
scansource

Introducing ScanSource 3D

- 3D printing & scanning industries are growing at 25%+ CAGR
- One of the fastest growing 3D markets is healthcare
- ScanSource has formed a separate business unit, ScanSource 3D to help grow the 3D business in healthcare and other markets
- ScanSource 3D was founded Aug. 2013.
  - Trained sales and technical teams, inside and field support
  - Website, educational materials, business and marketing plans in place
  - Printer and Scanner vendor relationships established
- Excited today to introduce you to 3D Systems and Artec, premier ScanSource 3D vendors for 3D applications in healthcare

Introducing 3D Systems and Artec

3D Systems

- Founders of 3D Printing
- Broadest line of 3D technology
- Pioneers in developing new solutions and 3D markets

Artec

- Leading provider of hand held 3D scanners
- Excellent performance & value
- Perfect for healthcare applications

Artec Group Inc

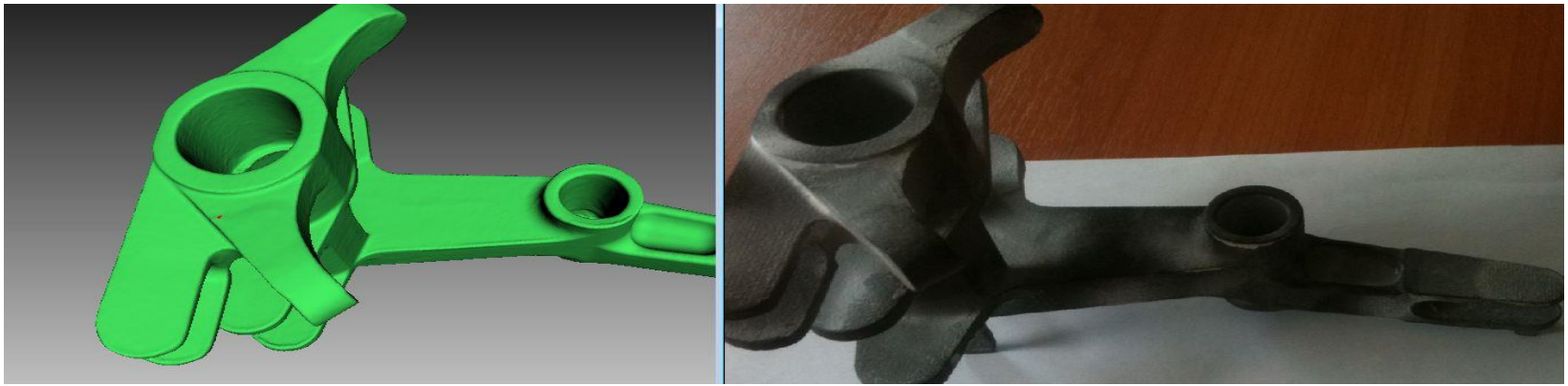
3D Scanning in Healthcare

Company Overview

- Created in 2007 and began R&D
- Started selling in 2009
- Became profitable within 6 months
- 110 employees in 3 offices around the world
- Offices in Moscow, California and HQ in Luxembourg

What is a 3D Scanner?

- a device that analyzes a real-world object or environment to collect data on its shape and/or color. The collected data can then be used to construct digital three-dimensional models.



How does it work?

- A light pattern is projected onto the object
- The camera captures and analyzes the deviations of the grid in real time
- As the scanner is taken around the object, more of it appears on the screen.

How is 3D Scanning used?

- Our customers can be divided into 3 categories
  1. “The Arts”
  2. “Industry”
  3. “Medicine”

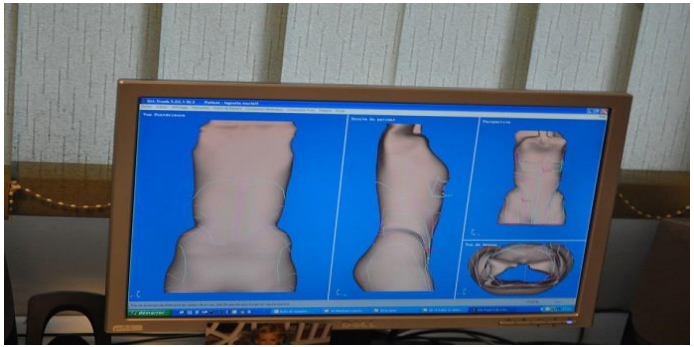
Applications

- The “Arts” include:
  - Heritage Preservation
  - Virtual Museums
  - Graphic Design & Animation
  - Special Effects
  - Archeology & Architecture
- “Industry” includes:
  - Prototyping
  - Reverse Engineering
  - Quality Control

