

Exhibit 21

Filed Manually

EXHIBIT 22



Subject: on: the sony vs apple competition

Date: Wed, 08 Mar 2006 02:46:30 +0000

From: "Richard Howarth" <howarth@apple.com>

To: "Jonathan Ive" <ive@apple.com>

Message-ID: <7A6182E5-4376-471D-B232-5DA75826BD17@apple.com>

hi Jony,

i'm worried about the extrudo shape we're using for P2 etc. looking at what shin's doing with the sony-style chappy, he's able to achieve a much smaller-looking product with a much nicer shape to have next to your ear and in your pocket. also note that it's only half a step away from where we were with the metal band, black insides before we changed to the 3-equal-stripped sandwich which i show below. It looks a lot smaller to me and it makes the X a load narrower, which is something i've been going on about for ages because i'm worried that the round sides are so inefficient. I agree that the one we did below isn't right, and it looks old next to the extrusion, but it does have the size and shape/comfort benefits i mentioned before and these are hard to ignore with a product we have to carry and use all day, every day. i'm really worried that we're making something that is going to look and be too wide.

i'm also worried that if we start cutting volume buttons on the side, then it removes some of the purity of the extrusion idea and seems like the wrong shape for the job. We can only add so much too it before it becomes a style/ a shape, rather than the most efficient construction method and that would be bad.

r.

----- end message -----









EXHIBIT 23

ETSI Board#48
Sophia Antipolis
1-2 September 2004

ETSI/B48(04)16
 S. Tronchon
 Submission date: 04 Aug 2004
 page 1 of 24

DEFENDANT'S EXHIBIT
NO. 613.001

United States District Court
 Northern District of California
 No. 11-CV-01846-LHK (PSG)
Apple v. Samsung

Date Admitted: _____ By: _____

Source: ETSI Director-General

Title: ETSI Guide on IPRs

Agenda item: 4.1

Relevant Strategy: Standards

Document for:

| | |
|-------------|---|
| Decision | X |
| Discussion | |
| Information | |

Late submission

1 Decision/action requested

The Board is asked to approve the attached ETSI Guide on IPRs.

2 References

| | |
|-------------------|--|
| ETSI/GA40(02)13 | Creation of a GA ad hoc group on ETSI's IPR Policy |
| ETSI/GA42(03)20r1 | Report of the GA ad hoc group on ETSI's IPR Policy operation |
| ETSI/GA43(04)25 | Proposal to re-balance IPR ad hoc recommendations |
| ETSI/B47(04)17 | Implementation of IPR Recommendations Decision about separate Membership Guide |
| ETSI/B4704)18 | Implementation of IPR Recommendations-Decision about separate Membership Guide |
| ETSI/B47(04)22r1 | Status of implementation of the recommendations of the GA ad hoc IPR group on ETSI's IPR Policy operation (v3) |
| ETSI/B47(04)23 | Revision to the existing Technical Body (TB) Chairman's Guide on IPRs |
| ETSI/B47(04)40 | Comments received from Microelectrónica Española S.A re ETSI Members' Guide on IPRs |
| ETSI/B47(04)41 | Comments received from Microelectrónica Española S.A re the Technical Body (TB) Chairman's Guide on IPRs |

| | |
|-----------------|--|
| D-B47/12 | <p>The Board:</p> <ul style="list-style-type: none"> agreed that there should be only one IPR guide, now called "The ETSI IPR Guide", with each major section containing sub-sections addressing specific audiences, e.g. TB Chairmen, Members, Secretariat, etc. (IPR ahg Rec.23). agreed that the new text to be included should remain as close as possible to the text agreed in the IPR ahg & GA#42 but accepted that some minor adjustments maybe needed to "glue" the text together. supported the production of this new Guide to be put together by a drafting party (23 June 2004) for subsequent circulation to the IPR ahg email list for discussion. the new Guide is to be approved at B#48. the creation of an extract from this guide listing the information needed by TB Chairmen (only), |
|-----------------|--|

ETSI/B48(04)16

page 2 of 24

3 Rationale

The drafting group created under this Decision **D-B47/12** was composed of:

Karl Heinz Rosenbrock (convenor)
Alberto Perez Lafuente
Andy Wilton
Hans Van Der Veer
Harry Ibbotson
John Phillips
Julian Pritchard
Michael Breidhardt
Stéphane Tronchon

A physical meeting was held on 23 June 2004 and revised draft (v4) was produced. During subsequent email discussions this draft was progressed through two more versions (v5 & v6).

The clean version attached to this document represents the best compromise which can be achieved between the different factions. The Board is requested to approve this version without entering into a detailed discussion on the actual content and wording.

4 Consequences and implications

With the attached Guide on IPRs, Recommendations 2, 4, 6, 7, 8, 9, 10,14, 15, 16, 17, 18, 24 and 25 from GA IPR ad hoc group are now discharged.

The attached ETSI Guide on IPRs will replace the exiting Technical Body Chairman's Guide on IPRs (<http://www.etsi.org/legal/documents/IPR-Guide-V6.0.pdf>), which will be withdrawn.

The Board is asked to approve the attached ETSI Guide on IPRs.

ETSI/B48(04)16
page 3 of 24

ETSI Guide on Intellectual Property Rights (IPRs)

(as approved by Board #xx on xx September 2004)

ETSI/B48(04)16

page 4 of 24

Contents

Background.....5

Foreword.....5

1 The ETSI IPR Policy.....5

 1.1 What is the Purpose of the IPR Policy ?.....5

 1.2 Where can I find the ETSI IPR Policy ?.....6

 1.3 Terminology6

 1.4 Rights and obligations deriving from the IPR Policy6

 1.5 "Essential" IPRs8

2 Importance of timely disclosure of Essential IPRs8

 2.1 Members Duties9

 2.1.1 Responding to Calls for IPRs performed in Technical Body meetings9

 2.1.2 Use the ETSI IPR Information Statement and Licensing Declaration forms.....9

 2.1.3 Update and complete the ETSI IPR Information Statement form9

 2.1.4 Copyrights in ETSI Deliverables.....9

 2.2 Members do NOT have a duty to:.....9

 2.3 Technical Body Chairmen's duties.....10

 2.3.1 Define scope statements for work items10

 2.3.2 Make call for IPRs in Technical Bodies meetings10

 2.3.3 "When and How ?.....10

 2.3.4 Record and report information on IPRs11

 2.3.5 Copyrights in ETSI Deliverables.....12

 2.3.6 Confidential information.....12

 2.4 ETSI Secretariat Duties12

 2.4.1 Information on Essential IPRs in ETSI Deliverables12

 2.4.2 Initiate a procedure of Clause 8 when no licensing declaration can be obtained.....12

 2.4.3 Non response by an IPR owner13

 2.4.4 Redrafting of ETSI Deliverables13

 2.4.5 Disclose copyright identified in ETSI documentation13

 2.4.6 Acknowledgement of third parties copyright.....13

 2.4.7 Reporting of a substantial IPR problem.....14

 2.4.8 Maintenance of information on Essential IPRs14

3 Information on Essential IPRs by ETSI14

 3.1 Where to find information on essential IPRs.....14

 3.1.1 ETSI Special Report 000 314.....14

 3.1.2 The ETSI IPR Online Database14

 3.1.3 Requests to the ETSI Secretariat.....15

 3.2 What type of information and procedures for updates.....15

 3.2.1 Assessment of IPR rights15

4 Other ETSI IPR Policy matters.....15

 4.1 Responsibility for specific licensing terms15

 4.2 Dispute Resolution16

 4.3 Notice on the use of NDAs in IPR negotiations16

 4.4 Financial contingency16

Annex 1 ETSI Intellectual Property Rights Policy17

Annex 2 ETSI IPR Information Statement and Licensing Forms22

Annex 3 Check list of the Chairmen's obligations in respect of the notification and disclosure of IPRs 24

ETSI/B48(04)16

page 5 of 24

Background

The ETSI IPR Policy was adopted by the 21st General Assembly on 23 November 1994 and incorporated in the ETSI Directives as Annex 6 to the ETSI Rules of Procedure.

At a later stage a Technical Body Chairman's Guide on IPRs had been written to help Chairmen and others involved in ETSI's standardization activities to understand and implement the Institute's IPR Policy. That Chairman's Guide on IPR had not been endorsed by the General Assembly or the Board and therefore did not have the same official status as the ETSI Statutes, the Rules of Procedure or the Technical Working procedures. The Technical Body Chairman's Guide on IPRs is now replaced by the present ETSI Guide on IPRs

In 2002 the ETSI General Assembly #40 identified the need to review the ETSI IPR Policy with a view to addressing and rectifying any uncertainties on the operation of this policy and on any legal rules and obligations on the membership in order to avoid an incorrect implementation of the ETSI IPR policy and in order to avoid anti-competitive actions. An ad-hoc IPR group, with a clear mandate to review the implementation of the IPR Policy but not to change the Policy itself, was consequently created and 30 recommendations on the operation of the ETSI IPR Policy were approved by the ETSI General Assembly #42. The present ETSI Guide on IPRs embodies most of these recommendations.

Foreword

Intellectual property plays an important role in standardization, especially in the telecommunications and electronic communications sector. In that context, the likelihood of having Intellectual Property Rights (IPRs) incorporated into ETSI Deliverables became critical after a few years of existence of ETSI. This tension (proprietary nature of IPRs versus wide dissemination of standards) was minimized with the adoption by the ETSI Membership of the ETSI IPR Policy as found in Annex 6 to the ETSI Rules of Procedure.

