PATENT LITIGATION

INSURANCE

A Study for the European Commission on the feasibility of possible insurance schemes against patent litigation risks

FINAL REPORT

June 2006

CJA Consultants Ltd

European Policy Advisers

Britain and Brussels

CJA Consultants Ltd PH7, Bickenhall Street, London W1U 6BS UK
Telephone: +44 207 935 2949 Fax: +44 207 935 2950
email: amedee.turner@btinternet.com website: www.cjac.co.uk

CONTENTS

Appendices are contained in a separate volume

TABLES

ACKNOWLEDGEMENTS

1.1 The core team

This Study on possible insurance against patent litigation risks was directed and coordinated by **Amédée Turner MA QC** (Director of the Study and Legal Co-Ordinator, Chairman, CJA Consultants Ltd, former MEP);

Edward Williams (Chairman of Insurance Advisors, Insurance and Risk analysis advisor) Partner of Glencairn Limited;

Dr Frank Cuypers (Insurance Advisor) of Swiss Re, Zurich – in a personal capacity;

Christopher Jackson MA (Feasibility Study advisor, director, CJA Consultants Ltd, former MEP);

Peter Price BA (Deputy Project Director, director CJA Consultants Ltd, former MEP);

Ben Patterson MA (economist, director, CJA Consultants Ltd, former MEP).

PARTICULAR THANKS ARE EXPRESSED TO THE FOLLOWING:

1.2 Experts consulted on insurance aspects

Paul Cumberland, Underwriter of Markel London;

Paul Koronka, Principal & Chairman Mutual Development Unit of Charles Taylor Consulting, London;

Barbara J. Merry, Chief Executive, Hardy Underwriting Group plc, London

Adrian Walker BA(Hons)ACII, Active Underwriter Hardy Underwriting Group plc

Antje Fedderke, Stv. Leiterin Europaburo of GDV Die Deutschen Versicherer, Brussels;

Gustaaf Daemen, Chairman CEA legal expenses committee; Gedelegeerd Bestuurder of Verzekering Rechtsbijstand D.A.S.;

Jean-Louis Marsaud, Director, Comité Européen des Assurances

Mets Gerit, Broking Partner of J. Van Breda & Co. Netherlands;

Erik Baekmark, Managing Partner of Baekmark & Kvist Forsikringsradgivining A/S - Denmark;

Gunter Mengers, Broking Partner in Homan GmbH of Hamburg;

Carlheinz Mikosch MBA, Senior Broking Partner of Mikosch & Partners GmbH of Dusseldorf;

Richard Kromhout van der Meer, Broker of Van Breda Risk & Benefits, Netherlands;

Matthew Hogg, Intellectual Property Underwriter, Kiln Plc

1.3 National convenors of the legal and patent expert teams

Austria – Dep.Ing. Peter Puchberger Patentanwalt of Puchberger, Berger & Partner, Vienna;

Belgium – Bruno Vandermeulen Member of the Brussels Bar Partner of Bird & Bird, Brussels;

Czech Republic – Dr. Karel Cermak Managing Partner of Cermak Horejz Myslil A Spol, Prague;

Denmark – Sture Rygaard Attorney-at-Law of Plesner Svane Gronborg, Copenhagen;

Finland – Tord Langenskiold M.Sc (Chem.Eng.) Agent European Patent Attorney of Oy Jalo Ant-Wuorninen Ab, Helsinki;

France – Pierre Veron Avocat a la Cour of Veron & Associes, Paris, and Jean-Bruno Thevenet French and European Patent and Trademark Attorney of Cabinet Beau de Lomenie, Paris;

Germany - Dr Heinz Goddar of Boehmert & Boehmert, Munich,and Peter K. Hess Dpl.Phys. Patentanalt-European Patent Attorney Partner of Bardehle Pagenberg Dost Altenburg Geissler, Munich;

Greece - Dr Helen Papaconstantinou Advocate and Patent Attorney of Papaconstantinou & Co., Athens;

Hungary – Zoltan Forgo Attorney-At-Law Partner of Forego Varga & Partners, Budapest;

Italy - Dottoressa Francesca Moscone, Società Italiana Brevetti, Rome;

Netherlands – Wouter Pors, Advocaat of Bird & Bird, Den Haag;

Poland – Marek Lazewski Rzecznicy Patentowi Europejscy Rzecznicy Patentowi of Lazewska I Lazewski, Warsaw;

Spain – Luis H. de Larramendi, Socio Abogado Agent Propiedad Industrial, Elzaburu, Madrid ;

Sweden - Giovanni Gozzo Advokat of Gozzo Advokater, Stockholm;

UK - Amédée Turner QC.

.

National expert teams of patent practitioners are not listed here, but gave the vital information required in the Round Table Discussions.

1.4 Insurance consultants and other experts

Chris Wylde, Chief Executive CWMC Ltd, (Independent management consultancy specialising in operational review, business improvement, innovation services to the insurance and financial services industry).

