Keyframes

the "key-frames" are the pictures that
are absolutely required in order to tell the story

keyframes represent change over time

• traditional hand-drawn animation (Disney)
• every single frame used to be drawn by hand
• time consuming and expensive process

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Keyframes

a typical film runs at 24 frames per second
24 frames * 60 seconds = 1440 drawings

1440 drawings per 1 minute of animation
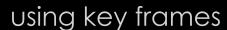1440 drawings * 90 minutes = 129,600 drawings

129,600 drawings for a movie !

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Keyframes

129,600 drawings for a movie !

best artists drawing all of those pictures
      time-consuming and expensive

studios found a way to distribute the work

using key frames

Keyframes

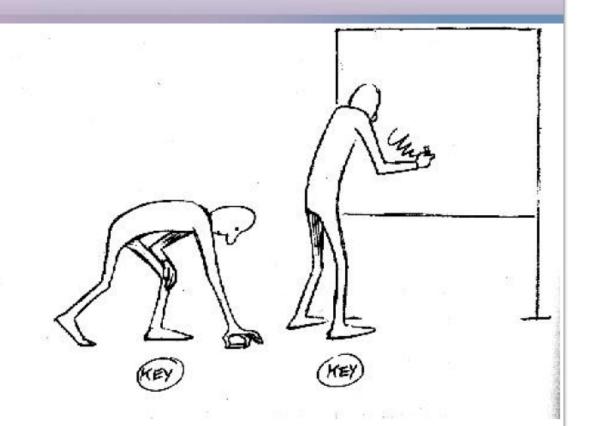The lead artist would draw only the most important frames in a sequence

The character picks up a chalk to draw on a blackboard

Lead artist would draw keyframes:
1. the first frame as the the man walks along
2. a second frame as he picks some chalk up from the ground
3. a third frame showing he writes on a board with it

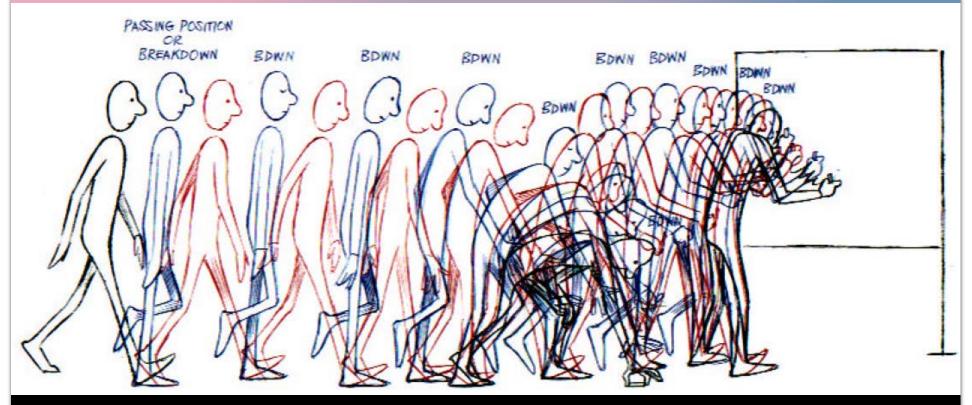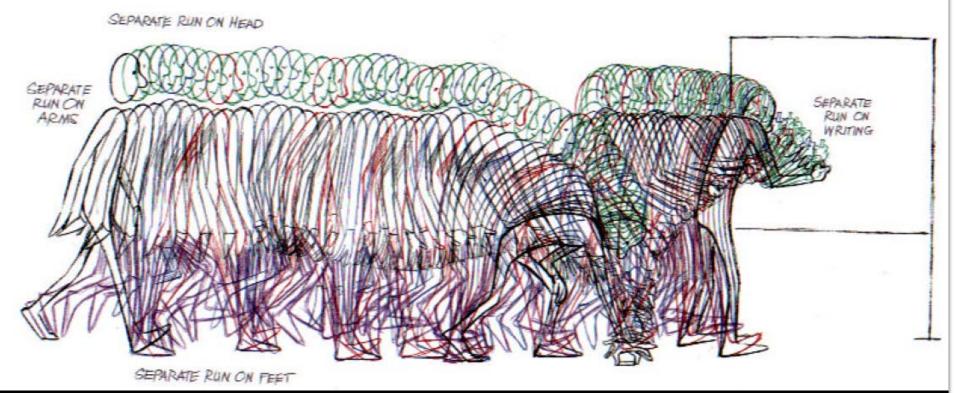School of Design

Keyframes

from a book by Richard Williams called "The Animator's Survival Kit"

Keyframes

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Keyframes

SEPARATE RUN ON HEAD

SEPARATE RUN ON ARMS

SEPARATE RUN ON WRITING

SEPARATE RUN ON FEET

from a book by Richard Williams called "The Animator's Survival Kit"

Keyframes

Once these three keyframes are completed
they are sent off to a junior animator (China)
to draw all the frames in between the keyframes

Inbetweeners – animators drawing frames in between keyframes

•allowed the animators to work more efficiently
•made feature length animation feasible

Keyframes

In After Effects

we can set the keyframes and let the computer draw all
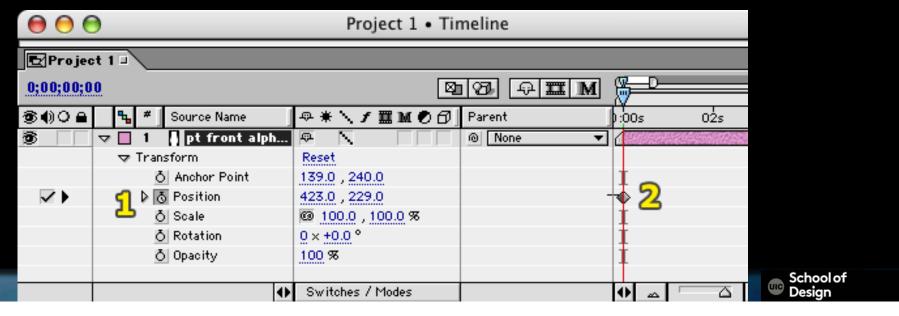
the in-between frames = tweening

