Kryptos 2022 – Challenge 1

Solution:

It looks like a text conversation between two people. Each text uses just two emojis: smiley and frown. Thus, one should consider some sort of binary cipher: Morse code, Bacon cipher, ASCII/binary, etc.

Trying A = smiley and B = frown, the pattern for the four messages are:

Message 1: BABAA AABAA ABABA AAABA ABBAB ABABB AABAA BAABA ABBAB ABAAB BAAAA
BABBA ABBBA BAABA ABBAB BAAAB

Message 2: BABAA AABAA BABAA ABAAA BAAAB AABBB BABBA ABBAB BAABB BAABA AABBB
AABAA AAAAB AABAA BAAAB BAABA ABBAB AABAB ABABA BAABB AAABA ABAAB

Message 3: AAAAA ABBAA AAABB AABBB ABBAB ABBBA AABAA AABAA BAABB AABAA BAAAA
BABBA ABBAB ABBAA AABAA BAAAB BAABA AAAAA BABBA BAAAB BAAAB AAAAA
AABAB AABAA AAAAA ABBAA AAABB AABBB AABAA AAAAA ABABA BAABA AABBB
BABBA

Message 4: AABBB AAAAA BAABB AABAA AABAB BAABB ABBAA

There are a couple of "standard" encryption methods for a Bacon Cipher. Using the one that does not use the letter "V" produces the following decryption (spaces added for clarity):

Message 1: WELCOME TO KRYPTOS

Message 2: WE WISH YOU THE BEST OF LUCK

Message 3: AND HOPE E**U**ERYONE STAYS SAFE AND [HEALTHY]

Message 4: HA**U**E FUN

The boldface "U"s can be converted to "V"s for the complete plaintext.

Note: A few letters got cut off in Message 3 in the image that appeared during Kryptos. So, the word "HEALTHY" did not appear in the CT.