IBEX RE
Reconstruction Engine

Advanced iterative 3D Reconstruction:

Cone Beam Computed Tomography (CBCT)

Digital Radiography Tomosynthesis (DRT)

Digital Breast Tomosynthesis (DBT)

Company Overview

UK based medical imaging software company established in 2011

X-ray imaging specialists with circa 25 full time employees

Patented core platform technology: IBEX Trueview®

4 main product lines:

IBEX BH   Bone Health – osteoporosis detection from routine X-ray

IBEX SC   Scatter Correction – multi-modality virtual anti-scatter grid
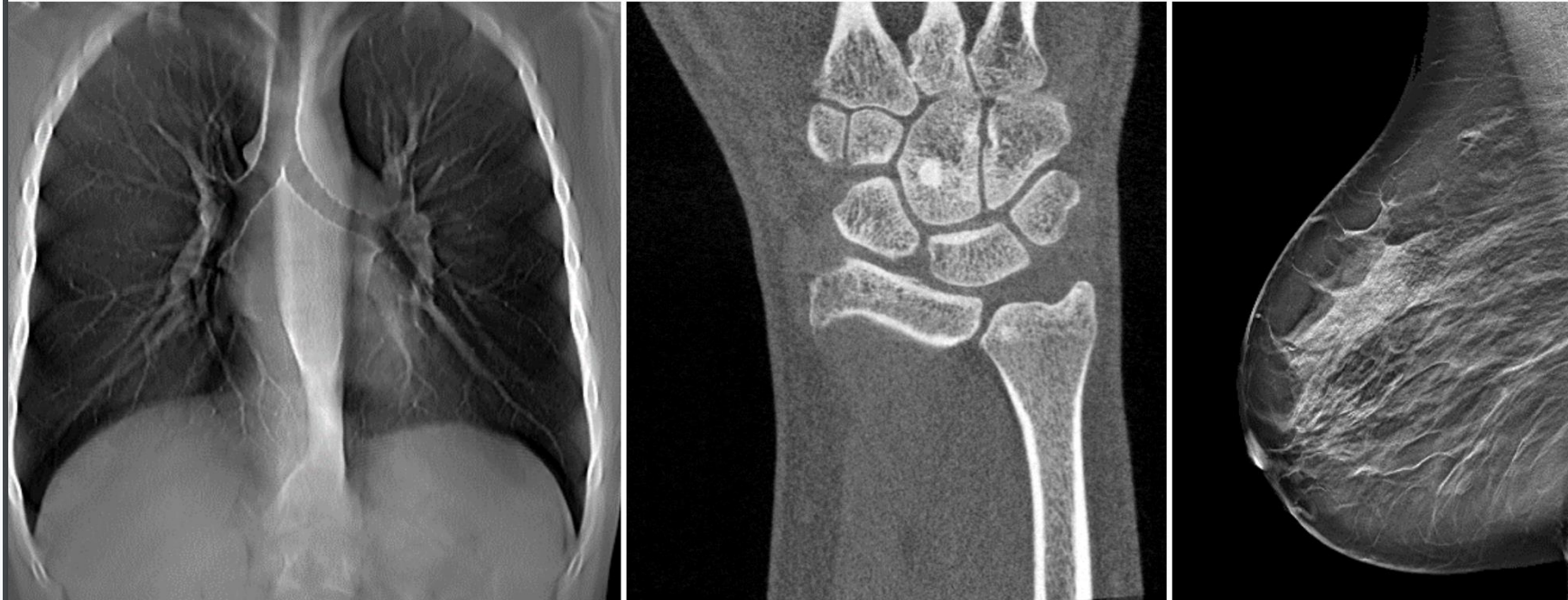
IBEX RE   Reconstruction Engine – 3D tomographic reconstruction