John Warran, CWMC Ltd

Mick Booth, CWMC Ltd

Simon Wilmot-Smith, Director of Underwriting of Capita, London;

Sam Bobo, Group Legal Expenses Underwriter of Capita, London;

2 DEFINITIONS

2003 Report	http://europa.eu.int/comm/internal_market/en/indprop/patent/index.htm
Adverse selection	When insurers are only offered a selection of risks which they perceived to be a greater risk than the average
CEA	Comité Européen d'Assurances, the European Trade body for insurers
Co-insurance	The percentage of a claim paid by the insured above the excess
EPO	European Patent Office
EU	European Union
Excess/Retention	The sum which the insured is liable to bear in any claim
Family of patents	European Patents validated in a particular Member State belonging to one patentee and relating to the same technical subject
Indemnity	Aggregate sum covered by insurance
Non-culpable alleged infringer	Alleged patent infringer which has been properly advised that it does not infringe a valid patent
Patent practitioners	Patent lawyers and Patent Attorneys
PLI	Patent Litigation Insurance
Pool	Scheme with which patentees with no other options for protection are obliged to join
SME's	Small and Medium sized enterprises
Spread risk	Insurance cover spread over a number of policies so as to avoid a non-average risk exposure
Standard cover premium	premium for mid-limit cover
Sunset clause	Clause releasing obligation of the insurer for a claim on which there has been no activity for a stated period
Widespread scheme	In this context, a scheme which covers such a large section of the market that it has the characteristics of the whole

3 BACKGROUND

3.1 The Green Paper and subsequent considerations

3.1.1 Reconsideration of the Patent system in Europe commenced in 1997 with the presentation by the European Commission of the Green Paper on the Community Patent and Patent System in Europe - COM(97) 314f. This was designed to open debate on users' needs, whether they were being met, and whether new measures ought to be taken at Community level. Among other possibilities for making the patent system more attractive, the possibility of setting up a system of legal costs insurance financed by each patent holder individually was considered.

3.1.2 In 1999 the European Parliament response to the Communication from the Commission "Promoting innovation through patents" noted that creation of an insurance system to provide legal protection in the event of disputes involving patents would give small and medium sized companies (SMEs) better possibilities to defend their rights.

3.1.3 The issue of litigation costs and litigations costs insurance has also been a recurrent subject of debate during the Patinnova conferences, and was one of the main topics of Theme 3: "Patent Litigation in Europe" of the Patinnova '99 Conference in Thessaloniki.

3.1.4 In 2000 the Commission organised a conference on patent litigation insurance in Brussels with governmental representatives of the Member States and interested circles. Presentations were made on PLI in the UK, USA, Japan and Germany, and on the SME's view and those of European industry and patent agents.

3.1.5 The Commission instigated a Study (referred to as the 2003 Report) to analyse the need for, the feasibility of and the implications of introducing an insurance scheme against cost for litigation in patent cases at European level. This was carried out by CJA Consultants Ltd. The full Study can be consulted on:

(http://europa.eu.int/comm/internal_market/en/indprop/patent/index.htm).

It laid out a number of broad alternatives proposed by the parties concerned and which could form the basis of possible viable insurance schemes in future. The main findings are outlined below

3.2 The 2003 Report: implications of introducing an insurance scheme against patent litigation cost.

3.2.1 The report showed that no Member State has any substantive law specifically on patent litigation insurance, nor has the USA, although there has been inconclusive discussion about the possibility of such legislation in some countries.

3.2.2 While Patent litigation insurance proposals are marketed in the EU and the USA, including patent, trade mark and copyright cover, in no part of the world has Patent Litigation Insurance (PLI) been particularly successful. No insurance scheme has shown any capacity to provide adequate cover at premiums affordable by patentees in general. Recent attempts by insurers in several countries to widen the market for PLI have not met with success.

3.2.3 In France the state-backed 'Brevetassur' scheme did not succeed. In the USA and Japan, PLI is normally limited to defence only. The tacitly assumed successful and wide use of insurance in the USA proved to be illusory. In the EU, it has been estimated that under one thousand PLI policies in total have been taken up.

3.2.4 Of the substantial number of companies, predominantly SMEs, patent lawyers and Patent Attorneys consulted, an overwhelming proportion of companies desired insurance cover, as defendants to infringement actions and as patentees pursuing infringers. Cover was desired for damages as well as for litigation costs.

3.2.5 Few insurance companies offer patent litigation insurance in Europe and the volume of such insurance has not been great.

Each insurance experience has been unique to its own circumstances.

3.2.6 A high proportion of respondents welcomed the possibility of the European Commission taking steps to set up patent litigation insurance.

3.2.7 Initial responses opposed compulsion for the take-up of patent litigation insurance. Re-consideration revealed a willingness to contemplate compulsion if the savings and benefits were great enough.

3.2.8 The economic effects of possible patent litigation insurance schemes were considered likely to be significant. The position of SMEs was important as they were currently falling behind larger firms in patenting inventions.

3.2.9 Brokers showed interest in and willingness to consider a European PLI scheme. However, insurers showed considerable trepidation at the risks involved.

3.2.10 Round table discussions with companies and patent professions in Member States representing over 70% of the GDP of the EU showed near unanimity on the desirability of an insurance scheme covering patentees and defendants for costs and for damages for infringement.

3.2.11 In these second discussions it was broadly accepted that only a compulsory scheme could achieve the volume necessary to spread risk and permit low premiums.

3.2.12 It seemed highly likely that the existence of a widely used European Patent Litigation scheme would, by increasing the security and strength of a patent, encourage prospective patentees to patent their inventions.

3.2.13 Experts expected that widely used PLI cover would lead to more patents being applied for by small companies, because they would feel more confident of using them. Patents would be more actively exercised by the patentee approaching possible infringers, and more small and medium sized companies would respond more intelligently to allegations of infringement, not simply giving in to implied threats of infringement litigation by abandoning or altering manufacture, as is often the case at present.

3.2.14 Wider use of PLI was thought likely to increase the amount of litigation, and the effectiveness of the patent system. Any PLI scheme must also be designed to lead to quicker and fairer settlements, including more licensing in appropriate cases, and out-of-court settlements. The average cost of proceedings in such a case would fall; though the aggregate costs of an increased number of proceedings would probably rise. If patents were regarded as more useful and more were taken out, then PLI would enhance the patent system's ability to advance technology in Europe.