In the preparation of standards, IPR issues may arise. It is important for all parties involved in the ETSI standards-making process to be aware of their responsibilities and that there is good co-operation between all parties.

This guide is intended to help ETSI Members and any other party involved in ETSI's standardization activities (e.g. Members, TB Chairmen, Secretariat, etc.) to understand and implement the Institute's IPR Policy.

This guide provides explanatory information on how to handle IPR matters in ETSI and does not replace the ETSI IPR Policy which takes precedence in all cases.

This guide has been endorsed by the Board but does not have the same official status as the Statutes, the Rules of Procedure or the Technical Working Procedures.

Should you (the reader) have any difficulty with provisions of this guide or with any practical aspects of the Policy which are not answered by this guide, please do not hesitate to contact the ETSI Secretariat (hereafter called simply "Secretariat").

1 The ETSI IPR Policy**1.1 What is the Purpose of the IPR Policy ?**

The purpose of the ETSI IPR Policy is to facilitate the standards making process within ETSI. In complying with the Policy the Technical Bodies should not become involved in legal discussion on IPR matters. 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.

ETSI/B48(04)16

page 6 of 24

- Standards and Technical Specifications shall be based on solutions which best meet the technical objectives of ETSI.
- 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.
- 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.

The ETSI IPR Policy defines the rights and obligations for ETSI as an Institute, for its Members and for the Secretariat.

The Policy is intended to ensure that IPRs are identified in sufficient time to avoid wasting effort on the elaboration of a Deliverable which could subsequently be blocked by an Essential IPR.

1.2 Where can I find the ETSI IPR Policy ?

The ETSI IPR Policy is part of the ETSI Directives and can be found in Annex 6 of the ETSI Rules of Procedures (<http://www.etsi.org/legal/home.htm>). This means that the rights and obligations specified by the IPR Policy are an integral part of the ETSI Rules of Procedure and are binding on all ETSI Members.

You can also find a copy of the Policy at Annex 1.

1.3 Terminology

The ETSI IPR Policy defines a number of terms; those used in this guide correspond to those used in the Policy.

In the ETSI IPR Policy:

an IPR includes:

- COPYRIGHT
- PATENT
- UTILITY MODEL
- REGISTERED DESIGN
- ... and applications therefor.

an IPR does not include:

- TRADEMARKS
- TRADE SECRETS
- CONFIDENTIAL INFORMATION
- RIGHTS RELATING TO GET-UP (packaging)

1.4 Rights and obligations deriving from the IPR Policy

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 following table intends to give a clear overview of the most important rights and obligations of the Institute, the Members, the Secretariat and the rights of third parties as specified under the ETSI IPR Policy. *All references below which are in italics relate to the ETSI IPR Policy.*

ETSI/B48(04)16

page 7 of 24

| | Obligations | Rights |
|----------------------|--|--|
| Institute | <ul style="list-style-type: none"> • to inform users of standards about Essential IPRs declared and ensure that this information is publicly available (<i>clause 7</i>). • to perform IPR searches if the EC and/or EFTA so require and reasonable expenses are met (<i>clause 6.2</i>). • to grant licenses on ETSI-owned IPRs (other than copyright) on fair, reasonable and non-discriminatory terms and conditions to third parties, free of charge to ETSI Members (<i>clause 9.3</i>). • to respect confidential information within a Technical Body until publication of the relevant Deliverable. • to include the information in a Standard (<i>clause 10</i>). | |
| Members | <ul style="list-style-type: none"> • to inform ETSI about their own, and other people's Essential IPRs (<i>clause 4.1</i>). • owners of Essential IPRs are requested to undertake to grant licenses on fair, reasonable and non-discriminatory terms and conditions (<i>clause 6.1</i>). • owners of Essential IPRs who refuse to grant license when no alternative is available, are requested to reconsider their position and provide the Director-General with a justification (<i>clause 8.1</i>). • to abstain from claiming copyright on standards documentation (text, graphics etc., of the standard itself) on behalf of the member itself and its employees (<i>clause 9.1</i>). | <ul style="list-style-type: none"> • no obligation to conduct IPR searches (<i>clause 4.2</i>). • to refuse the inclusion of own IPRs in Standards (<i>clauses 8.1 and 8.2</i>). • to be granted licenses on fair, reasonable and non-discriminatory terms and conditions in respect of a standard (<i>clause 6.1</i>). • to make copies of standards documentation (<i>clause 11</i>) free of charge.. • to use IPRs owned by ETSI free of charge (<i>clause 9.3</i>). • to have confidential information within a Technical Body respected until publication of the relevant Deliverable (<i>clause 10</i>). |
| Secretariat | <ul style="list-style-type: none"> • the Director-General to contact owners of Essential IPRs having refused to grant licenses on behalf of ETSI (<i>clauses 8.1 and 8.2</i>). • the Director-General to request the owner of an Essential IPR to give within three months an undertaking in writing that it is prepared to grant licenses (<i>clause 6.1</i>). | |
| Third Parties | <ul style="list-style-type: none"> • the ETSI IPR Policy is only binding on ETSI Members. Third parties do not have any legal OBLIGATIONS under the Policy. • when ETSI is informed that an IPR belonging to a non-Member could be essential for a standard, the non-Member owner is also requested to | <ul style="list-style-type: none"> • Third parties have certain RIGHTS under the ETSI IPR Policy either as owners of Essential IPRs or as users of ETSI standards or documentation: <ul style="list-style-type: none"> ○ to refuse the inclusion of their own Essential IPRs in ETSI Deliverables (<i>clause 8.1 and 8.2</i>). ○ To be granted licenses on fair, |

ETSI/B48(04)16

page 8 of 24

| | | |
|--|---|---|
| | <p>undertake to grant licenses on fair, reasonable and non-discriminatory terms and conditions (<i>clause 6.1</i>).</p> | <p>reasonable and non-discriminatory terms and conditions in respect of a standard at least to manufacture, sell, lease, repair, use and operate, (<i>clause 6.1</i>) to be granted licenses for ETSI owned IPRs (other than copyright in the Standard documentation) (<i>clause 9.3</i>) on fair, reasonable and non-discriminatory terms and conditions.</p> <ul style="list-style-type: none"> ○ to have confidential information within a Technical Body respected until publication of the relevant Deliverable (<i>clause 10</i>). |
|--|---|---|

1.5 “Essential” IPRs

Clause 15.6 of the ETSI IPR Policy gives the following definition of essentiality:

“15.6 *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..”.*

In simpler terms, an "essential IPR" is an IPR which has been included within a standard and where it would be impossible to implement the standard without making use of this IPR. The only way to avoid the violation of this IPR in respect of the implementation of the standard is therefore to request a license from the owner.

2 Importance of timely disclosure of Essential IPRs

The main problems for ETSI as a standards body which may arise from "late disclosures" include:

- Licenses for Patents which have been disclosed late and are not available at all, or,
- Licenses for Patents which have been disclosed late and which are available, but not on Fair, Reasonable and Non-Discriminatory (FRAND) terms, i.e. the company is unwilling to make a 'FRAND' undertaking/declaration.

If the above problems cannot be satisfactorily resolved, then ETSI has to change the standard, which in some extreme cases could even include the need to start again with the development of that standard.

NOTE 1: Definitions for "Timeliness" or "Timely" cannot be agreed because such definitions would constitute a "change to the policy".

NOTE 2: The following description of Intentional Delay has been noted:

"Intentional Delay" has arisen when it can be demonstrated that an ETSI Member has deliberately withheld IPR disclosures significantly beyond what would be expected from normal considerations of "Timeliness".

This description of 'Intentional Delay' should be interpreted in a way that is consistent with the current ETSI IPR Policy. In complying with the requirements of timeliness under section 4.1 of the IPR Policy, Members are recommended to

ETSI/B48(04)16

page 9 of 24

make IPR disclosures at the earliest possible time following their becoming aware of IPRs which may be essential.

NOTE 3: "Intentional Delay", where proven, should be treated as a breach of the IPR policy (clause 14) and can be sanctioned by the General Assembly.

2.1 Members Duties**2.1.1 Responding to Calls for IPRs performed in Technical Body meetings**

Members participating in Technical Bodies should respond at the earliest possible time to the Call for IPRs performed by Technical Body Chairmen at the beginning of each meeting- based on the working knowledge of their participants.

Furthermore, the call for IPRs acts as a reminder of the Member's obligations under the IPR Policy and is performed to foster the timely disclosure of essential IPRs.

Members having IPR portfolios should improve their internal IPR co-ordination processes to ensure, as far as possible, that their participants in Technical Bodies are aware of any alleged-essential IPR the company may have (related to the on-going work on a particular ETSI Standard or Technical Specification), that they understand their obligations, and that they know how to discharge them.

Members are encouraged to make general IPR undertakings/declarations that they will make licenses available for all their IPRs under FRAND terms and conditions related to a specific standardization area and then, as soon as feasible, provide (or refine) detailed disclosures. This process reduces the risk of the standards making process being blocked due to IPR constraints.

2.1.2 Use the ETSI IPR Information Statement and Licensing Declaration forms

The ETSI IPR Information Statement and Licensing Declaration forms should be used by any IPR holders wishing to make their disclosures and undertaking to ETSI.

A copy of the ETSI IPR Information Statement and Licensing Forms can be found at Annex 2 and online at: http://www.etsi.org/legal/IPR_database/IPRforms-V3.doc

These forms, once completed and duly signed should be returned to the ETSI Director-General.

