Judgment rendered on February 28, 2013; Original copy of judgment received on the same date; Court clerk
2011 (Wa) 38969, Case seeking declaratory judgment of absence of obligations
Date of conclusion of oral argument: December 18, 2012

Judgment

Plaintiff: Shinjuku-ku, Tokyo (address omitted)
Apple Japan Godo Kaisha
(Successor in litigant's status from Apple Japan Kabushiki Kaisha)
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Defendant: Republic of Korea, Gyeonggi-do, Suwon-si
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Main text

1. The court confirms that the defendant does not have a right to seek damages from the plaintiff based on the patent right for Patent No. 4642898, with regard to the plaintiff's production, assignment, lease, import or offering for assignment or lease (including displaying for the purpose of assignment or lease) of each product specified in the List of Products attached hereto.
2. The defendant shall bear the court costs.
3. The additional period for the appeal against this judgment to the court of second instance shall be thirty (30) days.

Facts and reasons

No. 1 Claim

Same as paragraph 1 of the main text of this judgment

No. 2 Background

1. Summary of case

This is a court case wherein the plaintiff alleges that its production, assignment, import or other acts in relation to the products specified in the List of Products attached hereto (hereinafter collectively referred to as the "Products"; the product stated in No. 1 of said list shall be referred to as "Product 1" and the product stated in No. 2 of said list as "Product 2," etc.) does not constitute an act of infringement of the defendant's patent right under Patent No. 4642898 for the invention titled "method and apparatus for transmitting/receiving packet data using a pre-defined length indicator in a mobile communication system" (this patent is hereinafter referred to as the "Patent"; the patent right as the "Patent Right"), and seeks a declaratory judgment to confirm that the defendant is not entitled to seek damages due to the plaintiff's tort of infringing the Patent Right in relation to the plaintiff's acts as mentioned above.

2. Undisputed facts, etc. (the facts without any indication of the evidence are the undisputed facts or the facts found from the entire import of oral arguments)

(1) Parties

A. The plaintiff is a limited liability company ("*godo kaisha*" under the laws of Japan) whose business objectives are sale, etc. of personal computers, hardware and software for computer-related devices, and ancillary devices for computers. The plaintiff implemented an absorption-type merger of Apple Japan K.K., a subsidiary company of Apple Incorporated, a U.S. corporation, (hereinafter referred to as "Apple Inc.") on October 30, 2011, and succeeded to the status of Apple Japan K.K. in this action (hereinafter the term "plaintiff" includes Apple Japan K.K. before the abovementioned absorption-type merger).

B. The defendant is a South Korean corporation whose business objectives are manufacturing, sale, etc. of electric machine devices, communication and related machine devices, and their component parts.

(2) Defendant's patent right

A. The defendant (the name as it appears on the patent registry is "Samsung Electronics Company Limited") filed an international application for the Patent (the PCT international application number is PCT/KR2006/001699, its priority date is May 4, 2005, its priority country is South Korea, and the Japanese application number is Patent Application No. 2008-507565; hereinafter referred to as the "Patent Application") on May 4, 2006, and obtained the registration of establishment of the Patent Right on December 10, 2010 (Exhibits Ko No. 1-1 and No. 1-2).

B. The claims of the Patent comprise Claims 1 to 14. Claims 1 and 8 read as follows (the invention of Claim 8 is hereinafter referred to as "Invention 1" and the invention of Claim 1 as "Invention 2," and these Inventions 1 and 2 shall be hereinafter collectively referred to as the "Inventions").

"[Claim 1] A method of transmitting data in a mobile communication system, comprising: a stage of receiving a service data unit (SDU) from a higher layer and determining whether the SDU is included in one protocol data unit (PDU); if the SDU is included in one PDU, a stage of configuring the PDU including a header and a data field, wherein the header includes a sequence number (SN) field, and a one-bit field indicating that the PDU includes the whole SDU in the data field without segmentation/concatenation/padding; if the SDU is not included in one PDU, a stage of segmenting the SDU into a plurality of segments according to the transmittable PDU size, and the data field of each PDU configuring a plurality of PDUs comprising one of said plurality of segments, wherein headers of the PDUs include an SN field, a one-bit field indicating the presence of at least one length indicator (LI) field and said at

least one LI field; if the data field of the PDU includes an intermediate segment of the SDU, a stage, wherein the LI field is set to the pre-defined value indicating the presence in the PDU of an intermediate segment which is neither the first nor last segment of the SDU, and the PDU is sent to a receiver.

"[Claim 8] An apparatus for transmitting data in a mobile communication system, comprising: a transmission buffer for receiving a service data unit (SDU) from a higher layer, determining whether the SDU is included in one protocol data unit (PDU), and reconfiguring the SDU to at least one segment according to the transmittable PDU size; a header inserter for configuring at least one PDU including a serial number (SN) field and a one-bit field in a header, and said at least one segment in a data field; a one-bit field setter for setting the one-bit field to indicate that the PDU includes the whole SDU without segmentation/concatenation/padding in the data field, if the SDU is included in one PDU, and for setting the one-bit field to indicate the presence of at least one length indicator (LI) field, if the data field of the PDU includes an intermediate segment of the SDU; an LI inserter for inserting and setting an LI field after the one-bit field in said at least one PDU if the SDU is not included in one PDU, wherein if the data field of the PDU includes an intermediate segment of the SDU, the LI field is set to the pre-defined value indicating the presence in the PDU of an intermediate segment which is neither the first nor last segment of the SDU; and a transmitter for sending at least one PDU received from the LI inserter to a receiver."

C. The constituent features of each of the Inventions are as follows (each of the constituent features shall be hereinafter referred to as "Constituent Feature A," "Constituent Feature B," etc.)

(A) Invention 1 (Claim 8)

[A] An apparatus for transmitting data in a mobile communication system, comprising:

[B] a transmission buffer for receiving a service data unit (SDU) from a higher layer, determining whether the SDU is included in one protocol data unit (PDU), and reconfiguring the SDU to at least one segment according to the transmittable PDU size;

[C] a header inserter for constructing at least one PDU including a serial number (SN) field and a one-bit field in a header, and said at least one segment in a data field;

[D] a one-bit field setter for setting the one-bit field to indicate that the

PDU includes the whole SDU without segmentation/concatenation/padding in the data field, if the SDU is included in one PDU, and for setting the one-bit field to indicate the presence of at least one length indicator (LI) field, if the data field of the PDU includes an intermediate segment of the SDU;

[E] an LI inserter for inserting and setting an LI field after the one-bit field in said at least one PDU if the SDU is not included in one PDU,

[F] wherein if the data field of the PDU includes an intermediate segment of the SDU, the LI field is set to the pre-defined value indicating the presence in the PDU of an intermediate segment which is neither the first nor the last segment of the SDU;

[G] and a transmitter for sending at least one PDU received from the LI inserter to a receiver.

[H] an apparatus for transmitting data which comprises the features [B] to [G] above.

(B) Invention 2 (Claim 1)

[I] A method of transmitting data in a mobile communication system, comprising:

[J] a stage of receiving a service data unit (SDU) from a higher layer and determining whether the SDU is included in one protocol data unit (PDU);

[K] a stage of constructing the PDU including a header and data field, if the SDU is included in one PDU, wherein the header includes a sequence number (SN) field, and a one-bit field indicating that the PDU includes the whole SDU in the data field without segmentation/concatenation/padding;

[L] if the SDU is not included in one PDU, a stage of segmenting the SDU into a plurality of segments according to the transmittable PDU size, and the data field of each PDU constructing a plurality of PDUs comprising one of the plurality of segments, wherein headers of the PDUs include a SN field, at least a one-bit field indicating the presence of a length indicator (LI) field and said at least one LI field;

[M] if the data field of the PDU includes an intermediate segment of the SDU, a stage wherein the LI field is set to the pre-defined value

indicating the presence in the PDU of an intermediate segment which is neither the first nor the last segment of the SDU;

[N] and the PDU is sent to a receiver.

[O] a method of transmitting data which comprises the features [J] to [N] above.

(3) Plaintiff's acts, etc.

A. The plaintiff is engaged in import and sale of the Products manufactured by Apple Inc.

B. (A) The Products satisfy Constituent Features A and H of Invention 1.

(B) The method of data transmission incorporated into the Products satisfies Constituent Features I and O of Invention 2.

C The Products conform to the UMTS (Universal Mobile Telecommunications System) standard, which is the telecommunications standard developed by 3GPP (Third Generation Partnership Project). 3GPP is a private organization established for the purposes of the dissemination of the third-generation mobile telecommunication system or mobile telephone system (3G), as well as the international standardization of the related specifications (Exhibits Otsu No. 1 to No. 5; the telecommunications standard developed by 3GPP is hereinafter referred to as "3GPP Standards").

The UMTS standard is called "W-CDMA" (wideband code division multiple access) in Japan.

(4) FRAND Declaration for the Patent

A. ETSI (European Telecommunications Standards Institute), one of the standard organizations which established 3GPP, provides the "Intellectual Property Rights Policy" as the guidelines for the treatment of intellectual property rights (IPRs).

The IPR Policy of ETSI contains the following Clauses (Exhibit Ko No. 12, the original text is English):

"3. Policy Objectives

3.1 It is ETSI's objective to create STANDARDS and TECHNICAL SPECIFICATIONS that are based on solutions which best meet the technical objectives of the European telecommunications sector, as defined by the General Assembly. In order to further this objective the ETSI IPR POLICY seeks to reduce the risk to ETSI, MEMBERS, and others applying ETSI STANDARDS and TECHNICAL SPECIFICATIONS, that investment in the preparation, adoption and application of STANDARDS could be wasted as a

result of an ESSENTIAL IPR for a STANDARD or TECHNICAL SPECIFICATION being unavailable. In achieving this objective, the ETSI IPR POLICY seeks a balance between the needs of standardization for public use in the field of telecommunications and the rights of the owners of IPRs.

3.2 IPR holders whether members of ETSI and their AFFILIATES or third parties, should be adequately and fairly rewarded for the use of their IPRs in the implementation of STANDARDS and TECHNICAL SPECIFICATIONS.

4. Disclosure of IPRs

4.1 ….. each MEMBER shall use its reasonable endeavours, in particular during the development of a STANDARD or TECHNICAL SPECIFICATION where it participates, to inform ETSI of ESSENTIAL IPRs in a timely manner. In particular, a MEMBER submitting a technical proposal for a STANDARD or TECHNICAL SPECIFICATION shall, on a bona fide basis, draw the attention of ETSI to any of that MEMBER's IPR which might be ESSENTIAL if that proposal is adopted.

4.3 The obligations pursuant to Clause 4.1 above are deemed to be fulfilled in respect of all existing and future members of a PATENT FAMILY if ETSI has been informed of a member of this PATENT FAMILY in a timely manner.

6. Availability of Licenses

6.1 When an ESSENTIAL IPR relating to a particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an irrevocable undertaking in writing that it is prepared to grant irrevocable licences on fair, reasonable and non-discriminatory ("FRAND") conditions under such IPR to at least the following extent:

- MANUFACTURE, including the right to make or have made customized components and sub-systems to the licensee's own design for use in MANUFACTURE;
- sell, lease, or otherwise dispose of EQUIPMENT so MANUFACTURED;
- repair, use, or operate EQUIPMENT; and
- use METHODS.

The above undertaking may be made subject to the condition that those who seek licences agree to reciprocate.

6.2 An undertaking pursuant to Clause 6.1 with regard to a specified member of a PATENT FAMILY shall apply to all existing and future ESSENTIAL IPRs of that PATENT FAMILY unless there is an explicit written exclusion of

specified IPRs at the time the undertaking is made. The extent of any such exclusion shall be limited to those explicitly specified IPRs.

6.3 As long as the requested undertaking of the IPR owner is not granted, the COMMITTEE Chairmen should, if appropriate, in consultation with the ETSI Secretariat use their judgment as to whether or not the COMMITTEE should suspend work on the relevant parts of the STANDARD or TECHNICAL SPECIFICATION until the matter has been resolved and/or submit for approval any relevant STANDARD or TECHNICAL SPECIFICATION.

12. The POLICY shall be governed by the laws of France.

15. Definitions

6. "ESSENTIAL" as applied to IPR means that it is not possible on technical (but not commercial) grounds, taking into account normal technical practice and the state of the art generally available at the time of standardization, to make, sell, lease, otherwise dispose of, repair, use or operate EQUIPMENT or METHODS which comply with a STANDARD without infringing that IPR. For the avoidance of doubt in exceptional cases where a STANDARD can only be implemented by technical solutions, all of which are infringements of IPRs, all such IPRs shall be considered ESSENTIAL.

7. "IPR" shall mean any intellectual property right conferred by statute law including applications therefor other than trademarks. For the avoidance of doubt rights relating to get-up, confidential information, trade secrets or the like are excluded from the definition of IPR.

9. "MEMBER" shall mean a member or associate member of ETSI. References to a MEMBER shall wherever the context permits be interpreted as references to that MEMBER and its AFFILIATES.

13. "PATENT FAMILY" shall mean all the documents having at least one priority in common, including the priority document(s) themselves. For the avoidance of doubt, "documents" refers to patents, utility models, and applications therefor.

B. (A) On December 14, 1998, the defendant, as a member of ETSI, made an undertaking (declaration) to ETSI that it was prepared to license its essential IPR relating to W-CDMA technology supported by ETSI as the UMTS standard on "fair, reasonable and non-discriminatory terms and conditions" (hereinafter referred to as the "FRAND Terms") in accordance with ETSI IPR Policy Clause 6.1 (Exhibit Ko No. 5).

(B) On August 7, 2007, the defendant, in accordance with ETSI IPR Policy Clause 4.1, notified ETSI of the number of the South Korean patent application which served as the basis for the priority claim for the Patent Application and the international application number of the Patent Application (PCT/KR2006/001699), and declared that the IPRs relating to these applications are or highly likely will be an essential IPR for the UMTS standard (such as TS 25.322), with a declaration that it was prepared to grant an irrevocable license in accordance with the licensing terms and conditions complying with ETSI IPR Policy Clause 6.1 (i.e. the FRAND Terms; and this declaration shall be hereinafter referred to as the "FRAND Declaration")(Exhibit Ko No.13).

(5) Background history of this action

A. On April 21, 2011, the defendant, alleging that the plaintiff's acts of production, assignment, import, etc. of the Products constitutes direct or indirect infringement of the Patent Right in relation to the Inventions (Article 101, item (iv) and (v) of the Patent Act), filed a petition for a provisional disposition order to seek an injunction against the plaintiff's production, assignment, import, etc. of the Products. The right sought to be preserved by this provisional disposition was the right to seek an injunction under Article 102 of the Patent Act (Tokyo District Court, 2011 (Yo) 22027; hereinafter referred to as the "Petition for Provisional Disposition").

B. The plaintiff filed this action on September 16, 2011.
Thereafter, on September 24, 2012, the defendant partially withdrew the Petition for Provisional Disposition in relation to Products 1 and 3.

3. Issues

The issues disputed in this action are as follows: [i] whether the Products fall within the technical scope of Invention 1 (Issue 1); [ii] whether the Patent Right for Invention 2 has been indirectly infringed upon (Article 101, items (iv) and (v) of the Patent Act) (Issue 2); [iii] whether restrictions pursuant to Article 104-3, paragraph (1) of the Patent Act may be imposed on the exercise of the Patent Right for the Inventions (Issue 3); [iv] whether the Patent Right for the Products has been exhausted (Issue 4); [v] whether a license agreement in relation to the Patent Right has been formed between Apple Inc. and the defendant based on the defendant's FRAND Declaration (Issue 5); and [vi] whether the defendant's exercise of the right to seek damages based on the Patent Right constitutes an abuse of right (Issue 6).

Since the defendant's allegation concerning the amount of damages that should be

compensated by the plaintiff was reserved at the time of the conclusion of the oral argument, no specific allegations have been presented on this point.

No. 3 Parties' allegations on disputed issues

1. Issue 1 (whether the Products fall within the technical scope of Invention 1)

(1) Defendant's allegations

A. Structure of the Products

(A) The Products conform to the UMTS standard (W-CDMA method), which is one of the standards developed by 3GPP. It has the structures set forth in "3GPP TS 25.322 V6.9.0," the technical specification of 3GPP standards developed by 3GPP in September 2006 (Exhibit Ko No. 1-3 and Exhibit Otsu No. 6; hereinafter referred to as the "Technical Specification V6.9.0"). In addition, according to the subclauses "4.2.1.2 Unacknowledged mode (UM) RLC entities," "4.2.1.2.1 Transmitting UM RLC entity," "9.2.1.3 UMD PDU," "9.2.2.5 Extension bit (E)" and "9.2.2.8 Length Indicator (LI)" of Technical Specification V6.9.0 (these subclauses shall be hereinafter referred to as "Subclause 4.2.1.2," "Subclause 4.2.1.2.1," etc.), all of the Products have the following structures (each of the structures shall be hereinafter referred to as "Structure (a)," "Structure (b)," etc.)

a. The Products are devices for transmitting data in a mobile communication system.

b. The Products have transmission buffers for receiving a service data unit (SDU) from a higher layer, and segmenting the SDU to a size appropriate to the protocol data unit (PDU) if the SDU is larger than the available space of one PDU (See Subclauses 4.2.1.2 and 4.2.1.2.1 referred to in Sections 1 and 2 of Attachment 1).

c. The Products have header inserters, which add to the data a UMD header containing a sequence number (SN) and an E-bit field and an RLC header containing a length indicator (LI) (See Subclause 9.2.1.3 referred to in Section 3 of Attachment 1).

d. If the SDU contained in the PDU is a complete one without segmentation/concatenation/padding, the header inserter is set to '0,' which shows that the PDU contains a complete SDU. If the SDU contained in the PDU is not a complete one, the header inserter is set to '1,' which shows the presence of a length indicator in the E-bit (See Subclause 9.2.2.5 referred to in Section 4 of Attachment 1).

e. If the SDU is not included in one PDU, the header inserter inserts an LI

field after the E-bit field in at least one PDU (See Subclause 9.2.2.8 referred to in Section 5(1) of Attachment 1).

f. If the PDU data field contains a segment which is neither the first nor the last segment of the SDU, the header inserter sets the pre-defined value of an LI field ('111 1110' or '111 1111 1111 1110'), indicating that the PDU contains a segment which is neither the first nor the last segment of the SDU (See Subclause 9.2.2.8 referred to in Section 5(2) of Attachment 1).

g. The Products have transmitters for sending at least one PDU received from the header inserter to the receiving entity.

h. The Products are devices for the transmission of data.

(B) a. According to the report on the demonstration test by Chipworks Inc., a Canadian corporation (hereinafter referred to as the "Demonstration Test"; Exhibit Otsu No. 13), Products 2 and 4 implement the functions based on the "alternative E-bit interpretation" as specified in Technical Specification V6.9.0 (Subclauses 9.2.2.5 and 9.2.2.8). This finding is also evidenced by an expert opinion prepared by Professor A of the University of Electro-Communications (Exhibit Otsu No. 14).

(a) In the Demonstration Test, a radio tester named "CM W500 universal radio communication tester" (hereinafter referred to as "CMW500") manufactured by Rohde & Schwarz, a German corporation, was used as the "base station emulator." CMW500 is a device supporting the W-CDMA method and is capable of creating a communication environment which is exactly the same as the real network environment (Exhibit Otsu No. 14, Page 10 and Exhibit Otsu No. 41).

CMW500 has been certified by several international bodies, such as GCF (Global Certification Forum) and PTCRB (PCS Type Certification Review Board).

Test 1 (PDU Size: 488-bit, SDU size: 480-bit) was the test for the combination of the data size for the "case in which the PDU contains a complete SDU without segmentation/concatenation/padding." The reason for the value of the SDU size being larger than the PDU by eight bits was due to taking into account the addition of an 8-bit PDU header (7 serial number (SN) bit + 1 E-bit) when the SDU is converted to a PDU

(Exhibit Otsu No. 14, Page 10).

Test 2 (PDU Size: 80-bit, SDU size: 480-bit) was the test for the combination of data size in which a PDU which is neither the first nor last one (e.g. the second PDU) is an "intermediate segment." This test aims to monitor the PDU as the intermediate segment (Exhibit Otsu No. 14, Page 11).

(b) The findings of the Demonstration Tests were as follows:

(i) If the PDU completely contains an SDU (Test 1), the E-bit following the sequence number (SN) is '0,' and a PDU without a length indicator (LI) is output (Exhibit Otsu No. 13, Figures 12 and 14).

(ii) If the PDU contains an intermediate segment of an SDU (Test 2), the E-bit following the sequence number (SN) is '1,' and a PDU containing a pre-defined value '1111110' as an LI is output (Exhibit Otsu No. 13, Figures 13 and 15).

(c) Subclause 9.2.2.5 provides that, when interpreting the alternative E-bit, the E-bit is configured as '0' if the "next field is a complete SDU, which is not segmented, concatenated or padded," or '1' if the "next field is a Length Indicator and E-bit." Subclause 9.2.2.8 provides that in the case where the "alternative E-bit interpretation" is configured and a PDU contains an intermediate segment of an SDU, and if a 7-bit length indicator is used, the length indicator with value '111 1110' shall be used.

The values of the E-bit and length indicator (see (b) above) obtained as a result of the Demonstration Test agree with the function based on the alternative E-bit interpretation as referred to in Technical Specification V6.9.0. This indicates that Products 2 and 4 implement the aforementioned functions.

b. In this regard, the plaintiff alleges that the Demonstration Test uses the "normal E-bit interpretation" as specified in Subclause 9.2.2.5 of Technical Specification V6.9.0 (See Section 4 of Attachment 1), instead of the alternative E-bit interpretation, because the "Interpretation" section of the Demonstration Test findings reads "next octet: data" and does not mention "a complete SDU without segmentation/concatenation/padding."

However, for the configuration of the alternative E-bit interpretation as well, if the E-bit is set to '0,' the following bit sequence is "data" (which is

the "data" of a "complete SDU"). Accordingly, there is no discrepancy between the statement of "next octet: data" in the "Interpretation" section and the use of the alternative E-bit interpretation in the Demonstration Test.