3.2.15 Insurance might encourage more patent applications by lessening fear of the expense of litigation without actually increasing litigation. This would also be a favourable outcome.

3.2.16 IInsurers would need better statistics to assess risk and these must be provided at an early stage.

3.2.17 Technical risk assessments undertaken when cover is agreed are currently expensive and complex and therefore a deterrent to insurance, but in the envisaged scheme these would be confined to the very small proportion of patents (thought then to be roughly one in one thousand), where early settlement was found impossible. The technical risk assessment would be delayed until the claim arose.

3.2.18 While a very wide range of possibilities was considered, it became clear that the range of practical possibilities was narrow and involved:

- Low premiums (say 300-600 Euros pa)
- Compulsion
- No initial technical risk assessment when cover is agreed

- Cover for patentee and defendant
- Substantial encouragement for early settlement

.

4 INTRODUCTION TO THIS FOLLOW-UP STUDY

4.1.1 Following on 2003 Report the European Commission initiated this detailed feasibility Study of patent litigation insurance.

4.1.2 Patent litigation insurance has long been considered potentially important as a means of ensuring access to patents to small and medium-sized enterprises which do not have extensive legal resources and are put off from developing, patenting or litigating patents on new technologies owing to the expense and complexities in EU patent systems. However, attempts by the private sector to provide such patent litigation insurance have rarely been successful up to now.

4.1.3 The purpose of the current Study is to evaluate, on a detailed basis, the feasibility of a small number of alternative schemes for insuring European Patents and, when they exist, Community Patents.

4.1.4 Experienced insurance executives were consulted as to the information they would require relating to patent litigation in the EU in order to assess underwriting risks and premiums.

4.1.5 As none of the information required was available in sufficiently complete form to provide a true picture of litigation and its costs at each stage in the Member States, the main experts among patent lawyers and Patent Attorneys in the Member States were consulted first by questionnaire and then in detailed and full discussions in the Member States with the Director of Study and Legal Co-Coordinator. The Study depended upon the knowledge and experience of the limited number of patent lawyers and Patent Attorneys in each Member State capable of giving a true picture of the incidence and costs of litigation in each Member State. From the information obtained, in particular legal costs in each Member State relating to patent litigation actions, the insurance experts were able to assess various options selected, developing a coherent picture of possible conditions and premiums under different circumstances.

4.1.6 Insurers, brokers and industry representatives were consulted on the costings involved, the likely pattern of claims, and the premiums likely under various assumptions as to limits of indemnity and excess for the various options elaborated. The possibilities for involvement by the public sector and the implications this might have for the feasibility of the various schemes were considered.

4.1.7 A Business feasibility model was developed, refined and tested, and finally used to give a portrayal of possible business results.

The following questions were dealt with in assessing the feasibility of options:

4.2 What would be the product?

4.2.1 The product is defined by the various options selected.

4.2.2 There are additional features such as the precise monetary limit of cover; the type and precise monetary amount of any excess, or percentage co-insurance; the impact of family size of the patent in question; of age of patent; of technical field.

4.2.3 In addition there are conditions such as non-technical assessment of the patentee at time of contract for insurance; when the claimant can claim; requirements for technical risk assessment when a claim is made; the possibility of informal mediation encouraged by the insurers.

4.3 What other provisions would be desirable?

4.3.1 Covered in Chapters 14 and 15.

4.4 Which patentees would be eligible for insurance?

4.4.1 This is covered in Chapters 12 and 18.

4.5 Who would supply the insurance?

4.5.1 This is covered in Chapter 17.

4.6 What administrative costs would be likely to be incurred in start-up and in running the scheme?

4.6.1 These are explored as a start-up cost in Chapter 15, section 36, Chapter 16 and Chapter 21, section 8, and Chapter 22, sections 4 and 8 and as to running costs Chapter 20, section 14, Chapter 21, section 5 , and Chapter 22, sections 1-3 and 5.

4.7 What would be the legal requirements for introduction and operation of mandatory insurance?

4.7.1 These are covered in Chapter 15

4.8 How would the start-up work?

4.8.1 This is covered in Chapter 14, section 2 Chapter 15, sections 30-34 and 36, Chapter 17, section 4 and Chapter 20, section 14.

4.9 What information would be needed by underwriters in order to assess risk and set premiums?

4.9.1 This was one of the key questions, is answered by the questionnaire and meetings with patent practitioners described in Chapters 6 to 11 and given in the statistics in Appendices 1, 2 and 3.

4.10 What would be the indications of premium levels for the countries studied?

4.10.1 This is answered by insurance experts in the light of the statistics for claims, costs, number of patents etc per country, and is given in Chapters 24 to 26.

4.11 What would be the likely business return to an insurer?

4.11.1 The answer to this is qualified by all the assumptions stated and the accuracy of the statistics, and the inevitable but unknown increase in litigation caused by any such scheme, together with the circumstance of their being liable for both parties costs. It is covered in Appendix 6.

5 EXECUTIVE SUMMARY

5.1.1 Before possible options for patent litigation insurance could be considered in detail and their feasibility examined, it was essential to determine the basic statistics relating to patent litigation and its cost in Member States. Incidence, duration, procedures and costs differ widely between Member States and had to be considered separately. Records were lacking and it was essential to go to expert legal practitioners in the Member States to utilise their personal knowledge and experience of litigation in their own courts. This was done first individually and then collectively in Round Table Discussions in each Member States studied.

