University of Southampton National Cipher Challenge Solutions

Message 6 Plaintext:
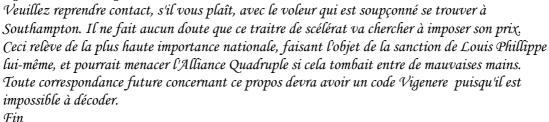
(Original In French)

Début
Cela fait un moment déjà que nous surveillons les progrès du Professeur Babbage sur ses moteurs à différence et analyse. Récemment, notre agent local a intercepté la correspondance codée entre Babbage et ses deux complices, le Professeur Wheatstone et la Comtesse Lovelace.
Ensemble, ce sont trois des esprits les plus originaux de leur génération. Il semble qu'ils seraient impliqués dans le développement d'une machine pour la codification automatique des messages, ce qui serait une menace terrible pour les intérêts de la belle France.
Nous étudions la possibilité de faire des copies secrètes de ces plans en utilisant le système ingénieux de M. Daguerre.
Veuillez reprendre contact, s'il vous plaît, avec le voleur qui est soupçonné se trouver à Southampton. Il ne fait aucun doute que ce traître de scélérat va chercher à imposer son prix.
Ceci relève de la plus haute importance nationale, faisant l'objet de la sanction de Louis Phillippe lui-même, et pourrait menacer l'Alliance Quadruple si cela tombait entre de mauvaises mains.
Toute correspondance future concernant ce propos devra avoir un code Vigenere puisqu'il est impossible à décoder.
Fin

Translation:

For some time we have been keeping an eye on the development of Prof. Babbage's difference and analytical engines. Recently, our local agent intercepted enciphered correspondence between Babbage and his two accomplices Prof. Wheatstone and the Countess Lovelace. Together they possess three of the most original intellects of their generation. It appears they are involved in the development of a machine for the automatic encryption of messages that could be highly detrimental to the interests of La Belle France. We are investigating the possibility of taking secret copies of the plans using M. Daguerre's ingenious device.

Please renew your contact with the thief who is believed to be in Southampton. No doubt the duplicitous scoundrel has his price. This is a matter of the highest national importance, sanctioned by Louis Philippe himself, which if discovered could threaten the Quadruple Alliance. All future correspondence on this matter must use a Vigenere cipher because it is impossible to crack.

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The fact that the plaintext is in French should not be too much of a surprise, since] some of the villains of this tale are indeed the dastardly French, here using their own language. Frequency analysis is still possible, but different languages have their own frequency distributions, and you need to know these (or at least something about them) in order to succeed. For example, the letter Q is much more frequent in French (as in "que, qui, quoi", etc) than in English, whereas letters like F and H are rather less frequent, so using English letter frequencies will produce nonsense. French letter frequencies can be found on the web (along with those for other languages), for instance at

http://starbase.trincoll.edu/~crypto/resources/LetFreq.html

The key phrase refers to Louis Philippe (1773-1850), King of the French (his preferred title) from 1830 to 1848. He was called the Citizen King because, despite his aristocratic birth, he was in sympathy with the French Revolution as a young man. In 1830, 15 years after Napoleon's defeat at Waterloo, the July Revolution overthrew Charles X and the Bourbon dynasty in France, and Louis Philippe was proclaimed king by the Chamber of Deputies. Although initially enlightened, his reign gradually became authoritarian, corrupt and lethargic, and he was deposed by the Revolution of 1848. He died in exile in England. For brief biographies, see:

http://www.chateauversailles.fr/en/270.asp

http://www.pvhs.chico.k12.ca.us/~bsilva/projects/france/franpers.html

There have been several Quadruple Alliances in European history, see:

http://www.slider.com/enc/43000/Quadruple_Alliance.htm

The Quadruple Alliance of 1834 was formed by Great Britain, France, Spain, and Portugal to strengthen the Spanish Government and the throne of Isabella II against the Carlists (followers of Don Carlos, claimant to the Spanish throne):

http://www.slider.com/enc/10000/Carlists.htm

Louis Jacques Mande Daguerre (1787-1851) was one of the principal discoverers of photography. In the late 1830s, he invented a process (called the daguerrotype) for fixing photographic images. The French government bought the rights to the process from him in 1839.

http://www.rleggat.com/photohistory/history/daguerr.htm

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