

SUPPLEMENTARY

This research splits video of echocardiogram become 10 frames. All frames are a representation of one heart cycle from diastole to systole. By using Optical Flow, determining boundary of cavity can performed in all sequential frames without repeating the initial process of enhancement and segmentation. Figure 1-6. shows the proposed method can track well the movement of the heart wall, which is marked with red contours.

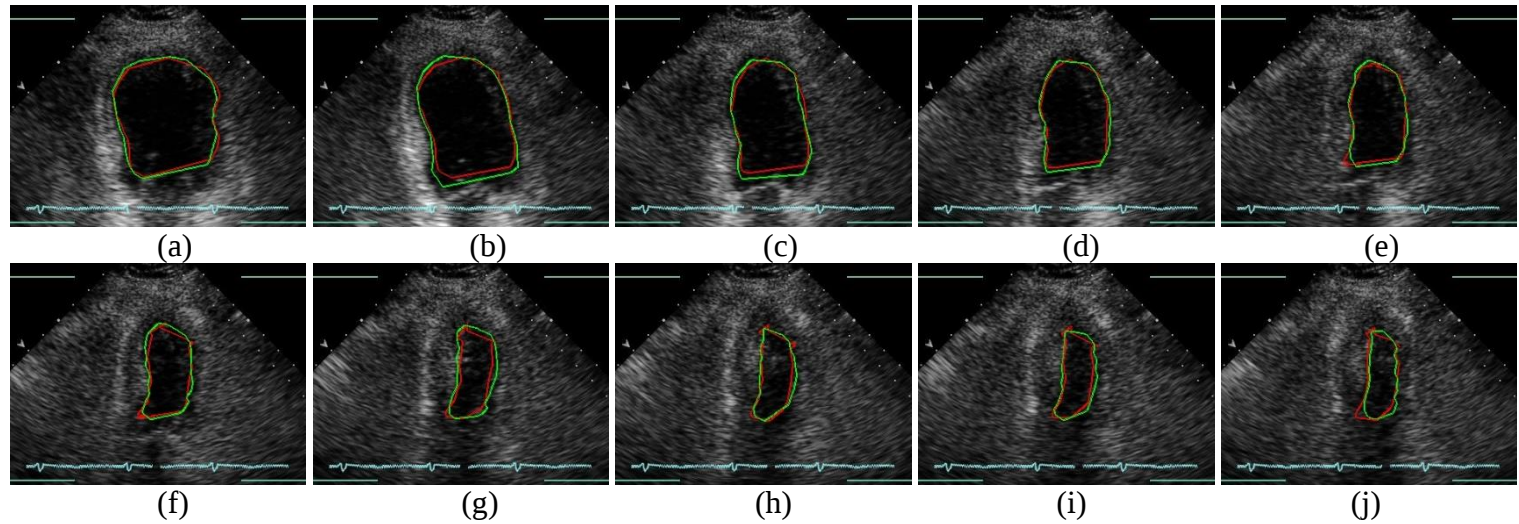


Figure 1. Tracking optical flow & manual data 1. (a) frame 1; (b) frame 2; (c) frame 3; (d) frame 4; (e) frame 5; (f) frame 6; (g) frame 7; (h) frame 8; (i) frame 9; frame 10.

