Create Coefficients For Messages

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In [1]: `printf(strftime ("Last updated: %A %e %B %Y", localtime (time ())))`

Last updated: Tuesday 26 November 2019

Input the table

In [2]: `MorseTable`

In [3]: `Test = "QRG DE VA3TYB?"`

Test = QRG DE VA3TYB?

In [4]: `Trinary_for_test = dec2base(arrayfun(@(v) strfind(Morse_char_to_trinary_map, v)(1) - 1, Test) .* 9 .+ 3^19, 3)`

Trinary_for_test =

```
10000000000000221200
10000000000000012100
10000000000000022100
10000000000000000000
10000000000000021100
10000000000000000100
10000000000000000000
10000000000000111200
10000000000000001200
10000000000001112200
10000000000000000200
10000000000000212200
10000000000000211100
10000000000011221100
```

```matlab
In [5]: Test_marks = ...
        # Do the processing for each character
        arrayfun(@(v) ...
            # Replace trailing zeroes with nothing
    #       strrep(
                    # Replace '2' with 'aaa0'
                    strrep(
                            # Replace '1' with a 'a0'
                            strrep(
                                    # Replace leading 1 and zeroes with nothin
    g
                                    regexprep(v, "^10{9,16}([12])|^10{17}(00)
    $", "$1"),
                                    "1", "a0"),
                            "2", "aaa0"),
    #               "0", ""),
            cellstr(Trinary_for_test)
        )
```

```
Test_marks =
{
  [1,1] = aaa0aaa0a0aaa000
  [2,1] = a0aaa0a000
  [3,1] = aaa0aaa0a000
  [4,1] = 00
  [5,1] = aaa0a0a000
  [6,1] = a000
  [7,1] = 00
  [8,1] = a0a0a0aaa000
  [9,1] = a0aaa000
  [10,1] = a0a0a0aaa0aaa000
  [11,1] = aaa000
  [12,1] = aaa0a0aaa0aaa000
  [13,1] = aaa0a0a0a000
  [14,1] = a0a0aaa0aaa0a0a000
}
```

```
In [6]: Test_marks_str = char(Test_marks(:,1))

Test_marks_str =

aaa0aaa0a0aaa000
a0aaa0a000
aaa0aaa0a000
00
aaa0a0a000
a000
00
a0a0a0aaa000
a0aaa000
a0a0a0aaa0aaa000
aaa000
aaa0a0aaa0aaa000
aaa0a0a0a000
a0a0aaa0aaa0a0a000
```

```
In [7]: size(Test_marks_str)

ans =

    14    18
```

```
In [8]: Test_marks_concat = strrep(reshape(Test_marks_str', 1, []), " ", "")

Test_marks_concat = aaa0aaa0a0aaa000a0aaa0a000aaa0aaa0a00000aaa0a0a000a
00000a0a0a0aaa000a0aaa000a0a0a0aaa0aaa000aaa000aaa0a0aaa0aaa000aaa0a0a0
a000a0a0aaa0aaa0a0a000
```

```
In [9]: Test_coeff = isalpha(Test_marks_concat)
```

Test_coeff =

 Columns 1 through 26:

   1   1   1   0   1   1   1   0   1   0   1   1   1   0   0   0   1   0   1   1   1   0   1
   0   0   0

 Columns 27 through 52:

   1   1   1   0   1   1   1   0   1   0   0   0   0   0   1   1   1   0   1   0   1   0   0
   0   1   0

 Columns 53 through 78:

   0   0   0   0   1   0   1   0   1   0   1   1   1   0   0   0   1   0   1   1   1   0   0
   0   1   0

 Columns 79 through 104:

   1   0   1   0   1   1   1   0   1   1   1   0   0   0   1   1   1   0   0   0   1   1   1
   0   1   0

 Columns 105 through 130:

   1   1   1   0   1   1   1   0   0   0   1   1   1   0   1   0   1   0   1   0   0   0   1
   0   1   0

 Columns 131 through 144:

   1   1   1   0   1   1   1   0   1   0   1   0   0   0

```
In [ ]:
```