Any questions related to the completion of the forms should be addressed to the ETSI Legal Advisor.

2.1.3 Update and complete the ETSI IPR Information Statement form

Members are not obliged to inform ETSI of any updates to their essential IPRs. Nevertheless, Members are encouraged to update and complete their information statements in line with the forms (see Annex 2). A minimum of information should be provided, which allows to verify the essentiality or the potential essentiality of an IPR.

2.1.4 Copyrights in ETSI Deliverables

Members should be aware that once a technical proposal has been included into ETSI documentation the copyright is owned by ETSI, for the purpose of the publication of ETSI documentation.

2.2 Members do NOT have a duty to:

- conduct IPR searches (see clause 4.2 of the IPR Policy).
- disclose within the Technical Body the commercial terms for licenses for which they have undertaken to grant licenses under FRAND terms and conditions. Any such commercial terms are a matter for discussion between the IPR holder and the potential licensee, outside of ETSI (see section 4.1 of this Guide).

ETSI/B48(04)16

page 10 of 24

2.3 Technical Body Chairmen's duties

Chairmen represent the membership while having the authority to represent the Institute in their technical body. Chairmen have an important role in respect of both, the identification and disclosure of essential IPRs. They have a duty to remind the Members of their statutory obligations to submit IPR disclosures.

In addition to the actions aiming at the identification of IPRs, the Chairmen also need to take the following actions, which ensure that the disclosure of essential IPRs is properly carried out:

- to record in the report of the meeting that an IPR call has been made and to record any responses;
- to inform the Secretariat of the existence of any essential IPRs identified.

Throughout the standardization process the Chairmen must take the following actions which facilitate the identification of essential IPRs.

2.3.1 Define scope statements for work items

It is vital that Chairmen ensure that the scope statements for all work items in the ETSI work programme are properly defined. This will ensure that if a search for patents is required (under clause 6.2 of the Policy) or chosen to be performed by a Member, the task can be carried out in the most effective manner.

In order that the scope statement of an ETSI work item can be used for IPR purposes, it should contain the following:

- a broad statement concerning the technical field of this work;
- a description of broad system concepts;
- the identity of any Standard on which the work item is likely to be based;
- a list of features which the Standard will define, or on which the Standard will place limitations;
- a technical description of each feature listed, in broad terms; and,
- a list of any criteria which the Standard must satisfy.

2.3.2 Make call for IPRs in Technical Bodies meetings

Every Technical Body and working group meeting shall start with a "Call for IPRs" (either in a written form – as part of the meeting's agenda - or in oral form) performed by the Chairman. This Call for IPRs acts as a reminder of the Member's obligations under the ETSI IPR Policy and is performed to foster the timely disclosure of essential IPRs.

An example of this "Call for IPRs" may be found below in clause 2.3.3. Please note that during the Operational Co-ordination Group meetings (OCG) Chairmen will be reminded to perform that call for IPRs.

Technical Body Chairmen are also invited to encourage Members to make general IPR undertakings/declarations that they will make licenses available for all their IPRs under FRAND terms and conditions related to a specific standardization area and then, as soon as feasible, provide (or refine) detailed disclosures.

2.3.3 "When and How ?

A formal call for IPR disclosures shall be made by the Chairman at the beginning of each meeting.

The formal call for IPR disclosures needs to be made by the Chairman orally or in writing according to the example given below. Members need to be reminded that the recommended form for the notification of essential IPRs and licensing declaration are available on-line and attached in Annex 2.

ETSI/B48(04)16

page 11 of 24

Example of a formal call for IPRs

The attention of the members of this Technical Body is drawn to the fact that ETSI Members have the obligation under clause 4.1 of the ETSI IPR Policy, Annex 6 of the Rules of Procedure, to inform ETSI of Essential IPRs they become aware of. This section covers the obligation to notify its own IPRs but also other companies' IPRs.

The members take note that they are hereby invited:

- to investigate in their company whether their company does own IPRs which are, or are likely to become Essential in respect of the work of the Technical Body,
- to notify to the Chairman or to the ETSI Director-General all potential IPRs that their company may own, by means of the IPR Information Statement and the Licensing Declaration forms that they can obtain from the ETSI Technical Officer or http://www.etsi.org/legal/IPR_database/IPRforms-V3.doc."

Members are encouraged to make general IPR undertakings/declarations that they will make licenses available for all their IPRs under FRAND terms and conditions related to a specific standardization area and then, as soon as feasible, provide (or refine) detailed disclosures.

During the meeting a short reminder call for IPR disclosures should be made:

- on formal submission of a technical solution
- on completion of the first stable draft of the Standard;
- on working group approval of a draft Standard;
- on TB approval of a draft Standard.

E.g., this may consist of the following sentence "***May I remind Members of their obligations to disclose any Essential IPR of which they become aware [related to this issue]***".

The Technical Body Chairmen should note and should make their attendees aware that disclosure of essential or potentially essential IPRs should be made at the earliest possible stage within the above list.

Knowing who has contributed to the development of a Standard may help identify IPRs essential to that Standard.

If it becomes apparent that an IPR declaration/undertaking is unlikely to be provided, the Technical Body Chairman should inform the Legal Adviser in the Secretariat, who will take the necessary action.

Ultimately, it may be necessary for the Secretariat to invoke Clause 8.1 of the Policy, which could require all work on the Standard to stop. In any case, the party owning the IPR is allowed three months consideration time after the Technical Body has examined the matter and the Director-General has invited the IPR owner to reconsider its refusal to grant a license. Chairmen should use their judgment (in consultation with the Secretariat) as to whether or not the Technical Body should suspend work on the Standard until the matter has been resolved.

2.3.4 Record and report information on IPRs

Technical Body Chairmen must be particularly careful to record in the report of each meeting that a reminder was issued and include details of any responses that were made. If there were no responses, then this fact should also be recorded.

Whenever a Chairman becomes aware of the existence of an Essential or potentially Essential IPR he must immediately inform the Legal Adviser of the ETSI Secretariat.

ETSI/B48(04)16

page 12 of 24

2.3.5 Copyrights in ETSI Deliverables

Chairmen shall ensure that all technical proposals adopted by their Technical Body are recorded in the minutes of the meeting, together with any restrictions on their use, and shall report them to the Secretariat. The Secretariat will inform Chairmen if copyright licenses/assignments are required. If so, then they must be obtained before publication of the document. The Secretariat will determine, with the assistance of the Chairman, which third party copyrights, if any, have to be acknowledged.

2.3.6 Confidential information

It may happen that Chairmen or Technical Bodies are offered confidential information. There are certain precautions which must be observed and Chairmen are strongly urged to contact the Secretariat before proceeding.

Clause 10 of the Policy states that information disclosed to ETSI's Technical Bodies is to be regarded as non-confidential, unless all of the following criteria are satisfied:

- the information is in written or other tangible form; and
- the information is identified in writing as confidential at the time it is submitted; and
- the information is first submitted to the Technical Body Chairman and accepted by him as confidential.

Where a Chairman becomes aware that confidential information has been disclosed in breach of a confidential disclosure agreement to which ETSI is a party, he must immediately inform the Secretariat.

2.4 ETSI Secretariat Duties

The Secretariat, and especially the Legal Adviser, have a general duty to assist the Chairmen in IPR matters. In addition to this, the Secretariat is responsible for the actions below:

2.4.1 Information on Essential IPRs in ETSI Deliverables

The ETSI Secretariat will ensure that an appropriate reminder of the duty to disclose the identity of Essential IPRs is included in all published ETSI deliverables in the form of a standard text.

Specifically, the Secretariat shall ensure that the following marking appears in ETSI Deliverables prior to Publication, Member vote, Public Enquiry or National Vote:

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://www.etsi.org/ipr>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

2.4.2 Initiate a procedure of Clause 8 when no licensing declaration can be obtained

Where an IPR License Declaration cannot be obtained because of the refusal by the essential IPR owner, the ETSI Secretariat is obliged to initiate the procedure set out in Clause 8 of the ETSI IPR Policy.

ETSI/B48(04)16

page 13 of 24

2.4.3 Non response by an IPR owner

In situation where there has been no response from an IPR owner to a request for undertaking/declaration within the three months specified in clause 6.1 of the IPR Policy:

- where a standard has not yet been published and an undertaking/declaration has not been received or is not sufficiently defined, the steps listed in Clause 8.1 of the IPR Policy should be applied, e.g. the TB should not pursue development of the standard based on the non-available technology and should look for alternative solutions.
- where a standard has already been published and an undertaking/declaration has not been received or is not sufficiently defined, the steps listed in Clause 8.2 of the IPR Policy should be applied, e.g. contact the IPR owner concerned, bring to the attention of the GA, etc. If these steps do not solve the issue of non-availability of licenses, the process of withdrawal of the standard should be initiated.

2.4.4 Redrafting of ETSI Deliverables

Published Standards or Technical Specifications should not be redrafted because a change on the essentiality of an IPR arises unless the required undertaking/declaration has not been provided within the three month period foreseen under Clause 6.1 of the IPR Policy, or has been refused. Any IPR changes should be entered into the ETSI IPR Database by the Secretariat, showing the date of the entry.

2.4.5 Disclose copyright identified in ETSI documentation

The copyright of ETSI documentation, including that produced in its Technical Bodies, is owned by ETSI. The Secretariat shall ensure that the following marking appears in ETSI Deliverables prior to Publication, Member vote, Public Enquiry or National Vote:

Reproduction is only permitted for the purpose of standardization work undertaken within ETSI.