5.1.2 The incidence of litigation varies dramatically between Member States, as do the costs. Germany is in a different league to the others, having practically half the litigation carried out in the EU. The ratio of actions to patents is 1 in 300, though this is exaggerated by the separation of infringement and nullity. In France by comparison the ratio is 1:5000; in the UK 1 in 2000. Most other Member State fall between these two. The proportion and timing of settlements also differ greatly. In the UK 80% settle before first judgement; in Belgium 65%; in France 50%; in Spain 25%; and in Netherlands and Germany only 20% settle.

5.1.3 A key table showing patents in force and the cost of litigation and damages is repeated here.

Table 1: Patents in force and costs of litigation and damages, 2004

	Patents in force	Litigation: total cost (€)	Cost per patent in force (€)	Total Damages (€)	Damages per patent in force (€)	Litigation Cost, incl. damages, per patent in force (€)
Austria	83,636	284,000	3.40	30,000	0.36	3.75
Belgium	84,621	1,675,000	19.79			19.79
Czech Republic	9,807	189,000	19.27			19.27
Denmark	45,067	4,370,000	96.97			
Finland	36,064	2,940,000	81.52	62,000	1.72	83.24
France	252,798	2,520,000	9.97	1,660,000	6.57	16.53
Germany	307,488	224,500,000	730.11	3,500,000	11.38	741.49
Greece	27,963	190,000	6.79	40,000	1.43	6.39
Hungary	9,513	60,750	6.39			6.39
Netherlands	121,337	7,815,000	64.41	100,000	0.82	65.23
Poland	12,457	460,000	36.93			36.93
Spain	97,146	2,360,000	24.29	650,000	6.69	30.98
Sweden	82,125	2,080,000	25.33	102,000	1.24	26.57
UK	257,600	56,950,000	221.08	4,860,000	18.87	239.95
TOTAL	**1427622**	**306,393,750**	**214.62**	**11,004,000**	**7.71**	**222.33**

5.1.4 The Study covers the Community Patent, not yet in force, in a provisional way relying on the projections contained in COM(2003)828 as well as on information from practitioners in the Member States. Widely varying estimates of the number of patents likely to be in force (from 100,000 to 400,000 patents) were taken for the steady state when the number of lapsed patents roughly equals the number of new grants. Will the German pattern of high litigation be followed? In that situation, perhaps 160 cases a year would be fought. If the average of all Member State is taken and with the lower forecast of grants, it might

be 40 actions a year. Costs might be the average of Germany and the Netherlands, say €300,000 per party at first instance.

5.1.5 The impact of different technologies was considered in detail. The expert view was that these differences would have much less impact on cost for a widespread scheme than had been expected. This is because of the diluting effect of global litigation on the more expensive technologies such as pharmaceuticals.

5.1.6 The Study considers a 'widespread scheme' because only that would bring the beneficial effects on the patent system and technical advance in the EU which is desired. Any such scheme must avoid the costs of an initial technical risk assessment, and have an uptake wide enough for the statistics for all litigation to give a true measure of the average risk of the patents insured.

5.1.7 The insurance experts concluded that only a scheme which involved the great majority of patentees, would overcome the present situation that insurance has been found attractive only to a minute proportion of patentees and for a very small number of disputes and litigations. Indeed the current availability of such insurance is declining. Some experts laid great emphasis on perceived disadvantages, mainly in terms of inflexibility and distortion, of a mandatory scheme. To them, mandatory schemes involve controls and conditions which restrict the freedom of insurers to offer what they might think to be a superior product. A further disadvantage of compulsion is the need for legislation and control. If the scope of legislation required were too great or the costs of control too onerous, this would weigh heavily against compulsion. The Study concludes that compulsion should be employed only if the benefits are sufficient as to outweigh the disadvantages.

5.1.8 The broad alternatives considered were

- Accepting the status quo: this would bring no benefit
- A voluntary scheme of PLI: many major insurers oppose any scheme other than voluntary insurance. Such a scheme is theoretically possible, but to avoid adverse selection a patentee must insure all its new patents for the life of each patent from its inception; and the scheme must be 'widespread' to avoid the requirement for a technical risk assessment at the outset. No insurers believed such voluntary insurance to be an attractive proposition at this stage. Public funding for a voluntary scheme was considered.
- A mandatory insurance scheme in which all new European or Community Patents would be included: this could bring the economic benefits sought.

5.1.9 Key findings from the two studies are that:

- Patentees would like to insure their patents – if the premium and conditions are reasonable.
- The PLI market is currently small and weak, and the risks of entry for insurers seem to exceed the potential rewards. This is why so few insurers are interested.
- Without compulsion no currently envisaged scheme is likely to succeed, though it may be possible to move back to a voluntary scheme later once a scheme is well established. However all the major conditions required for a voluntary scheme have also been identified.
- Only a mandatory scheme can obtain the economic and technical benefits to the EU and individual patentees which would arise from a widespread scheme of PLI. Only the relevant public policy makers can decide whether the expected public benefits justify the necessary action to introduce a scheme.

5.1.10 Insurers recommended that any scheme should be simple. There would be freedom of choice of insurer, but excess conditions would be subject to certain limits. Minimum scope for cover would be defined but defence would always be included. Insured Patentees would be covered regardless of their principle place of business, and premiums would not be subject to an initial technical risk assessment, thus avoiding that element of cost. Technical assessment would be made at the time of any claim, and the patentee would be liable for the cost, save when defence was involved, unless the assessment of its chances was 51% or better. An initial non-technical assessment of the patentee would impinge on the premium offered. Settlement would be encouraged, but the right to fight would always be preserved (subject to the risk assessment) in order to retain the validity of the patent system.