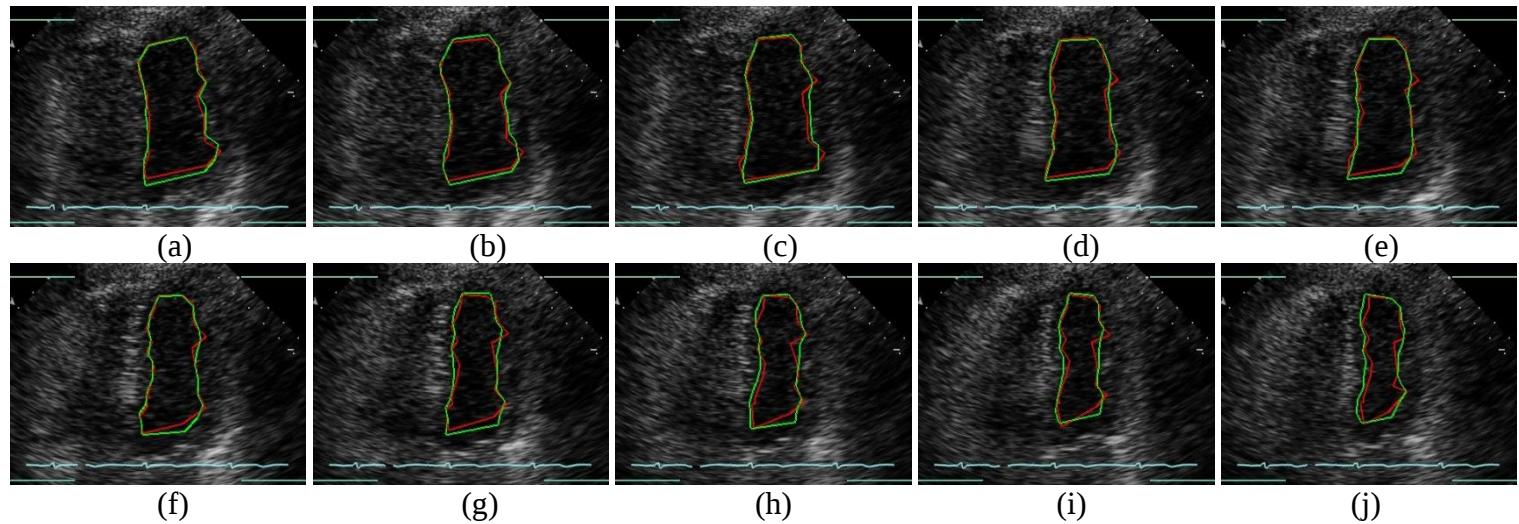


Figure 2. Tracking optical flow & manual data 2. (a) frame 1; (b) frame 2; (c) frame 3; (d) frame 4; (e) frame 5; (f) frame 6; (g) frame 7; (h) frame 8; (i) frame 9; frame 10.

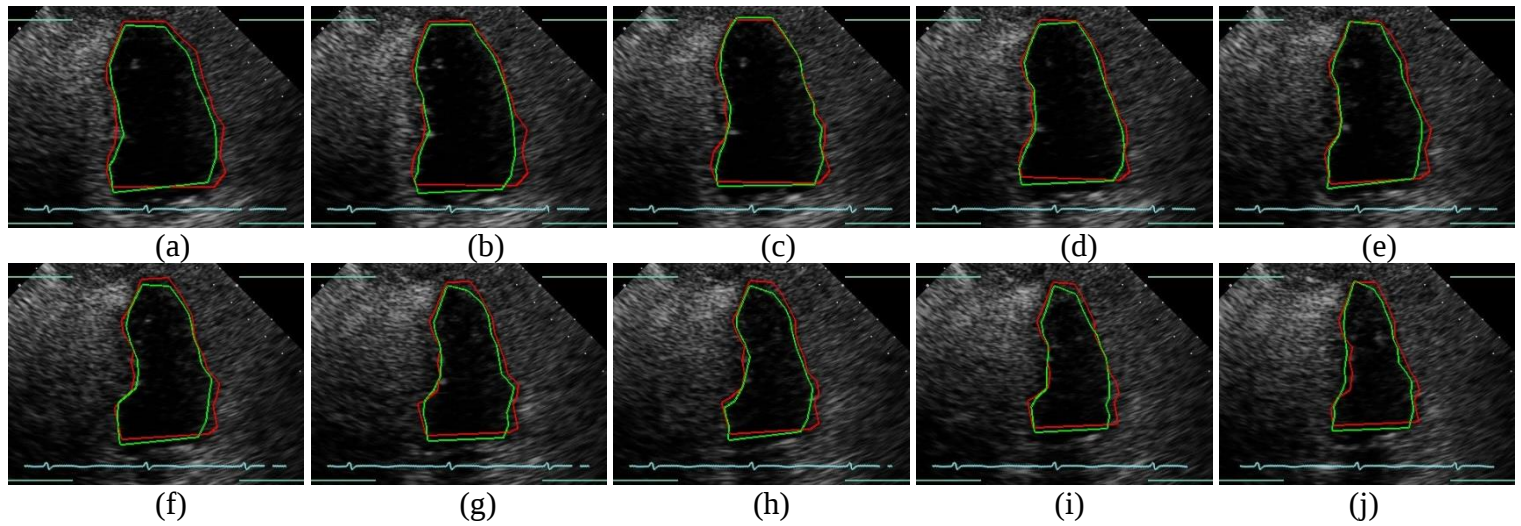


Figure 3. Tracking optical flow & manual data 3. (a) frame 1; (b) frame 2; (c) frame 3; (d) frame 4; (e) frame 5; (f) frame 6; (g) frame 7; (h) frame 8; (i) frame 9; frame 10.