The copyright and the foregoing restrictions extend to reproduction in all media.

© European Telecommunications Standards Institute yyyy.
All rights reserved.

This marking shall also appear in document templates provided to the Technical Organization by the Secretariat.

2.4.6 Acknowledgement of third parties copyright

Due acknowledgement of copyrights owned by third parties, which are identifiable in ETSI documentation, must be made in the following form:

Some material contained herein is the copyright of, or has been supplied by...(insert name of party in question).

This legend should appear on the ETSI documents and/or media concerned and should immediately follow the copyright legend(s) referred to above.

In response to the obligation on Chairmen to report to the Secretariat any copyright restrictions in technical proposals adopted by their Technical Body, the Secretariat will inform Chairmen if copyright licenses/assignments are required. If so, then they must be obtained before publication of the document. The Secretariat will determine, with the assistance of the Chairman, which third party copyrights, if any, have to be acknowledged.

ETSI/B48(04)16

page 14 of 24

2.4.7 Reporting of a substantial IPR problem

The ETSI Director-General should bring any [substantial] IPR problem to the ETSI Board and/or General Assembly for further discussion.

2.4.8 Maintenance of information on Essential IPRs

The Secretariat is responsible for the maintenance of the ETSI IPR online database and the ETSI Special Report 000 314 (see sections 3.1 and 3.2 of this guide).

3 Information on Essential IPRs by ETSI

All information statements and licensing declarations of IPRs received by ETSI are publicly available to ETSI Members and Standards implementers via two means: The ETSI SR 000 314 and the ETSI IPR Online Database.

3.1 Where to find information on essential IPRs**3.1.1 ETSI Special Report 000 314**

The ETSI Special report SR 000 314 is an ETSI Deliverable entirely dedicated to information on IPRs which have been notified to ETSI as being essential, or potentially essential, to ETSI standards. This SR is generated twice a year and offers a summary of the information contained in the ETSI IPR Online database as of the time it is generated.

In case of any conflict between the information contained in SR 000 314 and the information contained in the ETSI IPR Online Database, the contents of the database takes precedence.

ETSI SR 000 314 can be found at: <http://webapp.etsi.org/ipr>.

3.1.2 The ETSI IPR Online Database

The ETSI IPR Online Database is an application that has been developed by the ETSI Secretariat to allow electronic online access to Information Statements and Licensing Declarations received by ETSI.

Like the SR 000 314, the ETSI IPR Online Database contains IPRs, particularly patents and patent applications, which have been notified to ETSI as being essential, or potentially essential, to ETSI standards.

Unless otherwise specified, all IPRs contained herein have been notified to ETSI, with an undertaking from the owner to grant licenses according to the terms and conditions of Clause 6.1 of Annex 6 of the ETSI Rules of Procedure (the ETSI IPR Policy).

It is important to note that the ETSI IPR online database provides data that is based on the information received, i.e.:

- ETSI has not checked the validity of the information, nor the relevance of the identified patents/patent applications to the ETSI Standards and cannot confirm, or deny, that the patents/patent applications are, in fact, essential, or potentially essential.
- No investigation, or IPR searches, have been carried out by ETSI and therefore no guarantee can be given concerning the existence of other IPRs which are, or may become, essential.
- Potential licensees should use the information in this database at their discretion and should contact the patent holder, for example to establish the status of a disclosed patent family, prior to making a patent licensing decision.

The ETSI IPR Online Database can be found at: <http://webapp.etsi.org/ipr>.

ETSI/B48(04)16

page 15 of 24

3.1.3 Requests to the ETSI Secretariat

Whenever requested, the ETSI Secretariat shall provide any details on information statements and licensing undertakings/declarations that it has received. The main contact point is the Legal Advisor.

3.2 What type of information and procedures for updates

IPR information reflected by ETSI is based on the information received. ETSI has not checked the validity of the information, nor the relevance of the identified patents/patent applications to the ETSI Standards and cannot confirm, or deny, that the patents/patent applications are, in fact, essential, or potentially essential. No investigation, or IPR searches, have been carried out by ETSI and therefore no guarantee can be given concerning the existence of other IPRs which are, or may become, essential.

3.2.1 Assessment of IPR rights

As a general principle, ETSI does not perform any check on the status and validity of any Essential IPRs notified to ETSI.

In addition, ETSI does not perform any search for Essential IPRs which may exist and have not been notified.

3.2.2 Update procedure for the ETSI IPR Online database

In addition to the entry of new disclosures and undertakings/declarations, existing data in the ETSI IPR Database should only be updated based on information received from IPR holders or as the result of a GA decision, in particular with respect to the following cases:

- **Completion of an existing data entry**, e.g. the publication number, identification of standard.
- **Updating of legal information**, such as change of legal status of an IPR (e.g. grant, dropped, revoked or expired), change of ownership of the IPR.
- **Addition of information concerning studies performed on the essentiality of an IPR:** Members are obliged to disclose IPRs, which might be essential and ETSI is obliged to make these disclosures available to Members. This disclosure reflects, of course, only an opinion of the Member and some facts on the IPRs, but the Member is responsible for the content. Any further opinion should be added only with the agreement of the Member or to implement a General Assembly decision.
- **Removal of IPR disclosures at the request of the IPR holder:** Members are obliged to declare IPRs which they believe to be essential. A license undertaking/declaration for these IPRs is also published. ETSI is obliged to publish this undertaking/declaration. Any such removal shall be tracked in the IPR database.
- **Removal of IPR disclosures in exceptional circumstances:** Removals not requested by the IPR holder shall only be performed following a decision taken by the General Assembly. Any such removal shall be tracked in the IPR database.

4 Other ETSI IPR Policy matters

4.1 Responsibility for specific licensing terms

Specific licensing terms and negotiations are commercial issues between the companies and shall not be addressed within ETSI. Technical Bodies are not the appropriate place to discuss IPR issues. Technical Bodies do not have the competence to deal with commercial issues. Members attending ETSI Technical Bodies are often technical experts who do not have legal or business responsibilities with regard to licensing issues. Discussion on licensing issues among competitors in a standards making process can significantly complicate, delay or derail this process.

ETSI/B48(04)16

page 16 of 24

4.2 Dispute Resolution

ETSI Members should attempt to resolve any dispute related to the application of the IPR policy bilaterally in a friendly manner.

Should this fail, the Members concerned are invited to inform the ETSI GA in case a friendly mediation can be offered by other ETSI Members and/or the ETSI Secretariat.

However, it should be noted that once an IPR (patent) has been granted, in the absence of an agreement between the parties involved, the national courts of law have the sole authority to resolve IPR disputes.

4.3 Notice on the use of NDAs in IPR negotiations

It is recognized that Non Disclosure Agreements (NDAs) may be used to protect the commercial interests of both potential licensor and potential licensee during an Essential IPR licensing negotiation, and this general practice is not challenged. Nevertheless, ETSI expects its Members (as well as non-ETSI Members) to engage in an impartial and honest Essential IPR licensing negotiation process for FRAND terms and conditions.

4.4 Financial contingency

Members developing products based on standards where there may be essential IPRs, but there is uncertainty, have mechanisms available which they can use to minimize their risk. As a non-exclusive example, a Member might wish to put in place financial contingency, based on their assessment of "reasonable", against the possibility that further/additional license fees might become payable.

Annex 1 ETSI Intellectual Property Rights Policy

[ETSI Rules of Procedure, Annex 6]

1 Introduction

The General Assembly of ETSI has established the following Intellectual Property Rights POLICY.

2 Definitions

Terms in the POLICY which are written in capital letters shall have the meaning set forth in Clause 15 entitled DEFINITIONS.

3 Policy Objectives

- 3.1 STANDARDS and TECHNICAL SPECIFICATIONS shall be 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.
- 3.3 ETSI shall take reasonable measures to ensure, as far as possible, that its activities which relate to the preparation, adoption and application of STANDARDS and TECHNICAL SPECIFICATIONS, enable STANDARDS and TECHNICAL SPECIFICATIONS to be available to potential users in accordance with the general principles of standardization.

4 Disclosure of IPRs

- 4.1 Each MEMBER shall use its reasonable endeavours to timely inform ETSI of ESSENTIAL IPRs it becomes aware of. 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.
- 4.2 The obligations pursuant to Clause 4.1 above do however not imply any obligation on MEMBERS to conduct IPR searches.

5 Procedures for Committees

ETSI shall establish guidelines for the chairmen of COMMITTEES with respect to ESSENTIAL IPRs.

6 Availability of Licences

- 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 undertaking in writing that it is prepared to grant irrevocable licences on fair, reasonable and non-discriminatory terms and 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;

ETSI/B48(04)16

page 18 of 24

- 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 At the request of the European Commission and/or EFTA, initially for a specific STANDARD or TECHNICAL SPECIFICATION or a class of STANDARDS/TECHNICAL SPECIFICATIONS, ETSI shall arrange to have carried out in a competent and timely manner an investigation including an IPR search, with the objective of ascertaining whether IPRs exist or are likely to exist which may be or may become ESSENTIAL to a proposed STANDARD or TECHNICAL SPECIFICATIONS and the possible terms and conditions of licences for such IPRs. This shall be subject to the European Commission and/or EFTA meeting all reasonable expenses of such an investigation, in accordance with detailed arrangements to be worked out with the European Commission and/or EFTA prior to the investigation being undertaken.