5.1.11 In the case of a mandatory scheme, legislation would be required and is itemised. Control should be simple, and could be exercised by national Patent Offices requiring to see appropriate certification of insurance at the time of validation and renewal of a European Patent. The insured would have the right to choose its own legal representative in the event of an action. Patents with known risks would be excluded from the scheme and could obtain bespoke insurance if so wished. Companies with large patent litigation budgets ('globally oriented companies') could have special exemptive status.

5.1.12 Few actions are started in the first two years after validation, and the most active period is between years five and eight. Pharmaceutical cases have a different pattern. Insurers concerned at the uncertainties of the start-up period would wish to hedge this risk by measures such as: increased excess; co-insurance, front-loaded premiums and the right to opt out after three years.

5.1.13 No scheme can start without insurers. There is little interest shown at this stage by most insurance companies, however Lloyd's of London has indicated some interest; and there is always the possibility of using one or more mutuals.

5.1.14 If no action is taken, the currently unsatisfactory status quo will remain. While modest support public support for, and advocacy of, a widespread voluntary scheme could in theory be given for specified conditions, insurers take the view that adverse selection could not be avoided, that an initial technical risk assessment would become necessary, and that the conditions for a widespread scheme could then not be met. Thus only mandatory schemes and their feasibility have been considered in detail.

5.1.15 Because of the complexity of the considerations, one central Option was used as the basic model and others derived from that. For this central Option, the essential features considered included:

- Cover for cost of pursuit and defence
- Delayed technical risk assessment
- All new European and Community Patents from a given date have to be insured, and insured subsequently during their life
- Insurance must be taken out before validation of the patent
- Certain minimum co-insurance and excess

5.1.16 Insurers were asked to estimate premiums based on the detailed statistical information with the following results:

Table 2: Premiums for the Central Option

Member State, per patent	Premium for low €100,000 indemnity	Premium for standard €250,000 indemnity	Premium for high €500,000 indemnity
Austria	46	60	81
Belgium	92	120	162
Czech Republic	46	60	81
Denmark	346	450	606
Finland	231	300	404
France	185	240	323
Germany	923	1200	1615
Greece	46	60	81
Hungary	46	60	81
Italy	N/a	N/a	N/a
Poland	46	60	81
Spain	92	120	162
Sweden	231	300	404
The Netherlands	231	300	404
United Kingdom	462	600	808

5.1.17 Premiums were established for all the other options and are given in the text. Finally, detailed financial feasibility estimates were calculated and model Profit and Loss and Balance Sheets produced for the Central Option. This spreadsheet gave considerable flexibility for assessing the impact of variations in assumptions.

5.1.18 **Conclusion: It has been demonstrated that industry on the whole would welcome a widespread PLI scheme. This would particularly benefit SMEs. The only scheme that appears viable would be mandatory: however this requires public decision as to the balance of public advantage. While establishing such a scheme might not be easy, it appears possible that premiums could be affordable. Most insurers are distinctly risk averse when it comes to PLI given its past record, but some might be willing to enter at the outset and it appears that mutualisation is also an option. A scheme could succeed.**

6 NATIONAL STATISTICS RELATING TO EUROPEAN PATENTS

6.1 Designation, grant, validation and renewal of European Patents

6.1.1 Since only European and Community patents, and not patents granted by national patent offices, are relevant for the purposes of the present Study, statistics regarding these European Patents are necessary. After a European Patent is granted by the EPO it has effect in a particular Member State only when it has been validated there by the national Patent Office on the application of the patentee. Applicants to the EPO for a European Patent designate the Member States they may wish to validate in once the patent has been granted; however fewer national validations are applied for than are designated to the EPO. Hence EPO designations by applicants are of no assistance in indicating the number of European Patents in force in each Member State.

6.2 The figures required

6.2.1 For a new scheme of PLI the potential premium base in a Member State may be calculated from the total number of European Patents in force in the Member State. However, obviously a new scheme will build up year by year. Insurers also wish to know the annual figures of validations during the build-up period as new European Patents come into force in each Member State. This build up is indicated by the number of European Patents coming into force annually in each Member State, less the numbers abandoned. The build up period will thus be somewhat longer than indicated by figures of annual validations. Build-up to total coverage varies substantially in the different Member States.

6.2.2 The build up to a steady state in each Member State also gives an indication of the average life of European Patents in that particular Member State. There are wide differences between Member States.

6.2.3 In the case of some national Patent Offices, necessary figures relating to European Patents were not available. The two figures required by the insurance experts are the number of European Patents in force in a particular Member State in each of a series of years up to 2004, and the number of European Patents validated annually in each Member State over that period. The former figure is required to measure against the cost of litigation in the Member State in question in order to give a litigation cost per European Patent and the latter is required to show the number of European Patents which would enter an insurance scheme each year. This would indicate the speed of growth of aggregate premiums from the start of an insurance scheme.

6.3 Specific shortfall of information

6.3.1 Some Patent Offices, such as the Spanish Patent Office, had these figures available with no difficulty. Some others had fewer means of ascertaining the numbers of European Patents in force in each year. In the case of Italy the latter figures were unavailable because Italian patents, including European Patents, can be renewed and the renewal fees paid in any local post office. The Italian Government has an obligation to pay half the fees to the European Patent Office, but this does not reveal the numbers or the year in the life of a patent of the renewal. If a request is made to the Italian Patent Office as to whether a particular patent is in force, the Patent Office requests from the patentee proof that he has paid renewals fees up to date. In early 2006 renewal fees ceased to be required in Italy. This is however generally assumed to be a temporary measure.

