



StatscanTM
critical imaging system



Award Winning Technology
2004 Frost & Sullivan Product Innovation Award
2003 Popular Science 'Best of What's New' Grand Award

 **Iodox**[®]
critical imaging technology

The first flexible format digital radiography system, designed for:
Trauma, Military / Disaster, Pediatric, Bariatric and High Throughput General Radiography

...Because In The Golden Hour, 13 Seconds Could Mean A Lifetime

Statscan Critical Imaging System - the new paradigm for:

Emergency Trauma Assessment

Time is of the essence during the golden hour. Statscan is an entirely new class of digital radiography system specifically designed to meet the needs of emergency centers at any level worldwide. Emergency and trauma patients of all types can be quickly and flexibly assessed via large format full body x-rays, or smaller format detailed studies can be accomplished with extreme ease. Full body x-ray images can be completed in 13 seconds or less, while Statscan's ease of operation allows non-specialized personnel to perform procedures rapidly and at a much reduced risk of radiation exposure to the staff and the patients. Critical patients remain completely accessible to emergency medical professionals throughout the entire comprehensive x-ray examination. Such exams typically take as little as 3 - 4 minutes from beginning to end, versus an estimated hour or more via any alternate methodologies.

- ✓ Statscan is the only DR system that produces a full body x-ray... It takes 13 seconds, or less!
- ✓ Statscan can complete entire multi-view x-ray examinations in 3 - 4 minutes.
- ✓ Statscan detects unsuspected injuries in unconscious patients that might otherwise be missed.
- ✓ Statscan allows constant critical patient accessibility during the entire exam.
- ✓ Statscan's low dose technology is the safest x-ray system for life support personnel and patients.

Military / Disaster Casualty Assessment

When considering the critical realities of today's world... Statscan is the assurance that the needs of seriously injured patients can be diagnosed rapidly and provided the best possible chance of survival. Offering proven critical care benefits, Statscan is clearly applicable to the armed forces for use in permanent emergency health care installations, large ships, aircraft carriers or even standardized field hospital tents. Its relatively small footprint and easy-to-install floor mount design, enables Statscan to be integrated within a standard shipping container, allowing it to be rushed to critical need sites located anywhere in the world. Disaster victim management from explosions, earthquakes and other unfortunate massive-scale catastrophes can be addressed at life-saving speeds because Statscan is unparalleled against any diagnostic imaging technology currently available.



lucid™ automatic 'best view' image enhancement gives critical care professionals a hands-free look at every part of the patient, instantly... a huge time saver during the 'golden hour'.



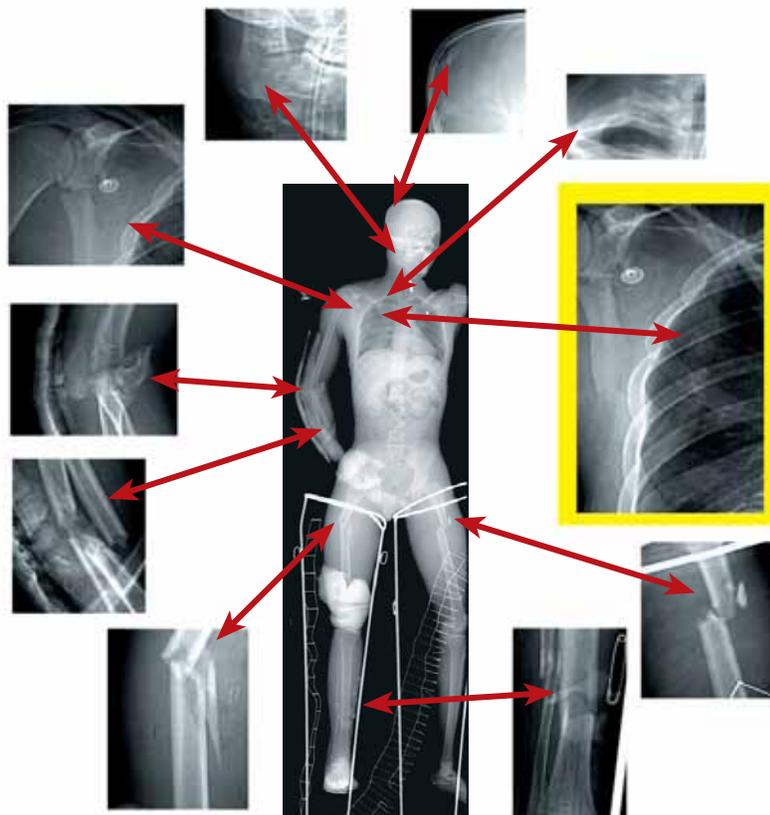
lucid™ full-body image



An actual case - a single Statscan full body image that diagnosed 10 separate injuries in 13 seconds

Which one, if found, is a Life Saver?