- set a keyframe for each property you want to animate on a layer
- move to a different point on the timeline
- then change the layer's properties at the new time
- set a second keyframe
- the computer can calculate the change between those two keyframes

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Keyframes

After Effects will set keyframes automatically
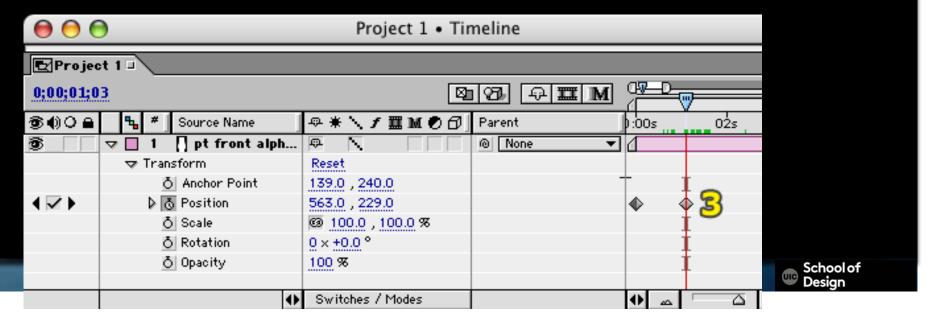
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Keyframes

When you toggle down a layer property you will see a tiny stopwatch icon to the left of the property's name (1)

If you click this icon, you will see a small diamond appear on the timeline at the playhead's current position (2)

Keyframes

change the current time by moving the playhead to a different location on the timeline

change the property which you turned on keyframes for.

a new diamond appear on the timeline- a second keyframe (3)

Keyframes

preview your comp :

the property you keyframed changes smoothly between the first keyframe and the second

Keyframes

Keyframes are specific to the property and layer you turn them on for

keyframes for scale, cannot not change the position of a layer

need to turn on keyframes for each property on each layer

Keyframes

If you turn off keyframes for a property
all the keyframes you've set for that property will be removed

a good way to reset a layer
but it can also mean a lot of work to redo if you didn't mean to turn
them off

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Keyframes

keyframes represent change over time

If you set a keyframe, then change the property without going to a different time in your comp, you will only change the value at the same keyframe

you need at least 2 keyframes separated by a period of time
with different values at each keyframe

Keyframes

The minimum time period between keyframes in AE is one frame

the more frames you have between keyframes the smoother your motion will appear

    more time

    property change will occur more slowly

Keyframes

set as many keyframes as you like on a given property

turn on keyframes for as many properties as you would like
 on a given layer

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Keyframes

- ach layer has it's own set of properties
- motion is created by changing properties over time
- Keyframes must be inserted for each individual layer and property
- a minimum of 2 keyframes required in order to create motion

Keyframes

keyboard shortcuts to access properties

"P" – position

"Shift-R" – rotation in addition to position

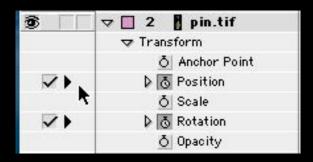"u" - all of a layer's properties which have keyframes on them

"T" - opacity

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Keyframes

Once you turn keyframes on for a property,

any change you make to that property will automatically create a new keyframe

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Keyframes

The keyframe box may have small black arrows on either side of it These arrows are shortcuts which allow you to jump the playhead to the next or previous keyframe. If you need to change a value at a keyframe, this is a much more precise way of selecting the keyframe than simply moving the playhead until it lines up with the keyframe.

Keyframes

You can also jump to the next or previous *visible* keyframe using keyboard shortcuts

'j'(previous)
'k'(next)

These will jump to the next or previous visible keyframe regardless of which layer or property it is on.

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Keyframes

You can move a keyframe to a different time simply by selecting it and dragging it to the left or right

To move more than one keyframe at a time, click somewhere near the first keyframe and drag a selection box across all the keyframes you want to select, or, shift-click to select multiple keyframes.

Once they are highlighted, drag any of the selected keyframes to a new time and they will all move together.

Keyframes

To delete a keyframe
 select it and press the delete key

 If you select multiple keyframes using the click-and-drag technique above, you can then remove all selected keyframes at once with the delete key.

Keyframes

To copy and paste keyframes
select the keyframes you want to copy,
Edit>Copy /Apple-C to copy

Then move the playhead to another time where you want to paste the keyframes
Edit>Paste /Apple-V to paste

The keyframes you copied should appear at the new time. If you want to paste keyframes from one layer to another, after you copy select the layer you want to past to before pasting.

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Keyframes

AE can Interpolate motion through keyframes in a variety of different ways

AE defaults to an interpolation method called "Auto Bezier" which creates a smooth, curved path through all of the keyframes.

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Keyframes

AE can Interpolate motion through keyframes in a variety of different ways

the Keyframe Interpolation dialogue

•Menu - select the keyframe you want change and from the main menu choose Animation>Keyframe Interpolation...

•Keyboard Shortcut - select the keyframe you want to change and press apple-option-K

•Contextual Menu - Right-click or Control-click on a keyframe and from the contextual menu that pops up choose "Keyframe Interpolation"

Keyframes

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