In addition, when the defendant confirmed the results of the comparative test based on the normal E-bit interpretation (i.e. the case where the checkbox of "altE_bitinterpretation" of the options window of CMW500 (Exhibit Otsu No. 13, Figure 11) is not ticked), the configurations of PDU headers were different depending on whether the checkbox was ticked, and, the PDU header according to the normal E-bit interpretation was output if the checkbox was not ticked (Exhibit Otsu No. 55, Pages 35 to 38). These comparative test results obviously show that the alternative E-bit interpretation was used in the Demonstration Test, not the normal E-bit interpretation.

On the basis of the foregoing, the plaintiff's allegations as mentioned above are groundless.

B. Satisfaction of Constituent Features B and D

(A) As explained below, the alternative E-bit interpretation referred to in Subclause 9.2.2.5 of Technical Specification V6.9.0 discloses Constituent Features B and D of Invention 1.

Invention 1 has the following structures: "determining whether the SDU is included in one protocol data unit (PDU)" (Constituent Feature B); and "setting the one-bit field to indicate that the PDU fully contains the SDU without segmentation/concatenation/padding in the data field, if the SDU is included in one PDU" (Constituent Feature D).

According to the wording of Constituent Feature D, as well as Paragraph [0022] and Figure 5A of the description of the Patent (Exhibit Ko No. 1-2; the description and the drawings shall be hereinafter collectively referred to as the "Patent Description"), the case in which the "SDU is included in one PDU" means the case in which the "PDU completely contains the SDU without segmentation/concatenation/padding in the data field," namely, the case in which the "SDU size completely matches the size of the PDU payload." The case where the SDU is contained in the PDU after concatenation or padding is excluded.

Furthermore, Subclause 9.2.2.5 indicates that, in relation to the "alternative E-bit interpretation," if the "next field is a complete SDU,

which is not segmented, concatenated or padded," namely, if the SDU is completely contained in (completely matches) the PDU, the E-bit is set to '0,' or otherwise as '1' (See Section 4 of Attachment 1). This statement of Subclause 9.2.2.5 can be understood as requiring the determination as to whether the SDU is completely contained in (completely matches) the PDU and the configuration of E-bit as above in accordance with the result of such determination. Therefore, such statement discloses the structure of Constituent Feature B for "determining whether the SDU is included in one protocol data unit (PDU)," and the structure of Constituent Feature D for "setting the one-bit field to indicate that the PDU fully contains the SDU." Meanwhile, with regard to the relationship between Subclauses 4.2.1.2.1 (See Section 2 of Attachment 1) and 9.2.2.5, it can be reasonably understood that Subclause 4.2.1.2.1 merely provides a general statement for the determination of whether the SDU is larger than the PDU without regard to the type of E-bit, and that the specific method for comparison in the case of use of the alternative E-bit interpretation is specified in Subclause 9.2.2.5.

(B) On the premises of the foregoing, Structures (b) and (d) of the Products satisfy Constituent Features B and D, respectively.

C. Satisfaction of Constituent Features C, E, F and G

Structure (c) of the Products satisfies Constituent Feature C, Structure (e) satisfies Constituent Feature E, Structure (f) satisfies Constituent Feature F, and Structure (g) satisfies Constituent Feature G, respectively.

D. Summary

(A) As mentioned above, the Products satisfy Constituent Features B to G of Invention 1, and also Constituent Features A and H as already mentioned in (3)B.(A) of the section of "Undisputed facts, etc."

Therefore, the Products fall within the technical scope of Invention 1 as they satisfy all of the Constituent Features of Invention 1.

(B) Contrary to this, the plaintiff alleges that the Products do not fall within the technical scope of Invention 1. The plaintiff's reasoning for this allegation is that, for the Products to be considered to fall within the technical scope of Invention 1, it is necessary to prove that the Products implement all functions stated in the Constituent Features of Invention 1 on the real network; however, the alternative E-bit interpretation is only optional to the normal E-bit interpretation, and there is no evidence that

the telecommunication service providers' networks are configured to use the alternative E-bit interpretation.

However, as long as the Products satisfy all of the Constituent Features of Invention 1 and have a structure to implement the alternative E-bit interpretation, they can be considered as falling within the technical scope of Invention 1, and the question of whether the telecommunication service providers' actual networks are configured to use the alternative E-bit interpretation is irrelevant to the question of whether the Products fall within the technical scope of Invention 1.

Therefore, the abovementioned allegation of the plaintiff is groundless.

(2) Plaintiff's allegations

A. Structure of the Products

(A) The processing tasks relating to the UMTS standard are implemented by baseband chips (chipsets) installed in the Products. Such chipsets are the products of Intel Corporation, and Apple Inc. purchases them through [(company name omitted)] and installs them into the Products.

Products 1 and 3 install Intel's baseband chip [(name omitted)]. This baseband chip [(name omitted)] conforms to 3GPP standards called "Release 5" publicized before the priority date of the Patent Application, and this version does not reflect the alternative E-bit interpretation. Therefore, the plaintiff refutes the defendant's allegation that Products 1 and 3 satisfy Structures (b) to (g).

In addition, the plaintiff has no knowledge as to whether Products 2 and 4 satisfy Structures (b) to (g) as alleged by the defendant.

(B) a. The Demonstration Test report relied upon by the defendant (Exhibit Otsu No. 13) does not support that Products 2 and 4 implement the functions based on the alternative E-bit interpretation.

In this Demonstration Test, the test mobile device was connected to the emulator, which plays the role of base station, and the data transmitted from such mobile device to the emulator was only tested by the data analysis software. Thus, as such test was performed merely under the testing environment, instead of on the real networks, the result of the test cannot be the evidence of the Products' capability to implement the functions based on the alternative E-bit interpretation on the real network.

b. In addition, as the Demonstration Test report (Exhibit Otsu No. 13)

contains the following deficiencies or problems, such report cannot be the evidence that Products 2 and 4 implement the functions based on the alternative E-bit interpretation.

(a) In the test log (Test 1) referred to in Exhibit Otsu No. 13, Figures 12 and 14, the E-bit is set to '0' in the second line of "68" of the "Byte" section, and the statement "next octet: data" appears in the "Interpretation" section. Considering the statement which reads that "next field" is "data," it is logically understood that the Demonstration Test uses the normal E-bit interpretation (i.e. the case of bit '0' for the "normal E-bit interpretation" referred to in Subclause 9.2.2.5 of Technical Specification V6.9.0), instead of the alternative E-bit interpretation.

In addition, as the bit sequence indicated in the test log of Exhibit Otsu No. 13, Figures 12 and 14, is merely a portion of data output from the tested product, it is not clear whether the PDU contained a complete SDU without segmentation/concatenation/padding or other object. Accordingly, it is impossible to conclude that the tested product used the alternative E-bit interpretation, on the basis of the test log referred to in Figures 12 and 14.

Meanwhile, ticking of the checkbox of "altE_bitinterpretation" in Exhibit Otsu No. 13, Figures 11 is irrelevant to the question of whether the tested product actually used the alternative E-bit interpretation.

(b) There is no evidence supporting that the length indicator set to '1111110,' as in the test log (Test 2) referred to in Exhibit Otsu No. 13, Figures 13 and 15, is set only for the indicator containing an intermediate segment. Therefore, it is impossible to conclude that the abovementioned value indicate the presence of a PDU containing the intermediate segment.

Further, as is the case with Exhibit Otsu No. 13, Figures 12 and 14, Figures 13 and 15 only show the SDU indication output by the tested product, and the condition of other segments of the SDU is not clear.

Therefore, Figures 13 and 15 cannot be regarded as the evidence supporting that the tested product implements the alternative E-bit interpretation.

B. Non-satisfaction of Constituent Features B and D

As explained below, the structures of Constituent Features B and D of Invention 1 differ from those referred to in Technical Specification V6.9.0. So, even supposing that, as alleged by the defendant, the Products have structures complying with Technical Specification V6.9.0, it cannot be said that they satisfy Constituent Features B and D.

(A) Constituent Feature B

Considering the statement of Constituent Feature B which reads "determining whether the SDU is included in one protocol data unit (PDU)" and the statement of Constituent Feature D which reads "to indicate that the PDU fully contains the SDU without segmentation/concatenation/padding in the data field, if the SDU is included in one PDU" in their totality, the statement of Constituent Feature B which reads "the SDU is included in one protocol data unit (PDU)" should be interpreted to mean the case where "the SDU is completely contained in (completely matches) one PDU."

Thus, Invention 1 adopts in its Constituent Feature B the method to determine whether the SDU is completely contained in (completely matches) one PDU.

Meanwhile, considering Subclause 4.2.1.2.1 of Technical Specification V6.9.0 which reads "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 determination method referred to in Subclause 4.2.1.2.1 is the method aimed at determining the necessity of segmentation of the SDU, in other words, whether the size of the SDU is larger than the available space of the PDU (the relationship between the SDU and the PDU in terms of size) is determined. It is different from the method to determine whether the SDU is completely contained in (completely matches) one PDU.

In addition, the statement of Subclause 9.2.2.5 of Technical Specification V6.9.0 relied upon by the defendant merely provides instructions on the interpretation of the value '0' or '1' for the E-bit, and does not mention anything about the method of determination.

Therefore, even though the Products have Structure (b) complying with Technical Specification V6.9.0, it does not mean that the Products satisfy Constituent Feature B.

(B) Constituent Feature D

The case where "the SDU is included in one PDU" mentioned in Constituent Feature D refers to all of the following situations: [i] a case where the SDU is padded (i.e. the SDU is incorporated into the PDU with padding); [ii] a case where the SDU is concatenated (i.e. the SDU is incorporated into the PDU after concatenation with one or more other SDUs); and [iii] a case where the SDU is not segmented, concatenated or padded (i.e. the size of the SDU completely matches the size of PDU payload). So, in order to satisfy Constituent Feature D, it is necessary that "the one-bit field is set to indicate that the PDU fully contains the SDU without segmentation/concatenation/padding" even for the case referred to in [i] and [ii] above.

Meanwhile, in the alternative E-bit interpretation referred to in Technical Specification V6.9.0, the one-bit field is set to indicate that the PDU fully contains the SDU only for the abovementioned case [iii]. Accordingly, Constituent Feature D and Structure (d) complying with Technical Specification V6.9.0 differ in terms of the conditions for setting the one-bit field to indicate that the PDU fully contains the SDU without segmentation/concatenation/padding, and also in terms of the method of configuration of the one-bit field in the case where the PDU contains a concatenated or padded SDU.

Therefore, even though the Products have Structure (d) complying with Technical Specification V6.9.0, it does not mean that the Products satisfy Constituent Feature D.

C. Lack of proof of the Products' capability to perform all functions contained in the Constituent Features of Invention 1

In order for the Products to be regarded to fall within the technical scope of Invention 1, it is necessary to prove that the Products are capable of performing all functions contained in the Constituent Features of Invention 1. To this end, it is necessary to show that the communication service providers' networks are configured to allow the use of the alternative E-bit interpretation.

The alternative E-bit interpretation cannot be implemented by the Products alone, and all mobile devices implement the "normal E-bit interpretation" which is the default setting for the data transmission to a base station, unless the network requires the use of the alternative E-bit interpretation. If the "normal E-bit interpretation" is implemented, an E-bit or length indicator is not

configured according to Constituent Features D and F of Invention 1. So, in order for the Products to be considered as being capable of implementing all functions contained in the Constituent Features of Invention 1, it is necessary that the communication service providers' networks are configured to allow the use of the alternative E-bit interpretation.

Nevertheless, in this action, no evidence is found which indicates that the communication service providers' networks are configured to allow the use of the alternative E-bit interpretation, and thus it cannot be said that the Products are capable of implementing all functions contained in the Constituent Feature of Invention 1. Therefore, the Products do not fall within the technical scope of Invention 1.

D. Summary

As mentioned above, the Products do not satisfy the Constituent Features of Invention 1, and cannot be considered as being capable of implementing all functions contained in the Constituent Features of Invention 1. Therefore, the Products do not fall within the technical scope of Invention 1.

2. Issue 2 (whether the Patent Right for Invention 2 has been indirectly infringed upon)

(1) Defendant's allegations

A. Structure of data transmission method of the Products

According to the structure of the Products as explained in 1(1)A. above, the data transmission method of the Products (hereinafter referred to as the "Method") have the following structures (each of the structures shall be hereinafter referred to as "Structure (i)," "Structure (j)," etc.)

i. The Method is the method for transmitting data in a mobile communication system.

j. The Method receives a service data unit (SDU) from a higher layer and determines whether the SDU is included in one protocol data unit (PDU).

k. If the SDU is included in one PDU, a PDU containing a header and data is configured. Here, the header includes a sequence number (SN) field, and an E-bit field set to '0' indicating that the PDU includes a complete SDU without segmentation/concatenation/padding.

l. If the SDU is larger than the space available in one PDU, the SDU is segmented into SDUs of appropriate size. Here, the header contains a sequence number field, an E-bit field set to '1' indicating the presence of a length indicator if the PDU does not contain a complete SDU, and a length indicator.

m. If the PDU data field contains a segment which is neither the first nor the last segment of the SDU, the pre-defined value is set for the LI field, indicating that the PDU contains a segment which is neither the first nor the last segment of the SDU ('111 1110' or '111 1111 1111 1110').

n. The Method transmits a PDU to the receiving entity.

o. The Method is for data transmission.

B. The Method falls within the technical scope of Invention 2.

(A) Structures (j) to (n) of the Method satisfy Constituent Features J to N of Invention 2, respectively.

In this regard, the plaintiff alleges that the Method does not satisfy Constituent Features J and L of Invention 2, for the reason that the structures of Constituent Features J and L differ from those specified in Technical Specification V6.9.0. However, for the same reason as mentioned in 1(1)B. above in relation to Constituent Features B and D, Constituent Features J and L disclose the contents of the alternative E-bit interpretation as specified in Technical Specification V6.9.0. Therefore, the plaintiff's allegation as mentioned above is groundless.

(B) Based on the above, the Method satisfies Constituent Features J to N of Invention 2, and also Constituent Features I and O as already mentioned in (3)B.(B) of "Undisputed facts, etc." of this judgment.

Therefore, the Method falls within the technical scope of Invention 2 as it satisfies all of the Constituent Features of Invention 2.

C. Establishment of indirect infringement

(A) Indirect infringement under Article 101, item (iv) of the Patent Act

Even where a product for the use of the process pertaining to the patented invention can also be used by a mode not involving the working of the patented invention, the acts of manufacturing, sale, etc of such product can still be considered to involve high probability of resulting in infringement, except for the case where the product has an economical, commercial or practical mode of use in a way using only the functions not involving the working of the patented invention, and not using any functions involving the working of the patented invention at all. Therefore, it is reasonable to consider that such product still falls under the "product to be used exclusively for the use of the said process" (Article 101, item (iv) of the Patent Act) (See judgment dated June 23, 2011, of the Intellectual Property High Court).

In relation to the Products, an economical, commercial or practical mode of use without using functions involving the working of Invention 2 cannot be anticipated at all. Therefore, the Products are considered to fall under the "product to be used exclusively for the use of the said process" in relation to Invention 2.

Based on the foregoing, the plaintiff's acts of import and sale of the Products are considered to constitute indirect infringement of the Patent Right for Invention 2 (Article 101, item (iv) of the Patent Act).

(B) Indirect infringement under Article 101, item (v) of the Patent Act

The problem to be solved by Invention 2 is as follows: "the RLC framing based on VoIP in traditional technology leads to inefficient use of limited radio resources in VoIP due to the use of unnecessary LI fields" (Paragraph [0012] of the Patent Description). The purpose of Invention 2 is as follows: "The invention relates generally to a mobile communication system supporting packet service. More particularly, the invention relates to a method and apparatus which efficiently use radio resources by reducing the header size of a protocol data unit (RLC PDU) to be transmitted on a radio link." (Paragraph [0013] of the Patent Description). In addition, the effect of Invention 2 is "efficient use of limited radio resources" (Paragraph [0018] of the Patent Description). Thus, the Products are for the use of Invention 2, and are essential for the solution of the problem of Invention 2 as mentioned above.

In addition, by the defendant's Petition for Provisional Disposition, the plaintiff must have come to know of the fact that Invention 2 is a patented invention and the Products are used for the working of Invention 2.

Accordingly, the plaintiff's acts of import and sale of the Products constitute indirect infringement of the Patent Right for Invention 2 (Article 101, item (v) of the Patent Act).

D. Summary

As explained above, the plaintiff's acts of import and sale of the Products constitute indirect infringement of the Patent Right for Invention 2 (Article 101, items (iv) and (v) of the Patent Act).

(2) Plaintiff's allegations

A. The Method does not fall within the technical scope of Invention 2.

(A) For the same reason as mentioned in 1(2)A. above, none of the Products can be considered as the implementations of the functions based on the

alternative E-bit interpretation, and therefore the Method does not satisfy Structures (j) to (n) as alleged by the defendant.

In addition, for the same reason as mentioned in 1(2)B. above, the structure of Constituent Features J and L of Invention 2 differ from those referred to in Technical Specification V6.9.0. Therefore, the Method is not considered to satisfy Constituent Features J and L.

As the Method is not considered to satisfy Constituent Features J to N, the Method does not fall within the technical scope of Invention 2.

(B) In addition, as mentioned in 1(2)C. above, no evidence can be found which supports that the communication service providers' networks are configured to allow the use of the alternative E-bit interpretation, and the actual use of the alternative E-bit interpretation in the Products is not evidenced. Therefore, the Method does not fall within the technical scope of Invention 2.

B. Non-existence of indirect infringement

(A) In order to establish indirect infringement under Article 101, item (iv) or (v) of the Patent Act, it is necessary to establish, at least, the fact of direct working of the invention by a third party. On the contrary, the defendant has not made any allegation or produced evidence of direct working of Invention 2 by a third party.

(B) No evidence has been produced which supports the actual use of the alternative E-bit interpretation for the Products. Moreover, the Products can also be used by an economical, commercial or practical mode which only involves the use of functions without working Invention 2. Therefore, the Products do not fall under the "product to be used exclusively for the use of said process" in relation to Invention 2 (Article 101, item (iv) of the Patent Act).

(C) For actual telecommunication complying with 3GPP standards, the percentage by which the SDU size coincides with the PDU size is extremely low, and the situation where Invention 2 achieves its effects is significantly limited. Therefore, the Products are not "indispensable for the resolution of the problem" (Article 101, item (v) of the Patent Act).

C. Summary

As mentioned above, the defendant's allegation that the plaintiff's acts of import and sale of the Products constitute indirect infringement of the Patent Right for Invention 2 is groundless.

3. Issue 3 (whether restrictions pursuant to Article 104-3, paragraph (1) of the Patent Act may be imposed on the exercise of the patent right)

(1) Plaintiff's allegations

As the Patent for the Inventions contains the following grounds for invalidation and therefore should be invalidated by a trial for patent invalidation, the defendant is restricted from exercising the Patent Right against the plaintiff in accordance with Article 104-3, paragraph (1) of the Patent Act.

A. Ground for invalidation 1 (lack of novelty due to Exhibit Ko No. 3)

As explained below, the Inventions are substantially identical to the invention specified in Exhibit Ko No. 3 (Publication of Unexamined Patent Application No. 2004-179917), which is a publication distributed before the priority date of the Patent Application. Therefore, the Patent for the Inventions has a ground for invalidation as it violates Article 29, paragraph (1), item (iii) of the Patent Act (Article 123, paragraph (1), item (ii) of the Patent Act).

(A) Contents of Exhibit Ko No. 3

Considering Paragraphs [0001], [0003], [0004], [0008], [0009], [0013], [0025], [0026], [0028], [0029] and [0031], and Figures 2, 3, 8, and 9 of Exhibit Ko No. 3, this Exhibit discloses all of the Constituent Features of the Inventions.

(B) Response to defendant's allegations

The defendant alleges that Exhibit Ko No. 3 does not disclose Constituent Features D(K) and F(M). However, such allegation is groundless due to the following reasons:

a. Constituent Feature D(K)

(a) Paragraph [0008] of Exhibit Ko No. 3 states that, in relation to PDU50 of Figure 3: "if only one SDU fulfills data domain 58 of PDU50, the bit 55a is set to '0,' indicating that no LI is present." This "bit 55a" means the "extension bit" (Paragraph [0008]), which is binary data of one bit ('0' or '1') (Figure 3).

Thus, in order to make it possible to set the extension bit (E-bit) to '0,' Exhibit Ko No. 3 can be considered to disclose the presence of the setter referred to in Constituent Features D(K) for setting "the one-bit field to indicate that the PDU completely contains the SDU without segmentation/concatenation/padding in the data field, if the SDU is included in one PDU."

(b) As SDUs vary in size, it is unavoidable that one SDU can be

segmented into three or more segments. In such case, PDUs containing intermediate segments (i.e. a segment which is neither the first nor the last segment) are inevitably generated. Therefore, it is clearly understandable for a person ordinarily skilled in the art who reads Exhibit Ko No. 3 that said Exhibit discloses a PDU containing an intermediate segment. Moreover, as the PDU containing an intermediate segment does not fall under the case where "only one SDU fulfills data domain 58 of PDU50" and where the E-bit is set to '0' (Paragraph [0008]), the value of the E-bit containing an intermediate segment is necessarily set to '1.'"

In addition, the "padding PDU," which is one of the examples of "alternative PDUs" referred to in Exhibit Ko No. 3 (Paragraphs [0026] and [0031], Figures 8 and 9) corresponds to "PDUs containing intermediate segments," as it plays the role to combine PDUs before and after the padding PDU.

It follows from the above that Exhibit Ko No. 3 discloses the presence of a "setter for setting the one-bit field to indicate the presence of at least one length indicator (LI) field, if the data field of the PDU includes an intermediate segment of the SDU" as specified in Constituent Feature D(K).

b. Constituent Feature F(M)

Exhibit Ko No. 3 discloses that, in relation to a "padding PDU" which correspond to a PDU including an intermediate segment, the LI field "creates special codes, all of which are '1'… the remaining PDU…only fulfills the undefined parts, while keeping ignorable information" (Paragraph [0026]). In addition, this Exhibit discloses, as the value for the padding PDU containing a special LI, LI 156a set to the defined value '111111111111111" (15 digits) in Figure 8, and LI 156b set to the defined value '1111111" (7 digits) in Figure 9.

Therefore, Exhibit Ko No. 3 can be considered to disclose the structure wherein "if the data field of the PDU includes an intermediate segment of the SDU, the LI field is set to the pre-defined value indicating the presence in the PDU of an intermediate segment which is neither the first nor the last segment of the SDU" as referred to in Constituent Feature F(M).