Which one, if missed, could be Terminal?



Pediatric Patient Radiography

Pediatric patients' safety is critical. The unique sub-specialty of imaging and diagnosing children has always been a conflict of opposing goals. On one hand, x-rays are still the "gold standard" for the vast majority of imaging procedures needed to identify disease processes in children. On the other hand, it is well known that excessive radiation exposure to children either before or after birth, can be detrimental in a number of proven ways. As such, achieving the highest quality images at the lowest possible dose has always been a conflicting quandary.

Until now...Statscan's unique linear slot-scanning x-ray technology produces a highly focused fan beam that effectively eliminates the dose-increasing scatter factors inherent in conventional x-ray systems, or even those intrinsic in all CR or other DR designs. Because Statscan allows the user to effectively control the actual dose administered to the child via a combination of adjusting: scan speed, digital resolution and x-ray technical parameters; pediatric imaging can be fully customized to fit the diagnostic requirements of any particular examination. This allows pediatric imaging specialists to individually control and administer only the lowest possible dose required to achieve the highest quality results needed. Also, due to the high sensitivity of Statscan's proprietary detector technology and its ability to create images using a very short effective exposure time, freezing pediatric patient motion can be accomplished with relative ease.

- ✓ Statscan's linear slot scan technology produces nearly zero amounts of x-ray scatter & minimizes radiation exposure.
- ✓ Statscan's x-ray exposures can be custom tailored to meet the diagnostic needs of the pediatric patient.
- ✓ Statscan's instantaneous x-ray exposure greatly reduces motion artifacts.
- ✓ Statscan allows constant pediatric patient accessibility during the entire exam.
- ✓ Statscan is the lowest dose x-ray system ever produced and the safest for pregnant patients & children!



