Mueller Exhibit 63

EXHIBIT K

SAMSUNG'S PATENT L.R. 3-1(A)-(D) DISCLOSURES FOR U.S. PATENT NO. 7,675,941

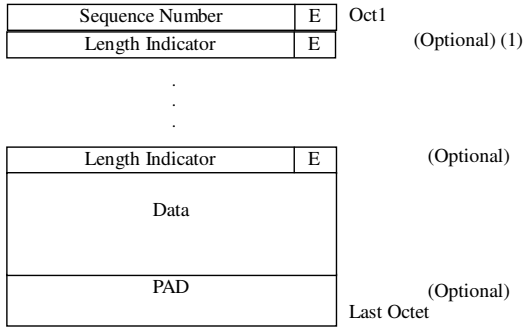
ASSERTED CLAIM (PATENT L.R. 3-1(A))	ACCUSED INSTRUMENTALITY AND HOW EACH ELEMENT IS MET BY ACCUSED INSTRUMENTALITY (PATENT L.R. 3-1(B)-(D))
1. A method of transmitting data in a mobile communication system, comprising:	Apple's 3G Products[1] transmit data in a mobile communication system. Apple infringes 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, Apple's 3G Products support transmitting and receiving data using UMTS radio technology[2] described in 3GPP[3] using a radio transceiver including a baseband processor. *See* 3GPP § 4.2.1; Figures 4.1, 4.3, and 4.3A.
receiving a service data unit (SDU) from a higher layer and determining whether the SDU can be comprised in one protocol data unit (PDU);	Apple's 3G Products receive a service data unit (SDU) from a higher layer and determine whether the SDU can be comprised in one protocol data unit (PDU). For example, peer-to-peer communication can proceed in at least three modes: (1) Transparent Mode Data PDU (TMD PDU); (2) Unacknowledged Mode Data PDU (UMD PDS); and (3) Acknowledged Mode Data PDU (AMD PDU).[4] *See* 3GPP § 9.1.1. All three of these modes are used to convey RLC SDU data. *Id.* As described in 3GPP, "Length Indicators are used to define boundaries between RLC SDUs within UMD PDUs unless the 'Extension bit' already indicates that a UMD PDU contains exactly one complete SDU." *Id.* § 4.2.1.2.1.
if the SDU is not comprised in one PDU,	Apple's 3G Products segment, if the SDU is not comprised in one PDU, the SDU into a

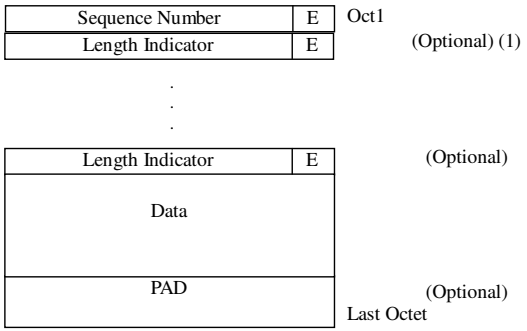
[1] "Apple's 3G Products" include iPhone 3G, iPhone 3GS, iPhone4, iPad 3G, iPad2 3G and any other products compliant with 3GPP UMTS standard.

[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 3G Products, indicating that each supports and uses UMTS.

[3] As defined herein, "3GPP" means 3GPP TS 25.322 v6.4.0 (2005-06) (Release 6); corresponding disclosure may be found in earlier versions.

[4] Although only "Unacknowledged Mode" is detailed in this preliminary infringement contention, the analysis described herein may apply equally, *mutatis mutandis*, to the other modes of communication listed in this paragraph.

segmenting the SDU into a plurality of segments according to a transmittable PDU size, and constructing one or more PDUs, each PDU comprising a header and a data field,	plurality of segments according to a transmittable PDU size, and construct one or more PDUs, each PDU comprising a header and a data field, wherein the data field comprises a segment of the SDU. For example, "the transmitting UM RLC entity segments the RLC SDU into UMD PDUs of appropriate size, if the RLC SDU is larger than the length of available space in the UMD PDU. The UMD PDU may contain segmented and/or concatenated RLC SDUs." *Id.* The actual format of the constructed UMD PDU is described in § 9.2.1.3 and shown below. Each PDU includes a header and data field. *Id.* § 9.2.1.3. 9.2.1.3 UMD PDU The UMD PDU is used to transfer user data when RLC is operating in unacknowledged mode. The length of the data part shall be a multiple of 8 bits. The UMD PDU header consists of the first octet, which contains the "Sequence Number". The RLC header consists of the first octet and all the octets that contain "Length Indicators".  **Figure 9.2: UMD PDU**

