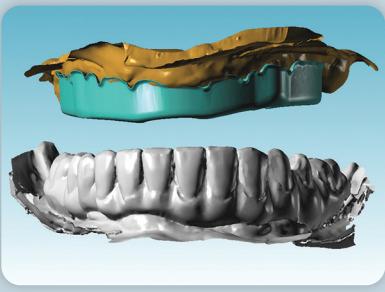
2. DIAGNOSTIC CHANGES IN RELATION TO IO SCAN DATA



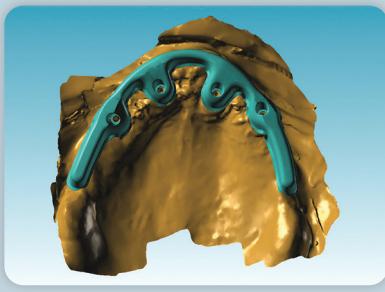
3. DIAGNOSTIC PROPOSAL READY FOR REMOTE REVIEW WITH CLINICIAN



4. ATLANTIS BRIDGEBASE DESIGNED TO SUPPORT APPROVED DIAGNOSTIC PROPOSAL



5. BRIDGEBASE SUPPORT STRUCTURE



6. BRIDGEBASE DESIGN READY FOR TITANIUM SLM AND MILLING OF INTERFACES

## Prototyping and Final Try-In

Prototyping remains the most valuable aspect of any digital workflow. This step allows the clinician and patient to evaluate (and adjust if necessary) the proposed final hybrid design. This prosthesis will be printed from a tooth-colored resin and could be worn (under light function) for a limited time. Any adjustments (additive or reductive) must be made to the prototype hybrid and returned for copy-milling of the final. Absolute Dental guarantees a 100% accurate duplication of the approved prototype in the final hybrid. This interim step guarantees a flawless “no adjustment” final delivery and should not be skipped.



7. PROTOTYPE TRY-IN PRINTED WITH DENTSPLY SIRONA LUCITONE 3D PRINT FROM CORE FILE



8. REQUEST PROTOTYPE FOR FINAL TRY-IN AND PATIENT SIGN OFF

# Final Processing



1. APPROVED PROTOTYPE DESIGN MILLED IN MONOLITHIC ZIRCONIA - ALL CONTOURING MADE IN GREEN-STAGE



2. NO ADJUSTMENTS AFTER SINTERING MAINTAINS MATERIAL INTEGRITY



3. *MiYo® SHADE* APPLIED



4. *MiYo® STRUCTURE* APPLIED



5. BRIDGEBASE BAR  
READY FOR INTEGRATION



6. BAR INTEGRATED WITH ZIRCONIA FOR  
CEMENTATION

# Delivery Appointment



Dr. Mark Ludlow

# Absolute Dental Lab

Established in 1994, Absolute Dental Services started as a small fixed prosthetics lab in the Triangle area of North Carolina. More than two decades later, Absolute's restorative focus is much broader but their attention to product detail and exceptional customer service has not changed. In 2019, Absolute Dental was voted NADL laboratory of the year by their peers.

Absolute is a true full-service partner, with a team nationally and internationally renowned for their expertise in creating world-class esthetics. Their use of cutting-edge technology in CAD and milling, as well as their extraordinary dental implant, guided surgery and high-end removable teams, enables them to deliver lifelike and functional dental prosthetics in even the most complex cases.

Serving their customers with Absolute Excellence has always been the primary focus of the Absolute team. Their vision and dedication is reflected in the company motto, *Perfection Is Not Optional!*

They welcome clinicians from all over the country to become part of the Absolute family!

## CONRAD J RENSBURG, N.D & N.H.D in technology

Conrad J Rensburg is CEO and President of Absolute Dental Services, headquartered in the Triangle region of North Carolina. He graduated under full scholarship with a 4-year Baccalaureate degree from Pretoria Tech in 1992. He is certified with an ND in technology and specialized with an NHD in fixed prosthetics. He is a member of the AO, ACP and prestigious PEERS association. He is registered with the NADL, NCDLA, ADIA and certified by the SADTC. He has specialized in fixed dental prosthetics, with an emphasis on dental implants, since the early 90's. As a CE-accredited speaker since 2002, he has presented at hundreds of events across the USA. These include the American College of Prosthodontists, the PEERS prosthodontic association, the Academy of Osseointegration, Global and US symposiums, and a multitude of study club events. Conrad's emphasis as a speaker is in keeping today's clinicians abreast with the latest advancements in restorative protocols and digital workflows related to removable and fixed prosthetics. His courses also cover the restorative value of guided surgery and latched conversion techniques, screw-retained restorative options, digital denture workflows and hybrid implant retained solutions. As author of multiple published articles, his focus is on CAD implant design protocols, fixed hybrid implant techniques, digital removable dentistry, and modern-day digital communication. Conrad can be contacted at [conrad@absolutedentalservices.com](mailto:conrad@absolutedentalservices.com)



## JACK MARRANO, CDT

Jack is the Director of Absolute Dental Services Signature Prosthetics Division in the Triangle region of North Carolina. Jack a former Marine, started his ceramics career in 2002. He managed the Implant, All Ceramic and PFM Divisions of MicroDental DTI. He was Director of technical Artistry for Lee Culp at Sculpture Studios Since 2014 before joining Absolute Dental Laboratory. He has completed courses on advanced implant restorative dentistry with Dr Carl Misch and has received a Fellowship from the Misch Institute as well as obtaining Fellowship and Mastership from the International Congress of Oral Implantologists. He is a member of the Academy of Osseointegration, the American College of Prosthodontists and the prestigious PEERS prosthodontic association. He was also named LMT magazine top 40 technicians in the US under 40. Over the years Jack has been an integral part in the research and development of many of today's top restorative dental materials. Jack is on the editorial advisor's board for Dental Lab Products magazine and Spectrum Dialog magazine. Jack has studied and restored cases with many of the world's top clinicians. In 2022 Jack received the NADL Excellence in education award as well as the Technician Leadership award from the American College of Prosthodontists. Today, he continues to push the boundaries of what is possible in the field of dental prosthetics.





Jack Marrano & Mark Ludlow



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