

## Acknowledgements:

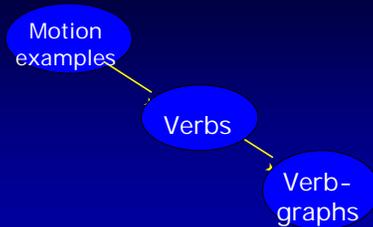
Human figure Animation Project:  
<http://research.microsoft.com/graphics/hfap>

- Bobby Bodenheimer
- Alex Colburn
- Michael Cohen
- Brian Guenter
- John Pella
- Charles F. Rose, III
- Seth Rosenthal
- Peter-Pike Sloan

## Advantages

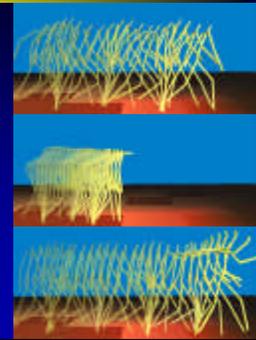
- *Generate infinite novel motions in smoothly varying space*
- *Good examples tend to produce good results*
- *'Free' Dynamic plausibility*
- *'Character' of examples retained*

## Production pipeline



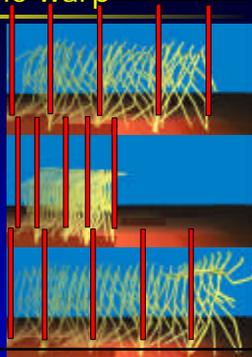
## Example Motions

- Purposeful Walk
- Sad Walk
- Happy Walk



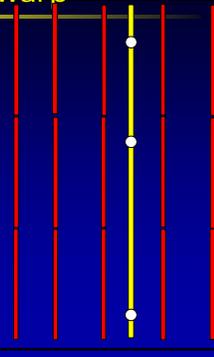
## Keytime warp

- Tag common events
  - Foot down (walk)
  - Reach apex (reach)
  - Arms crossed (idle)



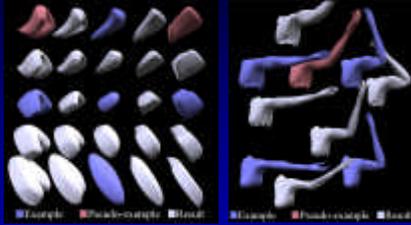
## Keytime warp

- Time warp examples into same time frame
- Joint angles can now be directly interpolated in the new time frame





## Skinning & shape deformation



Similar to animation interpolation  
Uses domain knowledge to advantage

## Skinning & shape deformation



## Want to know more?

### Artist-Directed Inverse Kinematics Using Radial Basis Function Interpolation

Charles F. Rose, III   Peter-Pike Sloan   Michael F. Cohen

*To appear in Eurographics 2001 in September.*