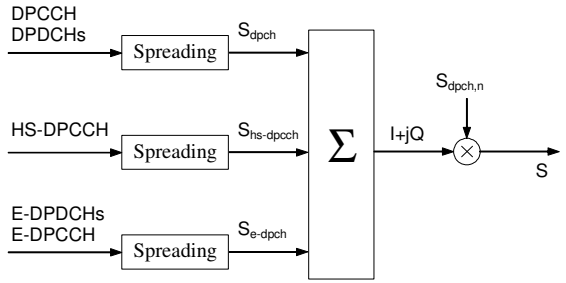
Mueller Exhibit 62

EXHIBIT H

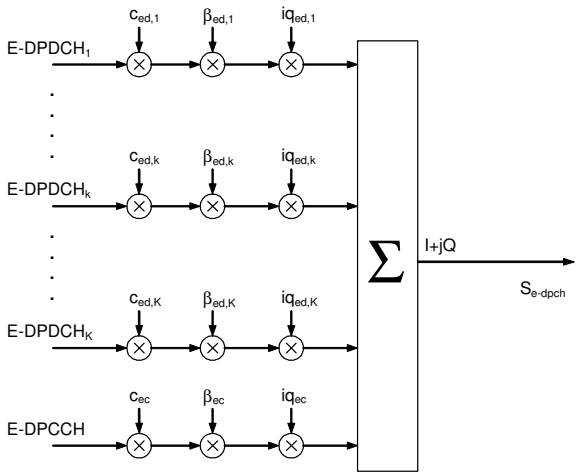
SAMSUNG'S PATENT L.R. 3-1(A)-(D) DISCLOSURES FOR U.S. PATENT NO. 7,447,516

ASSERTED CLAIM (PATENT L.R. 3-1(A))	ACCUSED INSTRUMENTALITY AND HOW EACH ELEMENT IS MET BY ACCUSED INSTRUMENTALITY (PATENT L.R. 3-1(B)-(D))
1. A method for transmitting data of a first channel not supporting Hybrid Automatic Retransmission Request (HARQ) and a second channel supporting the HARQ in a mobile telecommunication system which supports an enhanced uplink service, the method comprising the steps of:	Apple's 3G Products[1] transmit data of a first channel not supporting Hybrid Automatic Retransmission Request (HARQ) and a second channel supporting the HARQ in a mobile telecommunication system which supports an enhanced uplink service. Apple infringes this claim because it has performed each and every step of this claim, including but not limited to through testing and use by its employees. Apple also infringes this claim by selling Apple's 3G Products to customers and encouraging those customers to use the products in a manner that meets each and every step of this claim. For example, the Apple HSUPA Products support enhanced uplink service via HSUPA[2] described in 3GPP[1-3][3] using a radio transceiver including a baseband processor. Figure 1 of 3GPP[1] shows the spreading of the uplink dedicated physical channels.  **Figure 1: Spreading for uplink dedicated channels**

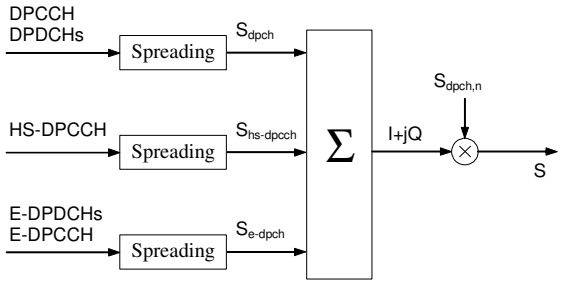
[1] "Apple's 3G Products" include iPhone 3G, iPhone 3GS, iPhone4, iPad 3G, iPad2 3G and any other products compliant with 3GPP UMTS standard.

[2] *See, e.g.,* iPhone 4 Technical Specifications, *available at* http://www.apple.com/iphone/specs.html. Similar technical specifications are available for the other Apple HSUPA Products, indicating that each supports and uses HSUPA.