wherein the data field comprises a segment of the SDU,	In Apple's 3G Products the data field comprises a segment of the SDU. For example, Figure 9.2 above shows the "data" field payload in a UMD PDU. As described above, "[t]he UMD PDU may contain segmented and/or concatenated RLC SDUs," *Id.* § 4.2.1.2.1.
wherein the header comprises a serial number (SN) field, a one-bit field indicating that the PDU does not contain an entire SDU in the data field and at least one Length Indicator (LI) field,	The PDUs constructed by Apple's 3G Products include a header that comprises a serial number (SN) field, a one-bit field indicating that the PDU does not contain an entire SDU in the data field and at least one Length Indicator (LI) field. For example, [t]he RLC header consists of the first octet and all the octets that contain "Length Indicators". *Id.* The one-bit "Extension bit" (labeled "E" in Figure 9.2) is included in the first octet. *Id.* § 9.2.2.5.  **Figure 9.2: UMD PDU** If the "Extension bit" in the first octet of the header is '0' then this indicates that the nest field is a complete SDU, as shown in the table below. *Id.* at § 9.2.2.5. If the bit is '1' then this indicates that that the next field is a Length Indicator and Extension bit, as shown in Figure 9.2 above. *Id.* **Bit** | **Description**

<table>
<tr><td></td><td></td><td><table>
<tr><td>0</td><td>The next field is a complete SDU, which is not segmented, concatenated or padded.</td></tr>
<tr><td>1</td><td>The next field is Length Indicator and E bit</td></tr>
</table></td></tr>
<tr><td>wherein if the data field of the PDU contains an intermediate segment of the SDU, the LI field in the PDU contains the intermediate segment of the SDU is set to a predefined value indicating that the PDU contains neither a first segment nor a last segment of the SDU; and</td><td colspan="2">Apple's 3G Products include an LI field in the PDU that is set to a predefined value indicating that the PDU contains neither a first segment nor a last segment of the SDU.

For example:

In the case where the "alternative E-bit interpretation" is configured for UM RLC and an RLC PDU contains a segment of an SDU but neither the first octet nor the last octet of this SDU:

- if a 7-bit "Length Indicator" is used:
- the "Length Indicator" with value "111 1110" shall be used.
- if a 15-bit "Length Indicator" is used:
- the "Length Indicator" with value "111 1111 1111 1110" shall be used.

Id. § 9.2.2.8.</td></tr>
<tr><td>sending the PDUs to a receiver.</td><td colspan="2">Apple's 3G Products send the PDUs to a receiver.

For example, “[t]he transmitting UM-RLC entity receives RLC SDUs from upper layers through the UM-SAP” and “submits UMD PDUs to the lower layer through either a CCCH, SHCCH, DCCH, CTCH, DTCH, MCCH, MSCH or an MTCH logical channel.” Id. at § 4.2.1.2.1. The PDUs are then sent to a receiver using at least the CTCH (Common Traffic Channel) and DTCH (Dedicated Traffic Channel). See also Figures 4-1 and § 4.2.1 (noting that “submitting to the lower layer” is the same as “transmitting”).</td></tr>
</table>

<table>
<tr><th>Claim 2</th><th></th></tr>
<tr><td>2. The method of claim 1, further comprising the step of, if the SDU is comprised in one PDU, constructing one PDU comprising a header and a data field,</td><td>Apple's 3G Products construct one PDU comprising a header and a data field, if the SDU is comprised in one PDU.

For example, “the transmitting UM RLC entity segments the RLC SDU into UMD PDUs of appropriate size, if the RLC SDU is larger than the length of available space in the UMD PDU. The UMD PDU may contain segmented and/or concatenated RLC SDUs.” Id. § 4.2.1.2.1. As shown above in Figure 9-2, the PDU includes a header and a data field.</td></tr>
<tr><td>wherein the header comprises a SN field, and a one-bit field indicating that the PDU contains the entire SDU in the data field.</td><td>The PDUs constructed by Apple's 3G Products include a header field with a SN field, and a one-bit field indicating that the PDU contains the entire SDU in the data field.

The SN field is shown above in Figure 9-2. See id. § 9.2.1.3. If the “Extension bit” in the first octet of the header is ‘0’ then this indicates that the next field is a complete SDU, as shown in the table below. Id. at § 9.2.2.5.