(C) Summary

Based on the above, the Inventions are identical to the invention described in Exhibit Ko No. 3 and therefore lack novelty.

B. Ground for invalidation 2 (lack of inventive step (1) based on Exhibit Ko No. 3 as primarily cited reference)

As explained below, the Inventions could have been easily conceived of by a person ordinarily skilled in the art based on the combination of the invention disclosed in Exhibit Ko No. 3, which is a publication distributed before the priority date of the Patent Application, and common general technical knowledge. Therefore, the Patent for the Inventions has a ground for invalidation as it violates Article 29, paragraph (2) of the Patent Act (Article 123, paragraph (1), item (ii) of the Patent Act).

(A) Common features and difference between the Inventions and the invention disclosed in Exhibit Ko No. 3

The Inventions differ from the invention disclosed in Exhibit Ko No. 3 in that it is not clear whether the latter invention has a structure wherein "if the data field of the PDU includes an intermediate segment of the SDU, the LI field is set to the pre-defined value indicating the presence in the PDU of an intermediate segment which is neither the first nor the last segment of the SDU" as referred to in Constituent Feature F(M), but they are identical in respect of all other structures.

(B) Whether the difference could have been easily conceived of by a person ordinarily skilled in the art

The structure of the Inventions which constitutes the difference referred to in (A) above could have been easily conceived of by a person ordinarily skilled in the art based on the combination of Exhibit Ko No. 3 and common general technical knowledge, on the basis of reasons including the following: [i] Exhibit Ko No. 3 discloses a technical idea to "set the pre-defined value for the length indicator so as to distinguish two types of PDUs completely incorporating data of the same length comprising one type of data" (Paragraphs [0008] and [0026], Figures 8 and 9, etc.); and [ii] judging from the technical point of view as well, setting the length indicator to a pre-defined value so as to distinguish two types of PDUs is the most realistic and simple way which would be adopted by a person ordinarily skilled in the art as a matter of course (Exhibit Ko No. 39, Paragraph [0007], etc.).

(C) Summary

Based on the above, the Inventions could have been easily conceived of by a person ordinarily skilled in the art based on the combination of the invention disclosed in Exhibit Ko No. 3 and common general technical knowledge and therefore lack inventive step.

C. Ground for invalidation 3 (lack of inventive step (2) based on Exhibit Ko No. 3 as primarily cited reference)

As explained below, the Inventions could have been easily conceived of by a person ordinarily skilled in the art based on the inventions disclosed in Exhibits Ko No. 3 and No. 4 (the minutes of the 3GPP Working Group "L2 Optimization for VoIP (R2-050969)"), which are the publications distributed before the priority date of the Patent Application. Therefore, the Patent for the Inventions has a ground for invalidation as it violates Article 29, paragraph (2) of the Patent Act (Article 123, paragraph (1), item (ii) of the Patent Act).

(A) Whether the difference could have been easily conceived of by a person ordinarily skilled in the art

The common features and difference between the Inventions and the invention disclosed in Exhibit Ko No. 3 are as explained in B(A) above.

The structure of the Inventions which constitutes the difference referred to above could have been easily conceived of by a person ordinarily skilled in the art based on the combination of Exhibits Ko No. 3 and No. 4, on the basis of reasons including the following: [i] Exhibit Ko No. 4 indicates the problem of inability to distinguish two types of PDUs (PDUs of the same length and containing data which constitute one type in total), in other words, the problem of inability to distinguish a PDU completely containing one SDU and a PDU containing an intermediate segment; and [ii] Exhibit Ko No. 4 discloses a technical idea to solve the abovementioned problem by setting a pre-defined specific value for the length indicator (Figures 2 and 3, etc.).

(B) Summary

Based on the above, the Inventions could have been easily conceived of by a person ordinarily skilled in the art based on the inventions disclosed in Exhibits Ko No. 3 and No. 4, and therefore lack inventive step.

D. Ground for invalidation 4 (lack of inventive step (3) based on Exhibit Ko No. 3 as primarily cited reference)

As explained below, the Inventions could have been easily conceived of by a

person ordinarily skilled in the art based on the combinations of Exhibits Ko No. 3 and No. 39 (Japanese National Publication of PCT Application No. 2002-527945), which are the publications distributed before the priority date of the Patent Application. Therefore, the Patent for the Inventions has a ground for invalidation as it violates Article 29, paragraph (2) of the Patent Act (Article 123, paragraph (1), item (ii) of the Patent Act).

(A) Common features and difference between the Inventions and the invention disclosed in Exhibit Ko No. 3

The Inventions differ from the invention disclosed in Exhibit Ko No. 3 in the following points: [i] it is not clear whether the latter invention has a structure wherein "a one-bit field setter for setting the one-bit field to indicate that the PDU completely contains the SDU without segmentation/concatenation/padding in the data field, if the SDU is included in one PDU, and for setting the one-bit field to indicate the presence of at least one length indicator (LI) field, if the data field of the PDU includes an intermediate segment of the SDU" as referred to in Constituent Feature D(K) (hereinafter referred to as "Difference 1"); and [ii] it is not clear whether the latter invention has a structure wherein "if the data field of the PDU includes an intermediate segment of the SDU, the LI field is set to the pre-defined value indicating the presence in the PDU of an intermediate segment which is neither the first nor the last segment of the SDU" as referred to in Constituent Feature F(M)(hereinafter referred to as "Difference 2"). But these inventions are identical in respect of all other structures.

(B) Description of Exhibit Ko No. 39

Exhibit Ko No. 39 discloses the following features: [i] the use of a length indicator is needed in the receiver to correctly assemble the segmented data ([Summary]); and [ii] a length indicator is inserted into a PDU containing an intermediate segment of the SDU so as to distinguish whether the SDU contained in the PDU ends in the current PDU or continues to the next PDU, and the pre-defined value is set for said length indicator ([Summary], Paragraphs [0006], [0010] and [0019]).

In addition, the notice of reasons for refusal dated March 30, 2010, issued during the examination process of the Patent Application (Exhibit Ko No. 44) indicates that it is mentioned in Exhibit Ko No. 39 that "specific information" on the SDU is shown by setting a pre-defined value for the

length indicator and that "the specific information instructs which one or more payload unit contains the segment length information in the header of the lower PDU" (this statement corresponds to the statement in the Patent Application which reads: "set to the value indicating the presence of an intermediate segment"). As the defendant did not, in its written opinion dated October 6, 2010, raise any objection to the matters specified in the abovementioned notice of reasons for refusal, the defendant is considered to have admitted that Exhibit Ko No. 39 discloses the feature whereby the intermediate segment is indicated by the use of the length indicator.

(C) Whether the difference could have been easily conceived of by a person ordinarily skilled in the art

a. Difference 1

Considering the following two facts, it can be said that it was easy for a person ordinarily skilled in the art to conceive of an idea to set the one-bit field to indicate whether an SDU is completely included in one PDU or PDU includes an intermediate segment of the SDU and a length indicator is present (the structure of the Inventions which constitutes Difference 1), based on the combination of Exhibit Ko No. 3 and Exhibit Ko No. 39. [i] Before the priority date of the Patent Application, a person ordinarily skilled in the art sufficiently recognized the necessity to distinguish a PDU completely containing one SDU and a PDU containing an intermediate segment. [ii] Exhibit Ko No. 39 discloses the structure wherein the length indicator is inserted into the PDU containing an intermediate segment of the SDU and the E-bit of said PDU is set to indicate the presence of the length indicator ((B) above).

b. Difference 2

As explained in (B) above, Exhibit Ko No. 39 discloses the structure of the Inventions which constitutes Difference 2.

Accordingly, it can be said that it was easy for a person ordinarily skilled in the art to conceive of the structure of the Inventions which constitutes Difference 2, based on the combination of Exhibit Ko No. 3 and Exhibit Ko No. 39.

(D) Summary

Based on the above, the Inventions could have been easily conceived of

by a person ordinarily skilled in the art based on the combination of Exhibit Ko No. 3 and Exhibit Ko No. 39 and therefore lack inventive step.

E. Ground for invalidation 5 (lack of inventive step based on Exhibit Ko No. 1-4 as primarily cited reference)

As explained below, the Inventions could have been easily conceived of by a person ordinarily skilled in the art based on the invention disclosed in Exhibit Ko No. 1-4 (3GPP technical specification "3GPP TS 25.322 V.6.3.0"; hereinafter referred to as "Technical Specification V.6.3.0"), which is a publication distributed before the priority date of the Patent Application, and common general technical knowledge. Therefore, the Patent for the Inventions has a ground for invalidation as it violates Article 29, paragraph (2) of the Patent Act (Article 123, paragraph (1), item (ii) of the Patent Act).

(A) Common features and difference of the Inventions and the invention disclosed in Exhibit Ko No. 1-4

Exhibit Ko No. 1-4 discloses the "normal E-bit interpretation," as specified in Technical Specification V.6.3.0.

The Inventions differ from the invention disclosed in Exhibit Ko No. 1-4 in the following points: [i] based on the "normal E-bit interpretation" as referred to in Exhibit Ko No. 1-4, the length indicator is not present if the PDU contains an SDU without segmentation/concatenation/padding (hereinafter referred to as "Difference 1"); and [ii] based on the "normal E-bit interpretation" as referred to in Exhibit Ko No. 1-4, if the PDU contains an intermediate segment of the SDU, a length indicator is inserted, and a special value indicating the presence of the intermediate segment is configured for said length indicator (hereinafter referred to as "Difference 2"). These inventions are identical in respect of all other structures.

(B) Common general technical knowledge before the priority date of the Patent Application

The following matters had already become a part of common general technical knowledge before the priority date of the Patent Application.

a. SDUs of the same size are frequently generated by a VoIP application which uses a sound codec with a fixed bit rate (Exhibits Ko No. 1-2, No. 42 and No. 91).

b. If the received data completely fills the data field of a data packet (i.e. if one SDU completely fills the PDU's data field), the header size can

be reduced (Exhibit Ko No. 3, Paragraph [0008] which reads "if only one SDU fulfills data domain 58 of PDU50, the bit 55a is set to '0,' indicating that no LI is present;" Exhibit Ko No. 40).

c. In a PDU's data field, the presence of an intermediate segment is indicated by the use of a length indicator (Exhibit Ko No. 39, Paragraph [0019]; Exhibit Ko No. 43)

(C) Whether the difference could have been easily conceived of by a person ordinarily skilled in the art

a. It has been common knowledge of a person ordinarily skilled in the art that the data volume of the PDU header can be reduced by setting its first E-bit to '0' and omitting the length indicator, and also that only four types of PDUs are thus capable of reducing the data volume of the PDU header (i.e. [i] a PDU containing the first segment of the SDU; [ii] a PDU containing an intermediate segment of the SDU; [iii] a PDU containing the last segment of the SDU, whose size coincides with the size of the PDU data field; and [iv] a PDU containing one SDU, whose size coincides with the size of the PDU data field). According to the "normal E-bit interpretation" referred to in Exhibit Ko No. 1-4, in relation to the two types of PDU [ii] and [iii] above, the E-bit is set to '0' and the length indicator is omitted.

With regard to the "normal E-bit interpretation" referred to in Exhibit Ko No. 1-4, the reason for omitting the length indicator for PDUs containing an intermediate segment of the SDU (as mentioned in [ii] above) is as follows. In many applications, SDUs whose size is larger than the size of the PDU data field are frequently generated, and consequently PDUs containing intermediate segments of the SDU are often generated, and reduction of the header size of such PDU can reduce the overhead in total and thereby enhance the efficiency of data transmission. This strongly suggests that 3GPP had recognized the possibility of reducing more data volume by omitting the length indicator of the PDU containing an intermediate segment, rather than by omitting the length indicator of the PDU containing an SDU which completely matches the PDU data field. In addition, considering that the types of PDUs capable of omitting the length indicator are limited as above, this also suggests that 3GPP had recognized the possibility of reducing the data transmission overhead by omitting the length

indicator for the PDU including the SDU which completely matches the PDU data field, if the frequency of generation of such SDU is high.

Meanwhile, the statement of Constituent Feature D(K) which reads "setting the one-bit field to indicate that the PDU completely contains the SDU without segmentation/concatenation/padding in the data field, if the SDU is included in one PDU" (hereinafter referred to as "Constituent Feature D(a)) represents the selection of the type [iv] as referred to above for the PDU for omitting the length indicator. The reason behind this is that, before the priority date of the Patent Application, it was widely recognized by a person ordinarily skilled in the art that a VoIP application which uses a sound codec with a fixed bit rate frequently generates SDUs of the same size ((B)a. above).

Thus, the "normal E-bit interpretation" as referred to in Exhibit Ko No. 1-4 and Constituent Feature D(a) share the common technical idea to reduce the data transmission overhead by omitting the length indicator of the PDU containing an SDU which occurs frequently, thereby to enhance the efficiency of data transmission.

b. (a) The adoption of the structure of Constituent Feature D(a) is automatically and inevitably connected to the structure of Constituent Feature D(K) which reads "setting the one-bit field to indicate the presence of at least one length indicator (LI) field, if the data field of the PDU includes an intermediate segment of the SDU" (hereinafter referred to as "Constituent Feature D(b)").

In other words, as the value of the E-bit is either '0' or '1,' given that the structure of Constituent Feature D(a) is adopted and the PDU contains an SDU without segmentation/concatenation/padding, setting the value of the first E-bit of the PDU to '0' inevitably means that the first E-bit of the PDU containing any other type of data is always set to '1.' Accordingly, if the PDU contains an intermediate segment of the SDU, the first E-bit of the PDU is always set to '1,' indicating "the presence of at least one length indicator (LI) field."

(b) In addition, the adoption of the structure of Constituent Feature D(a) automatically and inevitably leads to Constituent Feature D(b), as well as the structure of Constituent Feature F(M) which

reads "the LI field is set to the pre-defined value indicating the presence in the PDU of an intermediate segment which is neither the first nor the last segment of the SDU, if the data field of the PDU includes an intermediate segment of the SDU."

In other words, for the PDU completely containing one SDU, if the first E-bit is set to '0' and the length indicator is omitted, it is necessary to always set the first E-bit of the PDU containing intermediate segments to '1' and insert the length indicator. The length indicator is set to the value showing where in the PDU the SDU ends or the pre-defined value showing the type of data stored into the PDU data field. As it is impossible for the SDU to end in an intermediate segment, there is no choice but to adopt the structure of Constituent Feature F(M) wherein the length indicator of a PDU containing an intermediate segment is set to the pre-defined value showing the type of data stored in the PDU data field (i.e. intermediate segment).

c. Before the priority date of the Patent Application, it had been common general technical knowledge that SDUs of the same size are frequently generated by a VoIP application using a sound codec with a fixed bit rate, that the header size can be reduced if one SDU completely fills the PDU's data field, and that the presence of an intermediate segment is indicated by the use of a length indicator in a PDU's data field ((B) above). Based on this common general technical knowledge, in relation to a specific VoIP application whereby one SDU frequently fills the PDU data field, it was quite easy for a person ordinarily skilled in the art to apply the aforementioned common general technical knowledge to the "normal E-bit interpretation" as referred to in Exhibit Ko No. 1-4 and to modify the design to omit the length indicator from the header of the PDU completely containing one SDU, instead of a PDU containing intermediate segments. In addition, such design modification automatically and inevitably involves the insertion into the PDU containing an intermediate segment a length indicator with a pre-defined value. It follows that a person ordinarily skilled in the art could have easily conceived of the structures of the Inventions which constitute Difference 1 (Constituent Feature D(a)) and Difference 2 (Constituent Feature D(b) and Constituent Feature

F(M)), based on the combination of the "normal E-bit interpretation" referred to in Exhibit Ko No. 1-4 and common general technical knowledge.

d. On the contrary, the defendant alleges the existence of a factor which would obstruct a person ordinarily skilled in the art from applying the structure of Constituent Feature F(M) to the "normal E-bit interpretation" referred to in Exhibit Ko No. 1-4, for the reason that the addition of a length indicator to a PDU containing intermediate segments would result in an increase in overhead.

However, even supposing that the overhead increases in the case of PDUs containing intermediate segments, the header size still can be reduced for the PDUs completely containing one SDU, and the overhead decreases in the case where a certain VoIP application is used. Therefore, there is no obstructing factor for the application of the structure of Constituent Feature F(M) to the "normal E-bit interpretation" referred to in Exhibit Ko No. 1-4.

Based on the foregoing, the defendant's allegations as mentioned above are groundless.

(D) Summary

Based on the foregoing, the Inventions could have been easily conceived of by a person ordinarily skilled in the art based on the combination of the invention disclosed in Exhibit Ko No. 1-4 and common general technical knowledge, and therefore lack inventive step.

(2) Defendant's allegations

A. Ground for invalidation 1

(A) The invention disclosed in Exhibit Ko No. 3 and the Inventions are different in that the former does not disclose Constituent Feature D(K) and Constituent Feature F(M) of the Inventions.

a. The plaintiff refers to the explanation of Figure 3 in Exhibit Ko No. 3 which reads: "if only one SDU fulfills data domain 58 of PDU50, the bit 55a is set to '0,' indicating that no LI is present" (Paragraph [0008]). As stated in Paragraph [0006] which reads "Figure 3 is the simplified drawing of AM data PDU 50 and is published in 3GPP TS25.322 V3.8.0," such explanation of Figure 3 is an explanation about "3GPP TS25.322 V3.8.0", which is the old technical specification of 3GPP standards before the adoption of the alternative E-bit interpretation

(Exhibit Otsu No. 7, hereinafter referred to as the "Technical Specification V3.8.0"). This explanation refers to what is called "the normal E-bit interpretation" in the current 3GPP standards. On the contrary, the normal E-bit interpretation makes no reference to the case where "the PDU completely contains the SDU without segmentation/concatenation/padding in the data field."

In addition, even the aforementioned statement of Paragraph [0008] is literally interpreted; the wording which goes "only one SDU fulfills data domain 58 of PDU50" also encompasses the case where the size of SDU is larger than that of PDU and the PDU is filled with the first segment or intermediate segment, in addition to the case where the sizes of SDU and PDU are the same. Thus, this statement does not necessarily only mean the case where "the PDU completely contains the SDU without segmentation/concatenation/padding in the data field" as stated in Constituent Feature D(K).

Therefore, Exhibit Ko No. 3 does not disclose Constituent Feature D(K).

b. As explained in a. above, in Exhibit Ko No. 3, the case where the intermediate segment completely fills PDU also satisfies the case where "the bit 55a is set to '0,' indicating that no LI is present." Therefore, this Exhibit is irrelevant to the structure of Constituent Feature F(M) which reads "the LI field is set to the pre-defined value indicating the presence in the PDU of an intermediate segment which is neither the first nor the last segment of the SDU, if the data field of the PDU includes the intermediate segment of the SDU."

In addition, according to Exhibit Ko No. 3, the "padding PDU does not have actual SDU data and is to be used only in the case where the SDU data is destroyed due to an unexpected interruption of data transmission" and is not filled with the SDU (Paragraph [0026] of Exhibit Ko No. 3). Therefore, this padding PDU is irrelevant to the SDU, and it is impossible to anticipate the relationship between such PDU and SDU or intermediate segment from this "padding PDU." Therefore, this statement of Exhibit Ko No. 3 is irrelevant to PDUs containing intermediate segments. In addition, in the case of "padding PDU," the "extension bit 155a" is always set to '1,' without regard to whether such PDU is an intermediate segment or not. Therefore, the

"padding PDU" is not the technology to distinguish a PDU containing a complete SDU and a PDU an containing intermediate segment.

Therefore, Exhibit Ko No. 3 does not disclose Constituent Feature F(M).

(B) Based on the foregoing, the ground for invalidation 1 as alleged by the plaintiff is groundless.

B. Ground for invalidation 2

(A) As mentioned in A.(A)a. above, as Exhibit Ko No. 3 does not disclose Constituent Feature D(K), the Inventions and the invention disclosed in Exhibit Ko No. 3 are also different in that the latter does not have the structure of Constituent Feature D(K) of the Invention.

(B) The prior art referred to in Exhibit Ko No. 3 is the contents of Technical Specification V3.8.0 and had been established as the standard by itself. Therefore, there is no problem of inability of distinguishing the PDU containing a complete SDU and the PDU containing an intermediate segment.

In addition, from the technical standpoint, it was not an inevitable choice to set the length indicator to the pre-defined value so as to distinguish the two types of PDUs.

Therefore, it cannot be said that the structure of Constituent Feature F(M) could have been easily conceived of by a person ordinarily skilled in the art based on the combination of Exhibit Ko No. 3 and common general technical knowledge.

(C) Based on the foregoing, the ground for invalidation 2 as alleged by the plaintiff is groundless.

C. Ground for invalidation 3

(A) As mentioned in B.(A) and (B) above, the Inventions and the invention disclosed in Exhibit Ko No. 3 are also different in that the latter does not have the structure of Constituent Feature D(K). In addition, in the prior art referred to in Exhibit Ko No. 3, no problem can be found pointing to the inability to distinguish the PDU containing a complete SDU and the PDU containing an intermediate segment.

(B) The invention referred to in Exhibit Ko No. 4 is the method for solving the problem that "if the previous RLC PDU is lost, it will not be possible to know if the entire SDU was received or not" (the last line of the translation, Page 3), rather than the problem of the inability to distinguish

PDUs. Thus, said problem is different from the one to be solved by the invention disclosed in Exhibit Ko No. 3.

In addition, Exhibit Ko No. 4 states: "Use one of the LI's reserved values: In this case, an additional LI would have to be incorporated in the RLC PDU in which the first RLC SDU is entirely included. This would result in an overhead of 3% of 12.2kbps payload" (Lines 1 to 3 of the translation, Page 5). This indicates a technology completely opposite to Invention 1, wherein the LI's reserved value is used if the SDU is completely included in the PDU. Further, Exhibit Ko No. 4 does not refer to the use of the LI's reserved values for the intermediate segment.

Therefore, it cannot be said that the structure of Constituent Feature F(M) could have been easily conceived of by a person ordinarily skilled in the art based on the combination of Exhibits Ko No. 3 and No. 4.

(C) Based on the foregoing, the ground for invalidation 3 as alleged by the plaintiff is groundless.