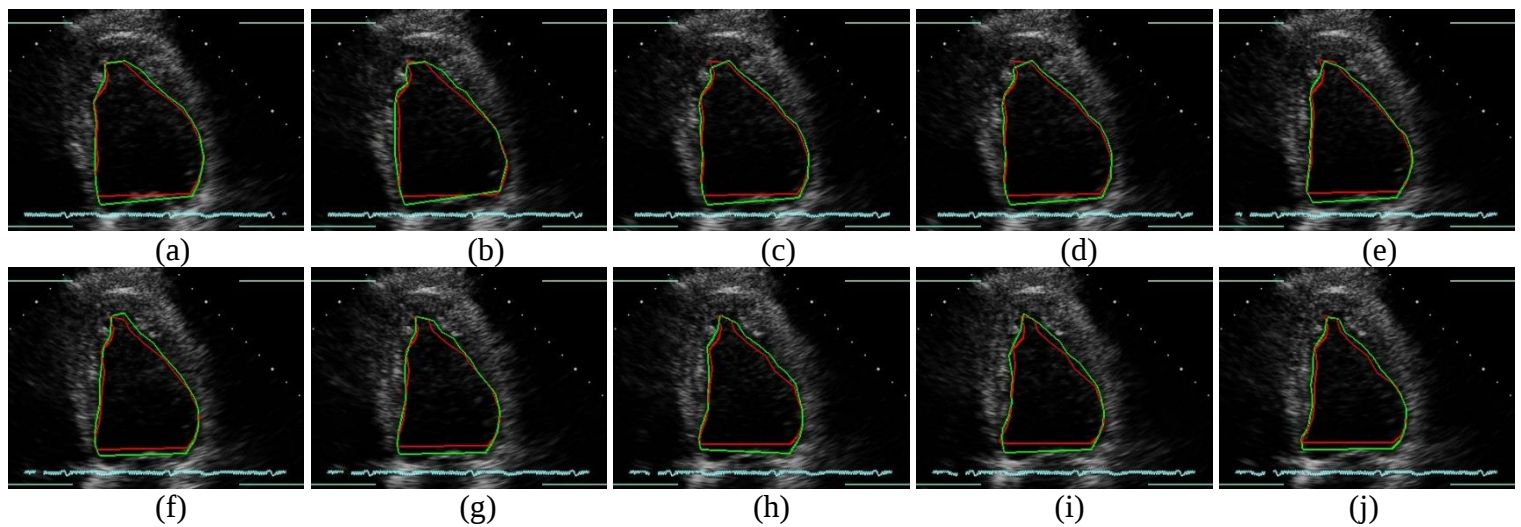


Figure 4. Tracking optical flow & manual data 4. (a) frame 1; (b) frame 2; (c) frame 3; (d) frame 4; (e) frame 5; (f) frame 6; (g) frame 7; (h) frame 8; (i) frame 9; frame 10.