“Medicine” in detail

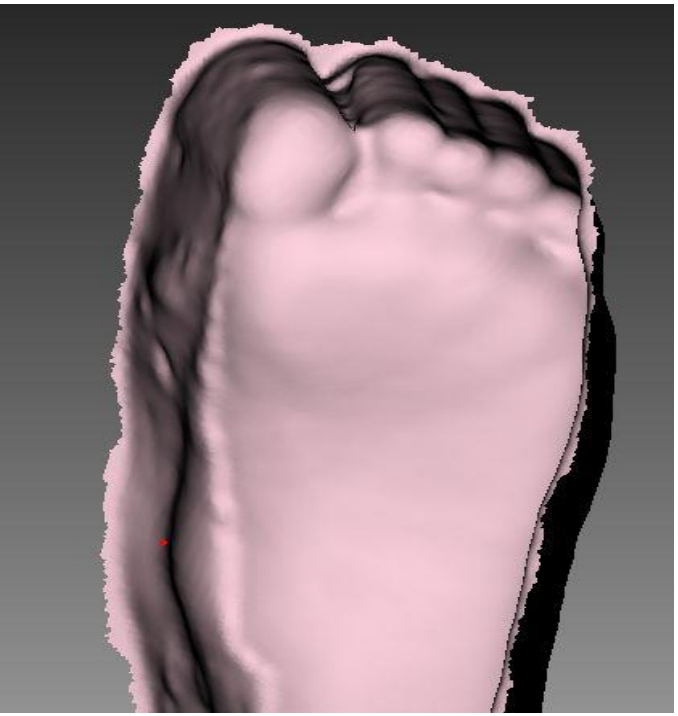
- Scanners are used in a variety of medical sub-specialties
  - Orthopedics and Prosthetics
  - Burn Units
  - Dermatology
  - Oncology
  - Medical Research
  - Maxillo-facial surgery
  - Dentistry
  - Plastic Surgery
  - Forensics