<table><tr><th>Bit</th><th>Description</th></tr><tr><td>0</td><td>The next field is a complete SDU, which is not segmented, concatenated or padded.</td></tr><tr><td>1</td><td>The next field is Length Indicator and E bit</td></tr></table></td></tr>
<tr><th>Claim 4</th><th></th></tr>
<tr><td>4. The method of claim 1, wherein LI fields of PDUs comprising the first and last segments of the SDU in data fields are set to values indicating inclusion of the first segment of the SDU and inclusion of the last segment of the</td><td>Apple's 3G Products include LI fields of PDUs comprising the first and last segments of the SDU in data fields that are set to values indicating inclusion of the first segment of the SDU and inclusion of the last segment of the SDU.

For example, § 9.2.2.8 of 3GPP describes the operation of the LI fields in Apple's 3G</td></tr>
</table>

SDU.	Products. The Length Indicator indicates the last octet of each SDU ending within the PDU and signals inclusion of the first and last segments. 9.2.2.8 Length Indicator (LI) Unless the "Extension bit" indicates that a UMD PDU contains a complete SDU which is not segmented, concatenated or padded, a "Length Indicator" is used to indicate the last octet of each RLC SDU ending within the PDU. If the "Extension bit" indicates that the UMD PDU contains a complete SDU which is not segmented, concatenated or padded, no LIs are present in this UMD PDU. Except for the predefined values reserved for special purposes and listed in the tables below, the "Length Indicator" shall: - be set to the number of octets between the end of the RLC header and up to and including the last octet of an RLC SDU segment; - be included in the PDUs that they refer to.
Claim 6	
6. A method of receiving data in a mobile communication system, comprising:	Apple's 3G Products receive data in a mobile communication system. *See* claim 1 above.
receiving a protocol data unit (PDU) from a transmitter and detecting a sequence number (SN) field and a one-bit field indicating whether the PDU contains an entire service data unit (SDU) in its data field from the header;	Apple's 3G Products receive a protocol data unit (PDU) from a transmitter and detect a sequence number (SN) field and a one-bit field indicating whether the PDU contains an entire service data unit (SDU) in its data field from the header. For example, "[t]he receiving UM-RLC entity receives UMD PDUs through the configured logical channels from the lower layer…. The receiving UM RLC entity deciphers (if ciphering is configured and started) the received UMD PDUs (except for the UMD PDU header). It removes RLC headers from received UMD PDUs, and reassembles RLC SDUs (if segmentation and/or concatenation has been performed by the transmitting

	UM RLC entity)." 3GPP § 4.2.1.2.2. *See* claim 1 for a description of SN field and E-bit which indicates whether the PDU contains an entire service data unit (SDU) in its data field.
if the one-bit field indicates that the PDU does not contain an entire SDU in its data field, detecting the following length indicator (LI) field from the header of the PDU, and	Apple's 3G Products detect the following length indicator (LI) field from the header of the PDU, if the one-bit field indicates that the PDU does not contain an entire SDU in its data field. *See* claim 1 above.
determining whether the LI field is set to a value indicating that the PDU contains an intermediate segment that is neither a first segment nor a last segment of the SDU;	Apple's 3G Products determine whether the LI field is set to a value indicating that the PDU contains an intermediate segment that is neither a first segment nor a last segment of the SDU. *See* claim 1 above.
storing the PDU until the PDU can be assembled with a previous segment and a following segment, if the LI field is set to the predefined value; and	Apple's 3G Products store the PDU until the PDU can be assembled with a previous segment and a following segment, if the LI field is set to the predefined value. For example, "[t]he receiving UM RLC entity deciphers (if ciphering is configured and started) the received UMD PDUs (except for the UMD PDU header). It removes RLC headers from received UMD PDUs, and reassembles RLC SDUs (if segmentation and/or concatenation has been performed by the transmitting UM RLC entity)." 3GPP § 4.2.1.2.2.
constructing the SDU by combining the intermediate segment from the data field of the PDU with at least one previous segment extracted from a data field of at least one previous PDU and at least one following segment extracted from a data field of at least one following PDU.	Apple's 3G Products construct the SDU by combining the intermediate segment from the data field of the PDU with at least one previous segment extracted from a data field of at least one previous PDU and at least one following segment extracted from a data field of at least one following PDU. *See* 3GPP § 4.2.1.2.2. In addition, a sophisticated duplicate avoidance and reordering function is used that "combines PDU sequences received from several sources and/or repeat transmissions from a single source to form a single ordered PDU sequence that is passed to the header removal and reassembly functions." *Id.* at § 9.7.10. This function handles duplicate detection, discard and re-ordering based on the UM PDU sequence number. *Id.*
Claim 7	
7. The method of claim 6, further comprising, if	Apple's 3G Products acquire the entire SDU from the data field of the PDU, if the one-bit

