

Code Breaking 2

Chris Brew

Decode this...

Many enormous elephants throw mysterious eggs at the seven undeniable nerds selling emus to Bavarian yachts that hide energetic arab rhubarb crumble hating saxophonists.

Decode this...

Many **E**normous **e**lephants **t**hrow mysterious eggs at the seven undeniable nerds selling emus to Bavarian yachts that hide energetic arab rhubarb crumble hating saxophonists.

Meet me at sunset by the archs

Encode this

Which arches do you mean?

Steganography

- ◆ Hiding the message in plain sight.
- ◆ Can be done in a more subtle way.

Bacon

It is known as the heart of Paisley
Protestant country, the town tha

Bacon

BA AB AAABB BA BAA ABAAA

BA BAAABAA ABAAAAABAA

BAAABAA, BAB ABBA ABA

Bacon

BAABA AABBB ABAAA

BAAAB ABAAA BAAAB

AAAAA BAABA AABAA

BABAB BAABA ...

Bacon's alphabet

a	AAAAA	g	AABBA	n	ABBAA	t	BAABA
b	AAAAB	h	AABBB	o	ABBAB	u-v	BAABB
c	AAABA	i-j	ABAAA	p	ABBBA	w	BABAA
d	AAABB	k	ABAAB	q	ABBBB	x	BABAB
e	AABAA	l	ABABA	r	BAAAA	y	BABBA
f	AABAB	m	ABABB	s	BAAAB	z	BABBB

Bacon

BAABA=t AABBB=h ABAAA=i-j

BAAAB=s ABAAA=i BAAAB=s

AAAAA=a BAABA=t AABAA=e

BABAB=x BAABA=t ...

This afternoon, we've independently confirmed that this is the case.

According to a knowledgeable source, the text of the contract itself refers to "threat mail technology insertion" which we believe i

This a ftern oonwe veind epend ently
confi rmedt hatth isist hecas eAcco
rding toakn owled geabl esour cethe
texto fthec ontra ctits elfre fersto threa
tmail techn ology inse rtion which
webel ievei

Thisa = ABAAB = o

ftern = ABAAA = n

oonwe = AABAA = e

veind = ...

CPZPAPUNHBUAZJHUILHWYVISLT
DQAQBQVOICVBAKIVJMIXZWJTMU
ERBRWRPJDWCBLJWKNJYAXKUNV
FSCSDSXQKEXDCMKXLOKZBYLVOW
GDTETYRLFYEDNLYMPLACZMWPX
HUEUFUZSMGZFEOMZNQMBDANXQY
IVFVG VATNHAGFPNAORNCEBOYRZ
JWGWHWBUOIBHGQOBPSODFCPZSA
KXXIXCVPJCIHRPCQTPEGDQATB
LYIYJYDWQKDJISQDRUQFHERBUC

...

UHRHSHMFZTMSRBZMADZOQNAKDL
VISITINGAUNTSCANBEAPROBLEM
WJTJUJOHBVOUTDBOCFBQSPCMFN

HXDBXUENMCQNLXMN

Shift cipher: exercise

- ◆ What happens if you shift BRADY CARY by 17 letters?
- ◆ What happens if you use the method of exhaustion to decode NDMPK OMDK?

Standard order

338214 e
232105 t
210111 a
207579 o
191572 n
182630 i
166934 h
166751 s
164166 r
112708 d
105007 l
77320 u
74504 m

63418 c
63186 w
62045 f
60424 y
51694 g
42504 b
41363 p
29056 v
16295 k
4179 j
3247 q
1150 z

ubzij npiqq cdajr zamin qcsgm cquia jadia jfchi
rfmin arzic pfmip rnirh mraqc zkrhk ajfvj ginaf
niifq rpira rhprh rfiqb afnjh kinfm jhjhb fmrhk
dmrsm fmiur hzcpu jhscy qzrho ihfdi dcyqz hcfzj
nifcs chsir oifmi fmrhk admrs mjnin ijqqb uinis
cuuch tqjsi acpix rafih sirpd iscyq zpqbc yfcpf
mjfdr hzcdm jhzrh mjhzm coinc oinfm rakni jfsrf
bkihf qbniu coifm inccp ajhzt iitrh jffmi wyiin
fmrhk admrs mjnik crhkc hfmia fnjkh iscrh srzih
siafm itqjh hrhka fmisn caaty ntcai afmid chzin

Make a frequency table

◆ a ||||| ||||| |...