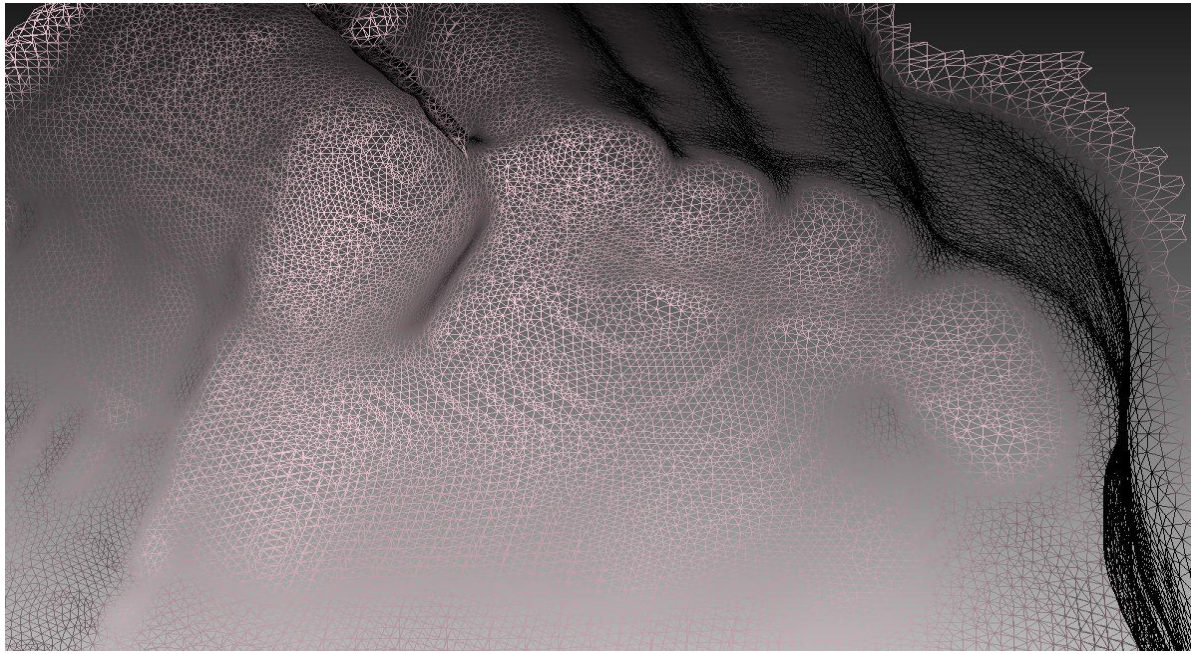
Orthopedics
Creating Custom Braces



Orthopedics

Creating Insoles

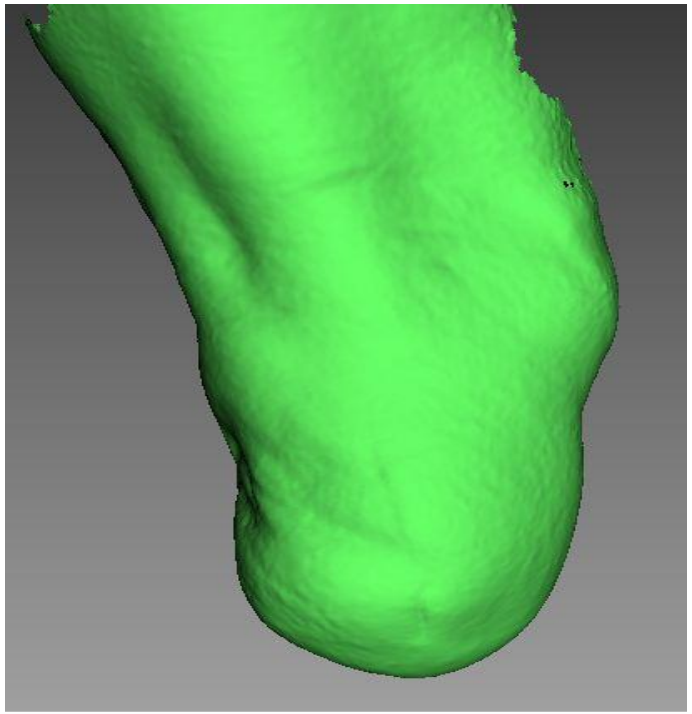




Orthopedics

Creating Products for Disabled

Prosthetics
Creating Limb Prosthetics



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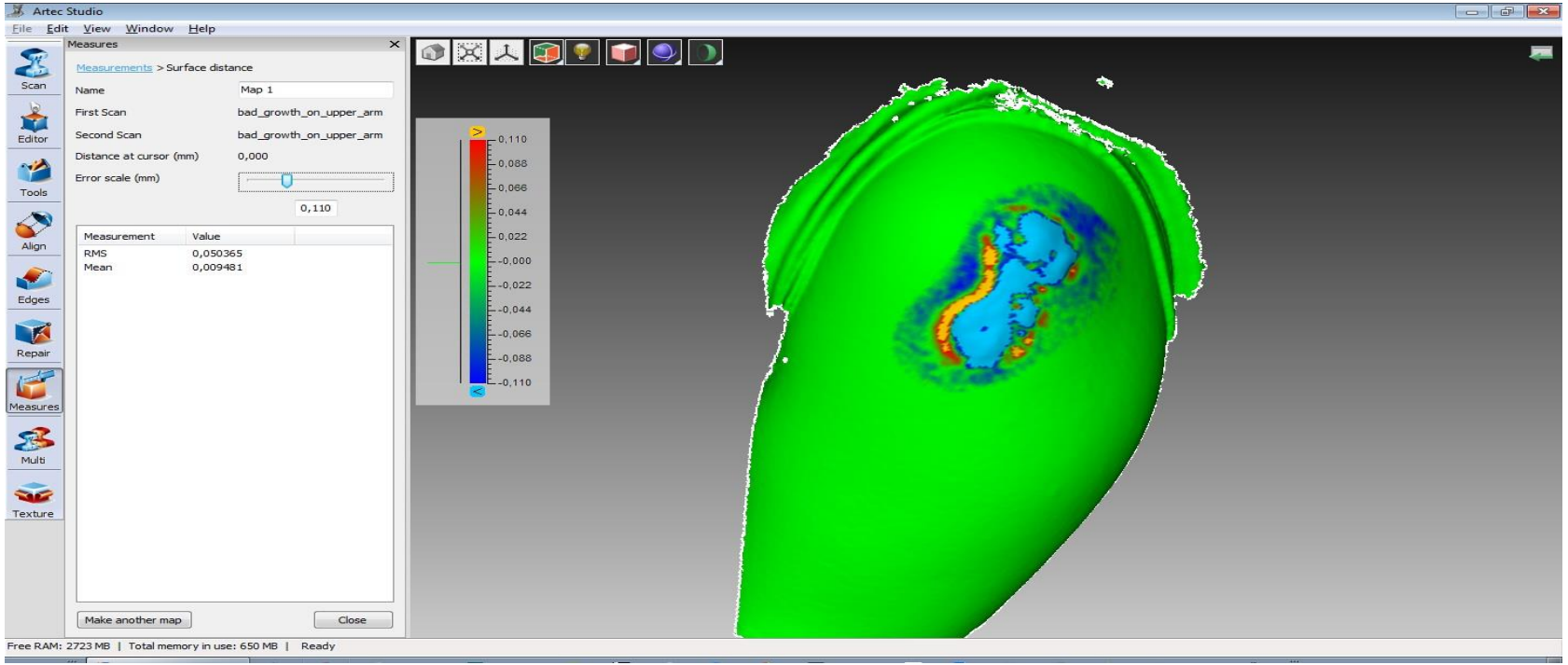
Burn Units
Creating Burn Masks