lodox[®]
critical imaging technology

Statscan[™]
critical imaging system

FAST whole body image
in 6 seconds

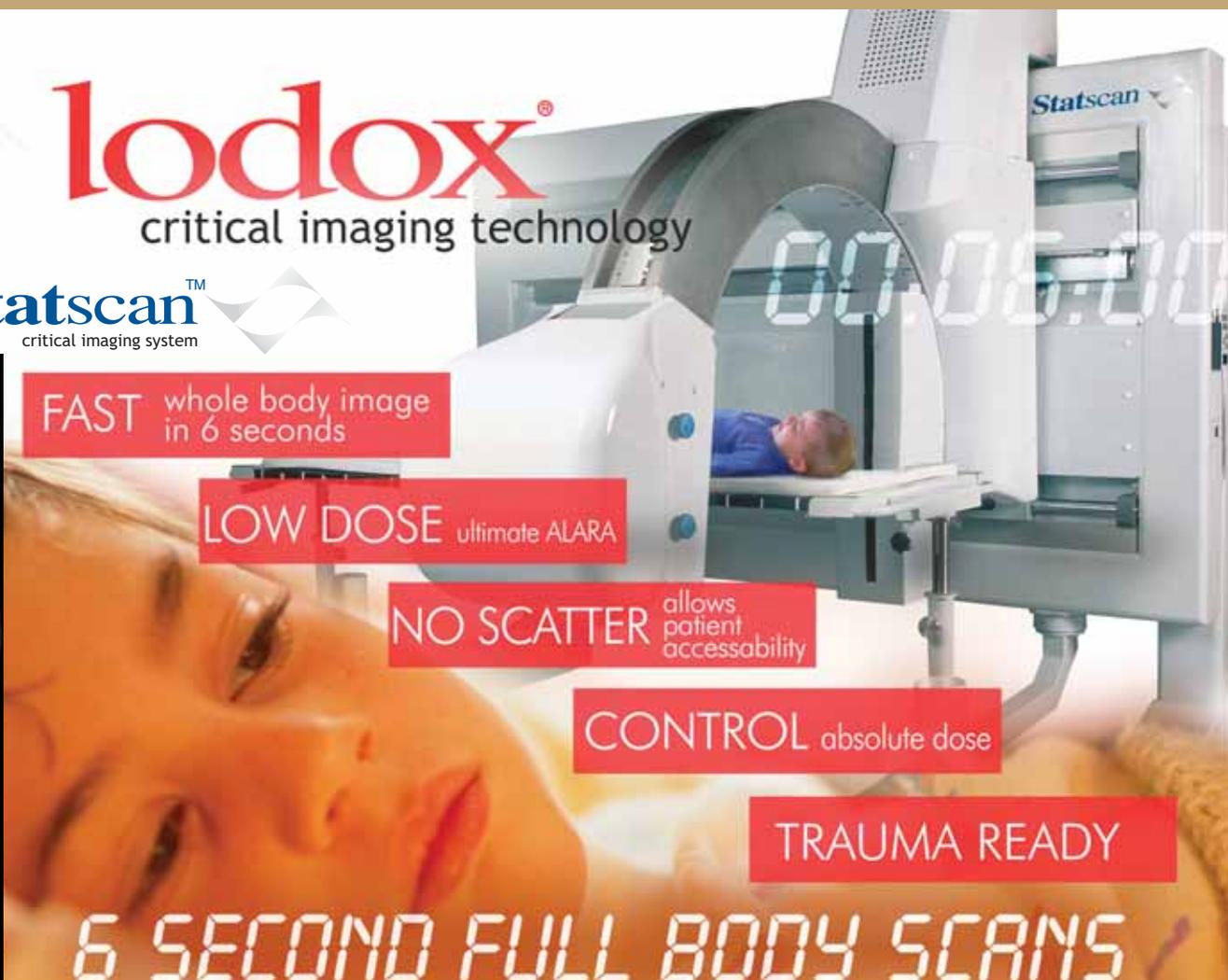
LOW DOSE ultimate ALARA

NO SCATTER allows
patient
accessibility

CONTROL absolute dose

TRAUMA READY

6 SECOND FULL BODY SCANS





- ✓ Statscan's linear slot scan technology produces excellent image quality without the large patient scatter degradation that is prevalent in other x-ray systems.
- ✓ Statscan's large field of view capability provides the highest amount of diagnostic feedback with the minimum number of actual x-rays taken.
- ✓ Statscan has >16,000 levels of gray offers excellent soft and dense tissue resolution which is extremely beneficial when working with large patients.
- ✓ Statscan's high weight capacity imaging table meets the needs of large patients.

Bariatric Patient Radiography

The forgotten patient. This is another sub-specialty of patients with a host of unique medical conditions that require quality imaging to diagnose their numerous physical conditions. Ask any medical imaging professional what type of patient is the most difficult to achieve diagnostic results from and they will almost unanimously say it is the bariatric patient. The type of patient that is basically too large to be x-rayed via conventional methodologies.

Until now..Statscan's flexible format digital imaging technology offers a real solution. Aside from Statscan's ability to image large areas, the system is designed to meet the needs of bariatric patients via a multi-faceted approach. Statscan's unique linear slot-scanning technology produces a highly focused primary beam that remains true to form, even as it enters the bariatric patient's larger body part.

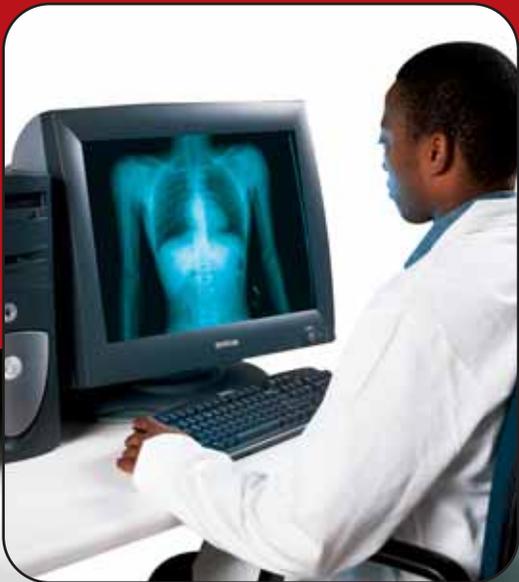
Because the majority of x-ray scatter that is produced from tissue interaction falls outside of Statscan proprietary detector (unlike any other DR technology), only the primary and cleanest (scatter-free) x-ray beam is used to produce the resultant images. These factors create image quality that is innately more diagnostic and therefore more beneficial to these patients. This approach is further enhanced by the system's massive 14 bit image processing that provides over 16,000 levels of grey scale contrast resolution to maximized image quality. Lastly, all of this is combined with an optional higher weight limit table design, a power enhanced x-ray generator and imaging chain produces a bariatric x-ray imaging system that is unmatched for this critical purpose.