7 Information on IPR by ETSI

- 7.1 Any published STANDARD or TECHNICAL SPECIFICATION shall include information pertaining to ESSENTIAL IPRs which are brought to the attention of ETSI prior to such publication.
- 7.2 ETSI shall establish appropriate procedures to allow access to information at any time with respect to ESSENTIAL IPRs which have been brought to the attention of ETSI.

8 Non-availability of Licences

8.1 MEMBERS' refusal to license

- 8.1.1 Where a MEMBER notifies ETSI that it is not prepared to license an IPR in respect of a STANDARD or TECHNICAL SPECIFICATION, the General Assembly shall review the requirement for that STANDARD or TECHNICAL SPECIFICATION and satisfy itself that a viable alternative technology is available for the STANDARD or TECHNICAL SPECIFICATION which:

- is not blocked by that IPR; and
- satisfies ETSI's requirements.

- 8.1.2 Where, in the opinion of the General Assembly, no such viable alternative technology exists, work on the STANDARD or TECHNICAL SPECIFICATION shall cease, and the Director-General of ETSI shall request that MEMBER to reconsider its position. If the MEMBER decides not to withdraw its refusal to license the IPR, it shall inform the Director-General of ETSI of its decision and provide a written explanation of its reasons for refusing to license that IPR, within three months of its receipt of the Director-General's request.

The Director-General shall then send the MEMBER's explanation together with relevant extracts from the minutes of the General Assembly to the ETSI Counsellors for their consideration.

8.2 Non-availability of licences from third parties

Where, in respect of a STANDARD or TECHNICAL SPECIFICATION, ETSI becomes aware that licences are not available from a third party in accordance with Clause 6.1 above, that STANDARD or TECHNICAL SPECIFICATION shall be referred to the Director-General of ETSI for further consideration in accordance with the following procedure:

- i) The Director-General shall request full supporting details from any MEMBER who has complained that licences are not available in accordance with Clause 6.1 above.
- ii) The Director-General shall write to the IPR owner concerned for an explanation and request that licences be granted according to Clause 6.1 above.

ETSI/B48(04)16

page 19 of 24

- iii) Where the IPR owner refuses the Director-General's request or does not answer the letter within three months, the Director-General shall inform the General Assembly. A vote shall be taken in the General Assembly on an individual weighted basis to immediately refer the STANDARD or TECHNICAL SPECIFICATION to the relevant COMMITTEE to modify it so that the IPR is no longer ESSENTIAL.
- iv) Where the vote in the General Assembly does not succeed, then the General Assembly shall, where appropriate, consult the ETSI Counsellors with a view to finding a solution to the problem. In parallel, the General Assembly may request appropriate MEMBERS to use their good offices to find a solution to the problem.
- v) Where (iv) does not lead to a solution, then the General Assembly shall request the European Commission to see what further action may be appropriate, including non-recognition of the STANDARD or TECHNICAL SPECIFICATION in question.

In carrying out the foregoing procedure due account shall be taken of the interest of the enterprises that have invested in the implementation of the STANDARD or TECHNICAL SPECIFICATION in question.

9 ETSI ownership of IPRs

- 9.1 The ownership of the copyright in STANDARDS and TECHNICAL SPECIFICATIONS documentation and reports created by ETSI or any of its COMMITTEES shall vest in ETSI but due acknowledgement shall be given to copyrights owned by third parties that are identifiable in ETSI copyrighted works.
- 9.2 In respect of IPRs other than copyright in STANDARDS and TECHNICAL SPECIFICATIONS documentation and reports, ETSI shall only seek ownership of IPRs generated either by its employees or by secondees to ETSI from organizations who are not MEMBERS.
- 9.3 ETSI shall, on request by a non-member, grant licences to that non-member on fair and reasonable terms and conditions in respect of any IPRs, other than those referred to in Clause 9.1 above, owned by ETSI. MEMBERS shall be allowed to use IPRs owned by ETSI free of charge.

10 Confidentiality

The proceedings of a COMMITTEE shall be regarded as non-confidential except as expressly provided below and all information submitted to a COMMITTEE shall be treated as if non-confidential and shall be available for public inspection unless:

- the information is in written or other tangible form; and
- the information is identified in writing, when submitted, as confidential; and
- the information is first submitted to, and accepted by, the chairman of the COMMITTEE as confidential.

CONFIDENTIAL INFORMATION incorporated in a STANDARD or TECHNICAL SPECIFICATION shall be regarded as non-confidential by ETSI and its MEMBERS, from the date on which the STANDARD or TECHNICAL SPECIFICATION is published.

11 Reproduction of Standards Documentation

MEMBERS may make copies of STANDARDS and TECHNICAL SPECIFICATIONS documentation produced by ETSI for their own use free of charge but may not distribute such copies to others.

12 Law and Regulation

The POLICY shall be governed by the laws of France. However, no MEMBER shall be obliged by the POLICY to commit a breach of the laws or regulations of its country or to act against supranational

ETSI/B48(04)16

page 20 of 24

laws or regulations applicable to its country insofar as derogation by agreement between parties is not permitted by such laws.

Any right granted to, and any obligation imposed on, a MEMBER which derives from French law and which are not already contained in the national or supranational law applicable to that MEMBER is to be understood as being of solely a contractual nature.

13 Policy Decisions

Without prejudice to ETSI's Statutes and Rules of Procedure, no decisions shall be taken by ETSI in relation to implementation of the POLICY unless supported by a 71 % majority of the weighted individual votes cast by MEMBERS.

14 Violation of Policy

Any violation of the POLICY by a MEMBER shall be deemed to be a breach, by that MEMBER, of its obligations to ETSI. The ETSI General Assembly shall have the authority to decide the action to be taken, if any, against the MEMBER in breach, in accordance with the ETSI Statutes.

15 Definitions

1 **"AFFILIATE"** of a first legal entity means any other legal entity:

- directly or indirectly owning or controlling the first legal entity, or
- under the same direct or indirect ownership or control as the first legal entity, or
- directly or indirectly owned or controlled by the first legal entity,

for so long as such ownership or control lasts.

Ownership or control shall exist through the direct or indirect:

- ownership of more than 50 % of the nominal value of the issued equity share capital or of more than 50 % of the shares entitling the holders to vote for the election of directors or persons performing similar functions, or
- right by any other means to elect or appoint directors, or persons who collectively can exercise such control. A state, a division of a state or other public entity operating under public law, or any legal entity, linked to the first legal entity solely through a state or any division of a state or other public entity operating under public law, shall be deemed to fall outside the definition of an AFFILIATE.

2 **"COMMITTEE"** shall mean any Technical Body of ETSI and shall include ETSI Projects, Technical Committees, ETSI Partnership Projects, and their Working Groups.

3 **"CONFIDENTIAL INFORMATION"** shall mean all information deemed to be confidential pursuant to Clause 10 of the POLICY disclosed directly or indirectly to the MEMBER.

4 **"EQUIPMENT"** shall mean any system, or device fully conforming to a STANDARD.

5 **"METHODS"** shall mean any method or operation fully conforming to a STANDARD.

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.

ETSI/B48(04)16

page 21 of 24

- 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.
- 8 **"MANUFACTURE"**, shall mean production of EQUIPMENT.
- 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.
- 10 **"POLICY"** shall mean ETSI's Intellectual Property Rights Policy.
- 11 **"STANDARD"** shall mean any standard adopted by ETSI including options therein or amended versions and shall include European Standards (ENs) (telecommunications series), ETSI Standards (ESs), Common Technical Regulations (CTRs) which are taken from ENs (telecommunications series) and including drafts of any of the foregoing, and documents made under the previous nomenclature, including ETSs, I-ETSs, parts of NETs and TBRs, the technical specifications of which are available to all MEMBERS, but not including any standards, or parts thereof, not made by ETSI.

The date on which a STANDARD is considered to be adopted by ETSI for the purposes of this POLICY shall be the date on which the technical content of that STANDARD was available to all MEMBERS.

- 12 **"TECHNICAL SPECIFICATION"** shall mean any Technical Specification (TS) adopted by ETSI including options therein or amended version including drafts, the Technical Specifications of which are available to all MEMBERS, but not including any technical specifications, or parts thereof, not made by ETSI.

The date on which a TECHNICAL SPECIFICATION is considered to be adopted by ETSI for the purposes of this POLICY shall be the date on which the technical content of that TECHNICAL SPECIFICATION was available to all MEMBERS.

ETSI/B48(04)16

page 22 of 24

Annex 2 ETSI IPR Information Statement and Licensing Forms**IPR Holder/Organisation**

Legal Name: _____

Signatory

Name: _____

Position: _____

Department: _____

Address: _____

Tel.: _____

Fax: _____

E-mail: _____

IPR information statement

In accordance with the ETSI IPR Policy, Article 4.1, I hereby inform ETSI that,

with reference to the technical proposal identified as _____
and/or

in relation to Work Item No. _____

and/or
with reference to ETSI Standard No. _____

it is my belief that the IPRs listed in Annex 2 are, or are likely to become, Essential IPRs in relation to that Standard.

IPR licensing declaration

The SIGNATORY has notified ETSI that it is the proprietor of the IPRs listed in Annex 2 and has informed ETSI that it believes that the IPRs may be considered ESSENTIAL to the Standards listed above.

The SIGNATORY and/or its AFFILIATES hereby declare that they are prepared to grant irrevocable licenses under the IPRs on terms and conditions which are in accordance with Clause 6.1 of the ETSI IPR Policy, in respect of the STANDARD, to the extent that the IPRs remain ESSENTIAL.