[3] As defined herein, "3GPP[1-3]" means 3GPP TS 25.213 v6.4.0 (2005-09) (Release 6) ("3GGP[1]"); TS 25.214 v6.6.0 (2005-06) (Release 6) ("3GGP[2]"); and TS 25.309 v6.6.0 (2006-03) (Release 6) ("3GPP[3]"); corresponding disclosure may be found in earlier versions as well.

	The E-DPDCH channels support HARQ (*see* 3GPP[3] § 6.1; 7.3.6; 8) while the DPDCH channels do not. *Id.* at § 7.3.6. One HARQ entity is capable of supporting multiple instances (HARQ processes) of stop and wait HARQ protocols. ***Each process is responsible for generating ACKs or NACKs indicating delivery status of E-DCH transmissions***. The HARQ entity handles all tasks that are required for the HARQ protocol. *Id.* (emphasis added).
determining transmit power factors for the channels and determining if total transmit power required for transmission of the channels exceeds the maximum allowed power;	Apple's 3G Products determine transmit power factors for the channels and determine if total transmit power required for transmission of the channels exceeds the maximum allowed power. For example, $\beta_{ed,k}$ represents the transmit power factors (*e.g.*, gain factors) for the E-DPDCH channels.  **Figure 1C: Spreading for E-DPDCH/E-DPCCH** "The value of $\beta_{ed,k}$ shall be computed as specified in [6] subclause 5.1.2.5B.2, based on the

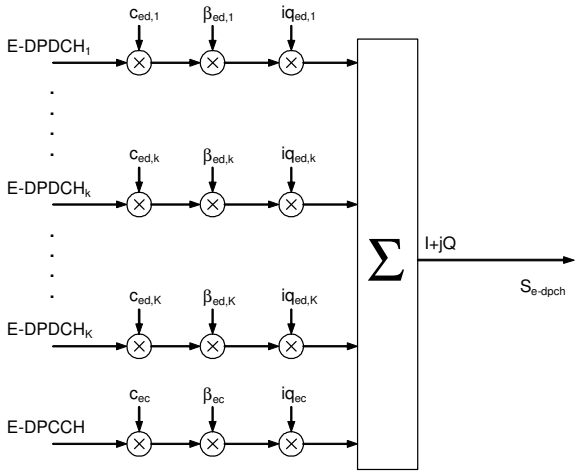
	reference gain factors, the spreading factor for E-DPDCH$_k$, the HARQ offsets, and the quantization of the ratio $\beta_{ed,k}/\beta_c$ into amplitude ratios specified in Table 1B.2 for the case when E-TFCI $\leq$ *E-TFCI$_{ec,boost}$* and Table 1.B.2B, for the case when E-TFCI > *E-TFCI$_{ec,boost}$*." 3GPP[1] § 4.2.1.3. The computation of the corresponding gain factors for the DPDCH channels is described in 3GPP[1] § 4.2.1.1. As explained in 3GPP[2], "[w]hen E-DCH is configured, if the total UE transmit power (after applying DPCCH power adjustments and gain factors) ***would exceed the maximum allowed value***, the UE shall firstly reduce all the E-DPDCH gain factors $\beta_{ed,k}$ by an equal scaling factor to respective values $\beta_{ed,k,reduced}$ so that the total transmit power would be equal to the maximum allowed power. 3GPP[2] § 5.1.2.6.
scaling-down the transmit power factor for the second channel if the total transmit power exceeds the maximum allowed power; and	Apple's 3G Products scale-down the transmit power factor for the second channel if the total transmit power exceeds the maximum allowed power. For example, as explained in 3GPP[2], "[w]hen E-DCH is configured, if the total UE transmit power (after applying DPCCH power adjustments and gain factors) would exceed the maximum allowed value, the UE shall firstly reduce all the E-DPDCH gain factors $\beta_{ed,k}$ by an equal scaling factor to respective values $\beta_{ed,k,reduced}$ so that the total transmit power would be equal to the maximum allowed power." *Id.*
transmitting data through the first and second channels using the scaled-down transmit power factor for the second channel and the transmit power factor for the first channel.	Apple's 3G Products transmit data through the first and second channels using the scaled-down transmit power factor for the second channel and the transmit power factor for the first channel. For example, spreading of the uplink dedicated physical channels (DPCCH, DPDCHs, HS-DPCCH, E-DPCCH, E-DPDCHs) is used to transmit data through the E-DPDCH and DPDCH data channels. *See* 3GPP[1] § 4.2.1.

