



A Hands Free Ultrasound Probe for Gynecological Procedures

Principal Investigator:

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Background:

Using real-time, vaginal ultrasound guidance can enhance the quality of many gynecological procedures. However, current technology does not allow for vaginal scanning while the speculum is in place. There simply is not enough room in the vagina to allow for an ultrasound probe and surgical instruments. Instead, ultrasound guidance for gynecological procedures most often involves trans-abdominal scanning. There are several disadvantages to this approach. The picture is not as clear as with a vaginal scan and an additional operator is needed.

Description of Project:

Dr. Liciardi has designed a new device that combines speculum and probe(s). A small ultrasound probe(s) can be imbedded into, attached to, or simply held in place by the tip of the speculum, above the surgical field. Utilizing such a device, both the speculum and probe would be in place, allowing the physician to manipulate any surgical instrument(s) within the field. The ultrasound picture would be very clear, and no other operator would be needed to assist in the surgery.

Other imaging devices (e.g. X-ray, infrared) can be used with or substituted for ultrasound. Further, two or more transducers may be used together to create a three-dimensional image of the field.

Applications:

All surgical procedures or medical examinations that require access to an orifice of the body and where a clear, real-time image of the field would provide an advantage, including 1) gynecology, 2) proctology and 3) dentistry.

Patent Status:

A provisional US patent application has been filed.

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