The construction, validity and performance of this DECLARATION shall be governed by the laws of France.

Place, Date:Signature:

(Signed for and on behalf of the SIGNATORY)

Please return this form duly signed to:
ETSI Director General - Karl Heinz RosenbrockETSI - 650, route des Lucioles - F-06921 Sophia Antipolis Cedex - FRANCE
Fax. +33 (0) 4 93 65 47 16

S-ITC-003356779

ETSI/B48(04)16

page 23 of 24

| ETSI Standard, Technical Specification or Work Item | | | Patent Proprietor | Patent/ application No. | Patent Subject/ Title | Country | OPTIONAL INFORMATION: Other patents/applications in same family* | | |
|---|---------------------------|---------|-------------------|-------------------------|-----------------------|---|--|--|--|
| Project or Standard name | Work Item OR Standard No. | Section | | | | | Version | Patent/application No. | country |
| example UMTS | TS 125 215 | 6.1.1.2 | v.3.5.0 | Nokia | 1131972 | Scheduling of slotted-mode related measurements | EPO | 12740/00 99813100.8 108270 11-318161 6532228 | Australia China P.R. Finland Japan USA |
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*Patent family information is provided voluntarily. The completeness and accuracy of any patent family information that is provided cannot be guaranteed.

ETSI/B48(04)16

page 24 of 24

Annex 3 Check list of the Chairmen's obligations in respect of the notification and disclosure of IPRs

- Check scope statements for work items are sufficiently defined
- Perform call for IPRs in Technical Bodies meetings
 - at the beginning of meetings using the text supplied in clause 2.3.3 of the IPR Guide.
 - during meetings: (reminder of the formal call of IPRs) as in clause 2.3.3 of the IPR Guide.
 - on formal submission of a technical solution
 - on completion of a first stable draft
 - on working group approval of a draft standard
 - on TB approval of a draft standard
- Record that the "call" has been performed.
- Record any responses received (or the absence thereof) and inform the Secretariat.
- Record any copyright identified (or absence thereof) and inform the Secretariat.

EXHIBIT 24
REDACTED

SUBJECT TO PROTECTIVE ORDER
CONTAINS HIGHLY CONFIDENTIAL – ATTORNEYS' EYES ONLY INFORMATION

**Exhibit 3A
Summary of Samsung License Agreements**

| Licensee | Licensor | Title | Effective Date | Date Last Signed | Term | Licensed Products/Technology | Geographic Scope | Payments | Source |
|----------|------------------------------|--|----------------|------------------|------------|--|------------------|------------|--|
| 1 | Samsung Electronics Co. Ltd. | Telecommunications Patent License Agreement | 1/1/2006 | 7/9/2007 | 3/31/2011 | Telecommunication Products relating to GSM (including GPRS and EDGE), WCDMA (including HSPA), and TDMA (except PDC and PHS) standards. The definition of standards does not include WiFi (802.11) and WiMax (802.16) | Worldwide | [REDACTED] | S-794-ITC-005517418 to S-794-ITC-005517432 |
| 2 | Samsung Electronics Co. Ltd. | Patent Cross License Agreement | 1/1/1993 | 2/8/1993 | 12/31/2002 | Semiconductor Material, Semiconductor Device or Integrated Circuit Excluding Intel Proprietary Products, Intel Flash Memory Products, and Samsung Proprietary Products | Worldwide | [REDACTED] | S-794-ITC-000000040 to S-794-ITC-000000049 |
| 3 | Samsung Electronics Co. Ltd. | Amendment Number 1 to the Patent Cross License Agreement | 3/19/2003 | 3/18/2003 | N/A | Intel Flash Memory Products | Worldwide | [REDACTED] | S-794-ITC-000000021 to S-794-ITC-000000025 |
| 4 | Samsung Electronics Co. Ltd. | Amendment Number 2 to the Patent Cross License Agreement | 7/1/2004 | N/A | 7/1/2009 | Licensed Products as defined in Patent Cross License Agreement effective 1/1/1993 Chips, NAND Flash Memory and Intel Flash Memory Products | Worldwide | [REDACTED] | S-794-ITC-000000026 to S-794-ITC-000000039 |
| 5 | Samsung Electronics Co. Ltd. | Cellular Cross License Agreement | 9/30/2000 | N/A | 12/31/2004 | Subscriber Terminals relating to TDMA Standards, Narrowband CDMA Standards and Wideband CDMA Standards | Worldwide | [REDACTED] | S-794-ITC-005280285 to S-794-ITC-005280348 |
| 6 | Samsung Electronics Co. Ltd. | License Extension Agreement | 6/30/2005 | 6/30/2005 | 6/30/2005 | N/A | N/A | [REDACTED] | S-794-ITC-005280348 to S-794-ITC-005280374 |
| 7 | Samsung Electronics Co. Ltd. | Wireless Communication Cross License Agreement | 7/1/2005 | 9/25/2005 | 12/31/2010 | Subscriber Terminals, Infrastructure Equipment, NICS, Access Fronts, WLAN/Wireless Broadband Switch and Wireless Bridges relating to TDMA Standards, Narrowband CDMA Standards, Wideband CDMA Standards, WLAN Standards, Wireless Broadband Standards and DECT Standards | Worldwide | [REDACTED] | S-794-ITC-005216440 to S-794-ITC-005216462 |

SUBJECT TO PROTECTIVE ORDER
CONTAINS HIGHLY CONFIDENTIAL -- ATTORNEYS' EYES ONLY INFORMATION

Exhibit 3A
Summary of Samsung License Agreements

| Licensee | Licensor | Title | Effective Date | Date Last Signed | Term | Licensed Products/Technology | Geographic Scope | Payments | Source |
|--------------------------------|-------------------|--|----------------|------------------|--|---|------------------|------------|--|
| 8 Samsung Electronics Co Ltd. | Nokia Corporation | License Agreement | 10/1/2009 | 10/21/2009 | 12/31/2006 and 6/30/2008 (depending on Licensed Product) | GSM Subscriber Terminals, CDMA Subscriber Terminals, WCDMA Subscriber Terminals and Infrastructure Equipment | N/A | [REDACTED] | S-794-ITC-000001583 to S-794-ITC-000001602 |
| 9 Samsung Electronics Co Ltd. | Nokia Corporation | License Agreement | 6/18/2010 | 6/30/2010 | 12/31/2013 Option to extend to 12/31/2018 or 12/31/2022 | Subscriber Terminal(s) and/or Infrastructure Equipment that implement a wireless air interface in accordance with one or more Cellular Standards which includes GSM Standard, WCDMA Standard, CDMA Standard, TD-SCDMA Standard and/or LTE Standard | N/A | [REDACTED] | S-794-ITC-000001547 to S-794-ITC-000001582 |
| 10 Samsung Electronics Co Ltd. | Qualcomm Inc. | Infrastructure and Subscriber Unit License and Technical Assistance Agreement | 8/31/1993 | 9/3/1993 | [REDACTED] | Subscriber Unit, Cordless Base Station, Components, and Infrastructure Equipment solely for use in Wireless Applications Wireless Applications are CDMA-based Digital Cellular Systems, Personal Communications Systems, Wireless PABX Systems, commercial telemetry for information gathering, commercial security system for alarming applications, RF LAN applications, Cordless Telephone applications and any other CDMA wireless applications currently licensed by Qualcomm to its existing CDMA Subscriber Unit and Infrastructure licensees as of the Effective Date of the Agreement | Worldwide | [REDACTED] | AMNDCA00052124 AMNDCA00052161 |
| 11 Samsung Electronics Co Ltd. | Qualcomm Inc. | Amendment to Infrastructure and Subscriber Unit License and Technical Assistance Agreement | 11/17/1997 | 11/17/1997 | [REDACTED] | Subscriber Unit, Cordless Base Station, Components, and Infrastructure Equipment | N/A | [REDACTED] | SAMNDCA00052164 to SAMNDCA00052165 |

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CONTAINS HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY INFORMATION