◆ b ||...

◆ ...

Candidate alphabet

abcdefghijklmnopqrstu
vwxyz
syocztkieagqhrvfln
wbmpjud

Try it

ubzij npiqq cdajr zamin
mydea rfell ocsan dsher

Candidate alphabet

abcdefghijklmnopqrstuvwyz
jvsz **i**pkmrlgquhctw **n**afyodbe
jvsz **n**pkmrlgquhctw **i**afyodbe

Try it

ubzij npiqq cdajr zamin
mydea rfell ocsai dsher

Try it

- ◆ my dear fellocc." said sherlowk holmes as ce sat on either side of the fire in his lodgings at paker street, "life is infinitely

Homework 1

RDEEI KEPQF QREPO BFKQL EEPFL AIXEL MSADX EQFYX MSIFH
ERMQD BPEVF RDRDE NFAQB LKRDE CBITE QVDBR KMXMS HLMVM
YEIEA BLCEM PJBL L EPQDM VETEP JSCDX MSPAM MKJBL JBXQI
BTEXM SVFII KFEBQ XMSBP EIFTF LAMLB KSLAD EBNBL KXMSP
CDFIK PELRD EQBJE VEIIV DBRMY RDBRP ENIFE KRDEX MSLAE
PMYCM SPQEM SPVMP HFQPM SADBL KCMBP QEUSR MLRDE MRDEP
DBLKF RFQOS PEBLK VELEE KLMRU MVRMB LXMLE USRXM SFLXM
SPRMV LQBPE QSPPM SLKEK UXREJ NRBRF MLQRM KBXBI IJBXU
EPFAD RUSRR MJMPP MVRDE ETFIM LEJBX REJNR XMSPD SQUBL
KVFRD CBPKQ VFLEM PVMJE LBLKB IIVFI IAMRM PSFLK MLRQS
CDRDF LAQDB NNELM YRELE LMSAD

Homework 2

KT73H QCYH2 6QY8J A1CYC 3R60V 2PGX4 IBJI1 7Y13K JA170
JU0I2 ISC0G 4610I 0SQJQ CYV3H 0IPLC 2Q1Y8 4QDPK YNA0L
QGX18 R017J RBCQC 0ORPX T6VY2 80A8J HL74G SCJJ9 Q4GGD
5BH31 7Y8YT 8QCVY K0TP2 516CT U05JQ 4HY1J GYQT5 XIJIP
YIPY6 011GY D5JRN 7Y2S6 JR8JI GXQ8J ROG04 P17TQ VYC2U
YI1GT 5SY53 RBC4A 4CT9K G051X 3AGT5 94PCJ RGSIQ A02NQ
CY9YU DGC4H P0GAQ CYVJH 0IADI 467Y9 Q7YD8 10TL7 T11YS
2VC4G YTOJR 19N06 62I91 7YILG Y28YS 2VTXQ 7Y10T QCD5B
P259G 2X9JV I136G Y0KOR Q1709 YUDG7 T9000 IP4QQ 4IB00
7DIS1 C0JUY I25S7 29CY2 8STGG QC21V 2PPT4 SC0V2 PKG0T
6YS17 T1QC0 K0TP2 IQPVD AY7T9 GYSCY NCR60 2ISD5 QJO32
P14IB T59QC TQ70C 2SP24 S1C2Q 4A7Y7 T9KGY I1X3A GT5S7
YVJRG S5JQA 0TN1C Y9YUD GCDHP 0GAWW W