IBEX AX   Augmented X-ray – synthetic digital X-rays from 3D data

Product Overview

Iterative algorithms: fewer artefacts, lower noise, reduced dose

Compatible with any imaging geometry

Advanced artefact reduction methods

Cone Beam Computed Tomography

Fast reconstruction: 25 seconds for 512^3 volume
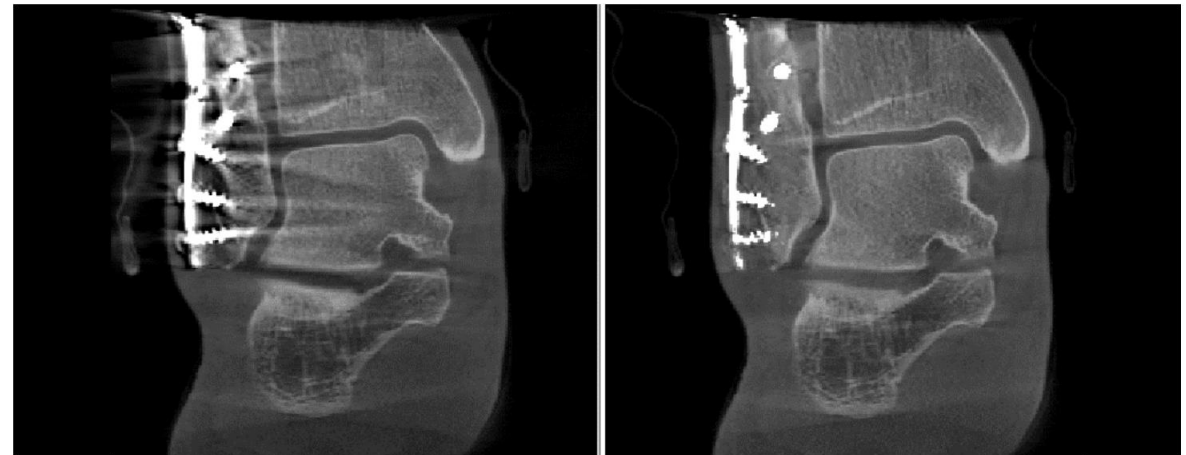
Noise reduction and resolution enhancements

Flexible geometries: full-fan and half-fan

Range of artefact correction methods:

Scatter Correction (SC)
Metal Artefact Reduction (MAR)
Truncation Correction
Hounsfield Unit calibration
Volume Masking
Adaptive Prefiltering
And many more....
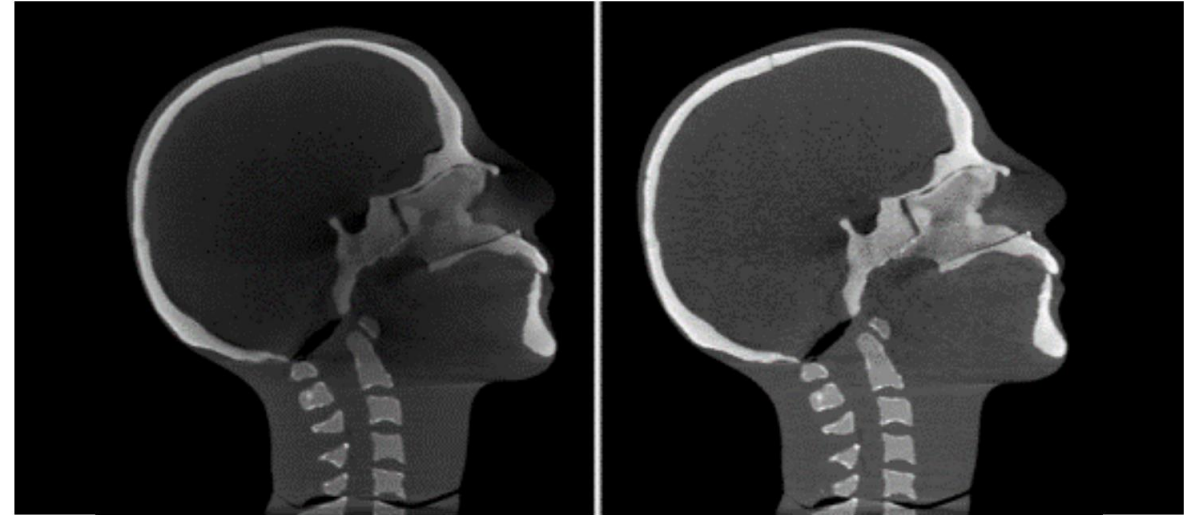
*Left: Conventional CT Slice; **Right:** With IBEX RE Scatter Correction*

*Left: Conventional CT Slice; **Right:** With IBEX RE MAR*

Digital Radiography Tomosynthesis

Fast reconstruction: 10 seconds for typical volumes

Iterative Reconstruction with noise reduction and resolution enhancements

Flexible geometries: static or sliding detector, source arc or sliding trajectories. Plus support for arbitrary detector and source movements

Range of artefact correction methods:

Scatter Correction (SC)
Metal Artefact Reduction (MAR)
Truncation Correction
Hounsfield Unit calibration

