Fakulteten för ekonomi, kommunikation och IT

Network Security Laboration 1

Datum: 2007-09-10

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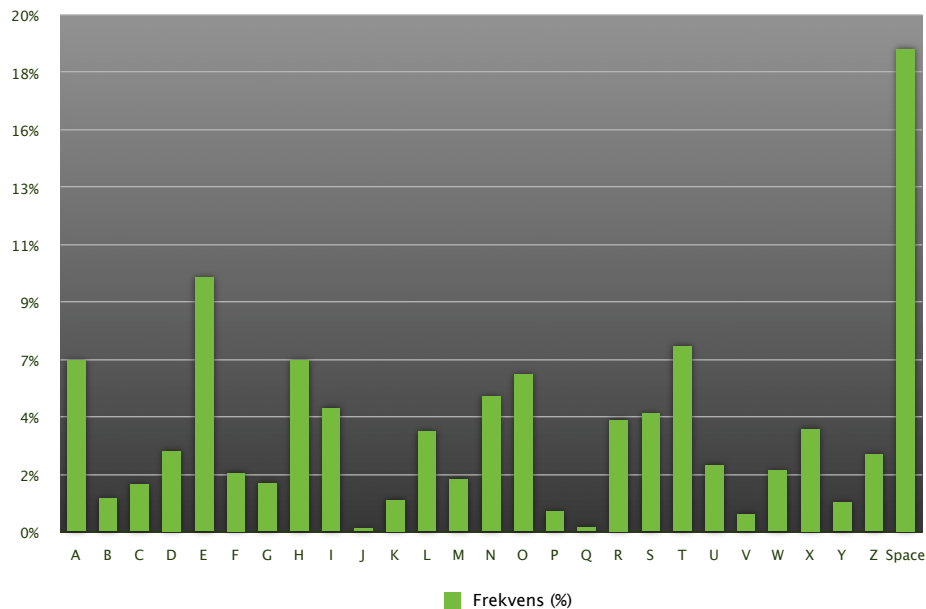**Kurs:** DVGC03

Innehållsförteckning

Text till annan labbgrupp

Till **Anders Ellvin** och **Tobias Pulls** skickades ett chiffer som finns att läsa i Bilaga A till detta dokument. Nyckeln som används för att låsa upp denna ger en ledtråd om innehållet. Nyckeln är **hdfwyzmvxtqjunglebok iscrap**

Frekvenstabell

Frekvenstabellen för texten, se nedan, skickades inte till Anders och Tobias.

Tecken	Antal (st)	Frekvens (%)
A	716	6,67
B	142	1,32
C	196	1,83
D	337	3,14
E	1055	9,83
F	246	2,29
G	206	1,92
H	712	6,64
I	516	4,81
J	16	0,15
K	135	1,26
L	421	3,92
M	222	2,07
N	565	5,27
O	652	6,08
P	86	0,80
Q	19	0,18
R	464	4,33
S	493	4,60
T	774	7,22
U	279	2,60
V	76	0,71
W	259	2,41
X	4	4,00
Y	125	1,17
Z	3	3,00
Space	2008	18,72

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Dekrypteringsprocess av mottagen text

För att lyckas dekryptera den mottagna texten gjordes först en frekvensanalys på texten.

Från denna tabell kunde sedan ett första utkast av nyckeln skapas. Genom att jämföra frekvenserna i den krypterade texten, som förutsattes vara på engelska, med frekvenser för det engelska språket kunde många bokstäver plockas på rätt plats i nyckeln.

Efter ett första test med dekryptering visade sig den krypterade texten fortfarande vara oläslig. Texten avslöjade dock vissa teckenkombinationer som var ord, trots att en eller annan bostav var fel.

Genom att byta plats på dessa i nyckeln kunde efter några vändor med samma taktik en komplett engelsk text visas.

Nyckeln för den givna texten var
vkbzxoewg nrfyuipscamlhqtjd

Slutsats

Att knäcka ett substitutionschiffer är mycket enkelt om man vet vilket språk texten är på. Finns det dessutom tillgång till både den krypterade och dekrypterade texten finner man nyckeln på nolltid.