Dermatology/Oncology
Measuring Bad Growth



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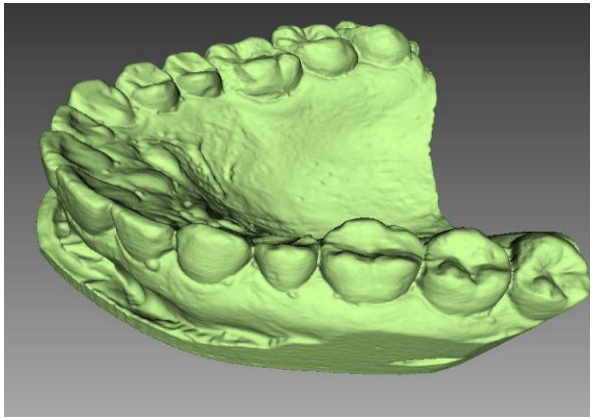
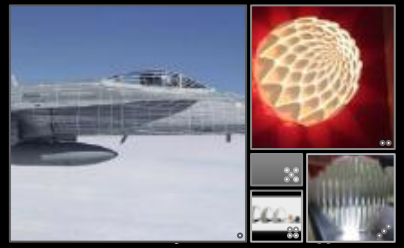
Maxillo-facial surgery/Dentistry



3DSYSTEMS™

MANUFACTURING*THE*FUTURE

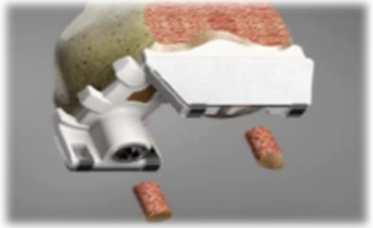
Additive Manufacturing for Healthcare

WWW.3DSYSTEMS.COM NYSE:DDD

Sample Medical Customers

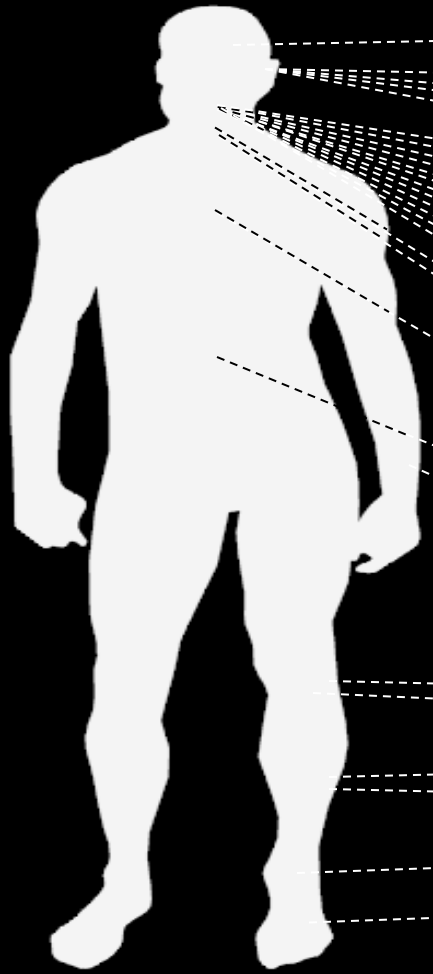
Key Healthcare applications



- **Custom Hearing Aids**
- **Orthopedics**
- **Dental Prosthetics**
- **Orthodontics**