	 **Figure 1: Spreading for uplink dedicated channels**
Claim 2	
2. The method as claimed in claim 1, wherein the scaling step is performed on a slot-by-slot basis.	Apple's 3G Products scale-down the transmit power factor on a slot-by-slot basis. For example, "[a]ny scaling, and any reduction in the E-DPDCH gain factor as described above, shall only be applied or changed at a DPCCH slot boundary." 3GPP[2] § 5.1.2.6.
Claim 3	
3. The method as claimed in claim 1, wherein the total transmit power is determined based on the transmit power factors for the first and second channels and a Transmit Power Control (TPC) command issued by the system.	Apple's 3G Products determine the total transmit power based on the transmit power factors for the first and second channels and a Transmit Power Control (TPC) command issued by the system. For example, the initial transmit power of the DPCCH and DPDCH channels are set by higher layers and then through uplink TPC procedures: The initial uplink DPCCH transmit power is set by higher layers. Subsequently the uplink transmit power control procedure simultaneously controls the power of a DPCCH and its corresponding DPDCHs (if present). The relative transmit power offset between DPCCH and DPDCHs is determined by the network and is computed according to subclause 5.1.2.5 using the gain factors signalled to the UE using higher layer signalling. *Id.* § 5.1.2.1. TPC commands are derived using one of two supported algorithms described in 3GPP[2] §§ 5.1.2.2.2 and 5.1.2.2.3.

	"After deriving of the combined TPC command TPC_cmd using one of the two supported algorithms, the UE shall adjust the transmit power of the uplink DPCCH with a step of β_{DPCCH} (in dB) which is given by: $\beta_{DPCCH} = \beta_{TPC} \times$ TPC_cmd." 3GPP[2] § 5.1.2.2.1.
Claim 4	
4. The method as claimed in claim 1, further comprising the step of equally scaling transmit power factors corresponding to the other channels comprising the first channel when the transmit power factor for the second channel is scaled down below a predetermined minimum value.	Apple's 3G Products equally scale transmit power factors corresponding to the other channels comprising the first channel when the transmit power factor for the second channel is scaled down below a predetermined minimum value. For example, predetermined minimum gain factors are specified in Table 1B.2 and described in 3GPP[2] § 5.1.2.6. Any additional scaling maintains enumerated power ratios, as described below, so that equal scaling results. In case a DPDCH is configured, if any $\beta_{ed,k,reduced}/\beta_c$ is less than the smallest quantized value of Table 1B.2 in [3] subclause 4.2.1.3, DTX may be used on that E-DPDCH (E-DPCCH is, however still transmitted using β_{ec}). In case no DPDCH is configured, if any $\beta_{ed,k,reduced}/\beta_c$ is less than $(8/15)/\beta_c$, that $\beta_{ed,k}$ shall be set to $\beta_{ed,k,min}$ such that $\beta_{ed,k,min}/\beta_c = \min((8/15)/\beta_c, \beta_{ed,k,original}/\beta_c)$, where $\beta_{ed,k,original}$ denotes the E-DPDCH gain factor before reduction. In the following cases, the UE shall then ***apply additional scaling*** to the total transmit power so that it is equal to the maximum allowed power: - if a DPDCH is configured and the total UE transmit power would still exceed the maximum allowed value even though DTX is used on all E-DPDCHs; - if no DPDCH is configured and the total UE transmit power would still exceed the maximum allowed value even though $\beta_{ed,k}$ is equal to $\beta_{ed,k,min}$ for all k. ***Any additional scaling of the total transmit power as described above shall be such that the power ratio between DPCCH and DPDCH, between DPCCH and***