Digital Breast Tomosynthesis

Fast reconstruction: 10 seconds for typical volumes

Iterative Reconstruction with noise reduction and resolution enhancements

Flexible geometries: static or sliding detector, source arc or sliding trajectories. Plus support for arbitrary detector and source movements
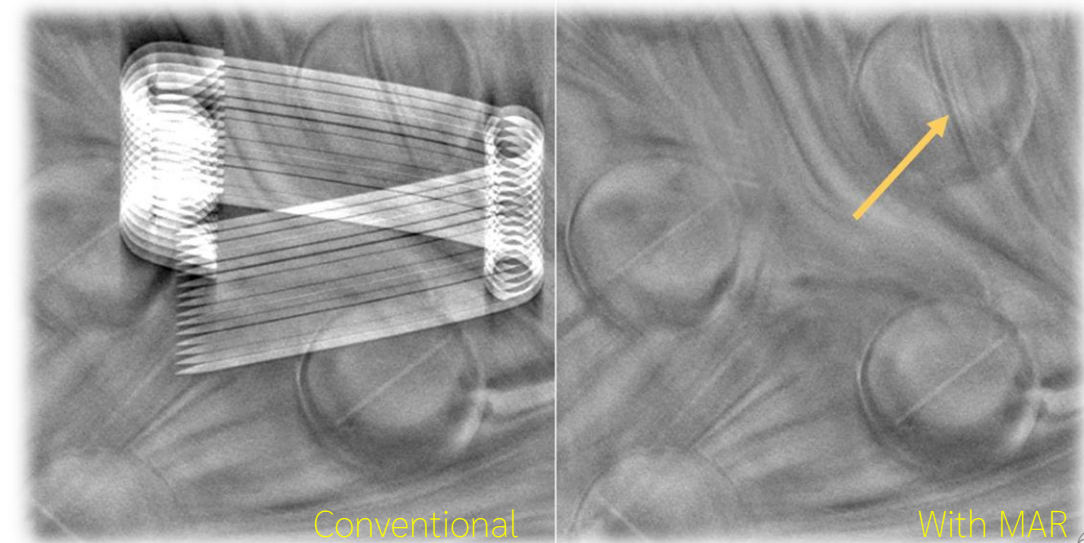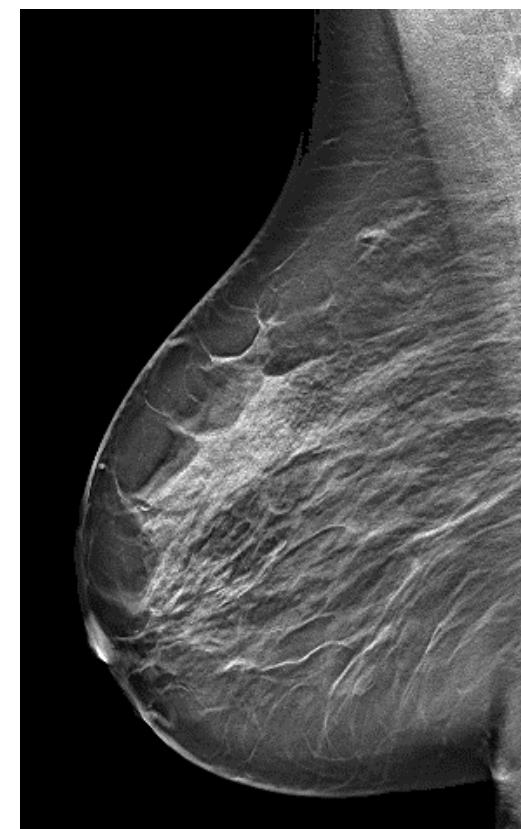
Range of artefact correction methods:

   Scatter Correction (SC)
   Metal Artefact Reduction (MAR)
   Truncation Correction
   Hounsfield Unit calibration


Conventional

With MAR

Technical

The IBEX Trueview product is delivered as a Software Development Kit (SDK) with easy to use Application Programming Interface (API) supporting C/C++ languages

Demo versions can be made available as wrapped executables

Typical runtime: 25 seconds (CBCT); 10 seconds (Tomosynthesis)

Minimum computing specification:

CPU	Intel i7
RAM	32GB
GPU	Nvidia GTX 1070 8GB RAM
Video Drivers	Version 461.92 or later.
Free Disk Space	25GB, SSD
Operating System	Microsoft Windows 10 (version 1607 or newer)
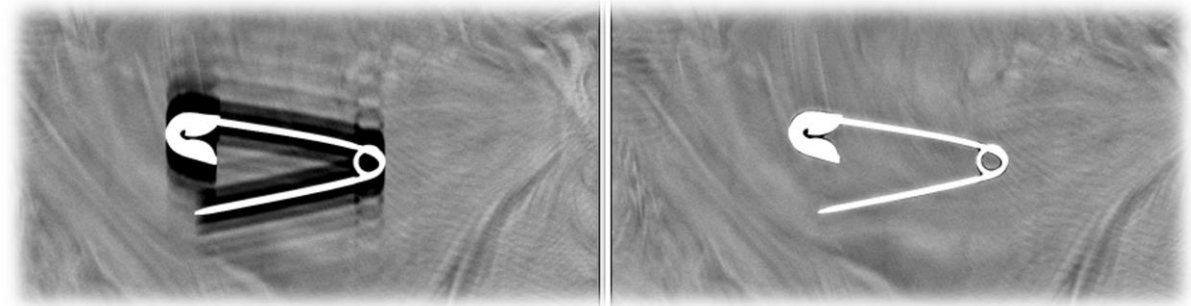
Typical DBT recon (LHS) and with MAR (RHS)