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Original Function (Revised for Real-Time Animation next page)

```
00a m = ||A||

00b for a = 0, 1, 2, ..., m - 1             // for all attributes

00c   pa = K.heada

00d   na = K.heada

00e end for

01  for f = 0, 1, ..., F                        // for all frames

02    for a = 0, 1, 2, ..., m - 1        // for all attributes

03      while f  >  na -> frame

04a       pa = na

04b       na = na -> next

04c     end while

05      u = (f - pa -> frame) / (na -> frame - pa -> frame)

06      Aa = (1 - u) * (pa -> value)  +  u * (na -> value)

07    end for

08    draw object with values A0, A1, A2, ..., Am-1

09  end for
```

Revised for Real-Time Animation

Assume that:

T is the length of the entire animation
K data structure holds timings for key frames
We must track elapsed time
`The function getElapsedTime() can get elapsed time since last frame`
`Either from K, pa, or na`

Changes are represented in red

```
00a m = ||A||

00b for a = 0, 1, 2, ..., m - 1              // for all attributes

00c   pa = heada

00d   na = heada

00e end for

00f int t = 0, t_ = 0;

01  while t < T                             // for all frames

02    for a = 0, 1, 2, ..., m - 1           // for all attributes

03      while t  >  na -> time

04a       pa = na

04b       na = na -> next

04c     end while

05      u = (t - pa -> time) / (na -> time- pa -> time)

06      Aa = (1 - u) * (pa -> value)  +  u * (na -> value)

07    end for

08    draw object with values A0, A1, A2, ..., Am-1

09 t_ = getElapsedTime();

10  end for
```