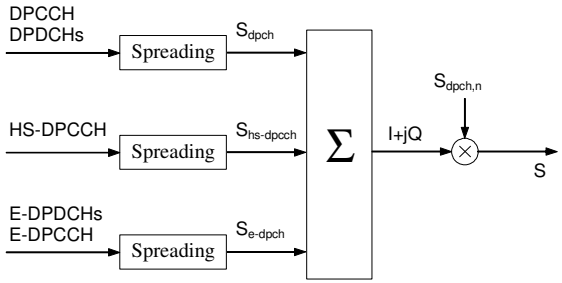
	HS-DPCCH, and between DPCCH and E-DPCCH, remains as required by sub-clauses 5.1.2.5, 5.1.2.5A and 5.1.2.5B.1, and such that the power ratio between each E-DPDCH and DPCCH remains as required by $\beta_{ed,k,min}/\beta_c$ if DTX is not used on E-DPDCH. Any slot-level scaling of β_{ed} or DTX of E-DPDCH as described above is applied at layer 1 only and is transparent to higher layers. *Id.* § 5.1.2.6 (emphasis added).
Claim 5	
5. The method as claimed in claim 4, wherein the predetermined minimum value indicates a status where the second channel is not transmitted.	Apple's 3G Products include a predetermined minimum value indicating a status where the second channel is not transmitted. For example, the predetermined minimum gain factors specified in Table 1B.2 and described in 3GPP[2] § 5.1.2.6 indicate a discontinuous transmission (DTX) status where the E-DPDCH channel is not transmitted. *See* claim 4.
Claim 6	
6. The method as claimed in claim 1, further comprising the step of equally scaling transmit power factors for the other channels exclusive of the second channel if the total transmit power still exceeds the maximum allowed power even after the transmit power factor for the second channel has been scaled-down.	Apple's 3G Products equally scale transmit power factors for the other channels exclusive of the second channel if the total transmit power still exceeds the maximum allowed power even after the transmit power factor for the second channel has been scaled-down. For example: In the following cases, the UE shall then apply additional scaling to the total transmit power so that it is equal to the maximum allowed power: - if a DPDCH is configured and the total UE transmit power would still exceed the maximum allowed value even though DTX is used on all E-DPDCHs; - if no DPDCH is configured and the total UE transmit power would still exceed the maximum allowed value even though $\beta_{ed,k}$ is equal to $\beta_{ed,k,min}$ for all k. Any additional scaling of the total transmit power as described above shall be such that the power ratio between DPCCH and DPDCH, between DPCCH and HS-DPCCH, and between DPCCH and E-DPCCH, remains as required by

	sub-clauses 5.1.2.5, 5.1.2.5A and 5.1.2.5B.1, and such that the power ratio between each E-DPDCH and DPCCH remains as required by $\beta_{ed,k,min}/\beta_c$ if DTX is not used on E-DPDCH. Any slot-level scaling of β_{ed} or DTX of E-DPDCH as described above is applied at layer 1 only and is transparent to higher layers. *Id.* § 5.1.2.6.
Claim 9	
9. The method as claimed in claim 1, wherein in the scaling step, the transmit power factor for the second channel is scaled when data of the second channel to be transmitted is retransmission data.	Apple's 3G Products scale-down the transmit power factor for the second channel when data of the second channel to be transmitted is retransmission data. For example: Any scaling, and any reduction in the E-DPDCH gain factor as described above, shall only be applied or changed at a DPCCH slot boundary. In order that the total UE transmit power does not exceed the maximum allowed value the scaling or E-DPDCH gain factor reduction shall be computed using the maximum HS-DPCCH power transmitted in the next DPCCH slot. In the case that either an ACK or a NACK transmission will start during the next DPCCH slot, the maximum HS-DPCCH power shall be computed using one of the following: (a) whichever of Δ_{ACK} and Δ_{NACK} will be used according to whether the transmission will be ACK or NACK, *or* (b) whichever of Δ_{ACK} and Δ_{NACK} is the largest. *Id.* § 5.1.2.6.
Claim 10	
10. The method as claimed in claim 1, wherein when data of the second channel to be transmitted is initial transmission data, transmit power factors for all the channels comprising the second channel	Apple's 3G Products scale-down the transmit power factor for the second channel when data of the second channel to be transmitted is initial transmission data, and the transmit power factors for all the channels comprising the second channel are equally scaled such that the total transmit power does not exceed the maximum allowed power.