6.4 Approximate figures available by deduction

6.4.1 Other Member States such as the UK, France and Germany only produce figures, and in some cases good but not completely accurate estimates, for the number of European Patents in force in a particular year, (though they can state whether any particular European Patent was in force). Some Member States, for instance the UK, did not produce the number of validations in a year but were able to estimate these.

6.5 European Patent Office information

6.5.1 The EPO cannot provide either of the above figures independently, because validation is a national matter and bears little relationship to the number of designations of particular Member States by European Patent applicants made to the EPO.

6.6 Reasonable figures for validations and European Patents in force obtained

6.6.1 The above two sets of figures, essential for the insurance experts' calculations, were established except in the case of Italy, sufficiently reliably in discussions with the national Patent Offices for the purposes of the insurance experts. For Italy there are figures for validations, but for the reason given above, total patents in force cannot be calculated from these. One cannot extrapolate the number of patents in force from the numbers validated annually from other Member States because of the wide spread in the years taken for annual validations in different Member States to build up to the total number of those in force. Not much significance should be placed on the annual variations in validations from 2000 to 2004 because, owing to internal procedures in the EPO during this period, there was a slow-down in clearing grants in the earlier years creating a backlog which was cleared in the subsequent years.

6.7 Member States with a short experience of European Patents

6.7.1 A number of Member States have had too short a period during which European Patents have been in effect to provide a reliable history of litigation practice with regard to European Patents. In these cases the litigation history of national patents has been established in order to show patent litigation characteristics and costs, on the assumption that these will remain reasonably typical for the growing number of European Patents in force in these countries. It was pointed out in some of these countries that practices may differ somewhat with European Patents because there would presumably be a higher proportion of foreign patentees holding such patents, probably with different emphases in litigation than among the national patentees. These Member States are Finland, Poland, the Czech Republic and Hungary.

6.8 Average Life of a European Patent

6.8.1 The approximate average life of a European Patent varies widely between Member States. In the UK it is about 8 years, in Germany 8, in France, the Netherlands, Denmark and Sweden about 6, in Spain, Belgium and Greece about 5 and in Austria 4. It is too soon to estimate the figure in the other Member States studied because of their recent adoption of the European Patent. The average life of a patent is of some relevance to insurers' calculations of the claims pattern in each Member State and as to cash flow. The figures are only a very rough guide because of the slow- down and subsequent back-log clearance in the EPO referred to above. However it is very important to note that it is most unlikely that the few patents which are litigated in fact conform to the average life of European Patents as a whole in any particular Member State.

6.8.2 Statistics of European Patents in force and annual validations in Member States are found in Appendices 1, 2 and 3.

7 LITIGATION OF EUROPEAN PATENTS IN THE MEMBER STATES

7.1 Patent litigation figures which insurers need

7.1.1 Incidence, duration, procedures and costs of litigation are so different in the different Member States that national statistics have to be obtained and used separately. Insurers need to know for five or more consecutive years the number of patent actions started annually, and in Germany, Austria, the Czech Republic, Hungary and Poland, separately, the number of infringement and nullity actions.

7.1.2 They need to know the figures on:

- the number settled before first instance judgment, but after considerable litigation activity;
- the number of first judgments;
- the number of first level appeals lodged and pursued, but settled before appeal judgment;
- the number of first appeal judgments;
- the number of second appeals and settlement of these before judgment.

7.1.3 They also need to know the number of those relating to

- interlocutory or preliminary proceedings;
- their relation to the main action;
- the number of settlements of these and
- the number appealed;
- settlements before second appeal judgment.

7.1.4 Insurers need to know the very different situation in each Member State as to the award of court-ordered costs. Needless to say, the insurers need to know the average cost of each step in these actions and of settlement at each stage. Insurers covering damages need to know the situation in each country as to the award of damages and the sums for damages agreed in settlements.

7.2 Obtaining the litigation statistics

7.2.1 Court statistics. As was already known from numerous previous discussions in the Member States and from consultations for this Study, there were no statistics available in any Member State sufficient to obtain a profile of patent litigation activity or of costs or damages.

7.2.2 The reasons for this are numerous. It was found that court records are insufficiently complete and insufficiently reliable as to the nature of intellectual property actions, even when these exist in partial form. The subject-matter is not clearly indicated, the nature of the action (interlocutory, preliminary, formal, as to infringement and or nullity or some other issues such as title) is not described clearly, and where there is more than one national court involved, some record some aspects and others record other aspects or none. No records distinguish between European Patents and national patents. This lack is particularly important. There is no sufficient link between actions commenced and their ultimate resolution or lack of it; or whether in some cases proceedings are linked, such as preliminary or interlocutory injunction applications, and actions for infringement.

7.2.3 There are, of course, no records of costs except costs ordered to be paid by the court. The latter in most cases bear little relation to the actual costs, and in any case only relate to the winning party.

7.3 Preliminary questionnaire to patent lawyers and Patent Attorneys

7.3.1 As a first step, a questionnaire was prepared in consultation with the insurance experts and circulated by the patent practitioner conveners to the patent practitioners in their Member States.

7.3.2 The information obtained in response to the questionnaire comprised the views of a substantial proportion of, or in some cases practically all patent practitioners in their Member State who were capable of providing the information required by the insurance experts

7.3.3 The respondents in most cases individually provided a range of figures for each of the many statistics requested. There were fourteen sections to the questionnaire and 114 sub-sections. In many instances, at the suggestion of insurance experts, patent practitioners were asked to provide an "average" figure and a "maximum" figure for a particular statistic. It subsequently turned out when the matters were discussed in personal meetings in each Member State, that the form which this request took had confused and distracted many of the respondents.