It is likely these four applications produce more patient specific custom medical devices per day than all the industrial "RP" machines in the world combined

Anatomy of Medical Applications



- Engineered Skull Plates - ISO-10993 – 140MP
- ITE – Hearing Aid –
- BTE – Hearing Aid –
- Hearing Protection
- Custom Audio & Communications
- Cleft Pallet Correction
- Prosthodontics
- Orthodontics – Clear Aligner Vac. Forming
- Orthodontics – Bracket Fixturing
- Orthodontics – bracket casting
- Mouth guard
- Sacrificial Patterns – Denture Substructures
- Chair side full Digital Crown
- Dentures
- Implant Drill Guide
- PrePrep Guide
- Temporary Crowns
- Custom Neck Brace
- Neck implant – Spinal Cage
- Heart Valve place - Preoperative tuning
- Orthopedic Braces
- Fracture – Engineered Cast
- Implant Sacrificial Pattern
- Implant Instrumentation
- Prosthetic Limbs
- Prosthetic Fairings
- Custom Orthotics
- Dynamic Ankle Foot Orthosis

Hearing Aid types

500 million people worldwide are hearing impaired

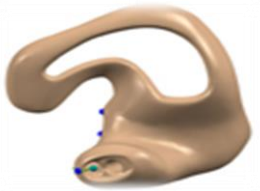
BTE -- Behind the Ear

IC -- In the Canal

ITE -- In the Ear

CIC --Completely in the Canal

Digital Design Process



Impression

Scan Impression
(1-2 min/shell)

3D Software Manipulation
(4-8 min/shell)

