What is claimed is :

1. A system for coupling a stylus to a computing device, the system comprising:

a computing device having a display and configured to communicate with the stylus in accordance with a first wireless protocol and via at least one communication channel associated with a second wireless protocol, the computing device executing computer-executable instructions to:

receive a stylus wireless protocol identifier in a first signal from the stylus via the at least one communication channel;

based on receiving the stylus wireless protocol identifier, transmit a second signal including a wireless protocol identifier of the computing device and a signing key to the stylus via the at least one communication channel associated with the second wireless protocol, whereby the computing device is coupled to the stylus to listen for signals from the stylus; and

based on receiving a third signal from the coupled stylus to the computing device via the first wireless protocol, perform an operation on the computing device based on the received third signal, the third signal indicating user input to the stylus;

wherein performing, by the computing device, the operation based on the third signal includes pairing the coupled stylus to the computing device based on the stylus wireless protocol identifier and the wireless protocol identifier of the computing device.

2. The system of claim 1, wherein the computing device is further configured to:

generate the signing key;

receive a signature from the coupled stylus with the third signal from the coupled stylus; and

authenticate the third signal prior to performing the operation by comparing the received signature to an expected signature based on the signing key and validating an associated sign counter.

3. The system of claim 1, wherein the user input to the stylus includes button event input associated with a button event, and wherein performing, by the computing device, an operation based on the third signal includes
performing, by the computing device, an operation associated with the button event.

4. The system of claim 3, wherein performing, by the computing device, the operation based on the third signal includes:

establishing a connection associated with the first wireless protocol between the stylus and computing device;

generating a session key; and

sharing the generated session key with the stylus via the first wireless protocol, wherein the computing device is configured to exchange the shared session key during communications with the stylus using the established connection.

5. The system of claim 1, wherein the at least one communication channel includes one or more of the following: an electrostatic (ES) communication channel and a near field communication (NFC) channel.

6. The system of claim 1, wherein the computing device is further configured to receive a second stylus wireless protocol identifier from a second stylus and transmit a signal including the wireless protocol identifier of the computing device to the second stylus, whereby the computing device is coupled to the second stylus concurrently with the first stylus.

7. The system of claim 1, wherein performing, by the computing device, an operation based on the third signal includes launching an application on the computing device prior to pairing the coupled stylus to the computing device.

8. A computerized method for coupling a stylus to a computing device, the computerized method comprising:

receiving, by the computing device, a stylus wireless protocol identifier from the stylus via at least one communication channel upon a tip of the stylus being brought proximate to a display of the computing device, the computing device configured to communicate with the stylus in accordance with a first wireless protocol, the at least one communication channel associated with a second wireless protocol;

based on receiving the stylus wireless protocol identifier, transmitting, by the computing device, a wireless protocol identifier of the computing device and a signing key to the stylus via the at least one communication channel, whereby the stylus and computing device are coupled; and

based on receiving a signal associated with user input from the coupled stylus via the wireless protocol, performing an operation on the computing device based on the received signal, the signal indicating user input to the stylus.

9. The computerized method of claim 8, wherein performing, by the computing device, an operation based on the signal includes pairing the coupled stylus to the computing device based on the stylus wireless protocol identifier and the wireless protocol identifier of the computing device.

10. The computerized method of claim 8, further comprising:

generating the signing key;

receive a signature from the coupled stylus with the signal associated with user input from the coupled stylus; and

authenticating said signal prior to performing the operation by comparing the received signature to an expected signature based on the signing key and validating the sign counter.

11. The computerized method of claim 8, wherein the user input includes button event input associated with a button event, and wherein performing, by the computing device, an operation based on the signal associated with user input includes performing, by the computing device, an operation associated with the button event.

12. The computerized method of claim 11, wherein performing, by the computing device, the operation based on the signal includes:

establishing a connection associated with the first wireless protocol between the stylus and computing device;

generating a session key; and

sharing the session key with the stylus via the first wireless protocol, wherein the computing device is configured to exchange the shared session key during

communications with the stylus using the established connection.

13. The computerized method of claim 8, wherein the at least one communication channel includes one or more of the following: an electrostatic (ES) communication channel and a near field communication (NFC) channel.

14. The computerized method of claim 8, further comprising receiving a second stylus wireless protocol identifier from a second stylus, and transmitting the wireless protocol identifier of the computing device to the second stylus, whereby the computing device is coupled to the second stylus concurrently with the first stylus.

15. One or more computer storage media having computer-executable instructions for coupling a stylus to a computing device that, upon execution by at least one processor, causes the at least one processor to at least:

receive, by the computing device, a stylus wireless protocol identifier from the stylus via at least one communication channel upon a tip of the stylus being brought proximate to a display of the computing device, the computing device configured to communicate with the stylus in accordance with a first wireless protocol, the at least one communication channel associated with a second wireless protocol;

based on receiving the stylus wireless protocol identifier, transmitting, by the computing device, a wireless protocol identifier of the computing device and a signing key to the stylus via the at least one communication channel, whereby the stylus and computing device are coupled; and

based on receiving a signal associated with user input from the coupled stylus via the first wireless protocol, perform an operation on the computing device based on the received signal, the signal indicating user input to the stylus.

16. The one or more computer storage media of claim 15, wherein performing, by the computing device, an operation based on the signal includes pairing the coupled stylus to the computing device based on the stylus wireless protocol identifier and the wireless protocol identifier of the computing device.

17. The one or more computer storage media of claim 15, wherein the computer-executanle instructions, upon execution by at least one processor, further cause the at least one processor to at least :

generate the signing key;

receive a signature from the coupled stylus with the signal associated with user input from the coupled stylus, and authenticate said signal prior to performing the operation by comparing the received signature to an expected signature based on the signing key and validating the sign counter.

18. The one or more computer storage media of claim 15, wherein the user input includes button event input associated with a button event, and wherein performing, by the computing device, an operation based on the signal associated with user input includes performing, by the computing device, an operation associated with the button event.

19. The one or more computer storage media of claim 18, wherein performing, by the computing device, the operation based on the signal includes :

establishes a connection associated with the first wireless protocol between the stylus and computing device;

generating a session key; and

sharing the session key with the stylus via the first wireless protocol, wherein the computing device is configured to exchange the shared session key during communications with the stylus using the established connection.

20. The one or more computer storage media of claim 15, wherein the at least one communication channel includes one or more of the following : an electrostatic (ES) communication channel and a near field communication (NFC) channel.