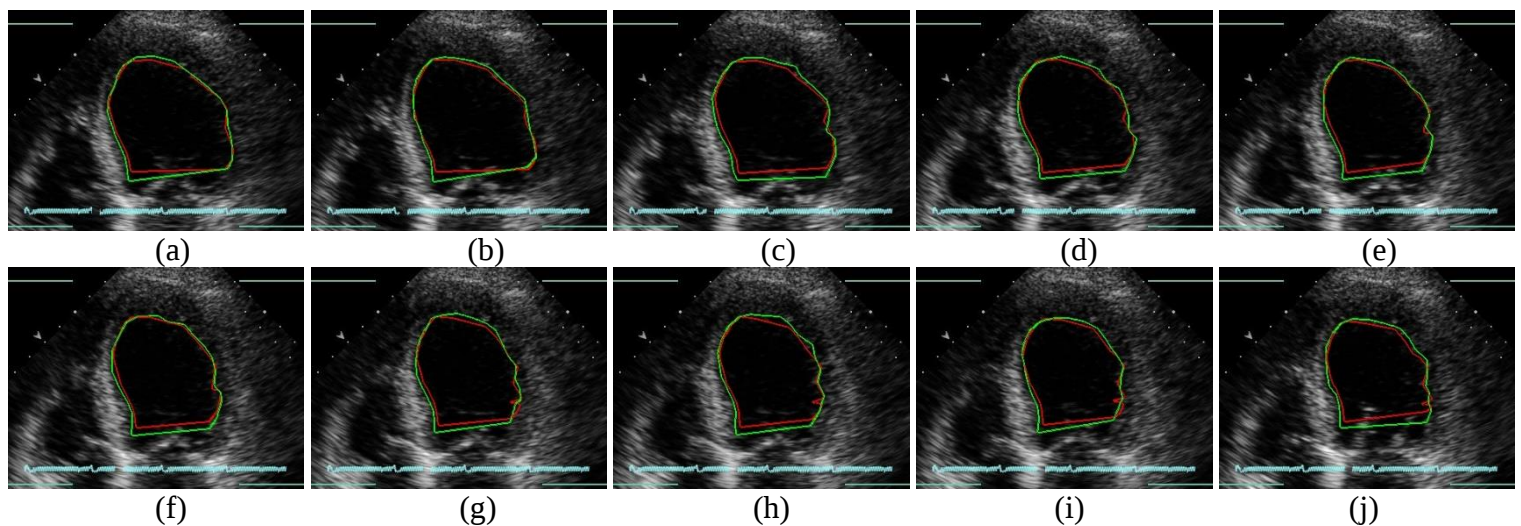


Figure 5. Tracking optical flow & manual data 5. (a) frame 1; (b) frame 2; (c) frame 3; (d) frame 4; (e) frame 5; (f) frame 6; (g) frame 7; (h) frame 8; (i) frame 9; frame 10.

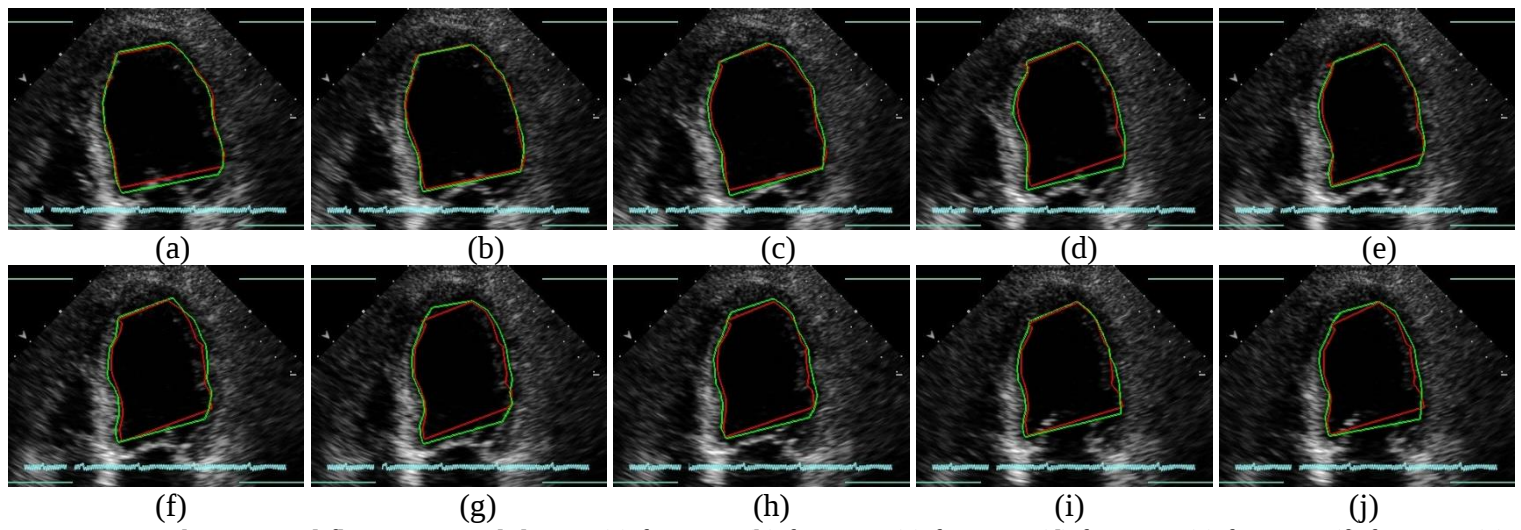


Figure 6. Tracking optical flow & manual data 6. (a) frame 1; (b) frame 2; (c) frame 3; (d) frame 4; (e) frame 5; (f) frame 6; (g) frame 7; (h) frame 8; (i) frame 9; frame 10.

Video Tracking Results Proposed method

<https://drive.google.com/file/d/1fEsVzw4PmJqIPly2Ql61Td3kSgA8By4/view?usp=sharing>