Rapid Manufacturing Process

Shell Production

Complete and finish

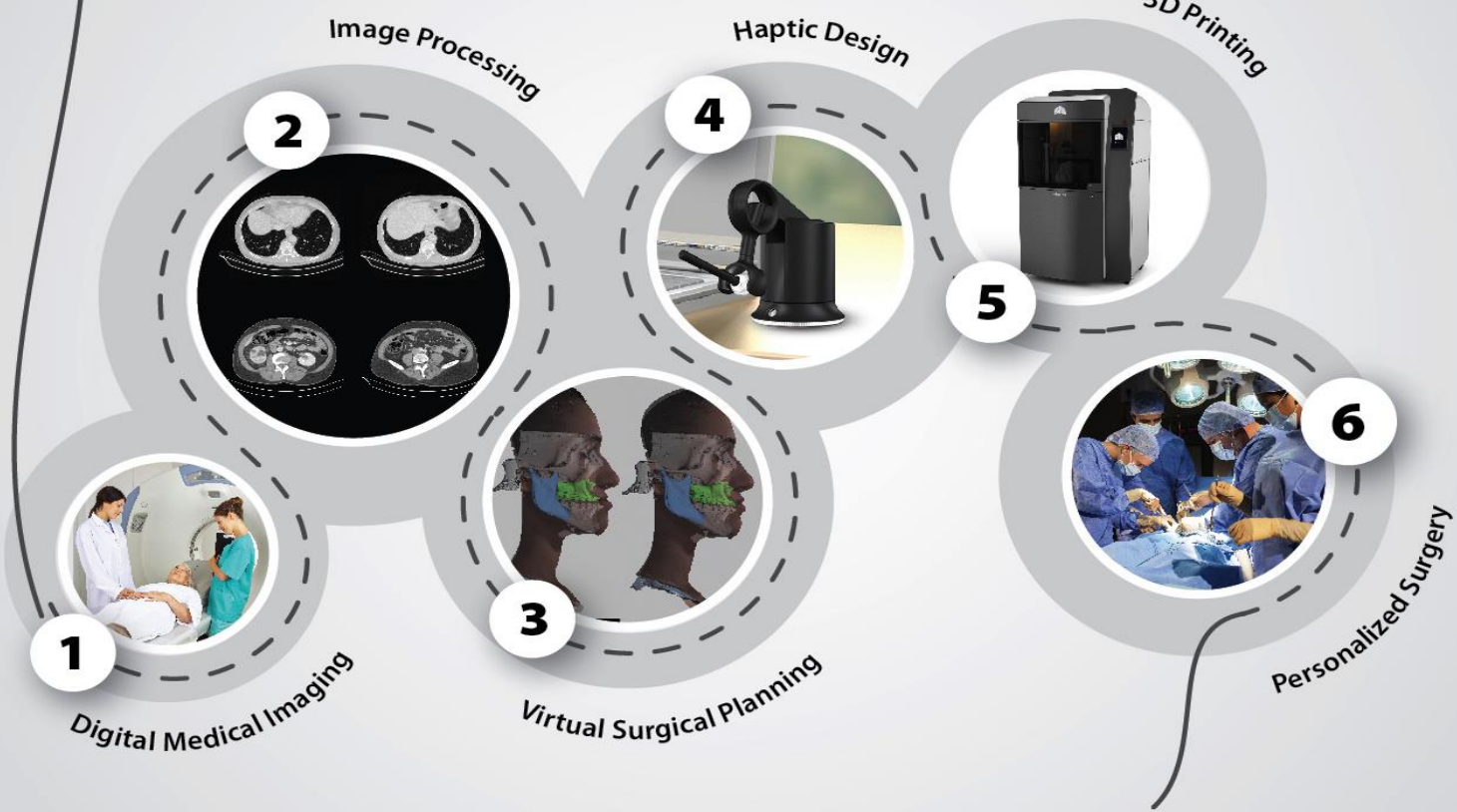
Final Product

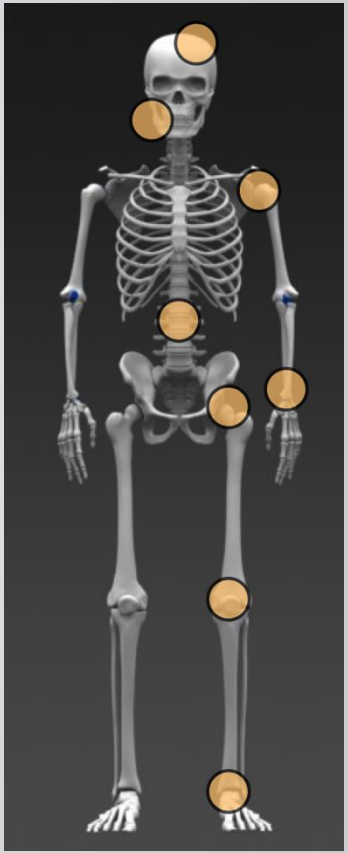
Hearing Aid Digital method benefits

- Better fit results in less returns and better audio
- Easy reproduction for lost hearing aids
- Faster with less skilled labor
- Better logistics (digital file & identification tags)
- Improved customer satisfaction
- 10% to 15% lower return rates

DIGITAL THREAD™ -

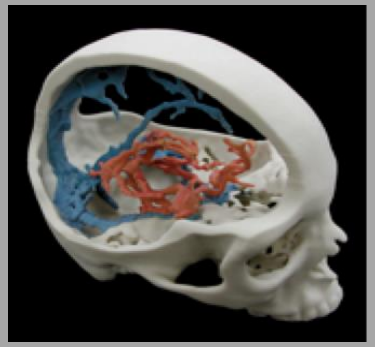
Virtual Surgical Planning (VSP®)





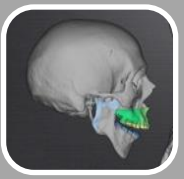
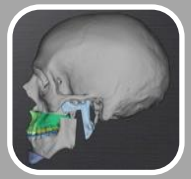
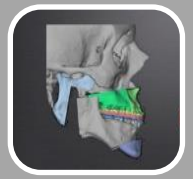
PERSONALIZED SURGERY