the one-bit field indicates that the PDU contains the entire SDU in its data field, acquiring the entire SDU from the data field of the PDU.	field indicates that the PDU contains the entire SDU in its data field. *See* claim 1 above.
Claim 8	
8. The method of claim 6, wherein the storing comprises the steps of storing the PDU in a reception buffer according to the SN field of the PDU.	Apple's 3G Products store the PDU in a reception buffer according to the SN field of the PDU. For example, the duplicate avoidance and reordering function handles reordering based on UM PDU sequence number. *Id.* at § 9.7.10. A reception buffer is used for the temporary storage of PDUs during the reordering process. *Id.*
Claim 9	
9. The method of claim 8, wherein the constructing comprises constructing the SDU by combining segments extracted from data fields of a set of PDUs stored in the reception buffer, if the first of the PDUs comprises an LI field indicating inclusion of the first segment of the SDU, if at least one intermediate PDU among the PDUs comprises an LI field set to the value, and if the first LI field of the last of the PDUs indicates the position of the last byte of the SDU.	Apple's 3G Products Products construct the SDU by combining segments extracted from data fields of a set of PDUs stored in the reception buffer, if the first of the PDUs comprises an LI field indicating inclusion of the first segment of the SDU, if at least one intermediate PDU among the PDUs comprises an LI field set to the value, and if the first LI field of the last of the PDUs indicates the position of the last byte of the SDU. For example, "Length Indicators are used to define boundaries between RLC SDUs within UMD PDUs unless the "Extension bit" already indicates that a UMD PDU contains exactly one complete SDU. Length Indicators are also used to define whether Padding is included in the UMD PDU." *Id.* at § 4.2.1.2.1. *See also* § 9.2.2.8 "Length Indicator (LI)."
Claim 10	
10. An apparatus for transmitting data in a mobile communication system, comprising:	Apple's 3G Products each include an apparatus for transmitting data in a mobile communication system. *See* claim 1 above.
a transmission buffer for receiving a service data unit (SDU) from a higher layer,	Apple's 3G Products include a transmission buffer for receiving a service data unit (SDU) from a higher layer. For example, "[t]he transmitting UM-RLC entity receives RLC SDUs from upper layers through the UM-SAP." *Id.* at § 4.2.1.2.1 and Figures 4.3 and 4.3A.

determining whether the SDU can be comprised in one protocol data unit (PDU)	Apple's 3G Products determine whether the SDU can be comprised in one protocol data unit (PDU). *See* claim 1 above.
segmenting the SDU into a plurality of segments according to a transmittable PDU size if the SDU does not be comprised in one PDU, and	Apple's 3G Products segment the SDU into a plurality of segments according to a transmittable PDU size if the SDU does not be comprised in one PDU. *See* claim 1 above.
constructing one or more PDUs;	Apple's 3G Products construct one or more PDUs. *See* claim 1 above.
a header inserter for constructing a header of each PDU, wherein the header comprises a serial number (SN) field, a one-bit field, at least one Length Indicator (LI) field;	Apple's 3G Products include a header inserter for constructing a header of each PDU, wherein the header comprises a serial number (SN) field, a one-bit field, at least one Length Indicator (LI) field. *See* claim 1 above.
a one-bit field setter for setting the one-bit field of the at least one PDU to indicate whether the PDU contains an entire SDU in the data field;	Apple's 3G Products include a one-bit field setter for setting the one-bit field of the at least one PDU to indicate whether the PDU contains an entire SDU in the data field. *See* claim 1 above.
an LI inserter for inserting an LI field after the one-bit field in the at least one PDU if the SDU is not comprised in one PDU, and	Apple's 3G Products include an LI inserter for inserting an LI field after the one-bit field in the at least one PDU if the SDU is not comprised in one PDU. *See* claim 1 above.
setting an LI field to a predefined value indicating that the PDU contains neither a first segment nor a last segment of the SDU to contain the intermediate segment of the SDU; and	The LI inserter of Apple's 3G Products sets an LI field to a predefined value indicating that the PDU contains neither a first segment nor a last segment of the SDU to contain the intermediate segment of the SDU. *See* claim 1 above.
a transmitter for sending the PDUs to a receiver.	Apple's 3G Products include a transmitter for sending the PDUs to a receiver. *See* claim 1 above.
Claim 11	
11. The apparatus of claim 10, wherein if the SDU is comprised in one PDU, constructing one PDU comprising a header and a data field,	Apple's 3G Products construct one PDU comprising a header and a data field, wherein if the SDU is comprised in one PDU. *See* claim 2 above.
wherein the header comprises a SN field, and a one-bit field indicating that the PDU contains the entire SDU in the data field.	The PDUs constructed by Apple's 3G Products include a header field with a SN field, and a one-bit field indicating that the PDU contains the entire SDU in the data field. *See* claim 2 above.
Claim 13	

