

## Highly Interactive, "Lively" Interfaces

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## Implementation

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- Integrated with I/O model
- Time-based
- Smoothness
- Interruptible
- Synchronization possible

## Integration: Work Queues

- Central queue where all work is registered
  - objects with "step" functions
  - remove from queue when done

## Integration: FSM

- Use FSM to model state of animation
  - Each step triggers a transition (often back to the same state)

## Time-based

- Machine and load independent

## Smoothness

- Time-based helps
- Smooth out motion: blur
- Speed up rate: degradation

## Interruptible

- User must be in control

## Synchronization

- Multiple animations can relate in complex ways

## Example Integration: Artkit

- Transition functions
  - Methods:
    - | start\_transition, transition\_step, end\_transition
  - Object
  - Time interval
  - Trajectory: Curve, Pacing Function

## Time Intervals

- Relative to other transitions
  
- Predict "when" visible