Exhibit 3A
Summary of Samsung License Agreements

| Licensee | Licensor | Title | Effective Date | Date Last Signed | Term | Licensed Products/Technology | Geographic Scope | Payments | Source |
|--------------------------------|----------------------------------|--|----------------|------------------|------------|---|------------------|------------|--|
| 12 Samsung Electronics Co Ltd. | Qualcomm Inc | Amendment to Infrastructure and Subscriber Unit License and Technical Assistance Agreement | 3/29/2004 | 3/29/2004 | | Eligible Subscriber Unit is a Qualifying Subscriber Unit (defined as a Subscriber Unit including but not limited to a Subscriber Unit implementing CDMA technology in compliance with the IS-95, cdma2000, WCDMA and/or UMTS standards) that incorporates a CDMA ASIC that is for use in the Rest of the World (i.e., not in Korea) | Worldwide | [REDACTED] | SAMNDCA00052116 SAMNDCA00052123 |
| 13 Samsung Electronics Co Ltd. | Qualcomm Inc | Amendment to Infrastructure and Subscriber Unit License and Technical Assistance Agreement | 12/25/2005 | 12/28/2005 | | N/A | N/A | [REDACTED] | SAMNDCA00052166 SAMNDCA00052169 |
| 14 Samsung Electronics Co Ltd. | Qualcomm Inc | Amendment to Infrastructure and Subscriber Unit License and Technical Assistance Agreement | 1/1/2009 | 1/4/2009 | | Royalty-Bearing Subscriber Units means (i) all Subscriber Units that are Telephones; (ii) all Subscriber Units that are Laptop Computer Subscriber Units not covered by clause (i) above; and (iii) any type of Subscriber Unit that has been or is introduced (e.g., marketed, offered for sale or Sold) by Samsung no later than 6 months following the execution of this Agreement and not covered under clauses (i) and (ii) above. Does not include GSM-only Subscriber Units Royalty-Bearing Modem card means all Modem Cards other than GSM-only Modem Cards CDMA Femtocell means a Femtocell that is used to connect to a wireless network that operates utilizing one or more CDMA Standards | Worldwide | [REDACTED] | SAMNDCA00052029 SAMNDCA00052115 |
| 15 Samsung Electronics Co Ltd. | Thomson Licensing S.A. (Alcatel) | Patent License Agreement (GSM Terminals) | 1/1/2000 | 10/3/2000 | 12/31/2006 | GSM terminal in completely assembled, ready-to-use form, as well as Kits of Licensed Products, Built-in-Products and/or the GSM function of Dual Mode Terminals (excluding products complying with UMTS) | Worldwide | [REDACTED] | S-794-ITC-003052458 S-794-ITC-03052455 |
| 16 Samsung Electronics Co Ltd. | Thomson Licensing S.A. (Alcatel) | Amendment to the Patent License Agreement (GSM Terminals) | N/A | 10/3/2000 | 12/31/2006 | N/A | Worldwide | [REDACTED] | S-794-ITC-003052456 S-794-ITC-003052459 |

SUBJECT TO PROTECTIVE ORDER
CONTAINS HIGHLY CONFIDENTIAL--ATTORNEYS' EYES ONLY INFORMATION

Exhibit 3A
Summary of Samsung License Agreements

| Licensee | Licensor | Title | Effective Date | Date Last Signed | Term | Licensed Products/Technology | Geographic Scope | Payments | Source |
|--------------------------------|--|---|----------------|------------------|--|---|------------------|------------|--|
| 17 Samsung Electronics Co Ltd. | Advanced Micro Devices, Inc | Patent License and Settlement Agreement | 12/22/2010 | 12/22/2010 | 10 years (or the last to expire of the Licensed Patents) | Semiconductor Device (excluding Foundry Products), System, Manufacturing Apparatus, Foundry Products, and Party Design | Worldwide | [REDACTED] | S-794-ITC-005517442 to S-794-ITC-005517460 |
| 18 Samsung Electronics Co Ltd. | British Telecommunications | Patent Cross License | 3/24/2004 | 3/24/2004 | 10 years | Telecommunication Products or Services | Worldwide | [REDACTED] | S-794-ITC-0000000001 to S-794-ITC-0000000230 |
| 19 Samsung Electronics Co Ltd. | Dolby Laboratories Licensing Corporation | Patent License Agreement | 1/1/2009 | 10/8/2009 | 12/31/2013 | Mobile phone handsets, set-top boxes, MP3 players, personal computers, servers, telecommunication mobiles, PC/MCIA cards, Blu-ray Disc (BD) players, optical disc drives, DVD players, televisions, IPTVs, camcorders, home theater equipment, monitors and components and software in connection with the practice of the AAC Standard | Worldwide | [REDACTED] | SAMINDCA00326285 to SAMINDCA00326293 |
| 20 Samsung Electronics Co Ltd. | Global Foundries, Inc | Patent License Agreement | 12/22/2010 | 12/22/2010 | 10 years | Manufacturing Apparatus, Semiconductor Device (excluding Foundry Products), System or Party Designs as incorporated into a Foundry Product | Worldwide | [REDACTED] | S-794-ITC-005517461 to S-794-ITC-005517476 |
| 21 Samsung Electronics Co Ltd. | International Business Machines Corporation | License Reference Number: L106170 | 12/22/2010 | 12/22/2010 | Last to expire of the Licensed Patents | Information Handling System Products (excluding System & Products) | Worldwide | [REDACTED] | S-794-ITC-0000000245 to S-794-ITC-0000000273 |
| 22 Samsung Electronics Co Ltd. | InterDigital Technology Corporation, Taaniv, Communications, Inc., IPR Licensing, Inc., InterDigital Patent Holdings, Inc., InterDigital Communications, LLC | Patent License and Settlement Agreement | 1/24/2008 | 1/14/2009 | 12/31/2012 | Terminal Unit or Infrastructure Equipment designed to work in accordance with: (i) one or more 2G Standards (US-TDMA, GSM, GPRS, and EDGE) but not also any 3G Standard (CDMA2000 1XRTT, CDMA2000 EV-DV, CDMA2000 EV-DO Rev A, CDMA2000 EV-DO Rev B, and WCDMA) or Excluded Standards and (ii) one or more 3G Standards but no Excluded Standards Excluded Standards include all wireless communication standards other than the 2G Standards, 3G Standards, WiFi (802.11), Bluetooth (802.15.1), and 802.21 | Worldwide | [REDACTED] | SAMIDCA00366019 to SAMIDCA00366052 |
| 23 Samsung Electronics Co Ltd. | Lucent Technologies Inc | Patent License Agreement | 1/1/2004 | 3/31/2005 | Earliest of (i) last to expire of the Licensed Patents, (ii) 12/31/09 or (iii) material breach or insolvency | Wireless Terminals and Wireless Infrastructure | Worldwide | [REDACTED] | S-794-ITC-005286933 to S-794-ITC-005286952 |

SUBJECT TO PROTECTIVE ORDER
CONTAINS HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY INFORMATION

Exhibit 3A
Summary of Samsung License Agreements

| Licensor | Licensor | Title | Effective Date | Date Last Signed | Term | Licensed Products/Technology | Geographic Scope | Payments | Source |
|---------------------------------|-----------------------------------|--|----------------|------------------|--|--|------------------|------------|--|
| 24 Samsung Electronics Co. Ltd. | Lucent Technologies Inc. | Agreement | 6/29/1999 | 6/29/1999 | N/A | Wireless Terminals | Worldwide | [REDACTED] | SAMDCA11230780 to SAMDCA11230787 |
| 25 Samsung Electronics Co. Ltd. | Lucent Technologies GRU LLC | Patent License Agreement | 6/3/2003 | 6/3/2003 | Earliest of (i) last to expire of the Licensed Patents or for as much of a term as the grantor has the right to grant or (ii) 12/31/03 | Wireless Terminals | Worldwide | [REDACTED] | S-794-ITC-0052N2911 to S-794-ITC-005283926 |
| 26 Samsung Electronics Co. Ltd. | Micron Technology, Inc. | Patent Cross-License Agreement | 10/1/2010 | 10/1/2010 | Last to expire of the Licensed Patents or 10 years | All products | Worldwide | [REDACTED] | S-794-ITC-000000030 to S-794-ITC-000000063 |
| 27 Samsung Electronics Co. Ltd. | Microsoft Corporation | Confidential Patent License Agreement | 7/1/2011 | 9/27/2011 | 7 years | Android Smartphones and Android Tablets | Worldwide | [REDACTED] | S-794-ITC-005517484 to S-794-ITC-005517506 |
| 28 Samsung Electronics Co. Ltd. | NEC Corporation | Patent License Agreement for Mobile Products | 6/30/2004 | 6/30/2004 | 12/31/2010 | End User Terminals and Infrastructure Equipment relating to GSM/GPRS, IS-136, PDC/PHS, cdma2000 1x, cdma2000 1x EV-DO, cdma2000 1x EV-DV, cdma2000 3x, W-CDMA, EDGE, TD-SCDMA, PMR | Worldwide | [REDACTED] | SAMNDCA11230874 to SAMNDCA11230888 |
| 29 Samsung Electronics Co. Ltd. | Telefonaktiebolaget L.M. Ericsson | Patent License Agreement | 12/18/2001 | 12/18/2001 | 12/31/2005 | ASIC, Module, Infrastructure Equipment or End User Terminal relating to GSM, GPRS, WCDMA, EDGE and TDMA (except PDC and PHS) standards | Worldwide | [REDACTED] | SAMNDCA11230766 to SAMNDCA11230779 |