13. The apparatus of claim 10, wherein the LI inserter sets LI fields of PDUs comprising the first and last segments of the SDU in data fields to values indicating inclusion of the first segment of the SDU and inclusion of the last segment of the SDU.	Apple's 3G Products include an LI inserter that sets LI fields of PDUs comprising the first and last segments of the SDU in data fields to values indicating inclusion of the first segment of the SDU and inclusion of the last segment of the SDU. *See* claim 4 above.
Claim 15	
15. An apparatus for receiving data in a mobile communication system, comprising:	Apple's 3G Products each include an apparatus for receiving data in a mobile communication system. *See* claim 1.
a reception buffer for receiving a protocol data unit (PDU) from a transmitter and storing the PDU;	Apple's 3G Products include a reception buffer for receiving a protocol data unit (PDU) from a transmitter and storing the PDU. For example, "[t]he receiving UM-RLC entity receives UMD PDUs through the configured logical channels from the lower layer." *Id.* at § 4.2.1.2.2 and Figures 4.3 and 4.3A.
a reassembly controller for detecting a sequence number (SN) field and a one-bit field indicating whether the PDU contains an entire service data unit (SDU) in its data field from the header,	Apple's 3G Products include a reassembly controller for detecting a sequence number (SN) field and a one-bit field indicating whether the PDU contains an entire service data unit (SDU) in its data field from the header. *See* claim 1.
detecting the following length indicator (LI) field from the header of the PDU and determining whether the LI field is set to a predefined value indicating that the PDU contains an intermediate segment that is neither a first segment nor a last segment of the SDU if the one-bit field indicates that the PDU does not contain an entire SDU in its data field;	The reassembly controller of Apple's 3G Products detects the following length indicator (LI) field from the header of the PDU and determines whether the LI field is set to a predefined value indicating that the PDU contains an intermediate segment that is neither a first segment nor a last segment of the SDU if the one-bit field indicates that the PDU does not contain an entire SDU in its data field. *See* claim 1.
a header and LI remover for eliminating the SN field, the one-bit field, and the LI field if the one-bit field indicates that the PDU does not contain the entire SDU in its data field; and	Apple's 3G Products include a header and LI remover for eliminating the SN field, the one-bit field, and the LI field if the one-bit field indicates that the PDU does not contain the entire SDU in its data field. *See* claim 1.

a reassembler for receiving the intermediate segment from the header and LI remover and constructing the SDU by combining the intermediate segment with at least one previous segment extracted from a data field of at least one previous PDU and at least one following segment extracted from a data field of at least one following PDU.	Apple's 3G Products include a reassembler for receiving the intermediate segment from the header and LI remover and constructing the SDU by combining the intermediate segment with at least one previous segment extracted from a data field of at least one previous PDU and at least one following segment extracted from a data field of at least one following PDU. *See* claim 1.
Claim 16	
16. The apparatus of claim 15, wherein the header and LI remover eliminate the SN field and the one-bit field from the PDU and acquire the entire SDU from the data field of the PDU if the one-bit field indicates that the PDU contains the entire SDU in its data field.	The header and LI remover of Apple's 3G Products eliminates the SN field and the one-bit field from the PDU and acquires the entire SDU from the data field of the PDU if the one-bit field indicates that the PDU contains the entire SDU in its data field. *See* claim 1.
Claim 17	
17. The apparatus of claim 15, wherein the reception buffer stores the PDU according to the SN field of the PDU.	Apple's 3G Products store the PDU according to the SN field of the PDU in the reception buffer. *See* claim 8.
Claim 18	
18. The apparatus of claim 17, wherein the reassembler constructs the SDU by combining segments extracted from data fields of a set of PDUs stored in the reception buffer, if the first of the PDUs comprises an LI field indicating inclusion of the first segment of the SDU, if at least one intermediate PDU among the PDUs comprises an LI field set to the value, and if the first LI field of the last of the PDUs indicates the position of the last byte of the SDU.	The reassembler of Apple's 3G Products constructs the SDU by combining segments extracted from data fields of a set of PDUs stored in the reception buffer, if the first of the PDUs comprises an LI field indicating inclusion of the first segment of the SDU, if at least one intermediate PDU among the PDUs comprises an LI field set to the value, and if the first LI field of the last of the PDUs indicates the position of the last byte of the SDU. *See* claim 9.