



X-Ray Light Valve for Mammography

Background

Digital mammography is the accepted screening modality for breast cancer in large centres but its availability worldwide is limited primarily by capital costs. Lower cost digital mammography will facilitate access to small clinics, community clinics in smaller centres, and mobile screening units, where capital costs are problematic. A novel approach to low-cost digital radiography with improved image quality has been developed to address the capital cost issue.

Technology

The x-ray light valve ("XLV") has been developed as a new instrument to improve digital radiography. The XLV combines 3 well-established technologies: amorphous-Se as photoconductors, liquid crystal displays, and digital scanner readout to achieve a low-cost but high image quality digital x-ray detector system. This technology incorporates the x-ray absorption, image formation and amplification stages within a simple, compact structure and entirely eliminates problems related to a secondary quantum sink. The XLV has improved image quality while significantly reducing manufacturing costs. The approach has general applications in medical x-ray systems and is being developed first for digital mammography, a \$1 billion market annually. The lower cost of the XLV system could encourage greater adoption of digital radiography in mammography clinics including mobile screening clinics, in North America and worldwide, potentially contributing to the earlier diagnosis of breast cancer when treatment is most effective.

Advantages

Advantages of the XLV over current technologies include:

- significantly lower cost due to inherent design features incorporating simpler components
- more robust image capture
- can be used in new equipment as well as retrofits of older film-based mammography machines

Intellectual Property Position

XLV Diagnostics Inc. is the exclusive licensee of two issued patents and several patents pending.

Key Personnel

Joel Liederman of MaRS Innovation is the CEO of XLV Diagnostics. Dr. John Rowlands at the Thunder Bay Regional Research Institute is the Founding Scientific Director and principal investigator. Mr. Vlad Sukhovatkin is Chief Technical Officer.



Business Opportunity

XLV Diagnostics is seeking a partner with expertise in the commercial manufacture of liquid crystal devices, as well as additional funding for this technology.

Contact

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