Import Formats

- DICOM (version 3.0 and 2D stacks) including:
  - 4D (time-resolved) DICOM with time step selection
  - Option to store DICOM tags with imported data
- DICOMencapsulated STL surface models
- ACR-NEMA (versions 1 and 2)
- DICONDE
- Interfile
- Analyze
- Meta-image
- Raw image data
- 2D image stacks:
  - BMP
  - GIF
  - JPEG
  - PCX
  - PNG
  - TIFF
  - XPM
- Natively

  - ^ Statistics: default template for Mask, Model and Centerline statistics
  - ^ Number formatting: customize how numbers are formatted within Simpleware software
  - ^ Annotations: set default styles for annotations
  - ^ Scripting: enable/disable supported scripting languages
  - ^ Licensing: change license location
  - ^ Miscellaneous: reset suppressible dialogs, clear the undo/ redo stack, mask name/color creation options
- x Interactive anatomy diagrams indicate the expected output, if anatomies are present and identifiable in the input data
- x Toggle segmentation of each available anatomy
- x Toggle the generation of landmarks
- x Landmarks accessible via the Measurements tool
- x Reduce region of interest to a sub-volume of a larger extent scan, either automatically or manually

2D User Interface

- x 3x 2D views
- x Orientation labels
- x Scale bars
- x DICOMinformation overlay
- x Interactive cropping using 2D view
- x Window/Level values and control options
- x Ability to work on single slice, selection of slices or whole volume
- x Slice cursors to identify the position of 2D slices
- x Mask visualization options: solid, translucent, voxel outline
- x View 3D model contours from model/3D view, surface objects and volume meshes on 2D slices
- x Multi-planar reconstruction through translation and rotation of reslicing axes

3D User Interface

- x Background volume rendering: using standard presets or greyscale mapping
- x Single mask volume rendering
- x Interactive cropping using 3D view
- x Clipping box: unconstrained, interactive sectioning of 3D rendering
- x Fast 3D preview mode for rapid visualization of segmentation: x

x Multi-label tools ^use mask labels to label different regions within a mask. Use for statistics and visualization:

^ Label disconnected regions

^ Split mask into pores

^ Combine masks to multi-label mask

^ Mask label editor

^ Reports (automatically generate pre-formatted reports of common metrics using a multi - Q F G J Q R F X P T W K Z Q Q R T I J Q c X mesh):

Particles report

Pores and throats report

x Window/level tool

x Overlap check: display/generate mask to check overlap volume in active masks

Ankle CT Segmentation and Landmarking

x Anatomy-specific automated segmentation tool for the ankle

x Automatic segmentation suitable for use on CT scans

x Produces masks for:

^ Calcaneus

^ Fibula

^ Talus

^ Tibia

x Landmarks placed on identified anatomy:

^ Ankle center

^ Fibular notch

^ Malleolus (lateral, medial)

x Automatic ROI detection within larger extent scans

x Option to retain all bone fragments

Craniomaxillofacial (CMF) CT Segmentation and Landmarking

x Anatomy-specific automated segmentation tool for the CMF region

x Automatic segmentation suitable for use on CT scans

x Produces masks for:

^ Cranium

^ Cranium (filled orbitals)

^ Mandible

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- Resurface: use voxelization and iso-surface extraction to re-triangulate surface objects
- Clip: cut a surface object using finite plane
- Extrude: extrude selected triangles in a specified direction
- Hollow: hollow a surface object, creating an inner and outer surface
- Sweep: dilate the triangles of a surface object inwards and outwards to create a tube (Specialist option only)
- Auto-pad: auto pad the image boundary to contain surface object
- Feature edge editor: visualization and selection of feature edges that the meshing algorithms should try to preserve
- Interactive clipping box for section views of surface objects in 3D
- Surface deviation analysis tool – comparison of a test surface:
    - Tool allows re-meshing of surfaces (user can set edge lengths required)
    - Options to set distance limits for deviation analysis
    - Surface deviation on regions of interest or the whole part can be calculated
    - 3D color map with customizable scale, and option to set out of range color
    - 3D color map also allows the user to set nominal and critical thresholds for positive and negative values
    - Annotate visualization /Lang (en-US)>> BDC q Einamiu4(m)-16(s)8(a)11(n)5(d)4( )8(o)-16(a)11(px16(i)16(m)-16(iu4(m)-16(s)8 TJ ET Q q

- Multi-label mesh (and contact surfaces) export available for Abaqus (*.inp)

Multipart Volumetric Meshing

^ VTK files (*.vtk, *.vtu)

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