High Throughput General Radiography

Considering current technology CR or DR for your department? Choose flexible-format DR, the next generation for your critical imaging needs. Busy imaging centers with large patient volumes need the fastest integrated solution available...Statscan.

Statscan not only produces images of the highest quality (60 micron pixel spatial resolution; <16,000 levels of gray contrast resolution exceeding current CR or DR technology), it does so using the most efficient, integrated solution for high throughput departments, because of its ability to create image formats of any size (from a whole body to a finger), using automated technical programming which provides absolute simplicity. Flexible format DR means that large format images consolidates more of the body, requiring less views and less images taken overall, and with less time required for each (even a tall adult full body x-ray can be completed in 13 seconds). Statscan eliminates film, supplies and processing, thereby allowing exams to be completed in unparalleled speed with greatly reduced retakes. DICOM 3.0 connectivity means full PACS compatibility in departments so equipped.

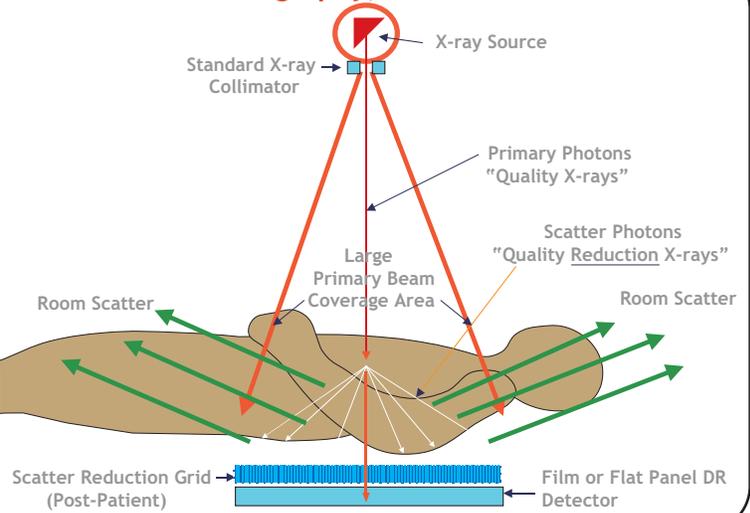
- ✓ Statscan's flexible format DR capability allows large or small field of view x-rays with a single exposure.
- ✓ Statscan allows fewer views to be taken to complete an exam.
- ✓ Statscan's has excellent spatial and contrast resolution... As good as or better than any digital imaging technology!
- ✓ Statscan's linear slot scan DR technology increases workflow, reduces costs and increases productivity.
- ✓ Statscan's DICOM connectivity allows PACS compatibility for the "all digital imaging department".



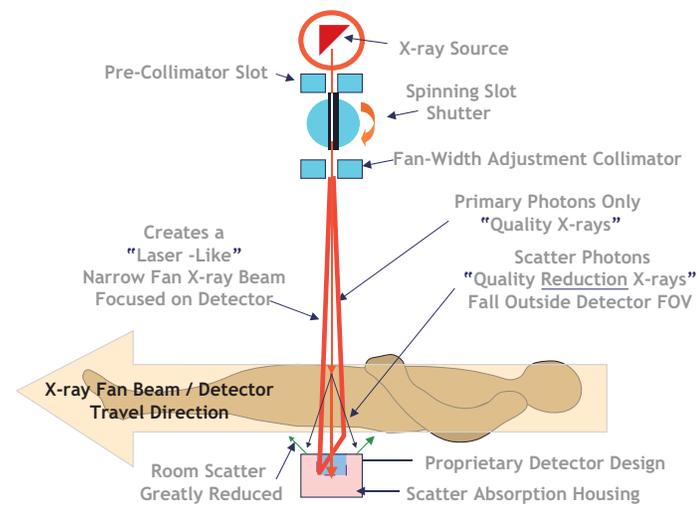
Conventional or Digital Flat Panel Detector Based X-ray Systems

