Caroline and John are in the computing laboratory.

“I have been thinking,” says Caroline “that it would be possible to send an animated sequence of emoji characters encoded as if plain text if a few characters to control the animation were encoded.”

“That sounds interesting .... please go on.”

“Well, I thought that there could be a character to signal the start of the animation and a character to signal the finish of the animation and a character to separate frames of the animation. So one would use one start animation character, an emoji character, a frame separator character, another emoji character, then another frame separator character and so on until ending with a finish animation character.”

“So one fewer frame separator character than the number of emoji characters.”

Caroline pauses, thinking.

“Yes, that’s right.” says Caroline.

“How long would each frame be shown?”

“Ah, that could be controlled too, ... but it would need another character .... or characters.”

“You could have a default time period and then have a way to alter that if desired, so that a basic animation without a time specified would work.”

“Yes, ... I could have a 2 second display of each frame unless specified otherwise. .... I could have that as 2000 milliseconds then a specified delay could be in milliseconds.”

“Good.”

“So, ... I’ll write down what I have so far before I add in the frame time duration.”

ANIMATION START MARKER

ANIMATION FRAME SEPARATOR

ANIMATION FINISH MARKER

“Now,” continues Caroline, “I can add ANIMATION TIME DURATION .... but then I need to follow that with a number so as to specify the number of milliseconds .... and I place the ANIMATION TIME DURATION after the emoji character and before the ANIMATION FRAME SEPARATOR .... how do I express the time delay.”

“Well, you have several choices, you could define several characters that each specify a particular time delay in milliseconds, and they could be additive, like having coins of 1p, 2p, 5p, 10p, 20p, 50p so that one can build up any particular value using a few coins .... or you could define ten digit characters and just put the number of milliseconds in as a number.”

“Which would you use?”

“Well, I would define ten digit characters, ... but it is your system, so it is your choice.”

Caroline pauses.

“I suppose,” says Caroline “that if the animation were being converted to or from another animation format used in some other application, that that might be easiest to convert. .... Yes, I will define ten digit characters.”

So I can have the following.

ANIMATION TIME DURATION

ANIMATION DIGIT ZERO

ANIMATION DIGIT ONE

ANIMATION DIGIT TWO

ANIMATION DIGIT THREE

ANIMATION DIGIT FOUR

ANIMATION DIGIT FIVE

ANIMATION DIGIT SIX

ANIMATION DIGIT SEVEN

ANIMATION DIGIT EIGHT

ANIMATION DIGIT NINE

“I have just realized,” exclaims Caroline “this system could be used for poems using localizable sentences!”

“Good. Are you going to have glyphs for the new characters?”

“Do they need glyphs?” asks Caroline, somewhat puzzled, “They would not be displayed as part of the animation.”

“True, but glyphs could possibly help in composing a message in some situations, and glyphs would have a graceful fallback if animation facilities were not available, ... though I suppose that a font with the glyphs might then not be available either.”

“On another aspect, I thought that there could be a character to indicate that an animation could be repeated. I thought of the following, to be used just before the ANIMATION FINISH MARKER is used.”

ANIMATION LOOP

“Ah, yes, how many times would the loop take place?”

“Well, ... continually .... so I suppose an infinite number of times if it is left to run.”

“So, just once if ANIMATION LOOP is not used and infinite if ANIMATION LOOP is used.”

“So could I define the following,”

ANIMATION LOOP COUNT

“.... and then that would be followed by an integer, expressed as a sequence of some of the ANIMATION DIGIT characters.”

“Yes .... good. Now you need to define exactly what that integer means in this context.”

“I don’t follow ....”

“Well, suppose that you had ANIMATION LOOP COUNT followed by ANIMATION DIGIT ONE followed by ANIMATION LOOP, how many times would the animation be displayed - a total of one time because the integer has a value of one, or a total of two times because the one would indicate to go round again one time?”

“Ah, which would be best .... I suppose that if the number is absolute then someone setting it up does not need to put an integer that is one less than the total number of times - he or she just uses the integer for the total number of times. .... Do you agree?”

“Yes, I think that that would be best.”

“Yet the ANIMATION LOOP COUNT is optional so if one did not want any repetition of the animation then one would not need to use either it or the ANIMATION LOOP character.”

“You mentioned emoji, yet the system could also be used for other purposes, such as for a poem using glyphs for localizable sentences, or announcements, or announcements that sequence through a number of languages.”

“Or even, “ says Caroline with glee “an announcement that sequences through a number of languages and also a glyph for the announcement expressed using a glyph for a localizable sentence - maybe even having the glyph for the localizable sentence alternately between announcements that are in a natural language!”