ANATOMICAL MODELING



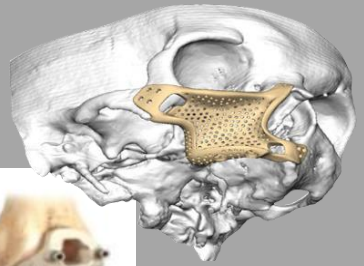
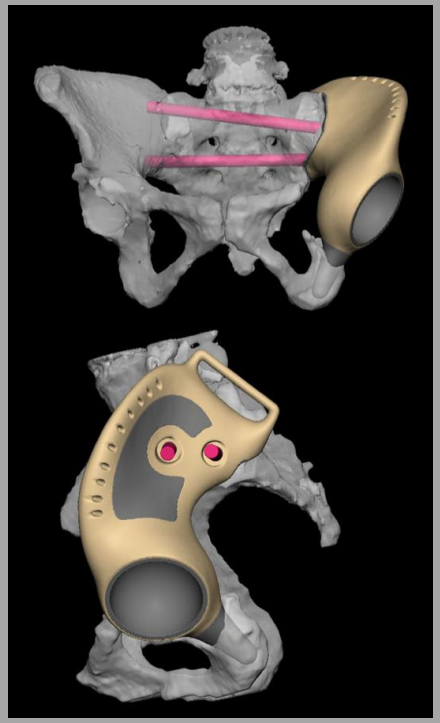
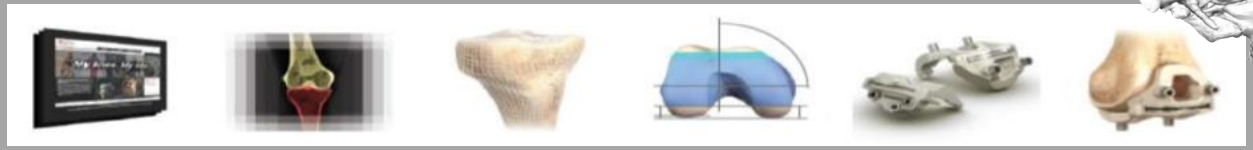
PERSONALIZED SURGERY

GUIDANCE AND CUSTOM DESIGNS


VSP® System
Virtual Surgical Planning



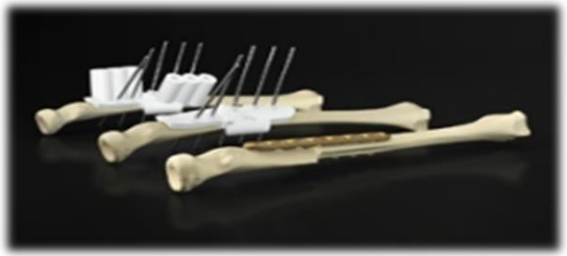
PATIENT-SPECIFIC IMPLANTS

Clinical Models for Pre-Surgical Planning

- Surgical planning
  - Informed consent
  - Trauma surgery
  - Congenital deformities
  - Craniofacial reconstruction

Orthopedics – Surgical Guides

- Implant instrumentation, (surgery guides)
  - Reduced sterilization and inventory costs
  - Disposable system delivered in a single pre-sterilized box
  - Minimal instrumentation required
  - Reduced Operating Room and Surgeon time
  - Better Fit, minimally invasive, faster recovery



Introducing Bespoke Modeling™

Bespoke
MODELING™

- View in 3D
- Print 3D color models
- Save Time
- Enhance Communication
- Increase referrals

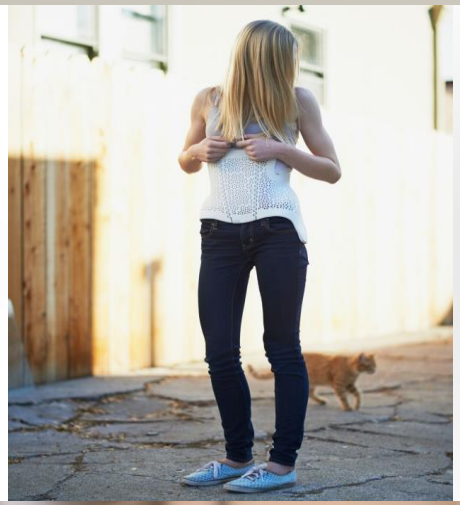
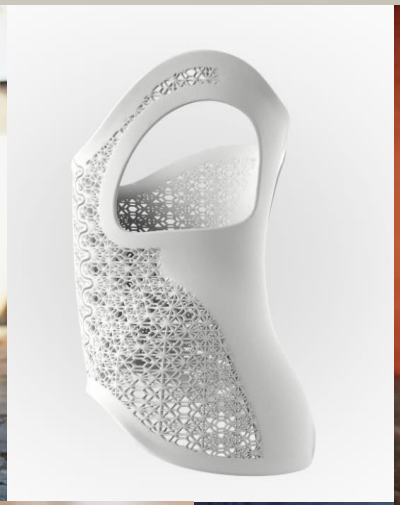
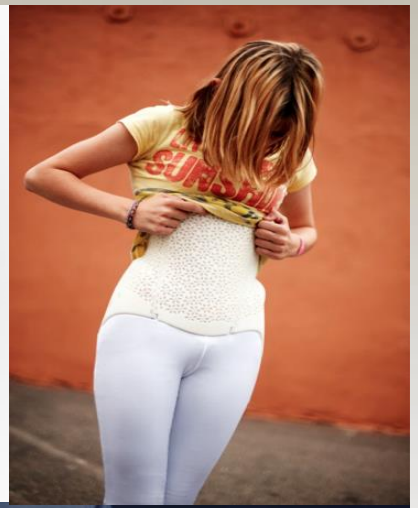
scansource 3D