- Conventional, CR or flat panel detector based DR x-ray systems require a wide primary x-ray beam to spread over a sizeable area for larger field of view image applications (design limited to a maximum 40 cm square).
- Compton scatter requires that a post-patient "scatter rejection" grid is used to reduce x-ray which is a harmful by-product of this faulty design, but a requirement to maintain image quality.
- The overall patient radiation exposure then needs to be higher to counter the negative effects of body scatter and grid absorption.
- This higher radiation exposure and the wide x-ray beam spreads causes relatively high amounts of scatter radiation throughout the room and adjacent areas.
- These are just the laws of radiation physics.

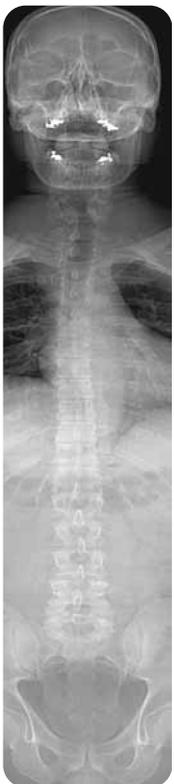
Conventional Radiography, or Other DR/CR Products



Statscan Flexible-Format Digital Radiography System



- Lodox has developed a proprietary x-ray beam controlling mechanism, consisting of a:
 - Pre-collimating slot
 - Spinning slot shutter
 - Fan-width adjustment collimator
- This creates a "laser-like" primary x-ray photon beam, in a .4 millimeter thin "fan format".
- Only the primary x-ray beam strikes Statscan's proprietary solid state detector.
- Only negligible scatter is produced, which strikes the radiation shielded detector housing that is designed for maximum radiation absorption.
- No post-patient scatter rejection grid is ever required, regardless of patient size.
- Results: Significantly lower patient radiation exposure (typically 10-15 times less dose is required).
- Also: cleaner, higher quality "scatter-free" digital images are produced, with spatial resolution up to 8 line pairs per millimeter theoretically possible because of Statscan's very fine 60 micron pixel size.



Lodox Systems - From a medical breakthrough and medical imaging technology-rich heritage.

The development of medical breakthroughs from South Africa is recognised worldwide. For example, the University of Cape Town is where Professor Allan Cormack, who won the Nobel Prize for Medicine in 1979, did his pioneering work in 1956 that led to the development of the world's first CT Scanner. The Groote Schuur Hospital in Cape Town is where Professor Christiaan Barnard and his team performed the world's first heart transplant. It should come as no surprise then that the University of Cape Town and the Groote Schuur Hospital is where the initial concept of Statscan became reality in 1995.

Lodox Systems - A South African consortium that gave birth to a solid medical imaging company with strong financial backing.

De Beers - Lodox began from a unique image detector technology that was originally developed for security purposes by De Beers, the multi-billion dollar "a diamond is forever" corporation. De Beers decided to share their technology with Lodox, became enthusiastic about the product's benefits to mankind and decided to become one of the primary investment partners in the Lodox consortium.

The Industrial Development Corporation (IDC) - The IDC is a self financing, multi-billion dollar development finance institution whose primary objectives are to contribute to the generation of balanced, sustainable growth in South Africa, and to the economic empowerment of the entire South African population. This is achieved by promoting entrepreneurship through the building of competitive enterprises based on sound business principles. Based on this premise, the IDC also chose to become one of the primary investment partners in the Lodox consortium.

Network Healthcare Holdings Limited (Netcare) - A Johannesburg Stock Exchange listed company, Netcare is the largest private hospital and doctor network in the Southern Hemisphere. The group operates 44 acute care hospitals and 56 specialised medical units throughout Africa and cares for in excess of 800,000 patients per year. Netcare is also South Africa's leading emergency service provider with both level one and level two trauma and emergency centers throughout the continent. Because of the obvious efficiency and outcome benefits offered by Lodox technology, Netcare also chose to become one of the primary investment partners in the Lodox consortium.



DE BEERS
A DIAMOND IS FOREVER