are equally scaled such that the total transmit power does not exceed the maximum allowed power.	For example, *k* E-DPDCH channels may be transmitted simultaneously. $\beta_{ed,k}$ represents the gain factor for each E-DPDCH channel.  **Figure 1C: Spreading for E-DPDCH/E-DPCCH** "The value of $\beta_{ed,k}$ shall be computed as specified in [6] subclause 5.1.2.5B.2, based on the reference gain factors, the spreading factor for E-DPDCH$_k$, the HARQ offsets, and the quantization of the ratio $\beta_{ed,k}/\beta_c$ into amplitude ratios specified in Table 1B.2 for the case when E-TFCI $\leq$ *E-TFCI$_{ec,boost}$* and Table 1.B.2B, for the case when E-TFCI > *E-TFCI$_{ec,boost}$*." 3GPP[1] § 4.2.1.3. The computation of the corresponding gain factors for the DPDCH channels is described in 3GPP[1] § 4.2.1.1. As explained in 3GPP[2], "[w]hen E-DCH is configured, if the total UE transmit power (after applying DPCCH power adjustments and gain factors) ***would exceed the maximum allowed value***, the UE shall firstly reduce all the E-DPDCH gain factors $\beta_{ed,k}$ by an equal scaling factor to respective values $\beta_{ed,k,reduced}$ so that the total transmit power would be equal

	to the maximum allowed power." 3GPP[2] § 5.1.2.6.
Claim 14	
14. The method as claimed in claim 1, wherein the transmit power factors are determined based on Transport Formats (TF) which are selected according to scheduling assignment information received from a Node B, respectively.	Apple's 3G Products determine the transmit power factors based on Transport Formats (TF) which are selected according to scheduling assignment information received from a Node B, respectively. For example, "[s]cheduling and transport format selection is controlled by the MAC-hs sublayer in the Node B." *Id.* § 6A.1. The transmit gain factors are determined based on each Transport Format Combination (TFC) used. As explained in 3GPP[2] § 5.1.2.5.1: The uplink DPCCH and DPDCH(s) are transmitted on different codes as defined in subclause 4.2.1 of [3]. In the case that at least one DPDCH is configured, the gain factors β_c and β_d may vary for each TFC. There are two ways of controlling the gain factors of the DPCCH code and the DPDCH codes for different TFCs in normal (non-compressed) frames: ~ β_c and β_d are signalled for the TFC, or ~ β_c and β_d is computed for the TFC, based on the signalled settings for a reference TFC. Combinations of the two above methods may be used to associate β_c and β_d values to all TFCs in the TFCS. The two methods are described in subclauses 5.1.2.5.2 and 5.1.2.5.3 respectively. Several reference TFCs may be signalled from higher layers. The gain factors may vary on radio frame basis depending on the current TFC used. Further, the setting of gain factors is independent of the inner loop power control. After applying the gain factors, the UE shall scale the total transmit power of the DPCCH and DPDCH(s), such that the DPCCH output power follows the changes required by the