D. Ground for invalidation 4

(A) Exhibit Ko No. 39 discloses neither Constituent Feature D(K) nor Constituent Feature F(M) of the Inventions.

a. Exhibit Ko No. 39 contains a statement which reads: "Alternatively, the first PDU in the PDU may be provided with a length indicator having a pre-defined value which indicates that the SDU in this PDU continues to the next RLC PDU" (Paragraph [0019]). However, this statement indicates that the SDU continues to the next PDU (i.e. the SDU is not the last segment), but not that such SDU is not the first segment. Therefore, this statement does not lead to a conclusion that Exhibit Ko No. 39 discloses Constituent Feature F, as it makes no reference to an intermediate segment which is neither the first nor the last segment.

In this regard, the plaintiff alleges that the defendant had admitted that Exhibit Ko No. 39 refers to the indication of intermediate segments by the use of the length indicator, on the ground that, in the course of examination process, the defendant did not raise any objection in its written opinion dated October 6, 2010, about the matters relating to Exhibit Ko No. 39 as specified in the notice of reasons for refusal dated March 30, 2010 (Exhibit Ko No. 44).

However, as mentioned above, Exhibit Ko No. 39 does not disclose

the intermediate segments. In addition, it is not unreasonable at all for the examiner to strive to grant the patent as early as possible based on the "Elements of Claim 2" (Exhibit Ko No. 44), for which the examiner did not find any reason for refusal. Therefore, the fact that the defendant did not expressly raise an objection by submitting a written opinion in the examination process does not necessarily mean that the defendant had admitted that the structure wherein intermediate segments are indicated by the use of the length indicator is disclosed in Exhibit Ko No. 39.

Based on the above, the plaintiff's allegations as mentioned above are groundless.

b. In addition, Paragraph [0019] of Exhibit Ko No. 39 contains a statement which reads: "If the SDU ends at the end of the current PDU, this is indicated by a length indicator value which points exactly to the end of the PDU." So, Exhibit Ko No. 39 clearly discloses the use of the length indicator if the PDU contains a complete SDU, and thus contains a disclosure which is opposite to Constituent Feature D(K).

(B) As mentioned above, Exhibit Ko No. 39 discloses neither Constituent Feature D(K) nor Constituent Feature F(M) of the Inventions, and no factor exists which would motivate a person ordinarily skilled in the art to combine Exhibits Ko No. 3 and No. 39. Therefore, it cannot be said that the Inventions could have been easily conceived of by a person ordinarily skilled in the art based on the combination of Exhibits Ko No. 3 and No. 39.

Based on the above, the ground for invalidation 4 as alleged by the plaintiff is groundless.

E. Ground for invalidation 5

(A) a. Before the priority date of the Patent Application, a high percentage of the SDU size completely matching the PDU size in the real communication environment was not recognized among persons ordinarily skilled in the art (Exhibit Ko No. 42, etc. do not support the plaintiff's allegations). Therefore, no factor is found which could have motivated any person ordinarily skilled in the art of that time to attempt to reduce the header information of the PDU containing a complete SDU.

In addition, for the purpose of the normal E-bit interpretation as

mentioned in Exhibit Ko No. 1-4, the length indicator contained in the header is set to a pre-defined value, if the last octet of the SDU coincides with the last octet of the PDU (the table shown in Page 9 of the translation indicates that the bit sequence '0000000' should be used for the length indicator if "the previous RLC PDU was exactly filled with the last segment of the RLC SDU and there is no 'Length Indicator' that indicates the end of the RLC SDU in the preceding RLC PDU"), and such length indicator was thus necessary. Accordingly, the idea to omit a length indicator did not exist even in the case of the SDU size completely matching the PDU size. A person ordinarily skilled in the art would not able to conceive of the idea to omit a length indicator by changing the technical specification already released, if it were not for the circumstance where the SDU size frequently matches the PDU size in the real communication environment, and unless this circumstance was recognized by a person ordinarily skilled in the art.

b. The length indicator for the normal E-bit interpretation as referred to in Exhibit Ko No. 1-4 is defined as the one that "indicates the last octet of each RLC SDU ending within the PDU" (9.2.2.8 of the translation, Page 4) because it is necessary to demarcate the scope of one SDU when the SDU is concatenated or padded. This Exhibit only suggests that no LI is present in the intermediate segment wherein the last octet of the SDU does not exist, and cannot serve as evidence of the existence of a technical idea to omit an LI for the PDU containing an intermediate segment which frequently occurred in relation to the normal E-bit interpretation.

c. The plaintiff alleges that the adoption of the structure of Constituent Feature D(a) is automatically and inevitably connected to the structure of Constituent Feature D(b) and Constituent Feature F(M). This allegation is groundless for the following reasons:

(a) In Exhibit Ko No. 1-4, the one-bit field after the sequence number has a meaning as an indicator of whether "the next field is a Length Indicator and E-bit" (9.2.2.5 of the translation, Page 4), and such one-bit field is called "E-bit." Contrary to this, according to the plaintiff's allegation, the term "E-bit" means an indicator of whether the SDU size completely matches the PDU size

(Constituent Feature D(a)). Here, the meaning of the term "E-bit" is completely different from that in Exhibit Ko No. 1-4.

The plaintiff alleges that, if the structure of Constituent Feature D(a) is adopted and when the PDU contains an SDU without segmentation/concatenation/padding (i.e. the SDU size completely matches the PDU size), setting the value of the first E-bit of the PDU to '0' inevitably means that the first E-bit of a PDU containing any other type of data, including the case where the PDU is an intermediate segment of the SDU, is set to '1.' In other words, the plaintiff alleges that the adoption of the structure of Constituent Feature D(a) inevitably boils down to Constituent Feature D(b), and further to the structure of Constituent Feature F(M) wherein the length indicator of the PDU containing an intermediate segment is set to a pre-defined value showing the presence of an intermediate segment.

However, the value '1' for the E-bit of the PDU containing an intermediate segment always means the value '0' for the E-bit of the PDU containing a complete SDU. Thus, the purpose of distinguishing these PDUs has already been attained. In addition, the plaintiff, in alleging that the adoption of the structure of Constituent Feature D(a) inevitably boils down to Constituent Feature D(b), presupposes that the one-bit field after the sequence number is an "E-bit" with a new meaning as an indicator of whether the SDU size completely matches the PDU size. However, in alleging that the adoption of the structure of Constituent Feature D(b) inevitably boils down to Constituent Feature D(M), the plaintiff presupposes that the one-bit field after the sequence number is an "E-bit" that has the traditional meaning as referred to in Exhibit Ko No. 1-4. Therefore, the plaintiff's allegation is inappropriate in this respect.

Furthermore, even supposing that the length indicator is omitted from a PDU containing a complete SDU, the one-bit field after the sequence number can be used to indicate the presence of a complete SDU ("E-bit"), and that the presence of the complete SDU can be indicated by use of the value '0,' it only follows that the one-bit field after the sequence number is set to '1,' because the

intermediate segment does not contain a complete SDU. Therefore, even such presumptions would not lead to the structure wherein a length indicator is inserted into an intermediate segment.

Thus, the adoption of the structure of Constituent Feature D(a) is not inevitably and automatically connected to the adoption of Constituent Feature D(b) or Constituent Feature F(M).

(b) In addition, supposing that, as alleged by the plaintiff, the adoption of the structure of Constituent Feature D(a) is inevitably and automatically connected to the adoption of Constituent Feature D(b) and Constituent Feature F(M), it would be necessary to consider the structures adopting Constituent Feature D(b) and Constituent Feature F(M) (i.e. alternative E-bit interpretation) as well when adopting Constituent Feature D(a). Considering the fact that the "alternative E-bit interpretation results in an increase in the total overhead" (Exhibit Ko No. 124), as well as the plaintiff's allegation that the alternative E-bit interpretation is inefficient and is highly unlikely to be implemented, a factor can be found which would obstruct a person ordinarily skilled in the art from adopting Constituent Feature D(a).

(B) Based on the above, a person ordinarily skilled in the art could not have easily conceived of the structure of the Inventions which constitute Difference 1 and Difference 2 based on the combination of the normal E-bit interpretation referred to in Exhibit Ko No. 1-4 and common general technical knowledge.

Therefore, the ground for invalidation 5 as alleged by the plaintiff is groundless.

4. Issue 4 (whether the Patent Right for the Products has been exhausted)

(1) Plaintiff's allegations

A. Defendant's licensing to Intel Corporation

(A) As mentioned in 1(2)A.(A) above, for the Products, the processing tasks relating to the UMTS standard are implemented by baseband chips (chipsets) installed therein (the baseband chip installed in the Products are hereinafter referred to as the "Baseband Chip").

Supposing that the Products involve the working of the Inventions, it necessarily means that the essential processes of the Inventions are implemented by the Baseband Chip, which is one of the component parts

of the Products, and the Baseband Chip would constitute indirect infringement of the Patent Right for Invention 1.

The Baseband Chip is a product manufactured by Intel Corporation. Apple Inc. purchased this product in the U.S. through [(company name omitted)] and installed it in the Products.

In this regard, the defendant alleges that the sale of Intel's Baseband Chip to Apple, Inc. is handled by IMC (Intel Mobile Communications GMBH; former Infineon); however, such allegation is not true.

(B) Intel Corporation and the defendant entered into a patent cross-license agreement dated [(Omitted)] (Exhibit Ko No. 20-1; hereinafter referred to as the "Defendant-Intel License Agreement").

Under the Defendant-Intel License Agreement, the defendant granted to Intel Corporation a [(Omitted)] license, in relation to the defendant's patents [(Omitted)] (including the Patent Right).

[(Omitted)] was included in the scope of the right to be licensed under the Defendant-Intel License Agreement.

Therefore, Intel Corporation's sale of the Baseband Chip to Apple Inc. through [(Company name omitted)] falls within the scope of the licensing under the Defendant-Intel License Agreement.

B. Exhaustion of the Patent Right for the Inventions

In the judgment of the Third Petty Bench of the Supreme Court of July 1, 1997 (See *Minshu* Vol. 51, No. 6, at 2299; hereinafter referred to as the "BBS Case Supreme Court Judgment"), the Supreme Court held as follows: "it is reasonable to understand that, in the case where the Japanese patentee or a person deemed equivalent to the patentee assigns a patented product outside of Japan, the patentee is restricted from exercising in Japan its patent right for the product against a third party who acquires the patented product from the assignee of the product and the subsequent assignees."

There is no reason to exclude licensees from the scope of "a person deemed equivalent to the patentee" as referred to in the BBS Case Supreme Court Judgment, and therefore licensees, such as Intel Corporation, should also be deemed "a person deemed equivalent to the patentee." In addition, even in the case of a component part, if such component part indirectly infringes the patent right for the product invention of the final products, the assignee and subsequent assignees of such component part are still allowed to use it and work the patent right for the invention for the final products. Based on these

premises, a component part should be understood to fall under the "patented product" as mentioned in the BBS Case Supreme Court Judgment.

In addition, in relation to the patent right for the process invention having substantially identical technical elements as a product invention, it should also be understood that the patentee is restricted from exercising his/her patent right for such process invention, as long as the patentee was guaranteed the "opportunity to obtain reward for public disclosure of the patented invention" for such process invention.

As for the patent right for Invention 1, which is a product invention, the Baseband Chip manufactured by Intel Corporation falls under the "patented product" in the context of indirect infringement. Moreover, the defendant was guaranteed the "opportunity to obtain reward for public disclosure of the patented invention" at the time when it granted Intel Corporation the distribution license for the Baseband Chip. Based on these premises, the defendant is restricted from exercising the Patent Right for Invention 1 against Intel Corporation's customers in the lower stream of the distribution channel. Further, Invention 2 is the process invention having substantially identical technical elements to Invention 1. So, as the defendant is restricted from exercising the Patent Right for Invention 1, exercising of the Patent Right for Invention 2 should also be prohibited.

Therefore, when Intel Corporation, the defendant's Patent licensee, sold the Baseband Chip to Apple Inc. in the U.S. through [(Company name omitted)], the Patent Right for the Inventions should be considered to have been exhausted in relation to the Baseband Chip.

C. Summary

Based on the above, the defendant is prohibited from exercising, against the plaintiff, the Patent Right for the Products mounting the Baseband Chip.

(2) Defendant's allegations

The plaintiff alleges the exhaustion of the Patent Right for the Inventions in relation to the Baseband Chip; however, such allegation is groundless due to the following reasons.

A. Defendant-Intel License Agreement [(Omitted)]

[(Omitted)] Although Apple Inc. received the assignment of the Baseband Chip through Intel Corporation, Intel Corporation has no authority for the Patent Right. Therefore, the Patent Right for the Inventions cannot be exhausted by virtue of such assignment.

B. The Products are not the licensed products under the License Agreement.

The Defendant-Intel License Agreement (Exhibit Ko No. 20-1) provides as follows: [(Omitted)]

The Baseband Chip is a product developed and manufactured by IMC (formerly Infineon)([(Omitted)]), not by Intel Corporation. Therefore, the Baseband Chip is not [(Omitted)] as licensed under the License Agreement.

C. Non-satisfaction of requirements of international exhaustion

The BBS Case Supreme Court Judgment is understood to require, as a prerequisite for international exhaustion, the assignor's rights in the assigned patented product to include the right of importation into Japan (as well as the right to use and assign the product in Japan). Therefore, it is obvious that "a person deemed equivalent to the patentee" as mentioned in the BBS Case Supreme Court Judgment means a person who has the right to import the patented product into Japan (as well as the right to use and assign the product in Japan).

Nevertheless, Intel Corporation has no right to import the patented products (i.e. mobile phones and tablet computers) into Japan (as well as the right to use and assign the products in Japan). Therefore, Intel Corporation does not fall under "a person deemed equivalent to the patentee."

In addition, the Baseband Chip assigned from Intel Corporation to Apple Inc. is neither the "data transmission device" nor "data transmission method" pertaining to the Inventions. As such, the Baseband Chip is not the "patented product" as mentioned in the BBS Case Supreme Court Judgment.

Further, as [(Omitted)], the defendant still would not be able to obtain reward for the public disclosure of the Inventions pertaining to the "data transmission device" or "data transmission method" from Intel Corporation, even supposing that the defendant expected the Baseband Chip to be incorporated into the devices such as mobile phones. So, it is obvious that the defendant cannot be considered to have been guaranteed the opportunity to obtain such reward. In addition, as the unit price of the Baseband Chip represents only a very small percentage of the total price of the Products, such limited opportunity for reward cannot be considered as the entire opportunity for gain.

D. Summary

As mentioned above, the Patent Right for the Inventions is not exhausted only by virtue of Apple Inc. purchasing from Intel Corporation the Baseband Chip, which is a component part of the Products. Therefore, the plaintiff's allegation

that the defendant is prohibited from exercising the Patent Right for the Products is groundless, as it lacks the conditions precedent.

5. Issue 5 (whether a license agreement in relation to the Patent Right has been formed based on the FRAND Declaration)

(1) Plaintiff's allegations

A. Laws governing the FRAND Declaration

(A) On December 14, 1998, the defendant made an undertaking (declaration) to ETSI that it was prepared to license its essential patent for the UMTS standard on the FRAND Terms (fair, reasonable and non-discriminatory terms and conditions in accordance with ETSI IPR Policy Clause 6.1). Further, on August 7, 2007, the defendant made a declaration to ETSI that it was prepared to grant an irrevocable license for its essential patent for the UMTS standard on the FRAND Terms, notifying the number of the South Korean patent application, which served as the basis for the priority claim for the Patent Application, as well as the international application number of the Patent Application (hereinafter collectively referred to as the "FRAND Declaration").

The licensing declaration of the standards essential patent on the FRAND Terms is applied to ETSI members, as well as all other parties including non-members (Exhibit Ko No. 16, "ETSI Guide on Intellectual Property Rights (IPRs)"). Accordingly, both Apple Inc. and the plaintiff are eligible to obtain license under the FRAND Declaration.

(B) The governing laws for the FRAND Declaration and IPR Policy are the laws of France (Exhibit Ko No. 13, IPR Policy Clause 12). As such, the issues such as the effect of the FRAND Declaration and the requirement for the formation of a license agreement thereunder are governed by the laws of France.

B. Formation of License Agreement between the defendant and Apple Inc.

(A) The FRAND Declaration, which the defendant made to ETSI, satisfies all elements of the legally binding offer under the laws of France (i.e. the licensed patent, the details of the rights to be licensed, etc.), and therefore constitute the "actual licensing offer, acceptance of which is implied by the implementation of the specification by a certain party." Under the laws of France, the acceptance is made by way of performance of certain acts or agreement. As for this case, Apple Inc. implicitly accepted the defendant's licensing offer by implementing the UMTS standard relating to the Patent

for the Products. By doing so, the license agreement in relation to the Patent Right can be regarded to have been formed between Apple Inc. and the defendant.

(B) a. Although the fixed royalty rate is not provided in the defendant's FRAND Declaration, this does not affect the formation of a license agreement.

Under the French laws, in order for the sale and purchase contract to be validly formed, a specific purchase price must be provided. However, a license agreement is characterized as a special contract different from a sale and purchase contract, and agreement on the royalty rate is not a condition essential for the formation of a contract between the parties. In addition, under the French laws, the courts have authority to determine the royalty rate on the FRAND Terms.

b. Under the French laws, the act of licensing is invalid unless it is in the form of writing (Intellectual Property Code, Article L613-8, paragraph (5)). On the other hand, the document is deemed legally binding if it is signed by a party to be bound by such document.

In this regard, the defendant's FRAND Declaration has been made in writing signed by the defendant, and therefore satisfies the requirement of written form. The lack of signature of Apple Inc. has nothing to do with this written form requirement. In addition, under the French laws, the purpose of this formality requirement in the licensing agreement is the "protection of specific interests of licensees." As such, only the party to be protected against the lack of written form (i.e. licensee) should be eligible to challenge the validity of the contract on the ground of lack of written form. In this court case, the defendant is not eligible to assert the invalidity of the contract.

C. Summary

As explained above, the FRAND Declaration made by the defendant to ETSI constitutes the offer for a FRAND license agreement in relation to the Patent Right, and the implementation by Apple Inc. of the UMTS standard relating to the Patent for the Products constitutes the implicit acceptance for such offer. Accordingly, the FRAND license agreement in relation to the Patent Right has been formed between the defendant and Apple Inc., and therefore the defendant is not entitled to exercise the Patent Right against the plaintiff, which is the subsidiary company of Apple Inc.

(2) Defendant's allegations

A. Non-existence of offer for contract

Upon the formation of a contract, the parties are bound by the legal obligation to perform the contract. Therefore, an offer for the contract should be concrete enough such that the contract can be immediately formed upon the acceptance thereof.

However, the defendant's FRAND Declaration contains no important particulars which are the elements of a contract, such as the consideration (royalty rate), terms and territories, and provides no specific obligations for the parties. Therefore, such declaration in no way constitutes an offer for a license agreement.

Under the French laws as well, it has been generally understood that, in order for a license agreement to be formed, an offer expressly providing important particulars of a contract (such as consideration, the licensed patent, territories, terms, etc.), as well as the corresponding acceptance are required. As such offer does not exist in this case, no license agreement was formed. Meanwhile, there has been no precedent of the Supreme Court of France (Court de cassation) dealing with the issue of whether the royalty rate is the essential element for the formation of a license agreement.

B. Non-existence of acceptance

(A) As mentioned in A. above, as there has been no offer from the defendant for the conclusion of a license agreement in relation to the Patent Right, acceptance of such offer by Apple Inc. cannot exist.

(B) In this regard, the plaintiff alleges that Apple Inc. has made an implicit acceptance of the offer by implementing the UMTS standard in the process of the manufacturing of the Products.

However, the plaintiff does not provide the reason why the implementation of the standards constitutes consensus between the parties. In addition, given that the plaintiff's allegation is affirmed, the patented technology users would be able to use such technology by merely implementing the standards, without manifestation of their intention of acceptance to the right holder or even without paying any consideration. Such consequence is obviously unreasonable.

Therefore, the plaintiff's allegations above are groundless.

C. Dissatisfaction of requirement of written form

(A) For the issue of whether a license agreement was formed, even granting

the plaintiff's allegations under the laws of France, the French laws still require that the patent license agreement be made in the form of writing. As there is no written document relating to the license agreement between the defendant and Apple Inc., the license agreement as alleged by the plaintiff has not been formed.

(B) In this regard, the plaintiff alleges satisfaction of the requirement of written form necessary for the formation of a patent license agreement, as the defendant's FRAND Declaration contains the signature of the defendant, which is to be bound by the contract.

However, the license agreement as alleged by the plaintiff to have been formed between the defendant and Apple Inc. does not satisfy the requirement of written form, based on the following reasons. [i] The FRAND Declaration has no provisions necessary for explaining the particulars of a contract, such as the purpose, consideration, terms and territories of the license agreement. [ii] As the FRAND Declaration does not contain the plaintiff's signature, it is not clear whether the parties reached a consensus. [iii] As the FRAND Declaration contemplates a cross-licensing arrangement between the parties, the licensee, which is the other party, is also bound by the licensing obligation, and therefore the signature of Apple Inc. should not be omitted.

Therefore, the plaintiff's allegations as above are groundless.

D. Summary

As explained above, the plaintiff's allegation that a license agreement in relation to the Patent Right was formed between the defendant and Apple Inc. by the FRAND Declaration is groundless.

6. Issue 6 (abuse of right)

(1) Plaintiff's allegations

Considering the various circumstances as explained below, it is an abuse of right (Article 1, paragraph (3) of the Civil Code) for the defendant to exercise the right to seek damages based on the Patent Right against the plaintiff, and such exercise is not allowed.

A. Breach of obligation to disclose the Patent in a timely manner

ETSI IPR Policy Clause 4.1 requires the ETSI members to disclose to ETSI in a timely manner the intellectual property rights which might be essential for the standards already developed or under development. If any participant in the development of standards conceals any patent which makes up the standards,

the standardization working group would miss the opportunity to consider alternative technologies for the standards or to decide to exclude such patent from the standards, and in addition, the users of the standards and standardization bodies might also miss the opportunity to adopt alternative technologies. Based on these reasons, the ETSI members are required to timely disclose their IPRs which might be essential for the standards.

In May 2005 (the month in which the date of priority of the Patent Application falls), the defendant prepared and submitted to the 3GPP Working Group the application for change of technologies, including the ones for which the defendant sought to obtain patent. It was not until August 2007, two years after the adoption of the standards incorporating the Patent, that the defendant informed ETSI of the existence of the Patent.

