

Biological Animations: A Comparison of Morph 2.5 and GifBuilder 0.5

Reviewed by Karen R. Davis and A. Malcolm Campbell

Usefulness ☺ Ease of Use ☺ Freedom from Bugs ☺ Summary 📄 Score: 8.5

Introduction

(Editor's Note: The ratings shown above are for Morph 2.5)

The dissemination of information via the World Wide Web (WWW) has become a powerful tool for educators and students at all levels. The benefits of presenting educational materials on the WWW extend to both students and teachers. Research data and other materials can be posted quickly and easily, and are accessible to a large number of people. Students can use the WWW to access visual information that cannot be distributed by standard media. Since many biological events occur over a period of time, QuickTime (QT) movies and GIF animations can be used to demonstrate dynamic processes. This review compares Morph and GifBuilder, which can generate different kinds of animations that can be distributed via the WWW. Examples of GIF animations and Morphed QT movies can be found at: www.bio.davidson.edu/biology/animate.html.

Morph

Morph 2.5 is a powerful software package that performs a gradual transformation of one image into another ("morphing"). The input images for a Morph sequence can be scanned photos, text, drawings, or QuickTime movies. The output may be any of the following: a movie of the entire or partial transformation, a still image from an in-

termediate point within the transformation, or a print-out of frames to make a flipbook. Many visual effects can be generated using Morph, the simplest of which is a direct metamorphosis of one image into another. For example, one human face can be transformed into another face by morphing between two input photographs. Caricaturing and warping, two additional features of Morph, are more complicated transformations that involve the exaggeration or deformation of one or more of the input images and, as such, are not biologically relevant and will not be reviewed.

GifBuilder

GifBuilder 0.5 is a freeware utility designed for creating animated GIF files using existing GIF, PICT, TIFF, or Photoshop images, a QuickTime movie, an Adobe Premiere FilmStrip 1.0 file, a PICS file, or the layers of an RGB or grayscale Adobe Photoshop 3.0 file. The output animation is a GIF89a file made up of multiple images presented as a sequence. In general, GifBuilder is used to illustrate any dynamic process that can be represented by a series of distinct steps. GIF animations would be useful to illustrate a series of events in a protocol or metabolic pathway, for example.

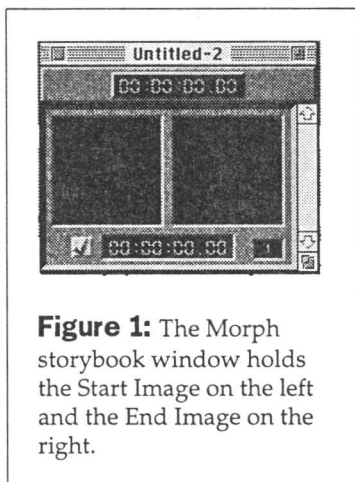


Figure 1: The Morph storybook window holds the Start Image on the left and the End Image on the right.

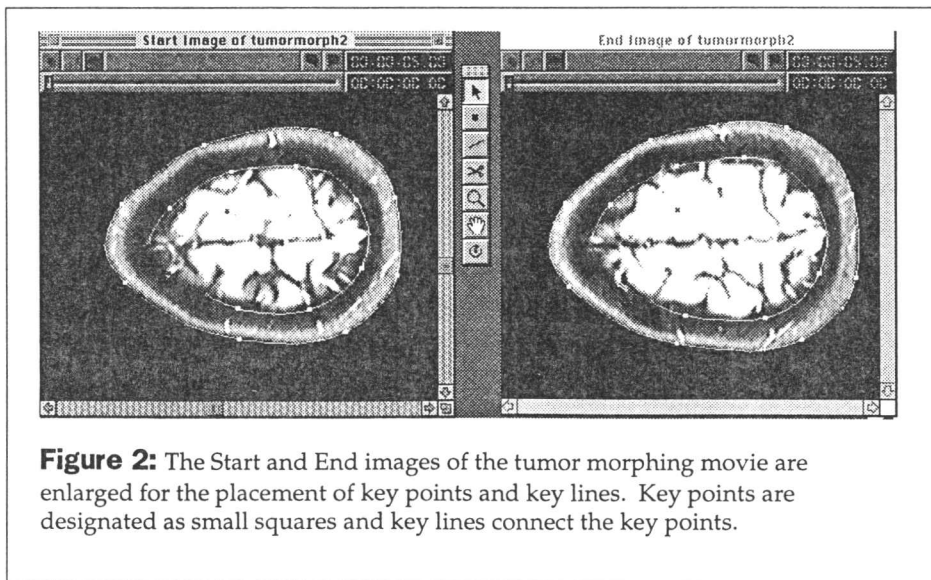


Figure 2: The Start and End images of the tumor morphing movie are enlarged for the placement of key points and key lines. Key points are designated as small squares and key lines connect the key points.

+837+>398=+8. +</ ./-3.381 ,/>A//8 !9<:2 +8.
30 ?36./< >+5/ 38>9+--9?8> >2/ -9=>90 >2/ =90>A+</
>2/ ;?+63>C9038:??> 37+1/= +8. 79=> 37:9<>+8>6C>2/
./=3</. 9?>:??> 37+1/= @/8 >29?12 !9<:2 -9=>=79</
3>3=+:+,6/ 90=799>2/< ><+8=09<7+>398=2+>37?6+>/
>37/ 6+:=/79@3/= C9?:6+8 >97+5/ =37:6/ =>/:EA3=
+837+>398=30 ?36./< 3=79</ +::<9:<3+>/ >3=A9<>2
89>381>2+>>2/ !9<:2 %(79@3/ =/;?/8-/ 90>2/ ,<+38
>?79< 3= ! +8. A366+5/9@/<+738?>/ >969+. 98
+***,<9A=/< A236/>2/ +837+>39890>2/ =+7/
=/<3/=9038:??> 37+1/= 69+.=;?3-56C.?! >93>=7+66=3D/
6=9 +837+>398=+8,/ -98=><?->/ .>9699:
-98>38?9?=6G=6981+=>2/ ,<9A=/< 3=@3/A381>2+>+<E
>3-?6+<*** =3>/

!9<:2 3=+@+36+,6<97

<C:298 '90>A+</ 9<:9<+>398

(<+./ '><//>

'+8 3/19)'

E E

2>>: AAA 1<C:298=A -97

0>: 0>: 1<C:298=A -97