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(54) Title: EXTENDING DEVICE FUNCTIONALITY AMONGST INDUCTIVELY LINKED DEVICES

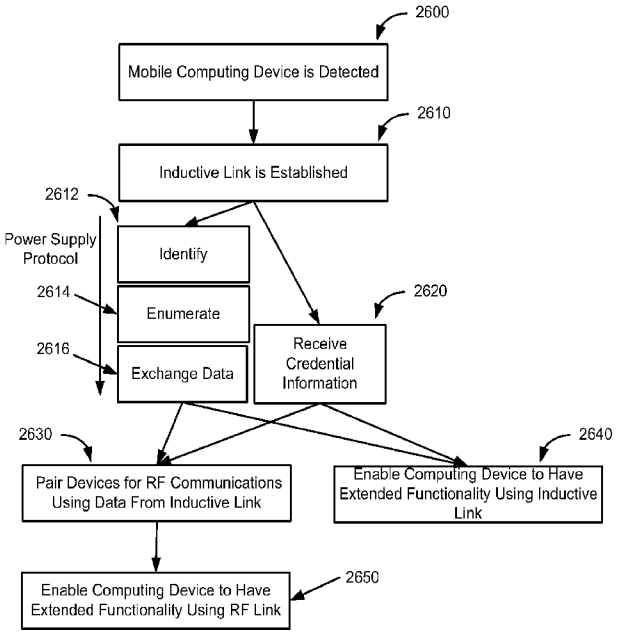


FIG. 26

(57) Abstract: A docking station is provided for a computing device. The docking station may be used by, for example, a mobile computing device, such as a cellular or wireless telephony/messaging device. The docking station includes a housing comprising a receiving surface top receive and retain the mobile computing device. An inductive signal transfer interface is included with the housing to inductively signal at least one of power or data to the mobile computing device. The docking station further provides an output component and processing resources. The processing resources are configured to detect placement of the mobile computing device on the receiving surface. The data is received from the mobile computing device, and an output is signaled to the output component based on the received data.

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1. A docking station for a computing device, the docking station comprising:

an inductive signal transfer interface provided within a housing to inductively signal at least one of power or data to the computing device;

an output component; and

processing resources configured to:

receive data from the computing device over the inductive signal transfer interface;

use said data to establish an alternative connection with the computing device; and

enable the computing device to use the alternative connection to signal an output to the output component.

2. The docking station of claim 1, further comprising a wireless communication port, wherein the processing resources are configured to receive data from the computing device to signal the output using the wireless communication port.

3. The docking station of claims 1 or 2, wherein the inductive signal transfer interface is configured to inductively receive or transfer data to the computing device.

4. The docking station of claim 3, wherein the inductive signal transfer interface is configured to inductively receive at least some of the data for signaling the output using the inductive signal transfer interface.

5. The docking station of claims 3 or 4, wherein the processing resources are configured to receive data from the computing device to signal the output using the wireless communication port; and

wherein the inductive signal transfer interface is configured to inductively exchange data with the computing device in order to establish a wireless link with the computing device.

6. The docking station of claims 1 through 5, further comprising a housing that includes a receiving surface to receive the computing device, the inductive signal transfer interface being positioned relative to the receiving surface to inductively signal power and to exchange data.

7. The docking station of claims 1 through 6, wherein the output device corresponds to or includes one or more speakers, and wherein the output corresponds to an audio stream.

8. The docking station of claims 1 through 6, wherein the output device corresponds or includes a projector, and wherein the output corresponds to video or image output.

9. The docking station of claims 1 through 6, wherein the output device corresponds or includes a printer.

10. The docking station of claim 1, wherein the docking station communicates an identifier of the docking station to the computing device in order to enable the computing device to configure one or more operations based on information associated with that specific docking station.

11. The docking station of claim 1, further comprising one or more magnets positioned to magnetically couple to a surface of the computing device that includes magnetically attractive material.

12. The docking station of claim 11, further comprising one or more components to detect an orientation of the computing device received on the receiving surface.

13. The docking station of claim 12, wherein the processing resource is configured to perform functionality, or enable functionality on the computing device, that is specific to a detected orientation of the computing device.

14. A docking station for a mobile computing device, the docking station comprising:

one or more magnets provided within a housing positioned to magnetically couple to a surface of the mobile computing device that includes magnetically attractive material;

one or more audio output components; and

a plurality of components contained within the housing, the plurality of components including:

a wireless communication port;

processing resources, the processing resources being configured to:

inductively receive data from the mobile computing device;

use said data to establish a wireless link with the mobile computing device using the wireless communication port;

process a media stream received over the communication port; and

enable the mobile computing device to use the wireless link to signal the one or more audio components to output audio corresponding to the media stream.

15. The docking station of claim 14, wherein the one or more magnets and the receiving surface are arranged to enable the mobile computing device to be coupled to the docking station in a plurality of orientations, including in a portrait orientation and in a landscape orientation.

16. The docking station of claims 14 or 15, further comprising a signal transfer interface provided on the docking station to signal power to the mobile computing device.

17. The docking station of claim 16, wherein the signal transfer interface is an inductive interface that is configured to inductively signal power to the mobile computing device.

18. The docking station of claim 16, wherein the inductive interface is configured to inductively signal power and to exchange data with the mobile computing device.

19. The docking station of claim 17,

wherein the one or more magnets and the receiving surface are arranged to enable the mobile computing device to be coupled to the docking station in a plurality of orientations, including in a portrait orientation and in a landscape orientation; and

wherein the inductive interface is configured to inductively signal power to the mobile computing device in either the landscape orientation or the portrait orientation.

20. The docking station of claim 19, wherein the processing resources are configured to receive the media stream when the mobile computing device is in either the landscape orientation or the portrait orientation.

21. The docking station of claims 14 through 20, wherein the communication port is a local wireless communication port.

22. The docking station of claim 18,

wherein the communication port is a local wireless communication port, and

wherein the docking station inductively exchanges data with the mobile computing device to enable the mobile computing device and docking station to be paired using a communication medium of the local wireless communication port.

23. The docking station of claim 22, wherein the inductively exchanged data includes data that (i) is signaled from the mobile computing device to the docking station to identify the mobile computing device, and/or (ii) is signaled from the docking station to the mobile computing device to identify the docking station.

24. The docking station of claim 22, wherein the inductively exchanged data includes data that establishes an inductive link between the mobile computing device and the docking station under a pre-established inductive communication protocol.

25. The docking station of claim 14, wherein the signal transfer interface is a conductive interface that is configured to conductively signal power to the mobile computing device.

26. A computing system comprising:

a first computing device; and

a second computing device;

wherein the first computing device and the second computing device are configured to inductively communicate with one another;

wherein at least the first computing device signals an identifier of the first computing device to the second computing device;

wherein the second computing device configures one or more operations based on the identifier of the first computing device;

wherein the first computing device (i) inductively receives data from the second computing device, (ii) uses said data to establish an alternative connection with the second computing device, and (iii) enables the second computing device to use the alternative connection to signal an output to the first computing device.

27. The computing device of claim 26, wherein at least one of the first or second computing device is configured to signal power to the other of the first or second computing device.

28. A computing system comprising:

a first computing device; and

a second computing device;

wherein each of the first and second computing device includes a wireless radio frequency communication port;

wherein the first computing device and the second computing device are configured to inductively communicate with one another when placed in contact, including to automatically exchange credential information to enable the first and second computing devices to subsequently communicate using the respective wireless radio frequency communication port of each device.

29. The computing system of claim 28, wherein the first computing device and the second computing device are configured to instantly exchange credential information using an inductive signal interface provided with each computing device.