

Claims:

1. An apparatus for facilitating medical imaging of a subject comprising:
 - a medical imaging device receiver configured to receive a medical imaging device,
 - at least one auxiliary equipment receiver configured to receive an auxiliary equipment for placement at a target portion of the subject, and
 - a sound wave manipulation module arranged to direct transmission of sound waves between the medical imaging device and the subject, wherein an image of the target portion is formed by the medical imaging device for guiding placement of the auxiliary equipment.
2. The apparatus according to claim 1, wherein the soundwave manipulation module comprises a soundwave deflection surface arranged to alter a direction of transmission of at least part of the sound waves.
3. The apparatus according to claim 2, wherein the soundwave deflection surface is configured to facilitate at least one of the following: - reflection, refraction, diffraction of sound waves.
4. The apparatus according to claim 2, wherein the soundwave deflecting surface is formed from a material having a sound transmission velocity at a ratio ranging from 3.0 to 11.0 relative to water.
5. The apparatus according to any one of claims 2 to 4, wherein the soundwave manipulation module comprises a soundwave transmission portion arranged to facilitate transmission of the sound waves between at least the medical imaging device and the soundwave deflection surface.
6. The apparatus according to claim 5, wherein the soundwave transmission portion is formed from a material having a sound transmission velocity at a ratio ranging from 0.8 to 5.0 relative to water.
7. The apparatus according to any one of claims 5 to 6, wherein the soundwave transmission interface comprises a gel-based material.
8. The apparatus according to claim 7, wherein the gel-based material is disposed at a hollow portion of the sound wave manipulation module.

9. The apparatus according to claim 1, wherein the soundwave manipulation module is formed from a homogenous material having a sound transmission velocity at a ratio ranging from 2.0 to 3.0 relative to water.
10. The apparatus according to claim 9, wherein the sound wave manipulation module, the medical imaging device receiver and the auxiliary equipment receiver are integrally formed as a one-piece element.
11. The apparatus according to any one of claims 1 to 10, wherein the at least one auxiliary equipment receiver is configured to facilitate placement of the auxiliary equipment at more than one desired positions with respect to a base plane of the apparatus.
12. The apparatus according to any one of claims 1 to 11, wherein the medical imaging device is mounted at a first angle between 0 to 90 degrees with respect to a base plane of the apparatus, and the sound wave deflection surface may be mounted at a second angle between 0 to 90 degrees with respect to a base plane of the apparatus.
13. The apparatus according to any one of the preceding claims, comprising a handle for controlling movement of the apparatus on a body surface of the subject.
14. The apparatus according to any one of the preceding claims, comprising a locking mechanism for maintaining the medical device at a desired position relative to a part of the apparatus.
15. The apparatus according to any one of the preceding claims, comprising a fiducial marker to indicate a position of the auxiliary equipment.
16. The apparatus according to any one of the preceding claims, wherein the medical imaging device receiver and the at least one auxiliary equipment receiver are rotatable with respect to each other.
17. The apparatus according to any one of the preceding claims, further comprising a frame mountable onto a body portion of the subject, wherein the frame is arranged to facilitate movement of the medical image device receiver and the at least one auxiliary equipment receiver along at least two axis.
18. The apparatus according to claim 17, further comprises a plurality of quick release mechanisms to facilitate mounting of the frame onto the body portion.

19. The apparatus according to claim 18, wherein the quick release mechanisms include at least one the following: suction device, strap and buckle, removable adhesive.

20. A method for deploying the apparatus of any one of claims 1 to 16 comprising the steps of:-

- attaching a medical imaging device to the medical imaging device receiver of the apparatus;
- placing the apparatus on a body surface of a subject;
- moving the apparatus on the body surface for obtaining an image of a target portion of the subject;
- attaching an auxiliary equipment to the at least one auxiliary equipment receiver of the apparatus;
- adjusting position of the auxiliary equipment based on the image of the target portion, and inserting the auxiliary equipment towards the target portion.

21. A method for deploying the apparatus of any one of claims 17 to 19 comprising the steps of:-

- mounting the frame of the apparatus on a body portion of a target subject;
- attaching a medical imaging device to the medical imaging device receiver of the apparatus;
- attaching an auxiliary equipment to the at least one auxiliary equipment receiver of the apparatus;
- moving the medical imaging device along a first axis and moving the auxiliary equipment along a second axis for obtaining an image of a target portion of the subject;
- adjusting position of the auxiliary equipment based on the image of the target portion, and inserting the auxiliary equipment towards the target portion.

22. The method according to claim 21, further comprising the following steps of: - a) securing a catch mechanism of the frame upon quick release, and/or (b) releasing the catch mechanism for the medical imaging device or auxiliary equipment to move along an opposite direction.