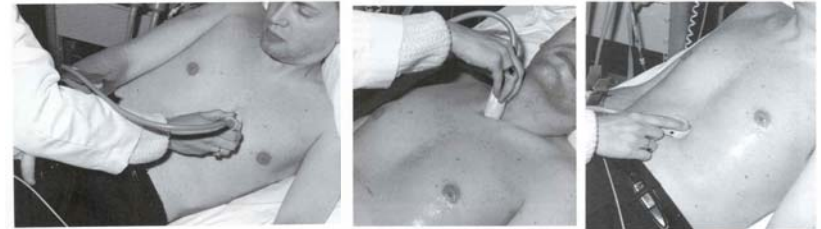
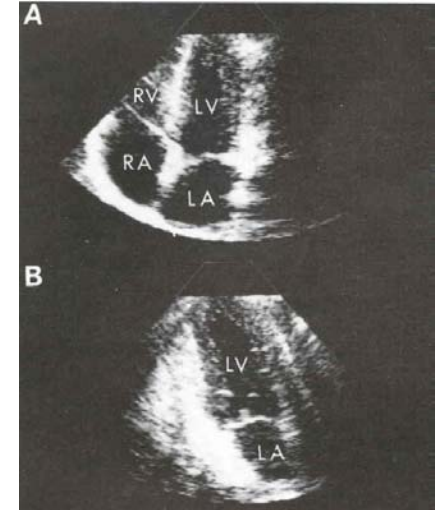
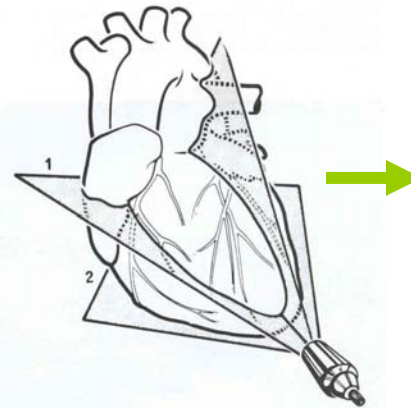


Introduction

- Echocardiography:
common diagnostic modality for assessing the *structure* and *function* of the heart
 - Inexpensive
 - Non-invasive
 - Widely used
- Imaging the heart in several different planes (*Views*)
- Consists of chronological order of video segments of views
- We focus on:
Trans-Thoracic Echo (*TTE*)