Traditional Hand Braces

Current orthopedic hand/wrist braces are bulky, uncomfortable, unattractive & “one-size fits all”.

BESPOKE BRACING

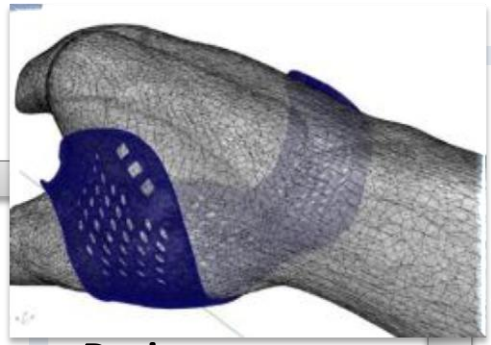
SCOLIOSIS, HAND & WRIST

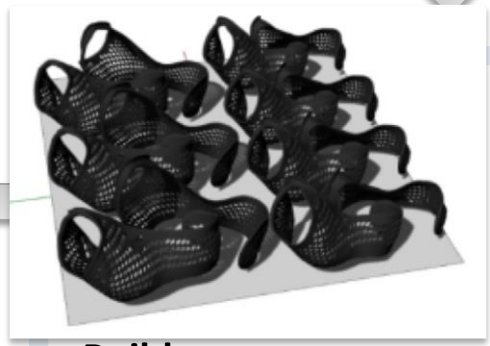

Orthopedic--Hand Braces

Orthopedic – Digital Hand Brace

Scan



Design



Build

Enjoy

Orthopedics

Braces / Casts (SLS)

- Fracture
- Artificial limb cladding

- Models can be sawed and drilled, exhibiting properties similar to real bone
  - Reduction in Cadaver cost and logistics
  - More hands on training
  - Duplicate sample cases thousands of times
  - Surgeon marketing
  - Trade show practice samples

Orthodontics -- Align Technologies

- SLA Systems used to produce models
- Aligners thermoformed on models
- More than 17 million models in 2012 (80,000+ per day)*

*Align 2012 Financials

invisalign

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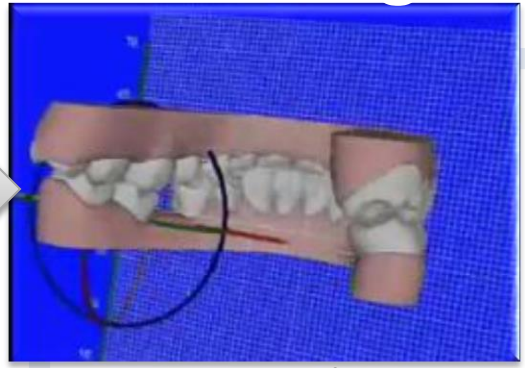
Impression or intraoral scan taken



X-Ray scanned into software

3D Printed using SLA Technology

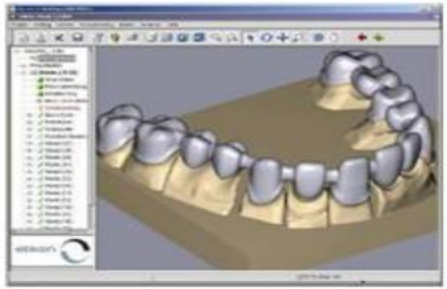
Thermoformed into Aligners

Technology Driving Digital Dentistry

Crowns and bridges

Dental implants

Traditional manufacturing



CAD/CAM prosthetics

Metals

Ceramics

Traditional Subtractive Dental Manufacturing

- Start with a big block
  - Large amount of waste

- High detail means longer milling times
- Geometry Limitations

Digital Dental - Applications

Part Criteria -- Detail

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Interested in learning more about becoming a 3D reseller?

Send email to 3Dsales@scancource.com

scansource 3D

richard.jelesky@scancource.com