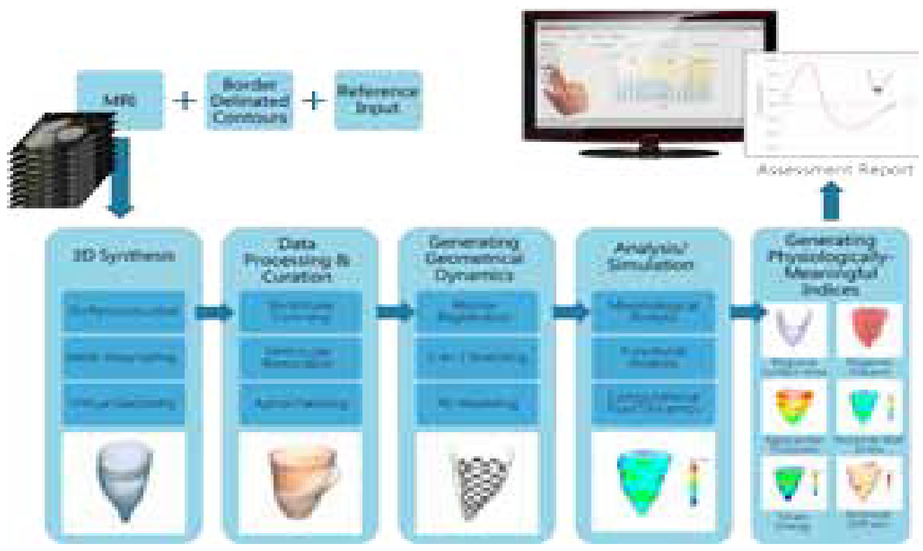
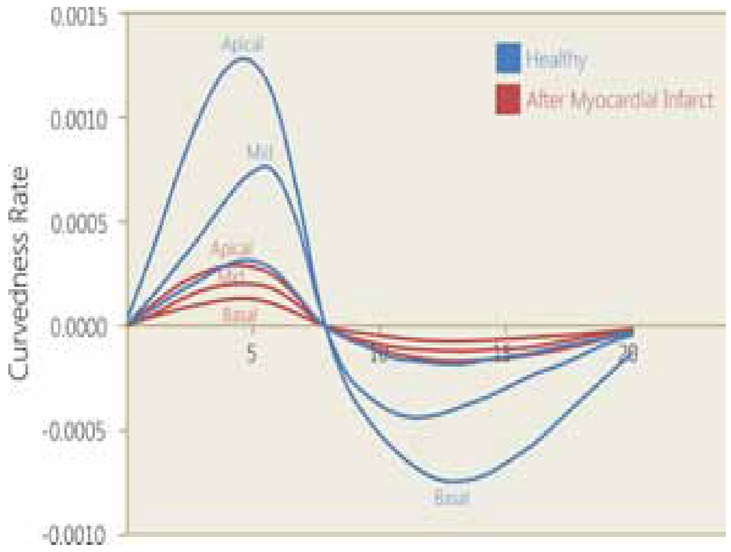
FUSIONWORLD

Lorem ipsum

CARDIOWERKZ

COMPUTATIONAL TOOL FOR GENERATING 4D MODELS OF PATIENTS' HEARTS





(From left)

1) Cardiac Assessment Workflow

2) Interface of Application

CHALLENGES

Ventricular remodelling plays an important role in the progression of heart failure. It is defined as a change in shape,size and function of the heart due to physiological or pathological conditions (e.g., after a heart attack). Conventional clinical methods used to characterize ventricular remodelling are largely based on two-dimensional images extracted from diagnostic imaging techniques.

OUR SOLUTION

CardioWerkz is a Computer-aided Diagnostics platform for quantitative assessment of a broad range of cardiovascular conditions based on MRI data- which is arguably the most accurate and reproducible imaging modality. We have pioneered the concept of curvedness-based Imaging (CBI) as a descriptor of a local left ventricular (LV) function by combining MRI and advcanced computational methodology. CardioWerkz embodies this technology into a seamless and automatic workflow for a real world deployment.

BENEFITS

CardioWerkz has the following distinct advantages:

- Curvedness-based indices are resilient to human-induced noise/error in manual
- Full cardiac cycle shape restoration technology allows MRI data affected by patient motion/respiration to be used for analysis
- 4D motion registration technology allows analysis at all levels of resolution
- Fully automatic workflow and real-time performance ensures efficiency

APPLICATIONS

CardioWerkz could be used for a wide range of cardiovascular applications: We have demonstrated its efficacy over a wide range of clinical conditions, including patients with myocardial infarction , ventricular restoration surgery and congenital heart disease.On-going CBI studies involve patients with coronary artery disease, valve disease and cardiac resynchronization therapy.

FUSIONWORLD

WWW.FUSIONWORLD.SG

Institute for Infocomm Research
A*STAR

CONTACT US
DR SU YI
T+65 6419 1557 ESUYI@IHPC.A-STAR.EDU.SG
WWW.IHPC.A-STAR.EDU.SG