Thus, the defendant intentionally breached its obligation to timely disclose the patent under IPR Policy Clause 4.1.

B. The defendant's Petition for Provisional Disposition was a retaliatory countermeasure.

In April 2011, Apple Inc. filed a U.S. action against the defendant seeking an injunction against the infringing acts, alleging that the defendant infringed the patent rights owned by Apple Inc. which was not related to the standards.

In the same month, the defendant took retaliatory countermeasures against the plaintiff for the court action by Apple Inc., including the Petition for Provisional Disposition seeking an injunction against sale, etc. of the Products based on the Patent Right, which the defendant declared as essential for the UMTS standard (the patent which is the subject of this declaration is hereinafter referred to as the "Standards Essential Patent").

C. Breach of obligation to enter into a license agreement and good-faith negotiation obligation under the FRAND Declaration

(A) "ETSI Guide on Intellectual Property Rights (IPRs)" Clause 1.4 (Exhibit Ko No. 16) provides that a third party, in the capacity of the user of the ETSI standards, is entitled to receive a FRAND license for the standards in accordance with ETSI IPR Policy Clause 6.1 (Page 2, and the right column of the table of Page 3 of the translation).

As both Apple Inc. and the plaintiff are entitled to receive license for the Standards Essential Patent based on the defendant's FRAND Declaration, the defendant is considered to be bound by an obligation to enter into a license agreement for the Patent Right, which is the Standards Essential

Patent (obligation to enter into a license agreement). And, at least, the defendant is considered to have an obligation to negotiate the license for the Standards Essential Patent in good faith (good-faith negotiation obligation).

Nevertheless, as explained below, the defendant breached both the obligation to enter into a license agreement and good-faith negotiation obligation.

a. As explained in B. above, by filing the Petition for Provisional Disposition as a retaliatory countermeasure for the court action by Apple Inc., the defendant has breached the obligation to enter into a license agreement and good-faith negotiation obligation for the license for the Standards Essential Patent.

   The defendant did not have an intention to grant the license under the FRAND Declaration to the plaintiff and Apple Inc.. The intent behind the defendant's Petition for Provisional Disposition was merely to threaten the plaintiff and Apple Inc. by exercising the right to seek an injunction based on the Patent Right declared as essential, to discourage Apple Inc. from proceeding with its court action, and to achieve results favorable to the defendant.

b. Apple Inc. asked the defendant to provide a concrete royalty rate on the FRAND Terms applicable to the license for the Patent. The defendant presented to Apple Inc. the "royalty rate of [(Omitted)] _%" on July 25, 2011, four and a half months after the request from Apple Inc. [(Omitted)]. In addition, the defendant refused to provide any information on the actual royalty rates applicable to other licensees.

   In substance, the defendant's acts as mentioned above are deemed as refusal to grant a FRAND license for the Patent Right to Apple Inc. and the plaintiff.

   It can be inferred from the following facts that the conditions offered by the defendant to Apple Inc. are far from the FRAND Terms, and the defendant substantially refused to grant Apple Inc. and the plaintiff a FRAND license for the Patent Right. [i] It took as long as four and a half months for the defendant to contemplate the conditions, but to Apple Inc. [(Omitted)]. [ii] It is impossible for Apple Inc. to determine whether the conditions offered by the defendant fell under the FRAND (fair, reasonable and non-discriminatory) Terms, unless information on

the royalty rates for the Patent applied to other licensees is disclosed to Apple Inc.; however, the defendant did not provide Apple Inc. with any information on royalty rates for the reason of confidentiality agreements with other licensees, although it was possible to disclose such information to a limited extent without breaching the confidentiality obligations. [iii] The defendant had repeatedly shown its policy to require the parties implementing the UMTS standard to pay a royalty rate up to "about 5%" in total for any patents declared as essential for such standards. Although this maximum rate was agreed by other companies, the defendant offered an unreasonably high royalty rate of "[(Omitted)] _%" for a single Patent (Among 1889 patents declared as essential for the UMTS standard, the number of patents owned by the defendant is only 103, representing 5.45% of them. Considering this fact, the reasonable royalty rate for the entirety of the defendant's Standards Essential Patents is only 0.273% (5%×5.45%)).

c. On March 4, 2012, Apple Inc. made an offer to receive a license for the Patent Right by sending the defendant a draft license agreement with its signature (Exhibits Ko No. 65-1 and No. 65-2). This offer by Apple Inc. was made on the premises that [(Omitted)] only to the extent of the purpose of execution of the FRAND license agreement, and was not conditional, without imposing any such conditions as that the court has declared the Patent Right to be valid or to conflict with the technology of Apple Inc.

However, the defendant refused the abovementioned offer by Apple Inc. without making any counterproposal.

d. In spite of the refusal by the defendant, Apple Inc. has attempted to continue the licensing negotiations with the defendant in relation to the FRAND Terms in all parts of the world.

On September 1 and 7 of 2012, Apple Inc. made a cross-licensing offer for the entire portfolio of the Standards Essential Patents held by Apple Inc. and the defendant relating to the mobile communication devices (Exhibits Ko No. 109 and No. 110). In this offer, Apple Inc. suggested that it would pay royalty at a rate of [(Omitted)] _% for the portion of the Baseband Chip price contributing to the functions relating to 3GPP standards, and that the defendant would pay royalty

at a rate of [(Omitted)] _% based on the Baseband Chip price for the patent portfolio for Apple Inc.

However, the defendant has not responded to the abovementioned offer by Apple Inc.

e. As mentioned above, Apple Inc. has repeatedly made a firm offer to receive a license to the defendant, with detailed explanation of the calculation basis of the royalty. Yet, the defendant has persisted on the prior offer without explaining the calculation basis of the proposed royalty or making any counterproposal to Apple Inc. Further, the defendant maintains the Petition for Provisional Disposition seeking an injunction based on the Patent Right, which is the Standards Essential Patent, putting pressure on Apple Inc. by the threatened provisional injunction order based on the Standards Essential Patent.

The patented invention technology incorporated into the standards can become a powerful tool which far exceeds its inherent value, that is, such technology has a risk of enabling the patentee to obtain an unreasonably high royalty or non-essential IPR cross-licenses from the users of the standards. The series of the abovementioned acts of the defendant would create the so-called "patent hold-up" (meaning the situation where the prospective users of the standards are prohibited from using the technologies incorporated in the standards, because of the enforcement of the right for such technologies).

Therefore, it is obvious that the defendant breached its obligation to enter into a license agreement and good-faith negotiation obligation for the Patent Right, which is the Standards Essential Patent.

(B) In this regard, the defendant alleges that it has no good-faith negotiation obligation as Apple Inc. has not made a "firm offer to receive a license" on the FRAND Terms.

However, in ETSI IPR Policy, the defendant's FRAND Declaration or the laws of France which govern such declaration, there is no provision which requires the prospective users of the UMTS standard to make a "firm offer to receive a license," as a precondition for the patentee of the Standards Essential Patent to have a good-faith negotiation obligation. A "firm offer to receive a license" is not required for the formation of a license agreement or the patentee's good-faith negotiation obligation.

Under the Japanese laws as well, there is no ground for requiring a "firm

offer to receive a license." Even supposing that a Japanese law requires of Apple Inc. or the plaintiff a "firm offer to receive a license" as the prerequisite for the defendant's good-faith negotiation obligation, Apple Inc., as mentioned in (A) above, has made a "firm offer to receive a license" to the defendant by manifesting its intention not to challenge the validity of the Patent Right or to raise the question of whether the products of Apple Inc. conflict with the Patent, to the extent of the purpose of executing the FRAND license agreement.

In addition, supposing that the prospective licensees are required to waive their right to challenge the validity of the patent or to raise the question of whether their products conflict with the licensed patent, as a requirement for the offer to receive a FRAND license, the holder of the Standards Essential Patent may be able to protect itself from any licensee's claims even if the patent turns out to be non-essential, invalid or not in conflict with the licensee's product. This would induce patent holders to make declarations for non-essential patents as essential ones so as to gain the benefit of being protected against the claim relating to the validity of the patent or conflict with the licensee's own technologies. Such consequence is not deemed appropriate.

Therefore, the defendant's allegations as mentioned above are groundless.

D. Violation of the Antimonopoly Act

The series of the defendant's acts constitute the creation of "patent hold-up" (C.(A)e. above). These acts completely run counter to the purpose of 3GPP, which aims to widely disseminate the standards. Further, such acts are highly likely to fall under one of the provisions related to the unfair trade practices as set out in the Act on Prohibition of Private Monopolization and Maintenance of Fair Trade (hereinafter referred to as the "Antimonopoly Act") (Article 2, paragraph (9), item (ii) of the Antimonopoly Act, Paragraphs 2 to 4 and Paragraph 14 of the Public Notice No. 15 of the Fair Trade Commission titled "Unfair Trade Practices") and therefore involve possible violation of the Antimonopoly Act.

E. Summary

As explained above, taking into consideration the various circumstances, including that the defendant intentionally breached the obligation to timely disclose the Patent to ETSI, that the defendant's Petition for Provisional Disposition was a retaliatory countermeasure, that the defendant breached its

obligation to enter into a license agreement and good-faith negotiation obligation for the Patent Right, which is the Standards Essential Patent, under the FRAND Declaration and thereby created the situation of "patent hold-up," and that the series of the defendant's acts may constitute violation of the Antimonopoly Act, the defendant is prohibited from exercising the right to seek damages against the plaintiff based on the Patent Right, as such exercise of right constitutes an abuse of right.

(2) Defendant's allegations

The plaintiff pointed out the various circumstances to support its allegation that the defendant's exercise of the right to seek damages against the plaintiff based on the Patent Right constitutes an abuse of right. However, as explained below, these circumstances lack the facts to be premised upon, or can in no way be relied upon as the grounds for the abuse of right.

A. Allegation of the breach of the obligation to timely disclose the Patent under IPR Policy

(A) ETSI IPR Policy Clause 4.1 (Exhibit Ko No. 12), which the plaintiff relies upon for the allegation of the defendant's breach of the obligation to timely disclose the Patent, requires the members to exercise reasonable endeavors to disclose patents and other IPRs. However, this provision governs the relationship between ETSI and its members, not the relationship between ETSI members and third parties. As such, the penalty for the breach of obligation against third parties is not contemplated in the IPR Policy.

In addition, in the first place, the breach of procedural obligation to ETSI cannot be relied upon to substantiate the abuse of right by the exercise of the Patent Right.

(B) The plaintiff relies upon the fact that the defendant disclosed the Patent to ETSI only after about two years from the priority date of the Patent Application to allege that the defendant breached the obligation to disclose IPRs in a timely manner.

However, for making the declaration of an essential patent, a company needs to follow an appropriate internal process such as the selection of patents and examination of whether they are essential for the standards. This process requires a significant amount of work and time, and, of course, the corporate decision and action. Therefore, it generally takes one or two years for an ETSI member to disclose the patent.

Thus, although the defendant disclosed the Patent to ETSI only after about two years from the priority date of the Patent Application, such disclosure is within the range of normal practice. The defendant can be considered to have exercised its reasonable endeavors to disclose the patent in a timely manner and therefore is not accusable for the breach of the obligation to disclose IPRs in a timely manner.

Therefore, the plaintiff's allegation as mentioned above is groundless.

B. Allegation that the defendant's Petition for Provisional Disposition was a retaliatory countermeasure

The plaintiff alleges that the defendant's Petition for Provisional Disposition was a retaliatory countermeasure with the purpose of putting pressure on Apple Inc. for the court action and thereby to achieve favorable results, relying on the fact that the defendant filed the Petition for Provisional Disposition after Apple Inc. had filed for an injunction against the defendant in the U.S.

However, the U.S. injunction relief case filed by Apple Inc. against the defendant is completely independent of this court case. In addition, the law contemplates that the plaintiff may be subject to the injunction claim for the infringement of the Patent Rights, as a matter of consequence that the defendant is entitled to seek injunctive relief against the infringement of the Patent Rights. Accordingly, although the defendant began exercising its right only after the enforcement by Apple Inc., there is no reason that the defendant should be accused of having taken a "retaliatory countermeasure" or "putting pressure on Apple Inc. for the court action."

Therefore, the plaintiff's allegation as mentioned above is groundless.

C. Allegation that the defendant breached its obligation to enter into a license agreement and good-faith negotiation obligation under the FRAND Declaration

(A) Non-existence of obligation to enter into a license agreement

By making a FRAND Declaration to ETSI, the declarant only has an obligation to discuss and negotiate in good faith with prospective licensees, upon the request from such prospective licensees and in accordance with the basic principle of licensing on the FRAND Terms as set out in IPR Policy Clause 6.1 (good-faith negotiation obligation). Therefore, the FRAND Declaration does not serve as the basis of the defendant's obligation to enter into a license agreement (obligation to enter into a license agreement) as alleged by the plaintiff.

In addition, the plaintiff's allegation that the FRAND Declaration serves as

the basis of the obligation to enter into a license agreement contradicts ETSI's policy not to intervene in individual licensing negotiations, as provided in the ETSI Guide on IPRs (Exhibit Ko No. 16) which provides as follows: "Specific licensing terms and negotiations are commercial issues between the companies and shall not be addressed within ETSI" (Clause 4.1).

Therefore, the plaintiff's allegation that the defendant breached its obligation to enter into a license agreement under the FRAND Declaration is groundless as it lacks the conditions precedent.

(B) Non-existence of good-faith negotiation obligation

a. The specific content of the obligations of the party which made a FRAND Declaration is an issue directly connected to the public policies of each country, which can be determined from the standpoint of the laws of Japan. From the standpoint of the Japanese laws, it should be understood that, as the precondition for the good-faith negotiation obligation, a prospective licensee needs to make a "firm offer to receive a license," which indicates such prospective licensee's faithful intent to obtain a license without challenging the validity of the licensed patent.

The plaintiff alleges that Apple Inc. made a "firm offer to receive a license" on the FRAND Terms to the defendant on March 4, September 1 and 7 of 2012. However, this allegation is groundless.

(a) The offer dated March 4, 2012, alleged by the plaintiff cannot be regarded as a "firm offer to receive a license," as the plaintiff challenged the validity of the defendant's patent and raised the question of whether its products conflict with the Patent.

In addition, in the abovementioned offer, an unreasonably low royalty rate of "[(Omitted)] _%" was proposed. This shows that the plaintiff did not have a faithful intention to obtain a license and only made a perfunctory offer, anticipating that the negotiation would fail. Therefore, such offer in no way constitutes a "firm offer to receive a license."

(b) In addition, the offers dated September 1 and 7 of 2012 as alleged by the plaintiff (Exhibits Ko No. 109 and No. 110) suggested [(Omitted)] (Translation, Page 3), and the plaintiff thereby reserved its right to challenge the validity of the defendant's patent

or to question whether the products in question conflict with the defendant's patent. Therefore, these offers do not constitute a "firm offer to receive a license" either. In addition, Apple Inc. has alleged that "[(Omitted)]." Considering that the allegation of exhaustion of patent right is a defense against the allegation of patent infringement, Apple Inc. can be virtually considered as questioning whether the products in question conflict with the defendant's patent by raising such allegation. In conclusion, these offers do not constitute a "firm offer to receive a license."

(c) As mentioned above, the offers by Apple Inc. as alleged by the plaintiff are not considered as firm offers which indicate the faithful intention to obtain a license. Therefore, the defendant is not bound by any good-faith negotiation obligation from the outset.

b. In this regard, the plaintiff raises an allegation to accuse the defendant of non-disclosure of licensing conditions for other licensees, although it is possible to disclose such information to Apple Inc. within a scope not breaching the confidentiality obligation.

However, the only obligation which the defendant owes as a result of making the FRAND Declaration is the obligation to discuss and negotiate in good faith with a prospective licensee who makes a firm offer, and does not include the obligation to disclose the licensing terms and conditions applicable to other licensees. Furthermore, Apple Inc. has not made a firm offer to receive a license and therefore the defendant has no obligation to the plaintiff at all. Therefore, the plaintiff's allegation as mentioned above is groundless.

(C) Non-existence of breach of good-faith negotiation obligation

a. The defendant has not breached its good-faith negotiation obligation as it has continuously requested Apple Inc. to enter into negotiations in a faithful manner.

The defendant, in its Response Letter dated April 18, 2012 (Exhibit Otsu No. 42), notified Apple Inc. of its intention to grant a FRAND license, and invited Apple Inc. to make a good-faith proposal. In addition, the defendant has continuously requested Apple Inc. to enter into faithful negotiations, for example, by sending proposals of [(Omitted)] in its letter dated September 7, 2012 (Exhibit Ko No. 111).

Rather, it is Apple Inc. which has not responded to the defendant's invitations for faithful negotiations.

b. The plaintiff alleges that, for the patents for which a FRAND Declaration is made, the calculation method to divide the 5% royalty rate cap by the percentage to the entire patent portfolio should be used. However, the 5% royalty rate cap has no ground and therefore the plaintiff's allegation as mentioned above is groundless.

c. In addition, the plaintiff alleges that the defendant refused to grant a FRAND license to Apple Inc. and the plaintiff by not making a FRAND licensing offer to Apple Inc. and seeking an injunction against the plaintiff without making counterproposals.

However, as mentioned above, Apple Inc. did not make a "firm offer to receive a license" at all. Therefore, the plaintiff's allegation that the defendant's act constitutes refusal of licensing on the FRAND Terms lacks the precondition and is therefore groundless.

d. As explained above, the plaintiff's allegation that the defendant breached the good-faith negotiation obligation is groundless.

D. Allegation of violation of the Antimonopoly Act

The plaintiff alleges that the series of the defendant's acts fall under the unfair trade practices as prescribed in the Antimonopoly Act and therefore violates the same Act.

The plaintiff's abovementioned allegation is grounded on the defendant's breach of the obligation of timely disclosure of patents and filing of the Petition for Provisional Disposition as a retaliatory countermeasure. Such allegation is groundless as it contains an error in its premises.

E. Summary

As mentioned above, the plaintiff's allegation that the defendant's exercise of the right to seek damages against the plaintiff based on the Patent Right constitutes an abuse of right is groundless, as there exists no fact which serves as the basis of these alleged circumstances, or, these circumstances in no way support the alleged abuse of right.

No. 4 Court Decision

1. Issue 1 (whether the Products fall within the technical scope of Invention 1)

(1) Structure of the Products

The defendant alleges that Invention 1 is the implementation of the "alternative E-bit interpretation" as referred to in Technical Specification V6.9.0 of the

3GPP standards, and also that the Products complying with this technical specification fall within the technical scope of Invention 1.

First of all, the court would like to determine whether the Products can be considered as the products complying with Technical Specification V6.9.0.

A. Products 1 and 3

There is no controversy as to the fact that Products 1 and 3 are products complying with the UMTS standard, which is the standard communication specification developed by 3GPP (3GPP standards).

There are multiple versions for the standards released as the UMTS standard, and the alternative E-bit interpretation as alleged by the defendant was adopted in the technical specification in the versions after "3GPP TS 25.322 V6.4.0" (hereinafter referred to as the "Technical Specification V6.4.0"), the publication released after the priority date of the Patent Application (Exhibits Ko No. 2 and No. 87, and the entire import of oral arguments).

The submitted evidence is not sufficient for determining that Products 1 and 3 implement the functions based on the alternative E-bit interpretation. Rather, the evidence indicates that the Baseband Chip incorporated into Products 1 and 3 for the processing of tasks relating to the UMTS standard is Intel's [(name omitted)] baseband chip, and that this baseband chip complies with 3GPP standard version "Release 5" publicized before the priority date of the Patent Application and does not have a function based upon the alternative E-bit interpretation (Exhibits Ko No. 82 to No. 85).

Therefore, the defendant's allegation that Products 1 and 3 comply with Technical Specification V6.9.0 is groundless.

Consequently, without the need to determine the other issues, the court finds the defendant's allegation that Products 1 and 3 fall within the technical scope of Invention 1is groundless.

B. Products 2 and 4

(A) Alternative E-bit interpretation

Subclauses 9.2.2.5, 9.2.2.8 and 9.2.2.8.1 of Technical Specification V6.9.0 (see Attachment 1) contain the following descriptions. [i] For the E-bit (extension bit) in the first octet of the PDU (UMD PDU) whose transmission mode is unacknowledged mode, either the "normal E-bit interpretation" or the "alternative E-bit interpretation" is applied depending on the higher layer configuration. [ii] Under the

"alternative E-bit interpretation," the E-bit '0' contained in the first octet means that "the next field is a complete SDU, which is not segmented, concatenated or padded," whereas the E-bit '1' means that "the next field is a length indicator and an E-bit." [iii] The "length indicator" is used to indicate the last octet of each SDU (RLC SDU) ending within the PDU, unless the E-bit contained in the first octet indicates a "complete SDU not segmented, concatenated or padded." [iv] In the case where the "alternative E-bit interpretation" is configured, and a PDU (RLC PDU) contains a segment of an SDU but neither the first octet nor the last octet of this SDU, the 7-bit "length indicator" with value '111 1110' or the 15-bit "length indicator" with value '111 1111 1111 1110' shall be used.

(B) Demonstration Test

a. Considering the evidence (Exhibits Otsu No. 13, No. 14 and No. 41), as well as the entire import of oral arguments, the court finds the following facts:

(a) Chipworks Inc., a Canadian corporation, tested Products 2 and 4 using CMW500 as the "base station emulator" (Demonstration Test).

CMW500 supports the W-CDMA method.

(b) Test 1 of the Demonstration Test was for the "case in which the PDU contains a complete SDU without segmentation/concatenation/padding," and performed under the conditions of "PDU Size: 488-bit, SDU size: 480-bit." Test 2 was the test to monitor the PDU as an "intermediate segment" excluding the first and last PDUs (e.g. the second PDU), and performed under the conditions of "PDU Size: 80-bit, SDU size: 480-bit."

(c) The results of the Demonstration Tests were as follows:

[i] In Test 1, the E-bit following the sequence number (SN) was '0,' and a PDU without a length indicator (LI) was output (Exhibit Otsu No. 13, Figures 12 and 14).