7.3.4 The results of the questionnaire showed in many cases wide ranges for each statistic requested. This was to be expected, and although the responses provided sufficient guidance for the adoption of options for schemes for feasibility studies, it was clear that more precise figures were vital.

7.4 National group discussions with patent lawyers and Patent Attorneys

7.4.1 It was clear that the wide scatter of figures in each Member State provided in the patent practitioners' individual responses to the written questionnaire on each issue could best be remedied by live discussion between the respondents until agreement was reached.

7.4.2 The discussions were held by patent lawyers and Patent Attorneys at meetings arranged by the national conveners in London, Paris, Munich, Madrid, Milan, Helsinki, Stockholm, Vienna, Prague, Warsaw, Athens, Budapest, Copenhagen, The Hague and Brussels. The Legal Coordinator attended all the meetings and led the discussions, recording decisions made and giving details, where relevant, of the discussions and questions in the other Member States.

7.5 Determining average figures

7.5.1 It was at these discussions that the difficulties which the respondents to the questionnaires were found to have suffered became apparent, particularly with regard to the "average and maximum" questions posed. The reason for this was that the request for an average was relatively easily related to one year's figures, but the request for a maximum led the respondents to hark back over their experience for the highest figure without regard to the number of years for which that the figure was the maximum. Examination of this point in the discussion meetings considerably clarified the minds of those attending in their efforts to arrive at common answers for all the questions.

7.6 Agenda of the group discussions

7.6.1 Each discussion group started with an analysis by those present of the nature of the objective, an annual

average for incidence of litigation and an average of costs and damages involved in each stage of litigation. Changes over the last ten years were discussed. This involved deciding the number of actions commenced annually at the present time, the procedures for and numbers of preliminary and interlocutory injunction applications, the number of each of these settled before the main hearing or hearings in court, the number of actions falling by the wayside, the number of judgments at first instance, the relationship of preliminary and interlocutory proceedings to the main action, and their effect on the main action at first instance.

7.6.2 They next considered the number of appeals initiated and the number of these settled before judgment, and the number of subsequent appeals. In each case discussion continued until agreement was reached on each point as a single figure, not a range.

7.7 Comparison of discussions and questionnaire

7.7.1 Insurance experts drew attention to the higher figures in the responses to the initial questionnaire, compared to the final figures settled on in the subsequent discussions. The same people were involved in both assessments, and the divergence is explained by the respondents' having the confidence to agree firmer figures in the light of full discussion together, as well as by the confusion caused in the responses to the questionnaire's request for separate maximum figures which led to cautiously high figures in the absence of extensive records.

7.7.2 Significantly fewer questions were considered in the discussions than had been set out in the questionnaire. The reason for this was that with the questionnaire a considerable number of closely related or even over-lapping questions were designed to guide the respondent, acting alone, to cross-check his answers to closely related questions. In the live discussions on the other hand this cross-checking occurred orally. Secondly, in the discussions, it was possible for the Legal Coordinator to see when litigation procedural steps could be run together to obtain the result which the insurers were interested in, because in the discussions he was able to tailor the agenda precisely to the court and litigation procedures involved in each Member State, while the questionnaire had had to cater for all possible variants of procedure.

7.8 The nature of the discussions

7.8.1 In the discussions in the Member States with the patent practitioners, the interplay of opinion between patent lawyers and Patent Attorneys, and in some cases patent judges and court experts, was instructive for all those present and certainly created effective counter-forces which ensured that the discussions arrived at commonly agreed figures for each statistic required. In all cases discussions continued on a particular figure until agreement was reached. Sometimes this was helped by switching back and forth between related figures to set each in fuller perspective. Changes, normally over the past ten years, were discussed and agreed on.

7.8.2 The meetings were reminded that the desired facts were present only in the heads around the table and in the larger countries of a number of other professional colleagues, and that the value of their decisions rested primarily on their ability to reach realistic consensus among themselves.

7.8.3 After a preliminary range of discussion at each meeting it was possible to move forward through the required statistics with reasonable confidence. After each meeting the Legal Coordinator circulated the results as he had recorded them to all participants for their confirmation or correction.

7.9 Separate nullity actions

7.9.1 Trying nullity separately in Germany, Austria, Finland (as far as costs are concerned), Poland, the Czech Republic and Hungary doubles the number of litigations and, generally, the costs to each party, although nullity cases in some countries are cheaper than infringement actions, and there is normally no second appeal in a nullity case. There is no indication from the figures of costs that trying the two aspects of the dispute separately reduces the costs of either aspect compared with a combined action. It is not uncommon, however, for the infringement action to be settled once the nullity of the patent in dispute has been decided in the patentee's favour, thus curtailing costs under this procedure in some instances. It should be noted that in the case of Finland the patent practitioners split the costs of infringement from nullity, because of their court procedures, but counted these actions as unitary.

7.9.2 The Figures in Appendices 1, 2 and 3 indicate the conclusions resulting from discussions between patent practitioners in Member States.