SUBJECT TO PROTECTIVE ORDER
CONTAINS HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY INFORMATION

Exhibit 3A
Summary of Samsung License Agreements

| Licensor | Title | Effective Date | Date Last Signed | Term | Licensed Products/Technology | Geographic Scope | Payments | Source |
|------------------------------|--|----------------|------------------|---|---|------------------|------------|--|
| Samsung Electronics Co. Ltd. | Corporate Patent Cross License Agreement | 4/1/2004 | 12/14/2004 | Earlier of 12/31/08 or the expiration of the license, non-asserts, and releases granted under the Agreement | Complete Electronic Products, Battery Packs, Media, Drives, and Refill Accessories and does not include Manufacturing Equipment | Worldwide | [REDACTED] | S-794-ITC-005287296 to S-794-ITC-005287336 |
| Samsung Electronics Co. Ltd. | GSM/DCS 1800/1900 Patent License Agreement | 2/22/1999 | 2/22/1999 | 12/31/2002 | GSM Terminal, DCS 1800/1900 Terminal or Comb- Terminal | Worldwide | [REDACTED] | S-794-ITC-003052419 to S-794-ITC-003052431 |
| Samsung Electronics Co. Ltd. | Patent License Agreement | 10/5/2009 | 10/5/2009 | Last to expire of the Assigned Patents | Pixel products include file viewer software products All Samsung products | Worldwide | [REDACTED] | SAMIDCA00330453 to SAMIDCA00330474 |
| Samsung Electronics Co. Ltd. | Patent License Agreement First Amendment | N/A | 4/21/2010 | N/A | Pixel products include file viewer software products | N/A | [REDACTED] | S-794-ITC-000001397 to S-794-ITC-000001402 |
| Samsung Electronics Co. Ltd. | Settlement Agreement | N/A | 4/25/2008 | N/A | Semiconductor products | Worldwide | [REDACTED] | S-ITC-003455062 to S-ITC-003455065 |
| Samsung Electronics Co. Ltd. | Addendum to the Settlement Agreement | 4/25/2008 | 4/27/2009 | 5 years | Semiconductor products | Worldwide | [REDACTED] | S-794-ITC-000005162 to S-794-ITC-000005167 |
| Samsung Electronics Co. Ltd. | Patent License Agreement | July 2006 | 8/14/2006 | 4 years with an extension option of 4 years | Handheld electronic mail device or handheld terminal | Worldwide | [REDACTED] | SAMINDCA00323440 to SAMINDCA00323448 |
| Samsung Electronics Co. Ltd. | Patent License Agreement | 12/31/2003 | 1/14/2004 | 12/31/2007 | Digital cellular mobile radio telecommunication terminals, modules with mobile radio telecommunication functionality and spare parts relating to GSM, GPRS, WCDMA, UMTS, EDGE, TDMA, TD-SCDMA, and DECT Standards, but not the IS-95 and cdma2000 standards | Worldwide | [REDACTED] | S-794-ITC-003052584 to S-794-ITC-003052592 |
| Samsung Electronics Co. Ltd. | Patent License Agreement | 4/1/2008 | 7/9/2008 | 10 years | All communication devices which can be used to transfer, initiate or receive data and/or voice transmissions that includes mobile transposable or handheld portable subscriber terminal equipment | Worldwide | [REDACTED] | S-794-ITC-000000274 to S-794-ITC-000000284 |

SUBJECT TO PROTECTIVE ORDER.
CONTAINS HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY INFORMATION

Exhibit 3B
Summary of Apple UMTS License Agreements

| Licensee | Licensor | Title | Effective Date | Date Last Signed | Term | Licensed Products/Technology | Geographic Scope | Payments | Source |
|--------------|--|-----------------------------------|----------------|------------------|--|--|------------------|------------|--|
| 1 Apple Inc. | Koninklijke Philips Electronics N.V. | Wireless Patent License Agreement | 10/1/2010 | 1/12/2012 | 10 years | Mobile Wireless Communication Equipment that is fully compliant with CDMA2000, GSM, LTE, and UMTS standards | Worldwide | [REDACTED] | APL7940018564430 to APL7940018564473 |
| 2 Apple Inc. | Koninklijke Philips Electronics N.V. and Sharp Corporation | Wireless Patent License Agreement | 10/1/2010 | 12/20/2011 | 10 years | Mobile Wireless Communication Equipment that is fully compliant with CDMA2000, GSM, LTE, and UMTS standards | Worldwide | [REDACTED] | APL7940018564474 to APL7940018564504 |
| 3 Apple Inc. | Nokia Corporation | Patent License Agreement | 6/1/2011 | 6/1/3/2011 | 12/31/2016 | Wireless Products such as an end-user terminal or any other therewith comparable product, including without limitation mobile phones, handsets, smart phones, tablet computers and laptop computers, which is capable of transmitting and/or receiving wireless communications in accordance with any of the CDMA2000, GSM, LTE, WiMax or UMTS Standards | Worldwide | [REDACTED] | APLND000038188 to APLND000038208; APL7940018048471 to APL7940018048496 |
| 4 Apple Inc. | InterDigital Group Technology Corporation | Wireless Patent License Agreement | 6/29/2007 | 9/6/2007 | 7 years | Apple Phones operating under TDMA and CDMA-based second and third generation mobile voice and data standards: GSM, GPRS, EDGE, PDC, PH5, and W-CDMA (through release 7 and any HSPA specifications included in release 8) regardless of the frequency used and including any updates | Worldwide | [REDACTED] | APLND00001226533 to APLND00001226549 |
| 5 Apple Inc. | Telefonaktiebolaget LM Ericsson | Global Patent License Agreement | 1/14/2008 | 1/18/2008 | Last to expire of the Licensed Patents not to exceed 7 years | Modules, Infrastructure Equipment and End-User Terminals relating to GSM, GPRS, EDGE, and WCDMA (including UMTS) - including all HSPA releases Does not include LTE Standard | Worldwide | [REDACTED] | APLND00001247678 to APLND00001247696; APLND00001247696 to WH00006551184 to APLND0000655203 |
| 6 Apple Inc. | SPH America, LLC and President, Dr. Chooengsoo Park | Settlement and License Agreement | 12/31/2009 | 12/31/2009 | Expiration of the last to expire of Dr. Park Patents | Apple product, product line, service, device, system, component, hardware, software and any combination thereof | Worldwide | [REDACTED] | APLND00000434443 to APLND00000434463 |
| 7 Apple Inc. | WIAV Networks, LLC | Settlement and License Agreement | 12/31/2009 | 12/31/2009 | Expiration of the last to expire of WIAV Patents | Apple product, product line, service, device, system, component, hardware, software and any combination thereof | Worldwide | [REDACTED] | APLND00000434664 to APLND00000434877 |
| 8 Apple Inc. | WIAV Solutions LLC | Settlement and License Agreement | 12/29/2008 | 1/5/2009 | Expiration of the last to expire of WIAV Patents | Apple product, product line, service, device, system, component, hardware, software and any combination thereof. Patents referenced in Exhibit B are limited to the Wireless Handsets field of use. Patents referenced in Exhibit C are for all fields of use. | Worldwide | [REDACTED] | APLND00000454878 to APLND00000454912 |

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**Exhibit 3B
Summary of Apple UMTS License Agreements**

| Licensor | Licensor | Title | Effective Date | Date Last Signed | Term | Licensed Product/Technology | Geographic Scope | Payment | Source |
|----------|---------------------|--|----------------|------------------|--|--|------------------|---|--------|
| 9 | Apple Inc. | Siemens Aktiengesellschaft Patent License Agreement | 10/2/2008 | 10/2/2008 | Later of (i) expiration of the last of the Siemens Licensed Patents (i) expiration of the last of the Apple Licensed Patents | Cellular phone, smart phone or handheld mobile communication device that is actually or claimed to be compliant with one or more of the GSM/GPRS Standard and the UMTS Standard. Products do not include stand alone PCMCIA cards, modules, and/or modems and a handheld mobile communication device is limited to a device that is designed to be used by holding it in one hand. Communication Equipment in the form of (1) Infrastructure equipment and (2) terminal units that is actually or claimed to be compliant with one or more of the GSM/GPRS Standard and the UMTS Standard | Worldwide | [REDACTED] APLND- WH0000454913 to APLND- WH0000454934 | |
| 10 | Apple Inc. | SPH America, LLC Settlement and License Agreement | 12/31/2009 | 12/31/2009 | Expiration of the last to expire of SPH Patents | Apple product, product line, service, device, system, component, hardware, software and any combination thereof | Worldwide | [REDACTED] APLND- WH0000454935 to APLND- WH0000454948 | |
| 11 | Apple Inc. | SPH America, LLC Settlement and License Agreement | 12/31/2009 | 12/31/2009 | Expiration of the last to expire of SPH Patents | Apple product, product line, service, device, system, component, hardware, software and any combination thereof | Worldwide | [REDACTED] APLND- WH0000454951 to APLND- WH0000454969 | |
| 12 | Apple Inc. | MSTG, Inc. Standstill and Option Agreement | 11/10/2009 | 11/10/2009 | Expiration of the last to expire of MSTG Patents | Apple product, service, device, system, hardware, software, or other offering | Worldwide | [REDACTED] APLND- WH0000454970 to APLND- WH0000454987 | |
| 13 | Apple Inc. | SPH America, LLC Settlement and License Agreement | 12/31/2009 | 12/31/2009 | Expiration of the last to expire of SPH Patents | Apple product, product line, service, device, system, component, hardware, software and any combination thereof | Worldwide | [REDACTED] APLND- WH0000454988 to APLND- WH0000455002 | |
| 14 | Apple Inc. | Electronics and Telecommunications Research Institute Apple - ETRI Collaboration Agreement | 12/31/2009 | 12/31/2009 | Expiration of the last to expire of ETRI Patents | Apple product, product line, service, device, system, component, hardware, software and any combination thereof compliant with at least one of the following standards: all standards reasonably considered to be 2G cellular telecommunication standards (e.g., TDMA, CDMA) and all standards reasonably considered to be 3G cellular telecommunication standards (e.g., 3GPP-related standards such as UMTS and 3GPP-2 related standards such as cdma2000) | Worldwide | [REDACTED] APLND- WH0000455003 to APLND- WH0000455044 | |
| 15 | Apple Computer Inc. | Telefonaktiebolaget LM Ericsson Patent License - Narrowband AMR and Wideband AMR Standards | 6/3/2003 | 5/19/2003 | 5 years | Decoder or Encoder software providing at least one channel compliant with the AMR Standards (Adaptive Multi-Rate Narrowband and the Wideband technical specifications of 3GPP that are specified in Appendix B of the Agreement) which is either an Implementation or a Personal Computer Product | Worldwide | [REDACTED] APLND- WH0000655159 to APLND- WH0000655183 | |