[ii] In Test 2, the E-bit following the sequence number (SN) was '1,' and a PDU containing a pre-defined value '1111110' as the length indicator was output (Exhibit Otsu No. 13, Figures 13 and 15).

b. The values of the E-bits and length indicator as indicated by the results of the Demonstration Test in a. above agree with the values obtained for the alternative E-bit interpretation as referred to in (A) above (Test 1 corresponds to (A)[ii] and [iii] above, and Test 2 corresponds to (A)[ii] and [iv] above, respectively). Therefore, the court finds Products 2 and 4 to be the implementation of the functions based on the alternative E-bit interpretation.

c. In this regard, the plaintiff raises allegations that the "Interpretation" section of the Demonstration Test results reads "next octet: data" and does not mention "a complete SDU without segmentation/concatenation/padding," and that therefore the Demonstration Test used the normal E-bit interpretation instead of the alternative E-bit interpretation.

However, for the alternative E-bit interpretation, if the E-bit is set to '0,' the bit sequence of the next field shows "data" of the SDU which comprise a "complete SDU without segmentation/concatenation/padding." Accordingly, the indication of "next octet: data" in the "Interpretation" section does not contradict the use of the alternative E-bit interpretation in the Demonstration Test.

Therefore, the plaintiff's allegations as mentioned above are groundless.

C. Summary

Based on the above, the court finds Products 2 and 4 to comply with Technical Specification V6.9.0 and have the structure implementing the functions based on the alternative E-bit interpretation.

(2) Technical significance of Invention 1

A. Matters disclosed by the Patent Description

(A) The detailed explanation of the invention of the Patent Description (Exhibit Ko No. 1-2) contains the following statements (for the drawings referred to in the following statement, see the Patent Description Figures attached hereto).

a. "[Field of Invention] The invention relates to a mobile communication system supporting packet service. More specifically, the invention relates to a method and apparatus which efficiently use radio resources by reducing the header size of a

Protocol Data Unit (PDU) to be transmitted on a radio link." (Paragraph [0001])

b. "[Background of Invention] The UMTS (Universal Mobile Telecommunication Service) system is a third-generation mobile communication system which uses Code Division Multiple Access (hereinafter referred to as "CDMA") based on the European telecommunication systems called GSM (Global System for Mobile Communications) and GPRS (General Packet Radio Services). This UMTS system provides services enabling mobile phone subscribers and computer users to transmit packed-based text, digitalized sound, video and multimedia data at a high speed of more than 2Mbps in all parts of the world. This UMTS system has introduced the concept of a packet switched access system using a packet protocol like the Internet Protocol (hereinafter referred to as "IP"). 3GPP (3rd Generation Partnership Project), which is the standardization body for the abovementioned UMTS communication system, has been discussing a voice communication service called VoIP (Voice over IP) which assists the voice packets using IP. VoIP is communication technology to transmit a voice frame generating from a voice codec in the form of an IP/UDP (User Datagram Protocol)/RTP (Real-time Transport Protocol) packet. This VoIP facilitates the provision of voice communication service through the packet network." (Paragraph [0002]) "Figure 1 shows the composition of the usual mobile communication system which supports VoIP." (Paragraph [0003]) "In general, an RLC layer is divided into UM (Unacknowledged Mode), AM (Acknowledged Mode) and TM (Transparent Mode) depending on the operation mode. VoIP operates in the RLC UM. In the transmitter, an RLC UM layer segments, concatenates or pads the RLC Service Data Unit (hereinafter referred to as "RLC SDU") received from the higher layer into a size appropriate for transmission through a radio channel. In the RLC UM layer, segmentation/concatenation/padding information and a sequence number (SN) are inserted in the abovementioned result value, and an RLC PDU fit for transmission through a radio channel is configured Then, this LCP PDU (Note: a typographical error of

"RLC PDU") is transmitted to the lower layer. … The operation for the processing of the RLC SDU received from the higher layer into a size appropriate for the transmission through a radio channel is called 'RLC framing. '" (Paragraph [0004])

"Figure 2C shows the operation for the configuration of an RLC PDU by framing the RLC SDU in the RLC layer of the transmitter based on the conventional technology. …The RLC layer of the transmitter receives from the higher layer any given size of RLC SDU, for example, RLC SDU225 which is 100-byte IP packet. If the size of the data transmittable through a radio channel is 40 bytes, the RLC layer divides the RLC SDU225 into three, namely, RLC PDU230, 235 and 240. In this case, the size of each of these RLC PDUs is 40 bytes. In addition, each of these RLC PDUs includes RLC header 245. This RLC header 245 is composed of at least two pairs of the sequence number (hereinafter referred to as "SN") 250, E-field 255, Length Indicator (hereinafter referred to as "LI") field 260 and E-field 265. LI field 260 is contained as a result of the segmentation. The SN field 250 shows a 7-bit SN which increases in monotone for each RLC PDU. This SN shows an order of RLC PDU230, 235 and 240. E-field 255 shows whether the following field is a data field, or the pair set of an LI field and E-field, and its size is 1 bit. LI field 260 has a size of 7 bits or 15 bits based on the framing of the RLC. The segment of RLC SDU225 contained in the RLC PDU shows that it is placed at data field 270 of the RLC PDU. That is, LI field 260 is data field 270 of the RLC PDU, and shows the start and the end of RLC SDU225. LI field 260 is capable of indicating whether the padding was made. The value shown by LI field 260 is configured by byte, and means the number of bytes from the RLC header to the point at which the RLC SDU ends." (Paragraph [0007])

c. "As mentioned above, the conventional method to indicate the position of the last byte of the RLC SDU using an LI field is efficient, when dividing one RLC SDU into two or more RLC PDUs or connecting two or more RLC SDUs to make up one RLC PDU. However, the VoIP packet has a general feature wherein one complete RLC SDU corresponds to only one RLC PDU, and RLC

SDUs without segmentation/concatenation/padding are frequently generated. …Thus, if the size of the RLC PDU is defined according to the size of the RLC SDU most frequently generated, the majority of RLC SDUs are framed in the RLC PDU without segmentation/concatenation/padding. In such case, the conventional framing method is inefficient." (Paragraph [0011])

"…In other words, for the VoIP communication system, the majority of RLC SDUs are not segmented or concatenated, and one RLC PDU is comprised of one RLC SDU. In spite of this, as for the existing RLC framing operation mode, at least two LI fields, i.e., the LI field which shows the start of the RLC SDU, and the LI field which shows the end of the RLC SDU, are always required for the RLC PDU. The LI field which shows whether the data field can be padded is also inserted if necessary. Therefore, when using an RLC framing method based on the conventional VoIP communication system, there was a problem of inefficient use of limited radio resources due to the use of the unnecessary LI field." (Paragraph [0012])

d. "[Problem to be solved by the invention] Therefore, in order to solve the problem with the conventional technology as mentioned above, this invention aims to provide the method and apparatus for the mobile communication system which supports packet service, decreasing the header size of a radio link control layer's Protocol Data Unit (RLC PDU) and using radio resources efficiently." (Paragraph [0013])

e. "[Means for solving problem] In order to achieve the purpose of the invention as mentioned above, the invention features a method of transmitting data in a mobile communication system by the use of a pre-defined length indicator (LI), comprising: a stage of receiving a service data unit (SDU) from a higher layer and determining whether the SDU is included in one protocol data unit (PDU); a stage of segmenting the SDU into a plurality of segments according to the transmittable PDU size, if the SDU is not included in one PDU; a stage of configuring multiple PDUs wherein headers of the PDUs include a sequence number (SN) field, at least a one-bit field indicating the presence of a length

indicator (LI) field and said one LI field and wherein the data field of each PDU includes the aforementioned segments; and a stage in which the LI field of the PDU containing an intermediate segment of the SDU in the data field is set to the pre-defined value indicating the presence of the aforementioned intermediate segment and the PDUs are sent to a receiver." (Paragraph [0014]) In addition, "the invention features an apparatus for transmitting data in a mobile communication system by the use of a pre-defined length indicator (LI), comprising: a transmission buffer for receiving a service data unit (SDU) from a higher layer, determining whether the SDU is included in one protocol data unit (PDU), and reconfiguring the SDU to at least one segment according to the transmittable PDU size; a header inserter for constructing at least one PDU containing a serial number (SN) field and a one-bit field in a header, and said at least one segment in a data field; a one-bit field setter for setting said at least one one-bit field of the PDU to indicate the presence of at least one subsequent LI field; an LI inserter for inserting the LI field after the one-bit field of said at least PDU and setting the LI field of the PDU containing an intermediate segment of the SDU to the value indicating the presence of the intermediate segment, if the SDU is not included in one PDU; and a transmitter for sending at least one PDU received from the LI inserter to a receiver." (Paragraph [0016])

f. "[Effect of Invention] The invention has an effect of enabling the efficient use of limited radio resources by the use of the 1-bit information showing the presence of a complete RLC SDU in the data field of the RLC PDU, thereby eliminating the need to insert the additional information for a start/end/padding of such RLC SDU. In addition, the invention has the effect of enabling the segmentation of the RLC SDU by including the LI field set to the pre-defined new LI value in the RLC PDU containing only an intermediate segment of the RLC SDU as mentioned above." (Paragraph [0018])

g. "…The RLC layer uses two framing systems based on the preferable embodiment of the invention. In the first system, the

RLC SDU which has the size most frequently used carries out the framing of the RLC PDU without the use of an LI field. The second system frames the different sizes of RLC SDUs by the use of an LI field. ...The first E-field is called "F-field" in order to distinguish it from other E-fields." (Paragraph [0020])

h. "Figure 4 shows the structure of the RLC PDU according to the preferable embodiment of the invention." (Paragraph [0021])

"Figure 5A shows the configuration of the RLC PDU, when the RLC SDU corresponds to the RLC PDU without segmentation/concatenation/padding according to the preferable embodiment of the invention. In Figure 5A, a transmitter (namely, the RLC layer of a transmitter) sets the value of the F-field to '0' and inserts a complete RLC SDU into the RLC PDU data field, when it is possible to frame one complete RLC SDU into one RLC PDU without segmentation/concatenation/padding." (Paragraph [0022])

"Figure 5B shows the configuration of the RLC PDU, when the RLC is framed in the RLC PDU after segmentation/concatenation/padding according to the preferable embodiment of the invention. In Figure 5B, when the segmentation/concatenation/padding is necessary for the framing of the RLC, a transmitter sets the F-field to '1' and configures the RLC PDU comprised of the LI field necessary for the segmentation/concatenation/padding and the padding. …The following problems should be solved in order to use the existing first E-field as the F-field. Usually, if the RLC PDU was the segment of the RLC SDU, and when neither the start nor the end of the RLC SDU was included in the RLC PDU, an LI field did not exist in the RLC PDU. In Figure 5A, when the RLC SDU is framed into one RLC PDU without segmentation/concatenation/padding, an LI field is not used. It is necessary to show that the RLC PDU does not contain one complete RLC SDU, nor does it contain either the start or the end of the RLC SDU." (Paragraph [0023])

i. "Figure 6A shows the situation where one RLC SDU is segmented into two or more RLC PDUs based on the conventional RLC

framing technology. …If an LI field is not inserted into RLC PDU615, which does not include the start or the end of the RLC SDU, a receiver cannot determine whether the segment contained in the data field of RLC PDU615 constitutes one complete RLC SDU, or one RLC SDU after the combination with the prior or following segment of the RLC PDU. Therefore, in the preferable embodiment of the invention mentioned later, a pre-defined new LI value is determined so as to show the presence of an RLC PDU which includes neither the start nor the end of the RLC SDU (hereinafter referred to as an "intermediate PDU"). For example, '1111 110' is defined as a pre-defined new LI value. The RLC PDU in which the pre-defined new LI value is inserted is recognized as an intermediate RLC PDU." (Paragraph [0024])

"Figure 6B shows the situation where one RLC SDU is segmented into two or more RLC PDUs using the pre-defined LI, according to the preferable embodiment of the invention. In Figure 6B, one RLC SDU625 is segmented into three, namely, PDU 630, 635, 640 that are SN 'x', 'x+1', and 'x+2'. Then, the F-field of the first RLC PDU630 is set to '1,' the pre-defined LI value of '1111 100' is inserted into the first RLC PDU630, showing that the first byte of this first RLC PDU630 data field corresponds to the first byte of RLC SDU625. Since the second RLC PDU635 includes only the intermediate portion without including the start or the end of RLC SDU625, the F-field is set as '0', and the pre-defined LI value '1111 110' is inserted into the second RLC PDU635, showing that the aforementioned RLC PDU635 is an intermediate RLC PDU. In the third RLC SDU640, LI value '0100 011' is contained, which shows that it is the end of RLC SDU625, for example, the 35th byte of a data field, is shown." (Paragraph [0025])

(B) Taking into consideration the wording of the scope of the claim of Invention 1 (Claim 8) and the statement of the "detailed explanation of the invention" of the Patent Description as referred to in (A) above (including each drawing), the court finds that the Patent Description discloses the following. [i] In relation to the mobile communication system supporting packet service (wireless data packet communication system), in order to provide VoIP service, which is a communication technology for

transmitting voice frames generated from a voice codec in the form of voice packets using the Internet Protocol, there was a problem of unnecessary LI fields being inserted, which caused inefficient use of limited wireless resources, when using the RLC framing method in the VoIP communication system based on the conventional technology (operation for processing the RLC SDU received from the higher layer into a size appropriate for transmission through wireless channel). Namely, although the majority of RLC SDUs are not segmented or concatenated and one RLC SDU is comprised of one RLC PDU, if the conventional RLC framing operation is applied, at least the length indicator (LI) field indicating the starting point and the LI field indicating the end point of the SDU are always required. [ii] The purpose of Invention 1 is to provide a device for using radio resources efficiently by reducing the header size of the RLC PDU (protocol data unit of radio link control layer), so as to solve the abovementioned problem of the conventional technology. [iii] Invention 1, as a means to achieve the abovementioned purpose, adopts the structure wherein the RLC PDU data field shows one-bit information that "one complete RLC SDU can be framed into one RLC PDU without segmentation/concatenation/padding" (i.e. the structure of Constituent Feature D which reads "setting the one-bit field to indicate that the PDU completely contains the SDU without segmentation/concatenation/padding in the data field, if the SDU is included in one PDU"), and by doing so, eliminates the need to insert additional information showing segmentation/concatenation/padding of the RLC SDU (i.e. use of the "LI field"). Further, to this end, Invention 1 adopts the structure wherein the LI field set to the pre-defined new LI value indicates that the RLC PDU includes "only an intermediate segment of the RLC SDU which does not include the start or the end of the RLC SDU" (i.e. the structure of Constituent Feature D which reads "a one-bit field setter for setting the one-bit field to indicate the presence of at least one length indicator (LI) field, if the data field of the PDU includes an intermediate segment of the SDU" and the structure of Constituent Feature F which reads "the LI field is set to the pre-defined value indicating the presence in the PDU of an intermediate segment which is neither the first nor the last segment of the SDU"). By adopting these structures, Invention 1 enables the segmentation of the RLC SDU to reduce the header size, and

thereby achieves the effect to enhance efficiency for the use of radio resources.

B. Relationship between Invention 1 and alternative E-bit interpretation

(A) The structure and effect of Constituent Feature D of Invention 1 which reads "setting the one-bit field to indicate that the PDU completely contains the SDU without segmentation/concatenation/padding in the data field, if the SDU is included in one PDU" (A.(B)[iii] above) defines that, under the alternative E-bit interpretation, if the E-bit contained in the first octet is '0,' it shows that the "next field is a complete SDU, which is not segmented, concatenated or padded" and that the LI is not used ((1)B.(A)[ii] and [iii] above). In addition, the structure of Constituent Feature D which reads "a one-bit field setter for setting the one-bit field to indicate the presence of at least one length indicator (LI) field, if the data field of the PDU includes an intermediate segment of the SDU" and the structure of Constituent Feature F which reads "the LI field is set to the pre-defined value indicating the presence in the PDU of an intermediate segment which is neither the first nor the last segment of the SDU" define that, under the alternative E-bit interpretation, if the PDU (RLC PDU) contains a segment of the SDU but does not contain either the first or the last octet of the SDU, the 7-bit "length indicator" with value '111 1110' or the 15-bit "length indicator" with value '111 1111 1111 1110' shall be used ((1)B.(A)[iv] above).

On the basis of these findings, the court finds Invention 1 to be the implementation of the alternative E-bit interpretation.

(B) a. In contrast, the plaintiff relies upon the following arguments to allege that Technical Specification V6.9.0 contains no disclosure of Constituent Feature B: Constituent Feature B of Invention 1 which reads "to determine whether the SDU is completely contained in one PDU" has a meaning "to determine whether the SDU is completely contained in (completely matches) one PDU;" whereas, the statement of Subclause 4.2.1.2.1 of Technical Specification V6.9.0 which reads "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" means that the method as referred to therein aims at determination of the necessity of segmentation of the SDU and whether the size of the SDU is larger than the available space of the

PDU (i.e. the size relation between the SDU and the PDU) and it is therefore different from the method to determine whether the SDU is completely contained in (completely matches) one PDU.

In spite of such allegation by the plaintiff, Subclause 9.2.2.5 of Technical Specification V6.9.0 indicates that, under the "alternative E-bit interpretation," the E-bit '0' contained in the first octet means that "the next field is a complete SDU, which is not segmented, concatenated or padded," whereas the E-bit '1' means that "the next field is a length indicator and an E-bit" (1.(1)B.(A)[ii] above)). These statements can be considered as defining the configuration of the E-bit as mentioned above, depending on the results of determination as to whether the SDU is completely contained in (completely matches) the PDU (i.e. whether the SDU is a complete SDU, which is not segmented, concatenated or padded) as a precondition for such configuration. Therefore, these statements can be considered as disclosing the structure of Constituent Feature B to "determine whether the SDU is completely contained in one protocol data unit (PDU)."

Based on the above, the court finds the abovementioned allegations of the plaintiff to be groundless.

b. In addition, the plaintiff alleges that the structure of Constituent Feature D differs from the alternative E-bit interpretation as set out in Technical Specification V6.9.0, based on the following reasons: "the case where the SDU is included in one PDU" as referred to in Constituent Feature D includes all of the situations [i] where the SDU is padded, [ii] where the SDU is concatenated, and [iii] where the SDU is not segmented, concatenated or padded, and, accordingly, in order to satisfy Constituent Feature D, it is necessary that "the one-bit field is set to indicate that the PDU fully contains the SDU without segmentation/concatenation/padding" even in the case [i] or [ii] above; whereas, according to the alternative E-bit interpretation as set out in Technical Specification V6.9.0, the one-bit field is configured to indicate that the PDU contains a complete SDU only in the case [iii] above.

However, considering the wording of Constituent Feature D which reads "setting the one-bit field to indicate that the PDU completely

contains the SDU without segmentation/concatenation/padding in the data field, if the SDU is included in one PDU," as well as the statement of Paragraph [0022] and Figure 5A of the Patent Description, it is understood that the case where "the SDU is included in one PDU" as referred to in Constituent Feature D only means the case where "the PDU completely contains the SDU without segmentation/concatenation/padding in the data field" (i.e. case [iii] above), and not the case where the concatenated SDU is contained in the PDU or the case where the SDU is incorporated into PDU with padding. Therefore, the plaintiff's allegation is unacceptable as it fails to satisfy the conditions precedent.

(3) Whether Products 2 and 4 fall within the technical scope of Invention 1

A. As already mentioned in (3)B.(A) of "Undisputed facts, etc.," Products 2 and 4 satisfy Constituent Features A and H of Invention 1.

Further, based on the findings that Products 2 and 4 comply with Technical Specification V6.9.0 and have a structure to implement the functions based on the alternative E-bit interpretation ((1)C. above), and that Invention 1 is the implementation of the alternative E-bit interpretation ((2)B.(A) above), the court finds Products 2 and 4 to satisfy Constituent Features B to G of Invention 1.

Based on the above, the court finds Products 2 and 4 to fall within the technical scope of Invention 1, as they satisfy all of the Constituent Features of Invention 1.

B. (A) On the other hand, the plaintiff alleges that Products 2 and 4 do not satisfy Constituent Features B and D, because Constituent Features B and D are not disclosed in Technical Specification V6.9.0.

However, as already mentioned in (2)B.(B) above, the plaintiff's allegation is groundless as it fails to satisfy the conditions precedent.

(B) In addition, the plaintiff alleges that, for Products 2 and 4 to be considered to fall within the technical scope of Invention 1, it is necessary to evidence that these Products implement all functions stated in the Constituent Features of Invention 1 on the real network; however, the alternative E-bit interpretation is only optional to the normal E-bit interpretation, and there is no evidence that the telecommunication service providers' networks are configured to allow the use of the alternative E-bit interpretation, and therefore that the Products do not fall within the technical scope of

Invention 1.

However, as Products 2 and 4 satisfy all of the Constituent Features of Invention 1 and have the structure to implement the alternative E-bit interpretation, they are found to fall within the technical scope of Invention 1, and whether the telecommunication service providers' networks are actually configured to allow the use of the alternative E-bit interpretation is irrelevant to the issue of whether the Products fall within the technical scope of Invention 1.

Therefore, the plaintiff's allegation as mentioned above is unacceptable.

(4) Summary

A. As mentioned above, Products 1 and 3 do not fall within the technical scope of Invention 1; whereas Products 2 and 4 fall within such technical scope. Further, considering the facts that Invention 2 is the invention for the method of data transmission for the device of Invention 1, and as these Inventions have a common structure (the fact not disputed by the parties), the structure of data transmission method of Products 1 and 3 does not fall within the technical scope of Invention 2, but the structure of data transmission method of Products 2 and 4 falls within the technical scope of Invention 2.

B. As a consequence of A. above, the plaintiff's acts of import, sale, etc. of Products 1 and 3 are not regarded to constitute infringement of the Patent Right.

2. Issue 6 (abuse of right)

Next, the court would like to decide on the issue of acceptability of the plaintiff's defense that the defendant's exercise of the right to seek damages based on the Patent Right for Products 2 and 4 constitutes an abuse of right, considering the specific details of the instant case.

