

MysteryTwister C3

THE CRYPTO CHALLENGE CONTEST

DOUBLE COLUMN TRANSPOSITION – PART 2

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Introduction

The Double Column Transposition (DCT) cipher was one of the most popular hand ciphers in the 20th century. It was extensively used from World War I to the Cold War by all sides.

With long enough keys (longer than 20) and if different keys are used for the first and second transposition, it is very difficult to break this cipher – even with modern computing equipment and methods.

This series offers several mid-level DCT challenges with keys shorter than 20 or with other weaknesses, which should allow for their cracking using Hill Climbing or other computerized methods.

Good luck!

Challenge

In this DCT challenge, a large part of the beginning of the plaintext is known. Using this partial crib, you need to reconstruct the keys.

Your answer to the challenge must contain the two literal keys, written in capital letters and without separation.

For example (if the keys were of lengths 5 and 6), and if the numerical keys were 4,2,1,3,5 and 2,5,4,1,3,6 then the literal keys should be DBACE and BEDACF, so the answer would be DBACEBEDACF.

Challenge – Ciphertext

UDUOSETINENATARLNRTEEDCEMWESCNERWHTIRTRCOIVEHRHEDSF
FONDDSIDSHYHMSSIERSOLDTOHSSMLCOIMAINTRBITMTURWLGIOE
HHHEOFMXOOPHWTRHFLFSSVHPLDEANCANREESOI I IOLONROEIGEO
WSOIEDAOEETFESASWRI IOHLIWNTMTNSENHEBISFEEFOOSITFASB
RTCNNODMNP EUAROTTPEEOEUOMLWI IOPMNMNIAESWYAETHBAEUI
TOSICCEGI IELIOUOFSCNNASRENOIUENAORHWAEOLFFNHUETMRTF
AEBLAEKIAAAEENDNFLMIEEOASLEOAHIAKOUOYFRCSIHEEELLNEM
TNSWFOTTNLYNDAOGESSTALYPIITNISFDSRBMSODVYAIEEDTADEN
ECIACARHSATYHAHI IMEGGHOEEOGW EIHKHBECTETABRFRSSTASNS
CANFBGDTNP IIRNGRSEMCFYDTLISREOMKLHIELTOTFINIMIROEDNS
ESBULLNPDII BEEDRAOTHNEGEOBESIETTRGAHLUF EYGTAISDHOC
UYTVEUEHAEAEEOUCS IEMOHEWTTSTOEAE DGIMHRDOEEAABBDLTAO
OKNOFWYFENNSDRNMSTROONFTFWOEORKOUREDSTCHTCRUA

Challenge – Crib

FINDSHIMSELFMASTEROFHISOWNESTABLISHMENTWERESUFFICIENT
TOABSORBALLMYATTENTIONWHILEHOLMESWHOLOATHEDEVERYFORMOF
SOCIETYWITHHISWHOLEBOHEMIANSOULREMAINEDINOURLODGINGS
INBAKERSTREETBURIEDAMONGHISOLDBOOKS

Hints

- ▶ The plaintext is in English.
- ▶ The length of the first transposition key is 13 and the length of the second key is 16.
- ▶ Those are random numerical keys, not derived from any meaningful textual sentence or expression.