

Healthcare: Devices

# Real-Time Object Recognition in Ultrasound Video for Detection And Censoring of Foetal Genitals

## APPLICATION

Purplas IT services is working on “Real-Time Object Recognition In Ultrasound Video For Detection And Censoring Of Foetal Genitals” where the system prevents clandestine use of ultrasound machines for prenatal sex determine of foetus through Real-Time Censoring of Foetal Sex Selective Physiologies through proprietary Image Processing Software for Ultrasound Video Output.

COMPANY NAME	TECHNOLOGY READINESS LEVEL (TRL)	INTELLECTUAL PROPERTY
<b>Purplas IT Services Pvt Ltd</b>	<b>TRL: 8 (The software is developed and validated. It is currently undergoing standardization and necessary due diligence for technology transfer &amp; partnership for market entry)</b>	US PN: US2017/0161629A1 US Patent Number: US 9819711 US Patent Number: US 9830423 PCT AN: PCT/US2014/013215 India AN: 3598/CHENP/2015
FOUNDER’S NAME		
Abhishek Biswas		

## PROBLEM ADDRESSED

India is a country with falling sex ratio and clandestine application of ultra-sonography machines leading to sex determination and female foeticide. One of the measures to discourage sex determination through ultrasonography machines is the enactment of PCPNDT. And through this act restriction were put on the usage and sale of USG machines. This has in-turn restricted the growth of application and accessibility of USG machines across the country and more so in rural India. Hence PCPNDT significantly reduces and adoption USG accessibility not only for Obstetrics but also Non-Obstetric diagnostics. To address this problem, our solution is using AI for censoring critical portion of the image which can be used for sex determination.

## ABOUT THE TECHNOLOGY

The entire project aims to develop a market ready Artificial Intelligence based object recognition software capable of working real-time on live USG video hardware prototype s capable of running the software. The AI software will be developed to detect and blur foetal genitalia and other features if any to render any USG machine embedded with the same incapable of use for pre-natal sex determination. This tech is referred as “SecureSound”

## FUNDS RAISED/ACHIEVEMENTS

- Received BIRAC BIG grant worth INR 49.99 Lakhs
- Second runners up in the “Tata Social Enterprise Challenge hosted” at IIM Calcutta.
- Awarded with the "Outstanding Innovation Award" for the business plan at the Dell Social Innovation Challenge among 2600 entries.
- Global Runners Up in Dell Empowering Women Challenge held at New York for solution/business model "Ultrasafe Ultrasound".

## PRODUCT



## USP

- “SecureSound” is an affordable handheld ultrasound machine providing accessibility to universal point-of-care diagnostics services in Rural and Urban India.
- These machines embedded with proprietary image processing technology, censor foetal physiologies which cannot be used for pre-natal sex determination.
- Being incapable of use for sex determination, these fall outside regulatory restrictions on sale and use of ultrasound machines through PC-PNDT Act. Enabling un-restricted sale in an otherwise restricted and untapped market.
- Enabling pre-emptive response for PC-PNDT through AI and data analytics

## END USERS/CUSTOMERS

Diagnostic Modalities like MRI, CT, PET etc. Non-obstetric USG clinics, Doctors/Radiologists providing basic diagnostic services in rural villages.