

**TITLE OF INVENTION: THREE-DIMENSIONAL CARDIAC MAPPING METHOD
AND SYSTEM**

ABSTRACT

The present invention discloses a three-dimensional cardiac mapping method and system, and belongs to the technical field of image mapping. Cardiac ultrasonic image sequences are collected in a plurality of cardiac cycles, wherein each ultrasonic cardiac image sequence includes a plurality of ultrasonic cardiac images; image enhancement and edge detection are performed on the ultrasonic cardiac images to obtain optimized ultrasonic cardiac images; the optimized ultrasonic cardiac images are registered based on a correlation matching algorithm, to ensure that each optimized ultrasonic cardiac image is in the same coordinate system; a three-dimensional reconstruction operation is performed on each registered optimized ultrasonic cardiac image to obtain a three-dimensional cardiac model; a heart is introduced, and layered mapping is performed on the three-dimensional cardiac model by using a morphological analysis method; and a mapped three-dimensional cardiac model is output. The collected ultrasonic cardiac images are subjected to image enhancement and edge detection and then registration to subsequently construct the three-dimensional cardiac model for layered mapping, which increases the display definition of the three-dimensional cardiac model and the accuracy and reliability of the mapping result of three-dimensional cardiac structure.

FIG. 1