	power control procedure with power adjustments of Δ_{DPCCH} dB, subject to the provisions of sub-clause 5.1.2.6. *Id.* § 5.1.2.5.1. *See also* § 5.1.2.6.
Claim 15	
15. An apparatus for transmitting data of a first channel not supporting Hybrid Automatic Repeat reQuest (HARQ) and a second channel supporting the HARQ in a mobile telecommunication system which supports an enhanced uplink service, the apparatus comprising:	Apple's 3G Products include an apparatus for transmitting data of a first channel not supporting Hybrid Automatic Repeat reQuest (HARQ) and a second channel supporting the HARQ in a mobile telecommunication system which supports an enhanced uplink service. For example, each of Apple's 3G Products includes a radio transceiver and baseband processor. *See* claim 1.
a controller for determining transmit power factors for the channels,	Apple's 3G Products include a controller for determining transmit power factors for the channels. For example, each of Apple's 3G Products includes a radio transceiver and baseband processor that determines transmit power factors for the various channels supported by the transceiver. *See* claim 1.
determining if total transmit power required for transmission of the channels exceeds the maximum allowed power, and	Apple's 3G Products determine if total transmit power required for transmission of the channels exceeds the maximum allowed power. *See* claim 1.
scaling down the transmit power factor for the second channel if the total transmit power exceeds the maximum allowed power;	Apple's 3G Products scale down the transmit power factor for the second channel if the total transmit power exceeds the maximum allowed power. *See* claim 1.
first and second channel generators for generating first and second data frames by performing channel-coding and modulation of the first and second channel data; and	Apple's 3G Products include first and second channel generators for generating first and second data frames by performing channel-coding and modulation of the first and second channel data. For example, spreading of the uplink dedicated physical channels (DPCCH, DPDCHs, HS-DPCCH, E-DPCCH, E-DPDCHs) is used to transmit data through the E-DPDCH and DPDCH data channels. *See* 3GPP[1] § 4.2.1.

	 **Figure 1: Spreading for uplink dedicated channels** Code generation and allocation is specified in 3GPP[1] § 4.3. Uplink modulation is specified in 3GPP[1] § 4.4.
a gain scaling unit for adjusting the transmit powers of the first and second channels, with which the data frames of the first and second channels is transmitted, using the scaled transit power factor for the second channel and the transmit power factor for the first channel.	Apple's 3G Products include a gain scaling unit for adjusting the transmit powers of the first and second channels, with which the data frames of the first and second channels is transmitted, using the scaled transit power factor for the second channel and the transmit power factor for the first channel. For example, spreading units are provided for each type of uplink channel. The spreading units multiply the channel signals by gain factors in order to control the transmit power of each channel. With regard to the DPDCH/DPCCH channels, "[a]fter channelisation, the real-valued spread signals are weighted by gain factors, β_c for DPCCH, β_d for all DPDCHs." *See* 3GPP[1] § 4.2.1.1.

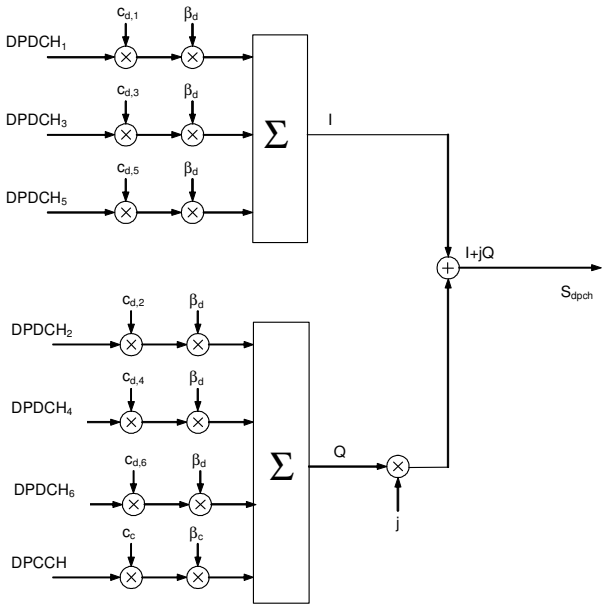
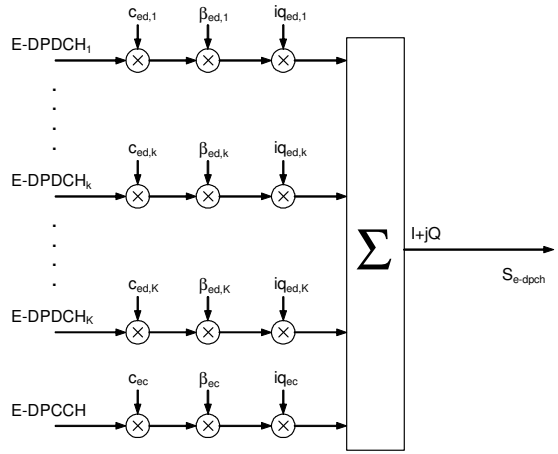


