Enhance the ultrasound learning process in cardiac and abdominal scanning

While CAE’s Vimedix 3.1 paved the way for remote learning, the CAE Vimedix 3.2 software update includes new enhancements that put CAE Vimedix on the leading edge as the only ultrasound simulator that trains across multiple disciplines—all on a single platform.

With enhanced fidelity ultrasonography realism, 3D/4D ultrasound scanning and multiplanar reconstruction (MPR) across the entire Vimedix 3.0 platform, Vimedix 3.2 builds upon expertise, helping learners to become ready for real-life clinical scenarios.

Differentiating Features

- 3D/4D ultrasound with MPR for Transthoracic Echocardiography (TTE), Transesophageal Echocardiography (TEE), and Transgastric Abdominal Ultrasonography (TGAUS) for advanced assessment and diagnosis
- Ability to customize content and curriculum with custom filters and presets
- VimedixAR application for Microsoft HoloLens 2 allows enhanced learning via Augmented Reality (AR)
- Simulator content and kinematic metrics validated through numerous peer-reviewed scientific journals
- Optional add-on modules (cardiac, lung, abdominal) that support multiple ultrasound applications on a single common platform, with a single manikin
- Self-directed instructional content that makes ultrasound learning easily scalable
- Empowers instructors to create scanning exercises and collect learner metrics
- Continuous development of new functionalities and content, including a COVID-19 case study
- Remote learning capabilities to teach via livestream and/or learn predetermined curricula
- Localization available to support various markets

Learn more about CAE Vimedix 3.2 at caehealthcare.com/vimedix.
Technical Specifications

CAE Vimedix 3.2 for Cardiac/Abdomen

Key Features

Manikin-based system that replicates real-time visual, physical and ergonomic attributes of ultrasound scanning
- Palpable thoracic and pelvic bony landmarks, combined with motion tracking system, allow 6 degrees of freedom to align physical manikin with virtual anatomy in Vimedix software
- Supports TTE, TEE and TGAUS ultrasound scanning on a single platform, with guidelines and training exercises
- Simulation of cardiac, lung and abdominal ultrasound images and functions
  - 2D/3D/4D, Biplane, M-mode views
  - MPR
  - Adjustable image settings (depth, viewing angle, gain, contrast)
  - Color flow Doppler and spectral Doppler (pulsed-wave and continuous-wave) of the heart
  - Color flow Doppler of the inferior vena cava for specific pathologies
  - Ability to complete measurements, including length/diameter, circumference and area
  - Echo report function, with automated calculations and drop-down menus consistent with typical echo scanning protocols and workflow
  - Zoom function for ultrasound images
  - Ability to freeze image and scroll through frames
  - Ability to add noise on ultrasound view to alter image quality and level of viewing difficulty

More than 200 available pathologies, with Stealth Mode option (hides pathology names)
- Enable/disable animated 2D AR display of labeled anatomical structures, that can be moved/rotated to learn structure identification and spatial orientation; and bone, lung and abdominal artefacts on ultrasound display
- Detailed cardiac and abdominal anatomy
- Switch between split screen and single screen views of 2D AR display and ultrasound display
- Self-directed instructional content modules that allow learners to practice in the absence of a live instructor:
  - Basic probe movements
  - Optimization of image settings
  - Obtaining views using Target Cut Planes (TCPs)
- Echocardiographic measurements
- Interactive remote education tools using any web-conference application
- TCP exercises that provide reference guides and images to aid learners in identifying the correct probe positioning/orientation to obtain specific ultrasound views
- Quantifiable kinematic metrics that can be recorded during TCP exercises to assess and monitor user performance
- Ability to capture and export images, videos, reports and metrics
- Ability to connect the simulator to a second display, with the option to either extend or mirror the Vimedix interface
- Access to CAE Healthcare's ICCU e-Learning curricula

Standard Equipment

- Male multi-purpose manikin
- Phased array, transesophageal and/or curvilinear transducer(s)
- HP® Omen laptop with wireless mouse
- Cables (power, DVI, ethernet)
- User guide
- Option to add OB-GYN capabilities to the simulator (including a female manikin, curvilinear and/or transvaginal transducer)

Optional Software

- Additional cardiac and abdominal pathology packages available

Specifications, Dimensions

Bob 1.3 male multi-purpose manikin
- 39.5 X 17 in (100 X 43 cm)
- 31.5 lbs (14.3 kg)

Optional Catherine female multi-purpose manikin
- 38 X 18.5 in (96.5 X 47 cm)
- 30 lbs (13.6 kg)

Computer
- 15.94 X 11.01 X 1.06 in (W X D X H) (40.49 X 27.97 X 2.69 cm)
- 7.04 lbs (3.2 kg)
- CPU: Intel® Core™ i9-9880H
- Hard drive: 1 TB SSD
- Memory: 16 GB
- Graphics card: NVIDIA® GeForce® RTX 2080 (8 GB)
- OS: Microsoft® Windows® 10
- Screen: 17.3 in

External Polhemus Box
- 7 X 6 X 2 in
  - 17.78 X 15.24 X 5.08 cm
  - 1.65 lbs (0.62 kg)

Electrical
- Operates at 110/240V 50/60Hz

Ambient Temperature Range
- 41°F – 95°F (5°C – 35°C)

Humidity
- 40 – 80%