Nyckeln för den utskickade texten var: **hdfwyzmvxtqjunglebok iscrap**
Nyckeln för den mottagna texten var: **vkbzxoewg nrfyuipscamlhqtjd**

Bilagor

Bilaga A - Plaintext

it was the jackal tabaqui, the dish licker and the wolves of india despise tabaqui because he runs about making mischief, and telling tales, and eating rags and pieces of leather from the village rubbish heaps but they are afraid of him too, because tabaqui, more than anyone else in the jungle, is apt to go mad, and then he forgets that he was ever afraid of anyone, and runs through the forest biting everything in his way even the tiger runs and hides when little tabaqui goes mad, for madness is the most disgraceful thing that can overtake a wild creature we call it hydrophobia, but they call it dewanee the madness and run enter, then, and look, said father wolf stiffly, but there is no food here for a wolf, no, said tabaqui, but for so mean a person as myself a dry bone is a good feast who are we, the gidur log [the jackal people], to pick and choose? he scuttled to the back of the cave, where he found the bone of a buck with some meat on it, and sat cracking the end merril.

all thanks for this good meal, he said, licking his lips how beautiful are the noble children! how large are their eyes! and so young too! indeed, indeed, i might have remembered that the children of kings are men from the beginning now, tabaqui knew as well as anyone else that there is nothing so unlucky as to compliment children to their faces it pleased him to see mother and father wolf look uncomfortable tabaqui sat still, rejoicing in the mischief that he had made, and then he said spitefully: shere khan, the big one, has shifted his hunting grounds he will hunt among these hills for the next moon, so he has told me shere khan was the tiger who lived near the waingunga river, twenty-miles away he has no right! father wolf began angrily by the law of the jungle he has no right to change his quarters without due warning he will frighten every head of game within ten miles, and i i have to kill for two, these days his mother did not call him lungri [the lame one] for nothing, said mother wolf quietly he has been lame in one foot from his birth that is why he has only killed cattle now the villagers of the waingunga are angry with him, and he has come here to make our villagers angry they will scour the jungle for him when he is far away, and we and our children must run when the grass is set alight indeed, we are very grateful to shere khan!

shall i tell him of your gratitude? said tabaqui out! snapped father wolf out and hunt with thy master thou hast done harm enough for one night i go, said tabaqui quietly ye can hear shere khan below in the thickets i might have saved myself the message father wolf listened, and below in the valley that ran down to a little river he heard the dry, angry, snarly, singsong whine of a tiger who has caught nothing and does not care if all the jungle knows it the fool! said father wolf to begin a nights work with that noise! does he think that our buck are like his fat waingunga bullocks? hsh it is neither bullock nor buck he hunts to night, said mother wolf it is man the whine had changed to a sort of humming purr that seemed to come from every quarter of the compass it was the noise that bewilders woodcutters and gypsies sleeping in the open, and makes them run sometimes into the very mouth of the tiger man! said father wolf, showing all his white teeth faugh! are there not enough beetles and frogs in the tanks that he must eat man, and on our ground too! the law of the jungle, which never orders anything without a reason, forbids every beast to eat man except when he is killing to show his children how to kill, and then he must hunt outside the hunting grounds of his pack or tribe the real reason for this is that man killing means, sooner or later, the arrival of white men on elephants, with guns, and hundreds of brown men with gongs and rockets and torches then everybody in the jungle suffers the reason the beasts give among themselves

is that man is the weakest and most defenseless of all living things, and it is unsportsmanlike to touch him they say too and it is true that man eaters become mangy, and lose their teeth the purr grew louder, and ended in the full throated aaarh! of the tigers charg then there was a howl an untigerish howl from shere khan he has missed, said mother wolf what is it? father wolf ran out a few paces and heard shere khan muttering and numbling savagely as he tumbled about in the scrub the fool has had no more sense than to jump at a woodcutters campfire, and has burned his feet, said father wolf with a grunt tabaqui is with him something is coming uphill, said mother wolf, twitching one ear get ready the bushes rustled a little in the thicket, and father wolf dropped with his haunches under him, ready for his leap then, if you had been watching, you would have seen the most wonderful thing in the world the wolf checked in mid spring he made his bound before he saw what it was he was jumping at, and then he tried to stop himself the result was that he shot up straight into the air for four or five feet, landing almost where he left ground man! he snapped a mans cub look! directly in front of him, holding on by a low branch, stood a naked brown baby who could just walk as soft and as dimpled a little atom as ever came to a wolfs cave at night he looked up into father wolfs face, and laughed is that a mans cub? said mother wolf i have never seen one bring it here a wolf accustomed to movng his own cubs can, if necessary, mouth an egg without breaking it, and though father wolfs jaws closed right on the childs back not a tooth even scratched the skin as he laid it down among the cubs

