

FIG. 2. The polarization entangled photons are transmitted via optical fibers to Alice and Bob, who are separated by 360 m, and both photons are analyzed, detected and registered independently. After a measurement run the keys are established by Alice and Bob through classical communication over a standard computer network.

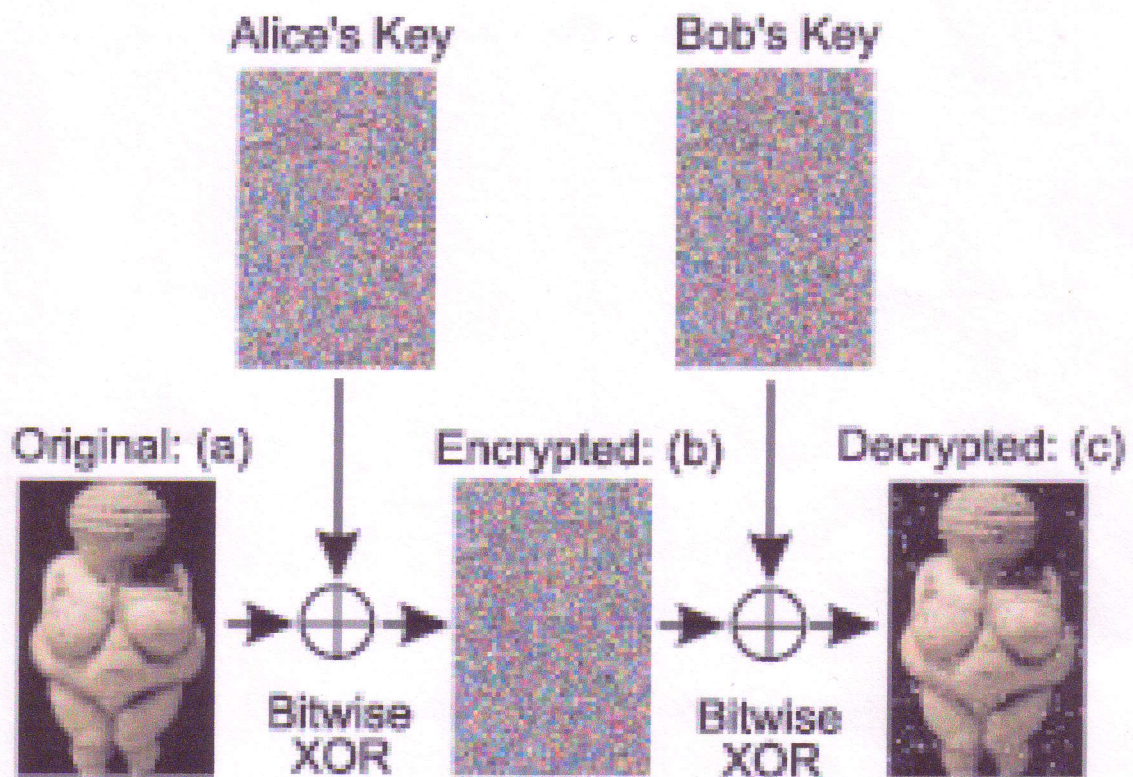


FIG. 3. The 49984 bit large keys generated by the BB84 scheme are used to securely transmit an image²⁸ (a) of the "Venus von Willendorf"²⁴ effigy. Alice encrypts the image via bitwise XOR operation with her key and transmits the encrypted image (b) to Bob via the computer network. Bob decrypts the image with his key, resulting in (c) which shows only few errors due to the remaining bit errors in the keys.