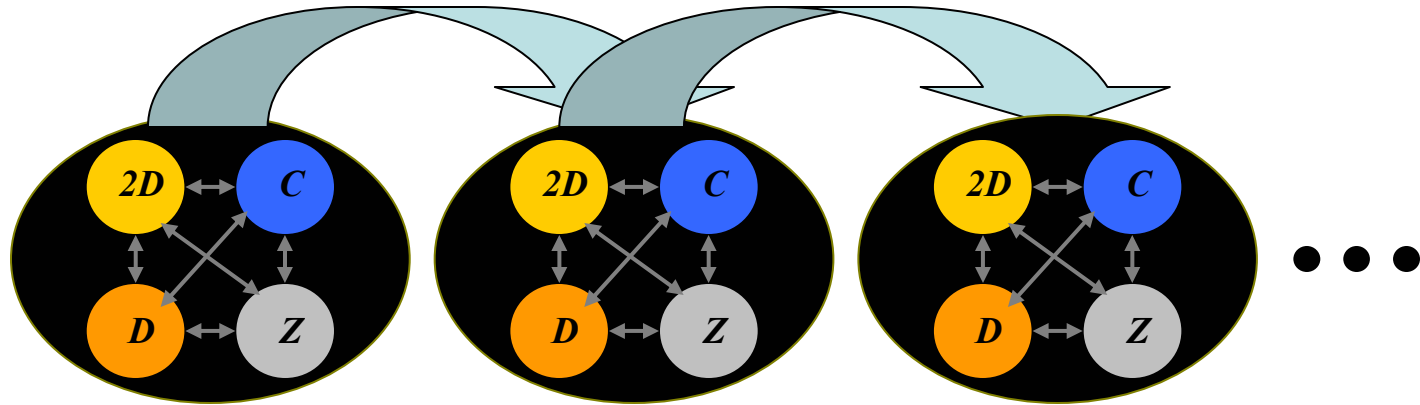


Acquisition Procedure



Views

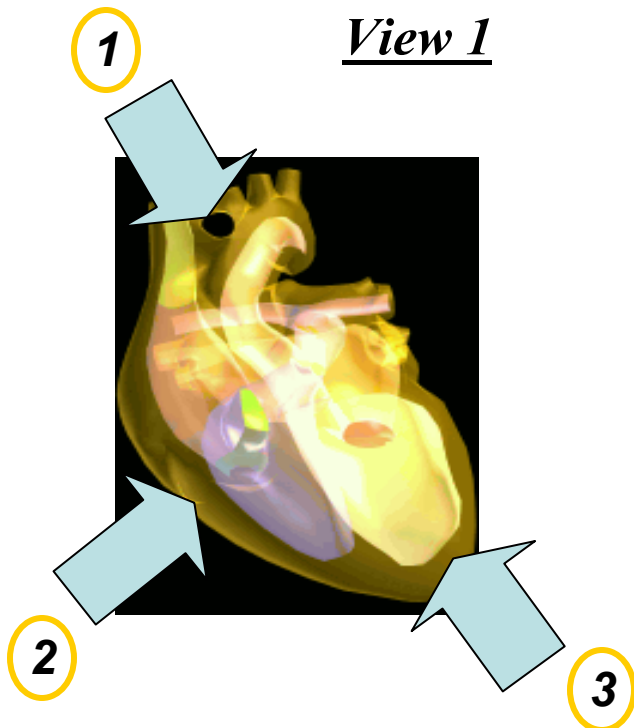
Production Model of Echo



View 1

View 2

View 3

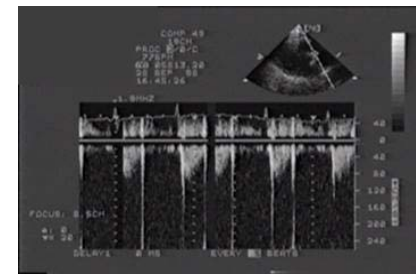
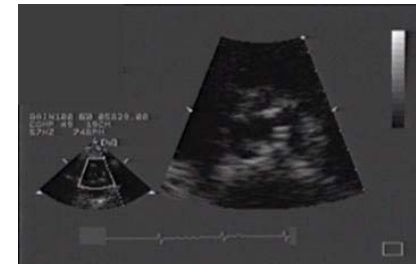
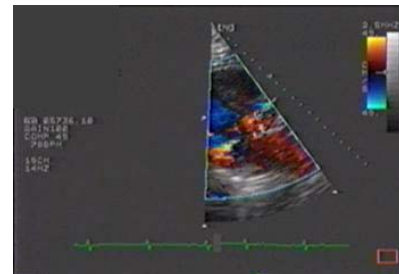
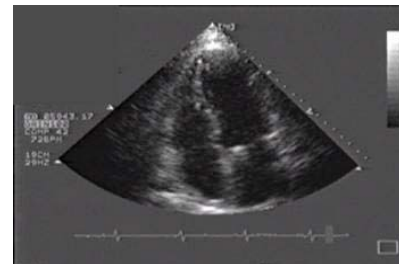


