

Coding elective Week 5

Many decades before computers and voice radio transmission were invented, we needed a system, similar to binary (1's and 0's), to transmit messages. Samuel Morse invented Morse Code for that purpose.

The telegraph was the only way to communicate over long distances but it could only transmit a tone. Morse, therefore, decided that each letter would consist of a series of long and short tones only.

A	• —	U	• • —
B	— • • •	V	• • • —
C	— • • — •	W	— • —
D	— • • •	X	• • • — •
E	•	Y	— • • — •
F	• • — •	Z	— • — • •
G	— • — •		
H	• • • •		
I	• •		
J	• — • — •		
K	— • • — •	1	• — • — • —
L	• — • •	2	• • — • — •
M	— • —	3	• • • — • —
N	— •	4	• • • • —
O	— • — • —	5	• • • • •
P	• — • — •	6	— • • • •
Q	— • — • —	7	— • — • •
R	• — • •	8	— • — • • •
S	• • •	9	— • — • — •
T	—	0	— • — • — •

So, if I wanted to transmit "HELLO", I'd send

• • • • for H

• for E

• — • • for L

• — • • for L

— — — for O

Hopefully you can see that this is very similar to how computers talk in only 1's and 0's so in a very real way, Samuel Morse invented binary communication.

Here's a video link you can watch if you want to.

<https://www.khanacademy.org/computing/computer-science/informationtheory/info-theory/pi/morse-code-exploration>

Worksheet

This, as you might guess, was quite tedious but it worked.

1. Using the table, make a Morse Code message saying:

“Help I need ice cream” (there was no punctuation and capitalization was ignored).

Code	Letter
	H
	E
	L
	P
	I
	N
	E
	E
	D
	I
	C
	E
	C
	R
	E
	A
	M

2. The following message was internationally recognized as a distress signal (probably not used to order ice cream). Complete the table. Contrary to popular belief it is not short for Save Our Souls. That is a myth.

Code	Letter
● ● ●	
■ ■ ■	
● ● ●	