

Really Secret Activities

Characteristics of Effective Secret Codes

How can financial institutions and others advertise “secure Internet transactions?” “Secure” means that there is no way an accident can reveal your information. It means that there is no way a computer hacker, the government, or anyone else can intercept your information and make sense of it. Should this claim be labeled false advertising?

Actually, electronic transactions can be secure. Someone may see the transaction as the result of an accident or someone may be able to intercept the transaction, but in neither case will they be able to make any sense of what they have. They may have the coded transmission, but they will be unable to do anything with it.

The business of creating secret codes to communicate really secret activities is probably as old as human communication. Leonardo da Vinci, one of the greatest minds to inhabit this planet, kept extensive journals. Most of his journal writing was done with the text written from right to left in a mirror image format. He also made use of unusual spellings and abbreviations. Most historians agree that he did this as a form of secret code because it made his journals very difficult to read. During the Second World War, Navaho “code talkers” were very effective at communicating secret messages. Their secret code was their native Navaho language. The Navaho language has no written form and can only be taught orally. As a result, it is understood by very few non-Navahos and by none of America’s enemies during the war.

Creating secret codes is an activity that most of us have tried at different times. Have you ever tried to speak a little differently to your friends so adults couldn’t understand you? Have you tried writing notes in code? Below is a message written in two different codes. The codes are so commonly “invented” by young children that you can probably decode them without any additional information. Give it a try before reading any further.

13050520 020508091404 200805 13011212 0120 14151514 1901202118040125
NFFU CFIJOE UIF NBMM BU OPPO TBUVSEBZ

An **effective and secure secret code** must have **five characteristics**.

1. The sender must be able to accurately code a message in a reasonable period of time.
2. The sender must be able to securely communicate a decoding key to the recipient of the message.
3. The code must be close to impossible to decode by someone without the decoding key.
4. The recipient must be able to accurately decode the message in a reasonable period of time.
5. The recipient must be able to confirm that the message came from the correct person rather than from someone else who figured out the code.