

be created by etching, depositing, and/or any other method for fabricating components on an integrated circuit.

**[0078]** FIG. 13 is a side view of a coil 330 in accordance with the present invention. As shown, dielectric layer 338 supports the first turns 332. A lower layer, dielectric layer 348, supports metal bridges 334 and 336. Utilizing conventional integrated circuit technologies, the metal bridges 334 and 336 are coupled to the corresponding portions of the first turns 332. As further shown, dielectric layer 380 supports the second turns 370 while dielectric layer 376 supports the metal bridges 372 and 374. The first turns 332 and the second turns 370 are coupled together by via 337. As discussed above, removed dielectric section 335 removes portions of both dielectric layers 338 and 348 to improve the magnetic coupling between the first turns 332 and second turns 370.

**[0079]** FIG. 14 is a bottom view of a coil 330 in accordance with the present invention. As shown, the second turn 370 on dielectric layer 376 and the metal bridges 372 and 374 couple the winding of the second turns together. The second turns have a symmetrical pattern and is similar to the winding of the first turns 332. As one of average skill in the art will appreciate, the first and second turns may include more or less turns, and additional turns may also be disposed on additional dielectric layers.

**[0080]** It should be noted that while FIGS. 12-14 present a particular configuration of an on-chip coil, other on-chip coil configurations can likewise be employed with the broad scope of the present invention.

**[0081]** FIG. 15 is a flowchart representation of a method in accordance with an embodiment of the present invention. In particular a method is presented for use in conjunction with one or more features and functions described in conjunction with FIGS. 1-14. In step 400, RFID data is communicated with a remote RFID device via an on-chip coil. In step 402, wireless telephony data is communicated with a remote wireless telephony device. In step 404, baseband processing is performed on an inbound symbol stream to produce inbound data and to process outbound data to produce an outbound symbol stream, wherein the inbound data includes RFID data and wireless telephony data.

**[0082]** In an embodiment of the present invention, the outbound data includes RFID data and wireless telephony data. Step 404 can produce RFID data and wireless telephony data either contemporaneously or sequentially.

**[0083]** FIG. 16 is a flowchart representation of a method in accordance with an embodiment of the present invention. In particular, a step is included that can optionally be used in conjunction with the method shown in FIG. 15. In step 410 an RF power signal is transmitted via the on-chip coil for powering the remote RFID device.

**[0084]** FIG. 17 is a flowchart representation of a method in accordance with an embodiment of the present invention. In particular, a step is included that can optionally be used in conjunction with the method shown in FIG. 15. In step 420 pico area network data is communicated with a remote pico area network device, wherein the inbound data further includes pico area network data.

**[0085]** FIG. 18 is a flowchart representation of a method in accordance with an embodiment of the present invention. In particular, a step is included that can optionally be used in conjunction with the method shown in FIG. 15. In step 430 WLAN data is communicated with a remote WLAN device, wherein the inbound data further includes WLAN data.

**[0086]** As may be used herein, the terms “substantially” and “approximately” provides an industry-accepted tolerance for its corresponding term and/or relativity between items. Such an industry-accepted tolerance ranges from less than one percent to fifty percent and corresponds to, but is not limited to, component values, integrated circuit process variations, temperature variations, rise and fall times, and/or thermal noise. Such relativity between items ranges from a difference of a few percent to magnitude differences. As may also be used herein, the term(s) “coupled to” and/or “coupling” and/or includes direct coupling between items and/or indirect coupling between items via an intervening item (e.g., an item includes, but is not limited to, a component, an element, a circuit, and/or a module) where, for indirect coupling, the intervening item does not modify the information of a signal but may adjust its current level, voltage level, and/or power level. As may further be used herein, inferred coupling (i.e., where one element is coupled to another element by inference) includes direct and indirect coupling between two items in the same manner as “coupled to”. As may even further be used herein, the term “operable to” indicates that an item includes one or more of power connections, input(s), output(s), etc., to perform one or more its corresponding functions and may further include inferred coupling to one or more other items. As may still further be used herein, the term “associated with”, includes direct and/or indirect coupling of separate items and/or one item being embedded within another item. As may be used herein, the term “compares favorably”, indicates that a comparison between two or more items, signals, etc., provides a desired relationship. For example, when the desired relationship is that signal 1 has a greater magnitude than signal 2, a favorable comparison may be achieved when the magnitude of signal 1 is greater than that of signal 2 or when the magnitude of signal 2 is less than that of signal 1.

**[0087]** The present invention has also been described above with the aid of method steps illustrating the performance of specified functions and relationships thereof. The boundaries and sequence of these functional building blocks and method steps have been arbitrarily defined herein for convenience of description. Alternate boundaries and sequences can be defined so long as the specified functions and relationships are appropriately performed. Any such alternate boundaries or sequences are thus within the scope and spirit of the claimed invention.

**[0088]** The present invention has been described above with the aid of functional building blocks illustrating the performance of certain significant functions. The boundaries of these functional building blocks have been arbitrarily defined for convenience of description. Alternate boundaries could be defined as long as the certain significant functions are appropriately performed. Similarly, flow diagram blocks may also have been arbitrarily defined herein to illustrate certain significant functionality. To the extent used, the flow diagram block boundaries and sequence could have been defined otherwise and still perform the certain significant functionality. Such alternate definitions of both functional building blocks and flow diagram blocks and sequences are thus within the scope and spirit of the claimed invention. One of average skill in the art will also recognize that the functional building blocks, and other illustrative blocks, modules and components herein, can be implemented as illustrated or