2D

C

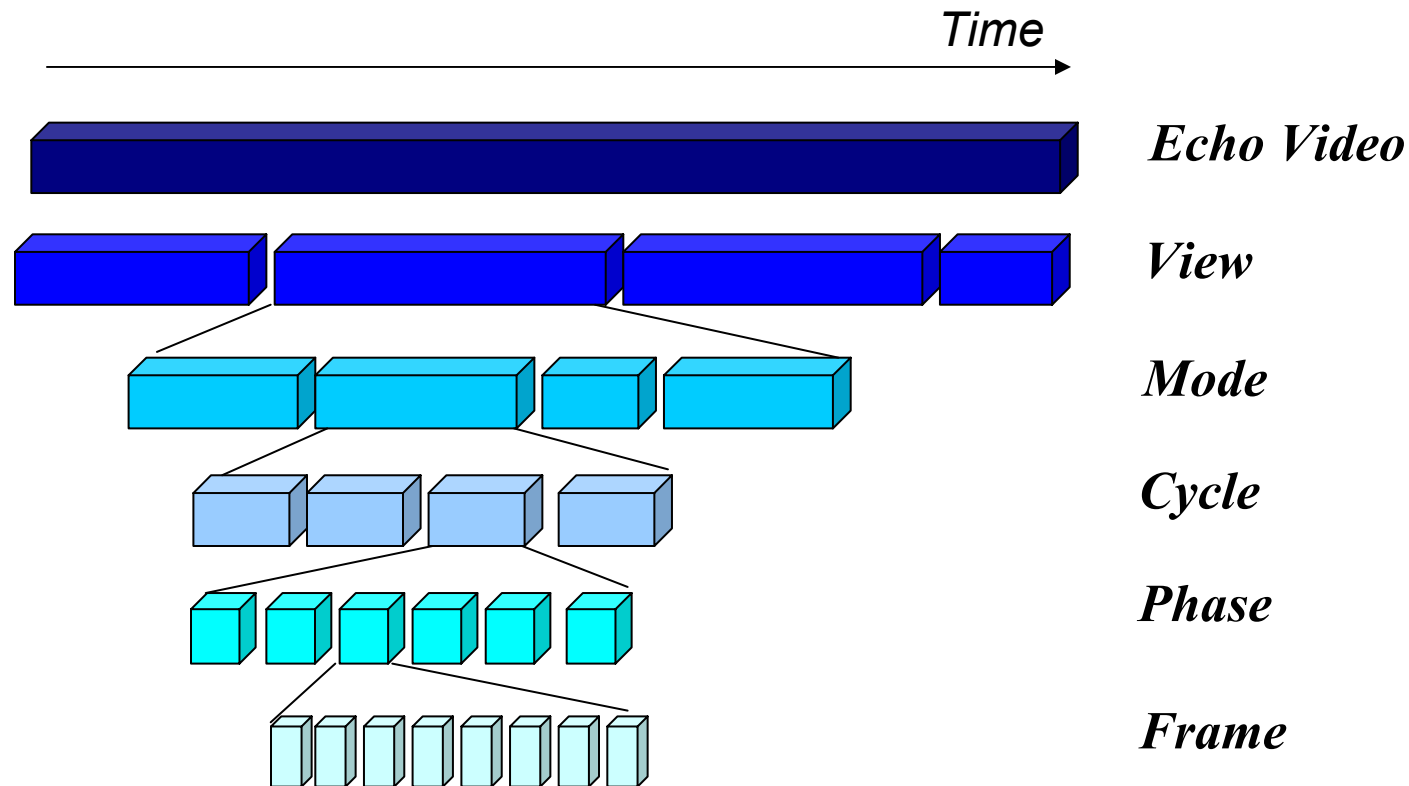
Z

D



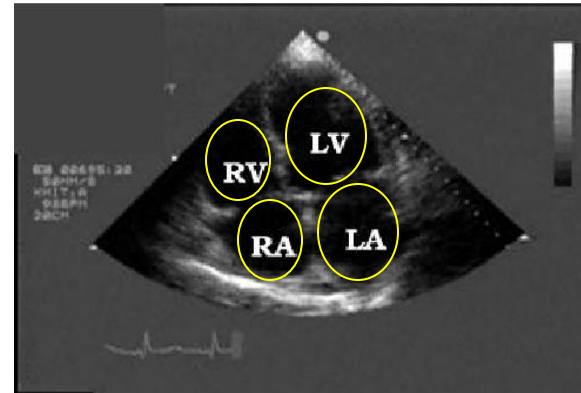
Temporal Structure of Echo

- Echocardiogram video is well structured in time
- Is consisted of conceptually well-defined units

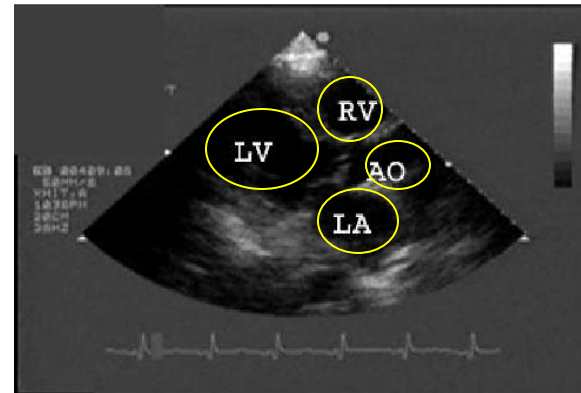


Spatial Structure of Echo

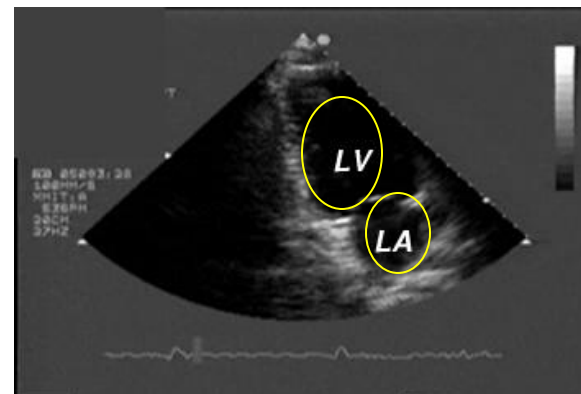
- Well defined **spatial structure** in the different views
- Think of heart in each view as an object consisted of certain **sub-parts** (chambers)
- **Spatial arrangement** of sub-parts are unique to the view
- Different views have partial **structural overlap**



A4C



PLA



A2C