(1) Facts on which the decision is premised

Considering the totality of the non-disputed facts, evidence (Exhibits Ko No. 5, No. 6, No. 12, No. 13, No. 27 to No. 29, No. 32 to No. 37, No. 65, No. 85 to No. 87, No. 109 to No. 111, and Exhibits Otsu No. 36, No. 42 and No. 53 (including branch numbers, if any)), and the entire import of oral arguments, the court finds the following facts:

A. ETSI IPR Policy

(A) Outside Europe, the second-generation mobile telecommunication system (2G) specifications were inconsistent depending on the country. Even in the same country, different specifications were used and such

specifications were not universally interoperable. The U.S., Japan and Europe respectively used different systems based on the non-interoperable standards. Against this backdrop, in 1998, international standards bodies, such as ETSI (European Telecommunications Standards Institute), gathered to organize a standard body called 3GPP. The objectives of this 3GPP were the dissemination of the third-generation mobile telecommunication system (3G) for providing data communication service and multimedia service, in addition to conventional voice communication services, as well as the standardization of the related specifications.

(B) ETSI provides IPR Policy as the guidelines for the treatment of IPR (intellectual property rights).

In general, the standardization of technology is expected to have various effects, such as ensuring product interoperability, reduction in production and procurement costs, enhanced efficiency in research and development, and more opportunities for partnership with other companies. In addition, for end-users as well, standardization would have significance, such as more convenient products/services at cheaper product prices and service fees. On the other hand, companies obtain IPRs to exclusively use the technology, so as to prevent competitors from using the same technology and to increase its sales. If certain IPR is determined to be essential for the standardized technology, there is a risk that the owner company of such IPR would take advantage of such standards to threaten competitors attempting to develop products using such technology to refrain from using such IPR, while demanding an unreasonably high royalty rate or other unreasonable licensing conditions, and forcing them to accept such conditions. In such case, competitors are exposed to the risk of loss of the investment for applying standard technology (such as investment for development or capital investment) if the license for such IPR cannot be obtained. Such situations may lead to a significant obstacle to the dissemination of technologies by way of standardization. Based on the foregoing possibilities, it is necessary to strike a balance between the necessity of standardization of technologies and the protection of right of IPR owners in the field of telecommunications.

ETSI IPR Policy aims to meet the foregoing needs (See "Policy Objectives" in Clause 3.1).

(C) ETSI IPR Policy provides as follows:

a. IPR Policy Clause 4.1 provides that each MEMBER shall use its reasonable endeavors, in particular during the development of a STANDARD or TECHNICAL SPECIFICATION where it participates, to inform ETSI of ESSENTIAL IPRs in a timely manner, and that, in particular, a MEMBER submitting a technical proposal for a STANDARD or TECHNICAL SPECIFICATION shall, on a bona fide basis, draw the attention of ETSI to any of that MEMBER's IPR which might be ESSENTIAL if that proposal is adopted. Clause 4.3 provides that the obligations pursuant to Clause 4.1 above are deemed to be fulfilled in respect of all existing and future members of a PATENT FAMILY if ETSI has been informed of a member of this PATENT FAMILY in a timely manner.

b. IPR Policy Clause 6.1 provides that, when an ESSENTIAL IPR relating to a particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an irrevocable undertaking in writing that it is prepared to grant irrevocable licenses on fair, reasonable and non-discriminatory ("FRAND") terms and conditions under such IPR to at least the following extent: [i] MANUFACTURE, including the right to make or have made customized components and sub-systems to the licensee's own design for use in MANUFACTURE, [ii] sell, lease, or otherwise dispose of EQUIPMENT so MANUFACTURED, [iii] repair, use, or operate EQUIPMENT, and [ii] use METHODS. Clause 6.1 also provides that the above undertaking may be made subject to the condition that those who seek licenses agree to reciprocate. Clause 6.2 provides that an undertaking pursuant to Clause 6.1 with regard to a specified member of a PATENT FAMILY shall apply to all existing and future ESSENTIAL IPRs of that PATENT FAMILY unless there is an explicit written exclusion of specified IPRs at the time the undertaking is made. Clause 6.3 provides that, as long as the requested undertaking of the IPR owner is not granted, the COMMITTEE Chairmen should, if appropriate, in consultation with the ETSI Secretariat use their judgment as to whether or not the COMMITTEE should suspend work on the relevant parts of the STANDARD or TECHNICAL SPECIFICATION until the

matter has been resolved and/or submit for approval any relevant STANDARD or TECHNICAL SPECIFICATION.

c. IPR Policy Clause 15, paragraph 6 provides as follows: "ESSENTIAL" as applied to IPR means that it is not possible on technical (but not commercial) grounds, taking into account normal technical practice and the state of the art generally available at the time of standardization, to make, sell, lease, otherwise dispose of, repair, use or operate EQUIPMENT or METHODS which comply with a STANDARD without infringing that IPR. For the avoidance of doubt in exceptional cases where a STANDARD can only be implemented by technical solutions, all of which are infringements of IPRs, all such IPRs shall be considered ESSENTIAL.

d. IPR Policy Clause 12 provides that the POLICY shall be governed by the laws of France.

(D) ETSI Guide on Intellectual Property Rights (IPRs) (Exhibit Ko No. 16), which supplements IPR Policy, provides as follows:

a. ETSI Guide on IPRs Clause 1.1 provides that the main characteristics of the Policy can be simplified as follows:

"• Members are fully entitled to hold and benefit from any IPRs which they may own, including the right to refuse the granting of licenses.

• It is ETSI's objective to create Standards and Technical Specifications that are based on solutions which best meet the technical objectives of ETSI.

• In achieving this objective, ETSI IPR Policy seeks a balance between the needs of standardization for public use in the field of telecommunications and the rights of the owners of IPRs.

• The IPR Policy seeks to reduce the risk that investment in the preparation, adoption and application of standards could be wasted as a result of an Essential IPR for a standard or technical specification being unavailable.

• Therefore, the knowledge of the existence of Essential IPRs is required as early as possible within the standards making process, especially in the case where licenses are not available under fair, reasonable and non-discriminatory (FRAND) terms and conditions.

b. ETSI Guide on IPRs Clause 1.4 provides that the ETSI IPR POLICY defines rights and obligations for ETSI as an Institute, for its Members

and for the Secretariat. Non-Members of ETSI also have certain rights under the Policy but do not have legal obligations. The "table" as referred to in this clause provides as follows:

"Rights of members"

"• to refuse the inclusion of own IPRs in standards (*Clauses 8.1 and 8.2*).

• to be granted licenses on fair, reasonable and non-discriminatory terms and conditions in respect of a standard (*Clause 6.1*)"

"Obligations of Members"

"• to inform ETSI about their own, and other people's Essential IPRs (*Clause 4.1*).

• owners of Essential IPRs are requested to undertake to grant licenses on fair, reasonable and non-discriminatory terms and conditions (*Clause 6.1*)"

"Rights of Third Parties"

"• Third parties have certain RIGHTS under ETSI IPR Policy either as owners of Essential IPRs or as users of ETSI standards or documentation:

・ To be granted licenses on fair, reasonable and non-discriminatory terms and conditions in respect of a standard at least to manufacture, sell, lease, repair, use and operate, (*Clause 6.1*)"

B. Background of the FRAND Declaration

(A) On December 14, 1998, the defendant, as a member of ETSI, made a declaration to ETSI that it was prepared to license its essential IPR relating to the W-CDMA technology, supported by ETSI as the UMTS standard, on "fair, reasonable and non-discriminatory terms and conditions" in accordance with ETSI IPR Policy Clause 6.1 (hereinafter referred to as the "FRAND Terms") (Exhibit Ko No. 5).

(B) On May 4, 2005, the defendant filed a South Korean patent application, which is the base of the priority claim of the Patent Application (Priority Claim No.: 10-2005-0037774).

(C) From May 9 to 13 of 2005, the defendant submitted to the 3GPP Working Group a modification request form in relation to Technical Specification V6.3.0, which contained then-effective standards. In this form, the defendant requested "introduction of the alternative E-bit interpretation to be optionally used in the RLM UM operation mode" and "introduction of

a new pre-defined value for the length indicator in the case where the RLC PDU is neither the first nor the last octet of the RLC SDU." (Exhibit Ko No. 85).

Thereafter, the abovementioned modification request was accepted. In Technical Specification V6.4.0 of 3GPP standards released in June of 2005 (Exhibit Ko No. 87), the alternative E-bit interpretation (specification to be applied only when the higher layer configuration chose the alternative E-bit interpretation for the E-bit after the sequence number (SN), in the case of the data transmission in unacknowledged mode (UM)) was incorporated in the clause relating to "Extension bit (E bit)" (Subclause 9.2.2.5) as the optional standard for the conventional normal E-bit interpretation. Thus, the alternative E-bit interpretation has become one of the standard technologies.

(D) The defendant filed the Patent Application on May 4, 2006, and obtained the registration of establishment of the Patent Right on December 10, 2010.

(E) On August 7, 2007, the defendant, in accordance with ETSI IPR Policy Clause 4.1, submitted to ETSI the document titled "Statement on IPR Information and Licensing Declaration" (Exhibit Ko No. 13), notifying that the IPRs relating to the South Korean patent application number, which served as the basis of the priority claim for the Patent Application, and the international application number of the Patent Application (PCT/KR2006/001699) are or highly likely will be essential IPRs for the UMTS standard (such as TS 25.322). In this document, the defendant made an undertaking that it was prepared to grant an irrevocable license on the conditions complying with IPR Policy Clause 6.1 (FRAND Terms), to the extent to which such IPRs continue to be essential for standards.

This document contained a provision to make such undertaking subject to the condition that prospective licensees agree to reciprocate in accordance with IPR Policy Clause 6.1, and the provision that the formation, validity and enforcement of the FRAND Declaration shall be governed by the laws of France.

C. Developments after the FRAND Declaration

(A) In April 2011, Apple Inc. filed the infringement action against the defendant in the U.S., alleging that the defendant had infringed its IPRs relating to "iPhone" and "iPad" products.

These IPRs alleged by Apple Inc. are not essential for the standards.

(B) After Apple Inc. filed the U.S. action as referred to in (A) above, on April 21, 2011, the defendant, alleging that the plaintiff's act of production, assignment, import, etc. of the Products constitutes direct or indirect infringement of the Patent Right in relation to the Inventions (Article 101, items (iv) and (v) of the Patent Act), filed a petition for an order for provisional disposition to seek an injunction against the plaintiff's production, assignment, import, etc. of the Products (hereinafter referred to as the "Petition for Provisional Disposition"). The right sought to be preserved by this provisional disposition was the right to seek an injunction under Article 102 of the Patent Act.

Thereafter, on September 24, 2012, the defendant partially withdrew the Petition for Provisional Disposition in relation to Products 1 and 3.

(C) a. Apple Inc. requested the defendant in the letter dated April 29, 2011 (Exhibit Ko No. 6-1), to provide clear explanation on [(Omitted)].

b. The defendant, in its letter dated May 13, 2011 (Exhibit Ko No. 6-3), invited Apple Inc. to propose concrete licensing conditions (e.g. the licensed patents, licensing period, availability of cross-licensing of essential patents owned by Apple Inc.), and requested the confidential treatment of future negotiations. Further, the defendant, in its letter dated June 3, 2011 (Exhibit Ko No. 6-6), notified Apple Inc. that it was prepared to grant a FRAND license to Apple Inc., and that execution of the confidentiality agreement was required before the determination of licensing conditions.

Apple Inc. informed the defendant of [(Omitted)] in the letter dated June 22, 2011 (Exhibit Ko No. 32).

Against these backgrounds, Apple Inc. and the defendant entered into a confidentiality agreement on July 20, 2011 (hereinafter referred to as the "Apple-Defendant Confidentiality Agreement")(Exhibit Ko No. 33).

(D) The defendant notified Apple Inc. in its letter dated July 25, 2011 (Exhibit Ko No. 29), that it was prepared to grant a worldwide non-exclusive FRAND license for the UMTS essential patents (including pending patent applications) owned by the defendant at the

royalty rate of "[(Omitted)] _%" (hereinafter referred to as the "Defendant's Licensing Offer") and also that [(Omitted)].

In response to this, in the letter dated August 18, 2011 (Exhibit Ko No. 34-4), Apple Inc. expressed its opinions to the defendant that "[(Omitted)]," and asked the defendant to disclose information, in accordance with the provisions of the Apple-Defendant Confidentiality Agreement, to enable Apple Inc. to determine whether the Defendant's Licensing Offer complied with the FRAND Terms, including the information on whether the royalty rate which the defendant required of Apple Inc. also applies to other licensees and the information on the essential patent license agreements between the defendant and other licensees.

The opinions raised by Apple Inc. in the abovementioned letter were as follows. [i] It has been a common understanding that there is an upper limit to the aggregate royalty rate which any owner of the UMTS standard essential patents may charge. The defendant has alleged in other litigation that such aggregate royalty rate should be "about 5%." However, among the entirety of the patent family (1889) declared as essential for the UMTS standard in all parts of the world, the defendant only owns 103 of them, which represents only 5.5% (according to the survey result of "Fairfield Resources International" of 2009). Considering this figure, the royalty rate which the defendant may charge Apple Inc. would be 0.275% (5%×5.5%) at maximum. [ii] Since the patent declared by the defendant as essential for the UMTS standard only relates to the functions of mobile communication chips, the royalty rate should be based on the price of the component parts, or at least the industry average price of communication devices. However, the royalty rate offered by the defendant is based on [(Omitted)], and such royalty rate far exceeds the figure explained in [i]. Therefore, the royalty rate is unreasonably high.

(E) The plaintiff filed this action on September 16, 2011.

(F) a. The defendant, in its letter dated January 31, 2012 (Exhibit Otsu No. 36), expressed its opinions to Apple Inc. such as [(Omitted)] and requested Apple Inc. to make a good-faith counterproposal if dissatisfied with the Defendant's Licensing Offer.

b. Apple Inc., in its letter dated March 4, 2012 (Exhibit Ko No. 65-1),

made an offer for the execution of a license agreement to the defendant, attaching a draft license agreement, to propose the licensing conditions reflecting the results of analysis of the three Japanese patents which the defendant alleges as essential for the UMTS standard (i.e. Patent Nos. 4642898 (the Patent), 4299270 and 4291328). As stated in the draft agreement (Exhibit Ko No. 65-2), this proposal contained an offer to pay the royalty of [(Omitted)] _%.

In response to this offer, the defendant expressed its opinion to Apple Inc. in its letter dated April 18, 2012 (Exhibit Otsu No. 42), that the abovementioned license agreement offer by Apple Inc. was not a FRAND license agreement offer, because the compensation of [(Omitted)] _% royalty rate was too low and unreasonable, and [(Omitted)].

(G) a. In the letter dated September 1, 2012 (Exhibit Ko No. 109), Apple Inc. informed the defendant that it was prepared to propose a scheme for licensing on FRAND Terms, including cross-licensing proposals, for the entire pool for essential patents for mobile device standard technologies which support 2G, 3G and 4G (LTE).

b. The defendant, in its letter dated September 7, 2012 (Exhibit Ko No. 111), expressed its opinion to Apple Inc. that the letter from Apple Inc. dated September 1, 2012 (Exhibit Ko No. 109) was [(Omitted)], and proposed [(Omitted)].

c. Apple Inc., in its letter dated September 7, 2012 (Exhibit Ko No. 110), made a proposal to the defendant, presenting its basic policy and calculation basis of the royalty rate. In this letter, Apple Inc. proposed the basis of royalty per unit for all feature phones, smart phones and mobile tablet devices applicable between the parties. Based on the assumption that the maximum amount of royalty for the entire pool for essential patents for mobile device standard technologies shall be USD [(Omitted)] per product unit, Apple Inc. proposed the royalty rate which the defendant may charge Apple Inc. to be [(Omitted)] _% (USD[(Omitted)] per product unit), and the royalty rate which Apple Inc. may charge the defendant to be [(Omitted)] _% (USD[(Omitted)] per product unit).

The letter of Apple Inc. (Exhibit Ko No. 110) includes the

following statements: [i] [(Omitted)], as the basic policy of Apple Inc. for calculation of the royalty rate (Translation Page 1, Line 33 to Page 2, Line 4; Page 3, Lines 1 to 8 and Lines 20 and 21), and [ii] [(Omitted)] (Translation Page 4, Lines 28 to 39).

D. Role and nature of the Patent

The Patent is an essential patent for manufacturing and selling of, and using methods in relation to, the products complying with the "alternative E-bit interpretation" as set out in Technical Specification V6.9.0 of the UMTS standard.

(2) Governing laws

In this court case, the plaintiff, a Japanese juridical person, seeks confirmation that the defendant, a South Korean juridical person, is not entitled to claim against the plaintiff for damages on the ground of infringement of the Patent Right, in relation to the plaintiff's acts of import, sale, etc. of the Products. As this court case has an aspect of international litigation, a decision on the governing laws is necessary.

It is understood that the nature of the legal relationship for the right to seek damages on the ground of infringement of the Patent Right is a tort. Therefore, the governing law is decided in accordance with Article 17 of the Act on General Rules for Application of Laws (hereinafter referred to as the "General Rules Act").

As for this case, considering the fact that the Products were imported and sold in Japan, and that the dispute relates to damage caused by infringement of the Patent Right protected under the Patent Act of Japan, it should be understood that the Japanese laws are "the laws of the place where the result of the wrongful act occurred" (Article 17 of the General Rules Act). Accordingly, the laws of Japan apply to this case.

Based on the presumptions as mentioned above, the court hereby decides on the issue of whether the defendant's exercise of the right to seek damages against the plaintiff based on the Patent Right constitutes an abuse of right.

(3) Abuse of right

The plaintiff alleges that, taking into consideration the various circumstances, including that the defendant intentionally breached the obligation to timely disclose the Patent, that the defendant's Petition for Provisional Disposition was a retaliatory countermeasure, that the defendant breached its obligation to enter into a license agreement and good-faith negotiation obligation for the Patent Right declared as essential for the standards under the FRAND Declaration and thereby created the situation of so-called "patent hold-up" (meaning the situation where the prospective

users of the standards are prohibited from using the technologies incorporated in the standards, because of the enforcement of the right for such technologies), and that the series of these acts of the defendant constitute violation of the Antimonopoly Act, the defendant is restricted from exercising the right to seek damages against the plaintiff based on the Patent Right, as such exercise of right constitutes an abuse of right (Article 1, paragraph (3) of the Civil Code).

A.(A) The Civil Code of Japan has not expressly provided for the parties' obligations during the preparatory process for the execution of contracts; however, it is appropriate to consider that, in certain cases, parties which entered into the negotiation process are bound by an obligation under the good faith principle to mutually provide material information and to conduct the negotiation in a faithful manner.

Based on the "Facts on which the decision is premised" as mentioned above, the following facts can be found. [i] On August 7, 2007, the defendant, as a member of ETSI (European Telecommunications Standards Institute), which is the standardization body that established 3GPP, notified ETSI in the document of Exhibit Ko No. 13 that the IPR (intellectual property rights) pertaining to the international application number of the Patent Application is essential for the UMTS standard (3GPP standards), and made a declaration that it was prepared to grant an irrevocable license for such essential patent in accordance with the FRAND (i.e. fair, reasonable and non-discriminatory terms and conditions) licensing terms and conditions complying with ETSI IPR Policy Clause 6.1 (FRAND Declaration). [ii] ETSI Guide on IPRs Clause 1.4 provides for the members' obligation to "undertake to grant licenses on fair, reasonable and non-discriminatory terms and conditions" (IPR Policy Clause 6.1), the members' right "to be granted licenses on fair, reasonable and non-discriminatory terms and conditions in respect of a standard" (IPR Policy Clause 6.1), and third parties' right "to be granted licenses on fair, reasonable and non-discriminatory terms and conditions in respect of a standard at least to manufacture, sell, lease, repair, use and operate" (IPR Policy Clause 6.1).

Considering [i] and [ii] above, as well as the entire import of oral arguments, the court finds that, pursuant to IPR Policy Clause 6.1 and ETSI Guide on IPRs Clause 1.4, if any party, whether an ETSI member or not, seeks a FRAND license for the Patent declared by the defendant as essential for the UMTS standard under the FRAND Declaration, the defendant has an obligation to hold a faithful negotiation with such party for the execution of a FRAND

license agreement for the use of the UMTS standard.

Then, given that the defendant received a specific offer to obtain a FRAND license for the Patent Right, the defendant and the offeror can be considered as having entered into the preparatory process for a FRAND license agreement. Therefore, it is appropriate to consider that the parties are bound by an obligation under the good faith to mutually provide material information and to conduct the negotiation in a faithful manner.

And, Apple Inc. is considered to have made a concrete offer to the defendant expressing its desire to obtain a FRAND license, at the latest as of the time when Apple Inc., in its letter dated March 4, 2012 (Exhibit Ko No. 65-1), made an offer to the defendant for a FRAND license agreement for the three Japanese patents, including the Patent, declared by the defendant as essential for the UMTS standard (See (1)C.(F)b. above). Therefore, it is appropriate to consider that Apple Inc. and the defendant have entered into the preparatory process for the execution of a contract and have become bound by an obligation under the good faith principle as mentioned above.

(B) In this regard, the defendant alleges that it has no good-faith negotiation obligation under the FRAND Declaration, based on the following reasons. [i] From the standpoint of the Japanese laws, it should be construed that, as a precondition for the good-faith negotiation obligation, a prospective licensee needs to make a "firm offer to receive a license" showing that such prospective licensee seriously wishes to obtain a license, without challenging the validity of the patent to be licensed. [ii] The offer dated March 4, 2012, from Apple Inc. to the defendant cannot be regarded as a "firm offer to receive a license," as Apple Inc. challenged the validity of the defendant's patent and questioned whether the products in question conflicts with the defendant's patent. [iii] In addition, in the abovementioned offer, an unreasonably low royalty rate of "[(Omitted)] _%" was proposed. This shows that Apple Inc. did not have a faithful intention to obtain a license and only made a perfunctory offer, anticipating that the negotiation would fail. Therefore, such offer in no way constitutes a "firm offer to receive a license."

However, the court finds the defendant's such allegations to be groundless due to the following reasons:

a. Points [i] and [ii] above

If an offer to obtain a FRAND license for the patent declared as essential for the standards under the FRAND Declaration is made, the party which

made the FRAND Declaration and the prospective licensee have the obligation under the good-faith principle as mentioned in (A) above even if the prospective licensee reserved its right to challenge the validity of the licensed patent, as long as the contents of such offer are concrete enough and presuppose the validity of the licensed patent, and the prospective licensee's intention to obtain a FRAND license is clear.