Figure 1A: Spreading for uplink DPCCH/DPDCHs

With regard to E-DPDCH/E-DPCCH channels, [a]fter channelisation, the real-valued spread E-DPCCH and E-DPDCH$_k$ signals shall respectively be weighted by gain factor β_{ec} and $\beta_{ed,k}$."

	 **Figure 1C: Spreading for E-DPDCH/E-DPCCH**
Claim 16	
16. The apparatus as claimed in claim 15, wherein the controller scales the transmit power factor for the second channel from slot to slot when the total transmit power exceeds the maximum allowed power.	The controller of Apple's 3G Products scales the transmit power factor for the second channel from slot to slot when the total transmit power exceeds the maximum allowed power. *See* claim 2.
Claim 17	
17. The apparatus as claimed in claim 15, wherein the controller determines the total transmit power based on the transmit power factors for the first and second channels and a TPC command issued by the system.	The controller of Apple's 3G Products determines the total transmit power based on the transmit power factors for the first and second channels and a TPC command issued by the system. *See* claim 3.
Claim 18	
18. The apparatus as claimed in claim 15, wherein the controller equally scales transmit power factors corresponding to the other channels comprising the first channel	The controller of Apple's 3G Products equally scales transmit power factors corresponding to the other channels comprising the first channel when the transmit power factor for the second channel is scaled-down below a predetermined minimum value. *See* claim 4.

when the transmit power factor for the second channel is scaled-down below a predetermined minimum value.	
Claim 19	
19. The apparatus as claimed in claim 18, wherein the predetermined minimum value indicates a status where the second channel is not transmitted.	The predetermined minimum value of Apple's 3G Products indicates a status where the second channel is not transmitted. *See* claim 5.
Claim 20	
20. The apparatus as claimed in claim 15, wherein the controller equally scales transmit power factors for the other channels exclusive of the second channel if the total transmit power still exceeds the maximum allowed power even after the transmit power factor for the second channel has been scaled.	The controller of Apple's 3G Products equally scales transmit power factors for the other channels exclusive of the second channel if the total transmit power still exceeds the maximum allowed power even after the transmit power factor for the second channel has been scaled. *See* claim 6.
Claim 23	
23. The apparatus as claimed in claim 15, wherein the controller scales the transmit power factor for the second channel when data of the second channel to be transmitted is retransmission data.	The controller of Apple's 3G Products scales the transmit power factor for the second channel when data of the second channel to be transmitted is retransmission data. *See* claim 9.
Claim 24	
24. The apparatus as claimed in claim 15, wherein when data of the second channel to be transmitted is initial transmission data, the controller equally scales transmit power factors for all the channels comprising the second channel such that the total transmit power does not exceed the maximum allowed power.	The controller of Apple's 3G Products equally scales transmit power factors for all the channels comprising the second channel such that the total transmit power does not exceed the maximum allowed power when data of the second channel to be transmitted is initial transmission data. *See* claim 10.

Claim 28	
28. The apparatus as claimed in claim 15, wherein the transmit power factors are determined based on Transport Formats (TF) which are selected according to scheduling assignment information received from a Node B, respectively.	Apple's 3G Products use transmit power factors that are determined based on Transport Formats (TF) which are selected according to scheduling assignment information received from a Node B, respectively. *See* claim 14.