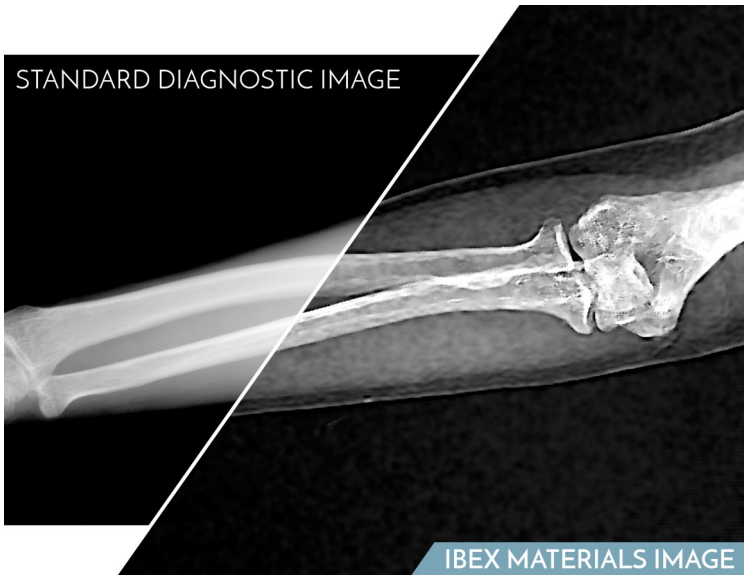
A MATERIAL DIFFERENCE

IBEX X-RAY DETECTOR TECHNOLOGY ADDS COMPOSITION DATA TO X-RAY IMAGES



Radiograph and IBEX materials image , human cadaver donor forearm collected with IBEX MAP technology fitted to a Rayence WCA1417 FPD. Mobile GE VMX Plus, single exposure, 60kV, 1.6 mAs (2.8 µGy detector dose)

Absorption and Materials Contrast from a Single Clinical Exposure

The IBEX MAP technology retrofits to standard digital radiography detectors to deliver high quality materials information.

IBEX-enabled detectors allow a standard DR system to simultaneously generate both diagnostic and materials contrast images from a single exposure at a fixed kVp. Images are collected with no change to standard clinical procedures and at a normal clinical dose.

Additional materials information – for example, areal Bone Mineral Density, is generated with a sensitivity equivalent to that of dedicated DEXA systems, greatly enhancing the diagnostic value of routine radiography examinations.

IBEX is making large-area energy sensitive detectors a practical reality for the first time. Contact us to learn how IBEX can help you see more in your application.

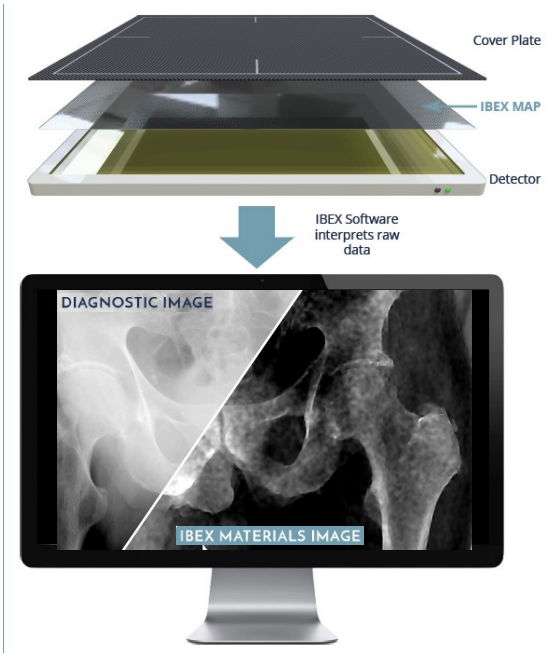
See more...

- Materials information from standard digital radiography systems
- Diagnostic and composition images in a single exposure
- No compromise on imaging area or speed

...with IBEX

- Simple upgrade - compatible with all Flat Panel Detectors
- Materials information from a single exposure at normal clinical dose
- No other change to equipment or procedures required

HIGH SENSITIVITY MATERIALS INFORMATION FROM ANY X-RAY DETECTOR



Radiograph and IBEX materials image , human cadaver donor neck of femur. IBEX MAP technology fitted to a Rayence WCA1417 FPD. Mobile GE VMX Plus, single exposure, 75 kV, 5 mAs (2.4 µGy detector dose)

The IBEX Solution

The patented IBEX MAP simple fits to the front face of an existing X-ray detector. A precise repeating pattern on the MAP modulates the X-ray beam over the area of a few pixels, analogous to an RGB filter in the optical regime. Advanced IBEX software algorithms then use the effect of this modulation to determine an energy profile on a pixel-by-pixel basis.

The additional energy information contains detailed information on the materials that the X-ray beam has passed through before reaching the detector. IBEX software tools use these changes in the local energy profile to uniquely classify both composition and thickness changes across the whole image.

In this way, IBEX technology can clearly determine materials composition, and separate it from changes in absorption contrast caused by variations in thickness.

Supercharge your Detector

The IBEX MAP technology is compatible with all X-ray imaging cameras including CMOS and large-area flat panel detectors. High sensitivity composition images are delivered simultaneously with diagnostic images that retain the spatial resolution of the underlying detector.

IBEX-equipped detectors deliver equivalent or better composition sensitivity than CdTe direct detectors, without the need for scanning.

Working with customers to integrate the IBEX solution

The value of IBEX technology has been demonstrated in multiple applications including NDT, Food Inspection, Security and Medical Radiography.

We work closely with customers to optimise the IBEX system for their specific detectors and applications, and can supply the IBEX MAP and software APIs under license for integration into third-party detectors and systems.

Please contact us if you would like to assess the IBEX technology and see how it can add a new dimension to your X-ray systems.

IBEX materials image, human cadaver donor wrist . IBEX MAP technology fitted to a Rayence WCA1417 FPD. Mobile GE VMX Plus, 60 kV, 0.5 mAs, single exposure.

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