how little! how naked, and how bold! said mother wolf softly the baby was pushing his way between the cubs to get close to the warm hide ahai! he is taking his meal with the others and so this is a mans cub now, was there ever a wolf that could boast of a mans cub amongher children? i have heard now and again of such a thing, but never in our pack or in my time, said father wolf he is altogether without hair, and i could kill him with a touch of my foot but see, he looks up and is not afraid the moonlight was blocked out of the mouth of the cave, for shere khans great square head and shoulders were thrust into the entrance tabaqui, behind him, was squeaking: my lord, my lord, it went in here! shere khan does us great honor, said father wolf, but his eyes were very angry what does shere khan need? my quarry a mans cub went this way, said shere khan its parents have run off give it to me shere khan had jumped at a woodcutters campfire, as father wolf had said, and was furious from the pain of his burned feet but father wolf knew that the mouth of the cave was too narrow for a tiger to come in by even where he was, shere khans shoulders and forepaws were cramped for want of room, as a mans would be if he tried to fight in a barrel the wolves are a free people, said father wolf they take orders from the head of the pack, and not from any striped cattle killer the mans cub is ours to kill if we choose ye choose and ye do not choose! what talk is this of choosing? by the bull that i killed, am i to stand nosing into your dogs den for my fairdues? it is i, shere khan, who speak! the tigers roar filled the cave with thunder mother wolf shook herself clear of the cubs and sprang forward, her eyes, like two green moons in the darkness, facing the blazing eyes of shere khan and it is i, raksha [the demon], who answers the mans cub is mine, lungri mine to me! he shall not be killed he shall live to run with the pack and to hunt with the pack; and in the end, look you, hunter of little naked cubs frog eater fish killer he shall hunt thee! now get hence, or by the sambhur that i killed (i eat no starved cattle), back thou goest to thy mother, burned beast of the jungle, lamer than ever thou camest into the world! go! father wolf looked on amazed he had almost forgotten the days when he won mother wolf in fair fight from five other wolves, when she ran in the pack and was not called the demon for compliments sake shere khan might have faced father wolf, but he could not stand up against mother wolf, for he knew that where he was she had all the advantage

of the ground, and would fight to the death so he backed out of the cave mouth growling, and when he was clear he shouted: each dog barks in his own yard! we will see what the pack will say to this fostering of man cubs the cub is mine, and to my teeth he will come in the end, o bush tailed thieves! mother wolf threw herself down panting among the cubs, and father wolf said to her gravely: shere khan speaks this much truth the cub must be shown to the pack wilt thou still keep him, mother? keep him! she gasped he came naked, by night, alone and very hungry; yet he was not afraid! look, he has pushed one of my babes to one side already and that lame butcher would have killed him and would have run off to the waingunga while the villagers here hunted through all our lairs in revenge! keep him? assuredly i will keep him lie still, little frog o thou mowgli for mowgli the frog i will call thee the time will come when thou wilt hunt shere khan as he has hunted thee but what will our pack say? said father wolf the law of the jungle lays down very clearly that any wolf may, when he marries, withdraw from the pack he belongs to but as soon as his cubs are old enough to stand on their feet he must bring them to the pack council, which is generally held once a month at full moon, in order that the other wolves may identify them after that inspection the cubs are free to run where they please, and until they have killed their first buck no excuse is accepted if a grown wolf of the pack kills one of them the punishment is death where the murderer can be found; and if you think for a minute you will see that this must be so father wolf waited till his cubs could run a little, and then on the night of the pack meeting took them and mowgli and mother wolf to the council rock a hilltop covered with stones and boulders where a hundred wolves could hide akela, the great gray lone wolf, who led all the pack by strength and cunning, lay out at full length on his rock, and below him sat forty or more wolves of every size and color, from badger colored veterans who could handle a buck alone to young black three year olds who thought they could the lone wolf had led them for a year now he had fallen twice into a wolf trap in his youth, and once he had been beaten and left for dead; so he knew the manners and customs of men there was very little talking at the rock the cubs tumbled over each other in the center of the circle where their mothers and fathers sat, and now and again a senior wolf would go quietly up to a cub, look at him carefully, and return to his place on noiseless feet sometimes a mother would push her cub far out into the moonlight to be sure that he had not been overlooked akela from his rock would cry: ye know the law ye know the law look well, o wolves! and the anxious mothers would take up the call: look look well, o wolves!

Bilaga B - Mottagen krypterad text

dawxdfmragdirvaousfdivcchuszdbsvbnxsduiwbsvbnddgcdgybsxzgkrtdovcaddwuhdovca
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