At step **644**, smart decision beam selection module **410** determines a smart decision beam selection **620** based on the traffic signals received in the first frame. At step **646**, the traffic signals received in the first frame are communicated to base station transceiver **24** via the beam selected as fast decision beam selection **440**. The determination of smart decision beam selection **620** at step **644** may not be completed until after the traffic signals are communicated to base station transceiver **24** at step **646**.

[**0246**] At step **648**, mobile station **15** transmits additional traffic signals in a second frame of the assigned traffic channel, which are received by receiving system **100** and communicated to processing module **62**. At step **650**, fast decision beam selection module **408** determines a fast decision beam selection **440** based on the traffic signals received in the second frame. At step **652**, smart decision beam selection module **410** determines a smart decision beam selections **620** based on the traffic signals received in the second frame along with signals received in one or more frames prior to the second frame (which may or may not include the first frame). At step **654**, it is determined whether the smart decision beam selection **620** determined at step **644** meets a particular criteria. For example, in one embodiment it is determined whether the quality of smart decision beam selection **620** determined at step **644** meets a particular threshold. If it is determined that the smart decision beam selection **620** determined at step **644** does meet the particular criteria, at step **656** the traffic signals received in the second frame are communicated to base station transceiver **24** via the beam selected as smart decision beam selection **620** at step **644**. If it is determined that the smart decision beam selection **620** determined at step **644** does not meet the particular criteria, at step **658** the traffic signals received in the second frame are communicated to base station transceiver **24** via the beam selected as fast decision beam selection **440** at step **650**.

[**0247**] Steps **648** through **658** may be repeated one or more times. In particular, steps **648** through **658** may be repeated in order to continually update smart decision beam selection **620** during the remainder of the call. In addition, in some situations, steps **640** through **646** may be repeated one or more times before using a smart decision beam selection **620**. In particular, steps **640** through **646** may be repeated one or more times until smart decision beam selection module **410** has sufficient data to determine an adequate smart decision beam selection **620**.

[**0248**] Smart antenna system **14** may provide a number of advantages. For example, in some embodiments, smart antenna apparatus **16** may be coupled to a new or existing base station transceiver as an add-on or applique without having to modify, alter, or reconfigure the base station transceiver or any other component of the base station system, such as base station controllers. Thus, the cost and labor of modifying or altering base station system **12** and/or dealing or negotiating with the manufacturer of the components of base station system **12**, such as base station transceiver **24** and base station controller **26**, is eliminated in some embodiments. Moreover, smart antenna apparatus **16** may be compatible with base station transceivers produced by a variety of manufacturers. For example, smart antenna apparatus **16** may be compatible with all base station transceivers using standard base station transceiver interfaces. For at least the reasons discussed above, the installation costs of smart antenna apparatus **16** are reduced as compared with traditional smart antenna systems. Moreover, the operating costs of smart antenna apparatus **16** are reduced as compared with traditional smart antenna systems.

[**0249**] In addition, the presence and operation of smart antenna apparatus **16** may be transparent to the base station system, including the base station transceiver. In other words, smart antenna apparatus **16** causes little delay (and in some embodiments, no delay) in the reception and transmission of radio signals to and from the base station transceiver. Thus, smart antenna apparatus **16** may operate without affecting the timing of the cellular network or any mobile stations.

[**0250**] In addition, the beam selection systems and methods provided by smart antenna apparatus **16** as described above with reference to FIGS. **11** through **23** may provide a number of advantages. For example, smart antenna apparatus **16** may reduce the interference, such as multi-path and co-channel interference, associated with uplink signals received by a new or existing base station transceiver. In addition, smart antenna apparatus **16** may reduce the interference associated with downlink signals received by mobile stations. Thus, smart antenna apparatus **16** may increase the effective capacity and improve the overall performance of the base station transceiver without requiring any modifications to the base station transceiver. For example, since using narrow beams generally increases the range (or coverage) of effective reception and transmission as compared with wide beams, smart antenna apparatus **16** may increase the range of the base station transceiver to which it is added. Moreover, smart antenna apparatus **16** may improve the signal-to-noise ratio (SNR) of transmitted and/or received signals, and thus increases the data rate which may be transmitted and/or received by the base station transceiver.

[**0251**] In some embodiments, smart antenna apparatus **16** may reduce the interference associated with received and/or transmitted signals better then traditional smart antenna systems. As a result, smart antenna apparatus **16** may provide increased capacity, coverage, and efficiency as compared with traditional smart antenna systems.

[**0252**] Although embodiments of the invention and their advantages are described in detail, a person of ordinary skill in the art could make various alterations, additions, and omissions without departing from the spirit and scope of the present invention as defined by the appended claims.

1-23. (canceled)

24. An apparatus comprising:

an smart antenna circuit comprising an antenna array, the smart antenna circuit further capable of being coupled to an already existing base station in a wireless communications system between a base station transceiver and at least one mobile station, the smart antenna circuit further capable of receiving or transmitting, or combinations thereof, signals along a selected beam; and

a processing system coupled to the smart antenna circuit capable of executing one or more algorithms, based on a number of parameters, to select an uplink beam for uplink signals and a downlink beam for downlink signals.