As for this case, the offer made by Apple Inc. dated March 4, 2012 (Exhibit Ko No. 65-1), is a concrete offer, specifying the three Japanese patents including the Patent as the licensed patents, and attaching a draft license agreement containing detailed licensing conditions, including the royalty rate (Exhibit Ko No. 65-2). The contents of this offer clearly indicate the intention of Apple Inc. to obtain a FRAND license. Nevertheless, the draft agreement as mentioned above includes [(Omitted)] in [(Omitted)] (Translation, Page 2, Lines 2 to 4), which indicates that Apple Inc. reserved its right to challenge the validity of the Patent to be licensed. However, the terms of this draft provision themselves are not particularly unreasonable, and in addition, the plaintiff challenged the validity of the Patent as a defense to the defendant's Petition for Provisional Disposition, in which the defendant sought an injunction against import, assignment, etc. of the Products by the plaintiff (the subsidiary company of Apple Inc.) based on the Patent Right, and, further, the case for this provisional disposition was still pending before the court at the time when Apple Inc. made the aforementioned offer (from the entire import of oral arguments). Considering all of these circumstances, it is not appropriate to consider that Apple Inc. had no intention to obtain a FRAND license merely because it reserved the right to challenge the validity of the Patent in the offer.

Therefore, the court finds the defendant's allegations [i] and [ii] to be groundless.

b. Point [iii] above

The royalty rate applicable in Japan as proposed by Apple Inc. in its offer dated March 4, 2012, was [(Omitted)] _%. It cannot be judged only from the figure of the royalty rate that such rate is unreasonably low and does not satisfy the FRAND Terms, or that Apple Inc. had no intention to obtain a FRAND license ("Facts on which the decision is premised" as mentioned above indicates that the aforementioned royalty rate took into consideration

the percentage of patents owned by the defendant to the entire patent family declared as essential for the UMTS standard in all parts of the world ((1)C.(E) above), as indicated by Apple Inc. in its letter dated August 18, 2011 (Exhibit Ko No. 34-4)). The court cannot find that Apple Inc. had no intention to enter into a license agreement under any condition different from the royalty rate as mentioned above.

Therefore, the court finds the defendant's allegation [iii] to be groundless.

B. Next, the court hereby discusses the issue of whether the defendant breached the obligation under the good-faith principle as mentioned in A.(A) above.

Considering the "Facts on which the decision is premised," as well as the entire import of oral arguments, the court finds the following facts. [i] The defendant, after executing the confidentiality agreement dated July 20, 2011 (Apple-Defendant Confidentiality Agreement), notified Apple Inc. in its letter dated July 25, 2011 (Exhibit Ko No. 29), that it was prepared to grant a world-wide, non-exclusive FRAND license for the defendant's patent essential for the UMTS standard (including pending patent applications) at the royalty rate of "[(Omitted)] _%" (hereinafter referred to as the "Defendant's Licensing Offer"). [(Omitted)]. However, the defendant did not explain the calculation basis of the "[(Omitted)] _%" of the licensing terms and conditions. [ii] In the letter dated August 18, 2011 (Exhibit Ko No. 34-4), Apple Inc. expressed its opinions to the defendant about the Defendant's Licensing Offer that the royalty rate offered by the defendant was unreasonably high and not complying with the FRAND Terms, because, among the entirety of the patent family (1889) declared as essential for the UMTS standard in all parts of the world, the defendant only owns 103 of them, which represents only 5.5% (according to the survey result of "Fairfield Resources International"), and considering this, the royalty rate which the defendant may charge Apple Inc. would be 0.275% (5%×5.5%) at maximum. In the same letter, Apple Inc. asked the defendant to disclose information, in accordance with the provisions of the Apple-Defendant Confidentiality Agreement, to enable Apple Inc. to determine whether the Defendant's Licensing Offer was consistent with the FRAND Terms, including information on whether the royalty rate which the defendant required of Apple Inc. also applies to other licensees and information on the essential patent license agreements between the defendant and other licensees. [iii] The defendant, in its letter dated January 31, 2012 (Exhibit Otsu No. 36), expressed its opinions to Apple Inc. such as [(Omitted)] and requested Apple Inc. to make

a good-faith counterproposal if dissatisfied with the Defendant's Licensing Offer. However, the defendant did not provide the calculation basis of the royalty rate for the Defendant's Licensing Offer. [iv] Apple Inc., in its letter dated March 4, 2012 (Exhibit Ko No. 65-1), made an offer to the defendant for a FRAND license agreement for the three Japanese patents which the defendant alleges as essential for the UMTS standard, including the Patent, proposing to pay a royalty rate of [(Omitted)] _%. [v] The defendant expressed its opinion to Apple Inc. in its letter dated April 18, 2012 (Exhibit Otsu No. 42), that the offer for a license agreement by Apple Inc. mentioned in [iv] above was not a license offer on the FRAND Terms, because the compensation for each of the three Japanese patents is unreasonable because the [(Omitted)] _% royalty rate is too low, and [(Omitted)]. [vi] In the letter dated September 1, 2012 (Exhibit Ko No. 109), Apple Inc. informed the defendant that it was prepared to propose a scheme for licensing on FRAND Terms, including cross-licensing proposals, for the entire pool for essential patents for mobile device standard technologies which support 2G, 3G and 4G (LTE). Further, Apple Inc., in its letter dated September 7, 2012 (Exhibit Ko No. 110), made a proposal to the defendant, presenting its basic policy and calculation basis of the royalty rate. In this letter, Apple Inc. proposed the basis of royalty per unit for all feature phones, smart phones and mobile tablet devices applicable between the parties. Based on the assumption that the maximum amount of royalty for the entire pool for essential patents for mobile device standard technologies shall be USD [(Omitted)] per product unit, Apple Inc. proposed the royalty rate which the defendant may charge Apple Inc. to be [(Omitted)] _% (USD[(Omitted)] per product unit), and the royalty rate which Apple Inc. may charge the defendant to be [(Omitted)] _% (USD[(Omitted)] per product unit). [vii] The defendant, in its letter dated September 7, 2012 (Exhibit Ko No. 111), expressed its opinion that the letter from Apple Inc. referred to in [vi] above was [(Omitted)], and proposed [(Omitted)].

In addition to the aforementioned facts found by the court, considering that the evidence does not clearly indicate the defendant's response to the draft license agreement that Apple Inc. proposed in its letter dated September 7, 2012, the following facts are found. [i] In the process of licensing negotiation between Apple Inc. and the defendant in relation to the Patent Right, the defendant made an offer to Apple Inc. in its letter dated July 25, 2011, to grant a world-wide, non-exclusive license for the defendant's patent essential for the

UMTS standard (including pending patent applications) at the royalty rate of "[(Omitted)] _%" as a FRAND Term ("Defendant's Licensing Offer"). However, the defendant did not explain the calculation basis of such licensing conditions. Thereafter, Apple Inc. asked the defendant to disclose information to enable Apple Inc. to determine whether the Defendant's Licensing Offer was consistent with the FRAND Terms, such as information to confirm whether the royalty rate which the defendant required of Apple Inc. also applies to other licensees, and information on the essential patent license agreements between the defendant and other licensees. In spite of such request, the defendant did not explain the calculation basis of such licensing conditions even at the time of September 7, 2012. [ii] Apple Inc. made an offer for a FRAND license agreement for the three Japanese patents which the defendant declared as essential for the UMTS standard, including the Patent, proposing to pay a royalty rate of [(Omitted)] _% in its letter dated March 4, 2012, and further made a concrete licensing proposal, including cross-licensing, to the defendant, presenting the basic policy and criteria for calculation of the royalty rate of Apple Inc. in its letter dated September 7, 2012. In spite of this, the defendant only requested Apple Inc. to make a concrete counterproposal if dissatisfied with the Defendant's Licensing Offer, without making any concrete counterproposal for the licensing conditions presented by Apple Inc.

Based on the analysis of the facts [i] and [ii] above, the court finds that the defendant did not provide any information necessary for Apple Inc. to determine whether the Defendant's Licensing Offer or offer of Apple, Inc. was complying with the FRAND Terms (e.g. information on the essential patent license agreement between the defendant and other licensees) in spite of repeated requests from Apple Inc., and did not suggest any counterproposal for the licensing conditions presented by Apple Inc. Therefore, it is appropriate to consider that the defendant breached its obligation under the good faith principle to provide material information to Apple Inc. and to conduct the negotiation in a faithful manner in relation to the execution of a FRAND license agreement for the Patent declared as essential for the UMTS standard.

The defendant's allegations which contravene the aforementioned findings are unacceptable.

C. As discussed above, considering the totality [i] that the defendant breached its obligation under the good faith principle to provide material information to Apple Inc., the plaintiff's parent company, and to conduct the negotiation in a

faithful manner in the preparatory process for the execution for a FRAND license agreement on the FRAND Terms for the Patent declared as essential for the standards under the FRAND Declaration; [ii] that, under such circumstances, as of the date of conclusion of the oral argument for this court action, the defendant still maintains the Petition for Provisional Disposition seeking an injunction against import, sale, etc. of Products 2 and 4 based on the Patent Right; [iii] that the defendant disclosed the Patent (international application number of the Patent Application) to ETSI only about two years after the technology pertaining to the Patent (alternative E-bit interpretation) was adopted as the standard technology in accordance with the defendant's modification request in relation to 3GPP specifications; and [iv] other circumstances relating to the process of licensing negotiations for the Patent Right between Apple Inc. and the defendant, the court finds that the defendant's exercise of the right to seek damages against the plaintiff based on the Patent Right for Products 2 and 4, without fulfilling its obligation under the good faith principle as mentioned above, is not allowed, as such exercise of the right constitutes an abuse of right.

3. Conclusion

Based on the foregoing, the court upholds the plaintiff's claim as it is reasonable, and renders the judgment in the form of the main text.

Tokyo District Court, 46th Civil Division

Presiding Judge:	Ichiro Otaka
Judge:	Aya Takahashi
Judge:	Masafumi Ueda

(Attachment)

List of Products

1. "iPhone 3GS"
2. "iPhone 4"
3. "iPad Wi-Fi+3G model"
4. "iPad 2 Wi-Fi+3G model"

(Attachment 1)

3GPP TS25.322 V6.9.0(Summary)

1 「4.2.1.2 Unacknowledged mode (UM) RLC entities

Figure 4.3 below shows the model of two unacknowledged mode peer RLC entities when duplicate avoidance and reordering is not configured.」

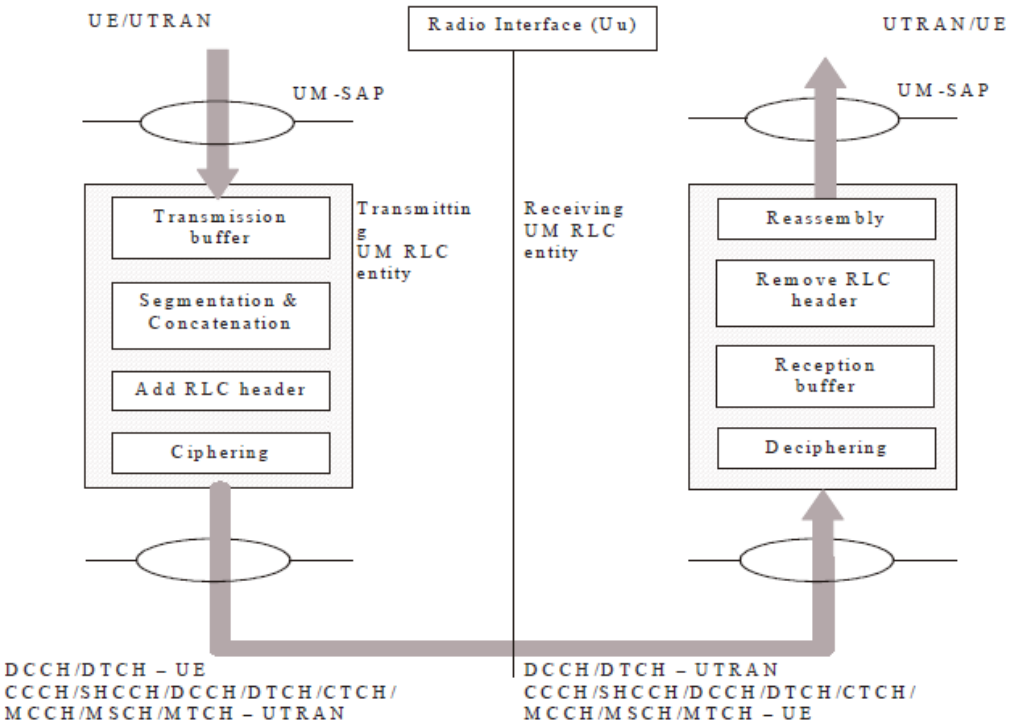


Figure 4.3a:Model of two unacknowledged mode peer entiti configured for use with duplicate avoidance and reordering」

2 「4.2.1.2.1 Transmitting UM RLC entity

The transmitting UM-RLC entity receives RLC SDUs from upper layers through the UM-SAP.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.」

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". 」

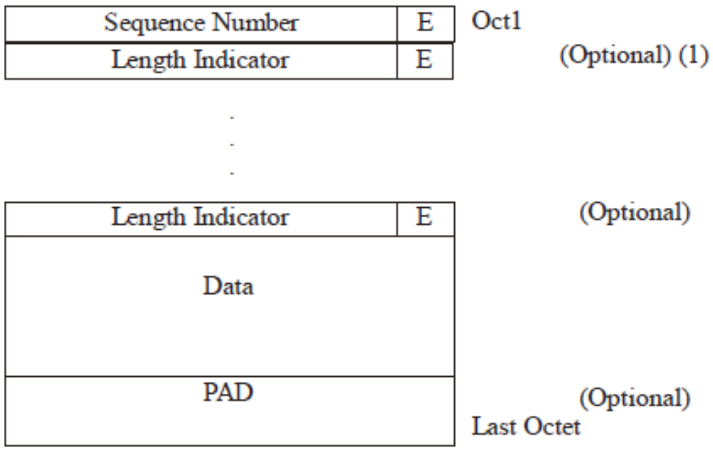


Figure 9.2: UMD PDU

4 「9.2.2.5 Extension bit(E)

Length:1bit.

The interpretation of this bit depends on RLC mode and higher layer configuration:

- In the UMD PDU, the "Extension bit" in the first octet has either the normal E-bit interpretation or the alternative E-bit interpretation depending on higher layer configuration. The "Extension bit" in all the other octects always has the normal E-bit interpretation.
- In the AMD PDU, the "Extension bit" always has the normal E-bit interpretation.

Normal E-bit interpretation:

Bit	Description
0	The next field is data, piggybacked STATUS PDU or padding
1	The next field is Length Indicator and E bit

Alternative E-bit interpretation:

Bit	Description
0	The next field is a complete SDU, which is not segmented, concatenated or padded.
1	The next field is Length Indicator and E bit

5 (1) 「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.」

(2) 「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.

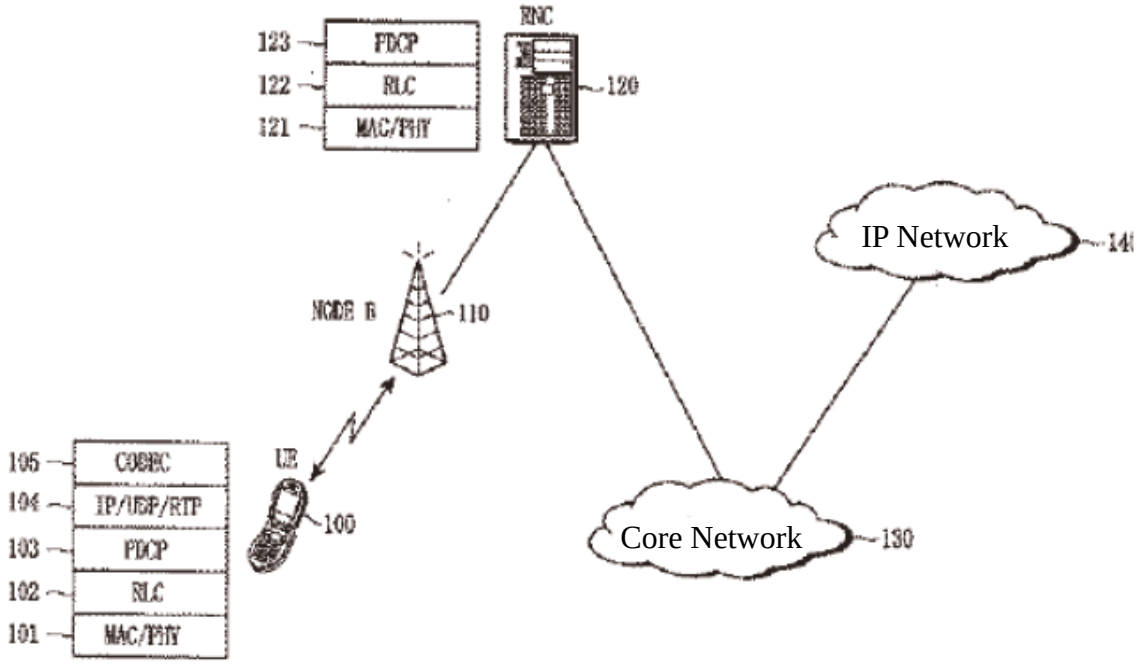
-if a 15-bit "Length Indicator" is used:

- the "Length Indicator" with value "111 1111 1111 1110" shall be used.」

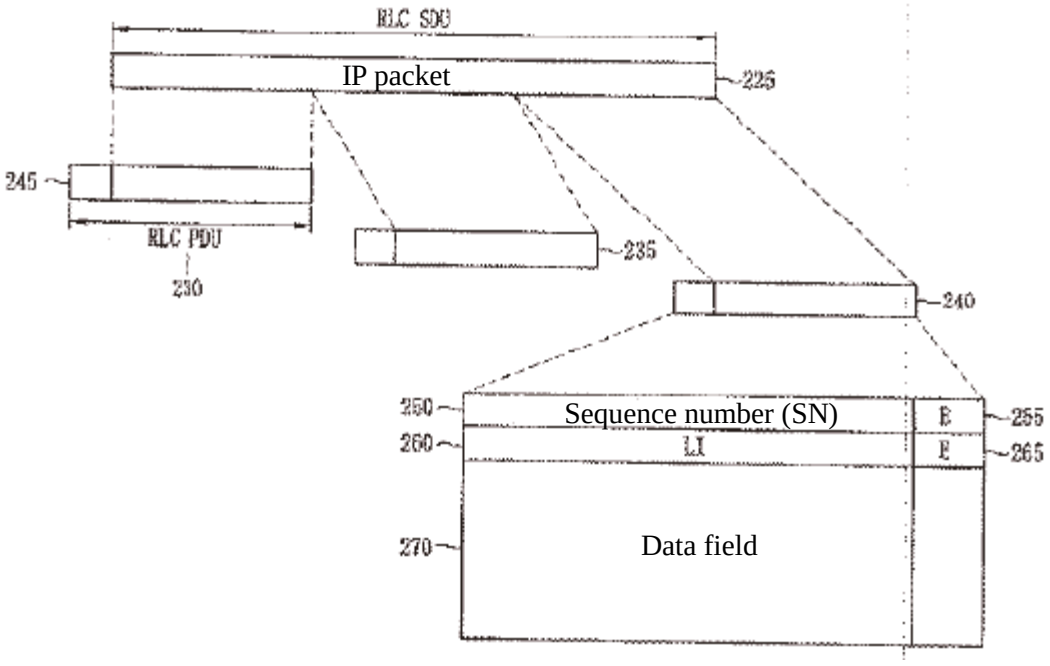
(Attachment)

Figures Attached to the Patent Description

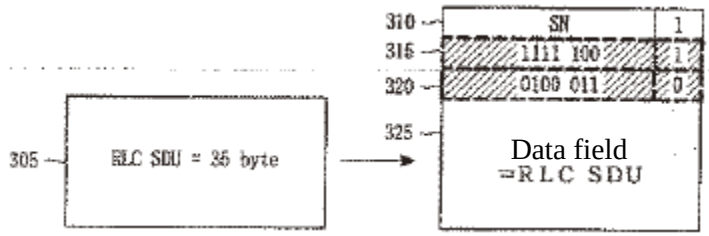
[Figure 1]



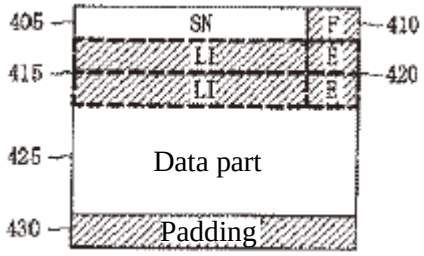
[Figure 2C]



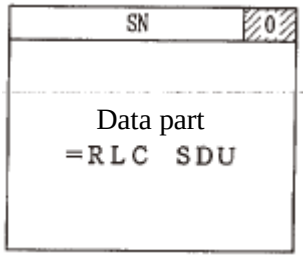
[Figure 3]



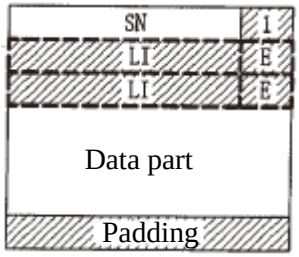
[Figure 4]



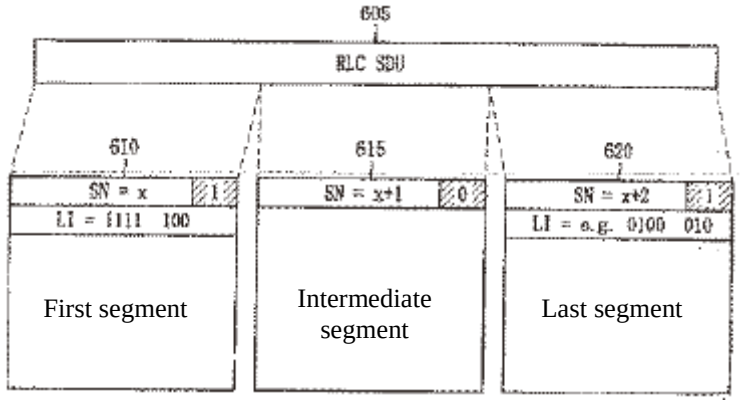
[Figure 5A]



[Figure 5B]



[Figure 6A]



[Figure 6B]