8 NATIONAL COMPARISONS OF LITIGATION FIGURES AND NUMBERS OF EUROPEAN PATENTS IN FORCE

8.1 The incidence of litigation in the Member States

8.1.1 Germany is in an entirely different league so far as litigation goes from all other large Member States. It has 1,000 litigation starts per annum out of a pool of European Patents in force of about 300,000 there, thus the ratio of cases to patents is about 1:300. This is partly, but only partly, explained by the separation of infringement from nullity, regarding these actions together reduces the effective litigation per patent to 1:600. This is still far higher than any other of the larger Member States. This compares with France with 50 litigation starts and European Patents in force of 250,000, a ratio of 1:5,000. Furthermore 80% of German starts are fought through to judgment, while the comparable figure in France is only 50%. In the UK the ratio of starts to European Patents in force is 1:2,000, and of the fights to first instance judgment, 1:12,000. In Spain the ratio is 1:2,000. In the Netherlands the ratio is 1:2,500, in Belgium 1:3,800, in Austria and Sweden 1:4,000, and in Denmark 1:3,300. However the other states where nullity is tried separately (apart from Finland) have relatively high ratios. The amount of German litigation (considering infringement and nullity together) is nearly equal to the rest of the EU put together.

8.2 Litigation costs compared

8.2.1 The UK, Germany and Finland are the most expensive states for litigation, first instance costs to judgment being respectively €550,000, €300,000, and €240,000. Next come Denmark, €150,000, Sweden €120,000, then France, Italy and Belgium, €70,000. The Netherlands and Spain about €40,000-50,000, then Austria, Greece, Poland and the Czech Republic about €20,000, and Hungary about €8,000.

8.3 Litigation costs

8.3.1 The litigation costs in each Member State are calculated from the average costs of the various steps in litigation in each Member State, depending on the differing court procedures and the differing costs of these in each state. These costs are multiplied by the number of cases started, settlements at various stages, numbers going to judgment at first instance, numbers of appeals started and cases going to appeal judgment at first and second stages. Insurers also need to know figures in each Member State relating to the incidence and procedures for interlocutory and preliminary injunction applications, and their relationship to the main action. These figures have all been analysed. They are widely different in each Member State. See Appendices 1, 2 and 3.

8.3.2 Similarly the extent of use of interlocutory and preliminary injunction proceedings, the extent of appeals in them and the effect of decisions on the main action differ considerably. The costs of these proceedings in comparison with the costs of the main action also vary considerably from one country to another. See Appendices 1-4.

8.4 Settlements

8.4.1 In Germany only one fifth of European Patent cases settle before judgment at first instance, half of the remainder settle before first appeal

judgment. In France half settle before first instance judgment, and 60% of appeals are settled. In the UK 80% settle before first instance judgment. On the other hand in Spain 75% are fought to first instance judgment, and in the Netherlands settlements are similar to Germany. Two thirds of cases are settled before first instance judgment in Belgium.

8.5 Changes over ten years

8.5.1 Estimates of the development of the various figures over the past ten (or in some cases five) years were also made in all the discussion meetings, taking the cost and damages figures in real terms. In most Member States, there is very little real rise in costs or damages, though in Germany and Belgium there was a substantial rise in the number of actions.

8.6 Future trends

8.6.1 The insurance experts did not ask for forecasts of the future from the patent practitioners. Apart from saying that a scheme might increase litigation activity and patent holdings (if that becomes more attractive in the eyes of European industry) there is nothing certain that can be said. Although more effective use of patents by industry is to be expected, this does not necessarily mean that litigation to judgment will increase. The presence of insurers on the scene, the increase in legal and technical assessments resulting from more investigations of patents and also more investigation of each patent in a case, is likely to lead to more settlements, mediation efforts and speedier resolution of disputes because the insurers say that their first objective in litigation is the speedy resolution of claims.

8.6.2 The figures make clear that in most Member States there is a gradual increase in the number of European Patents.

8.7 Adaptation to insurers' needs

8.7.1 The figures obtained in the discussions were related to the steps taken in preparing litigation and to the litigation steps themselves from the point of view of the patent practitioners. These were not necessarily in a form most useful to insurers. For the latter a number of procedural steps and costs and parallel proceedings were accordingly combined, most notably in relation to interlocutory or preliminary relief, where the individual steps are not of significance for the insurance experts. (See Appendices 2 and 3).

8.8 Court ordered damages and agreed damages

8.8.1 Basic options for insurance cover are whether the cover is for costs only or for costs and damages. However few statistics of damages awarded are available owing to the number of out-of-court settlements, and this appeared to be the case in the discussions with patentees recorded in the 2003 Report.

8.8.2 From the insured's point of view it might be thought that the threat of damages is greater than that of litigation costs, and thus of greater attraction to the insured. However this is not the case. Discussions with the patent practitioners in the Member States show that litigation more often than not does not establish damages and that settled damages are not particularly common. In addition in multiple litigation, settlements involve overall figures not attributable to litigation in any one Member State. This fact takes such settled damages outside

the Member State consideration, thus reducing the award of damages. These conclusions are clear from a comparison of litigation costs with damages found for each Member State in Appendices 1 to 4.

8.9 Damages: surprisingly low incidence and low figures

8.9.1 Thus damages stand surprisingly low in the view of the patent practitioners in the Member States as shown in the results of the discussions (see Appendix 1). They are not often awarded by a court and are not infrequently part of an agreed settlement. In cases where they occur in settlements they are not particularly high.

8.9.2 In Germany, for instance court awarded damages are very rare, though may average €250,000 (not necessarily on annual basis), but on the other hand agreed damages occur in about 70% of settlements and average €50,000.

8.9.3 The same figures for agreed damages in settlements are found in France, but court awarded damages are much lower at €75,000.

8.9.4 In the UK damages are agreed in only 30% of settlements, and average €100,000. Court awarded damages are very rare, but could be in excess of €3m. This is not the maximum per annum, but the maximum over a number of years.

8.9.5 In Italy agreed damages average €50,000, but the proportion of settlements is not known because the courts are scattered and no practitioner has an overall view.

8.9.6 In Spain damages are agreed in 30% of settlements and average €50,000.

8.9.7 In the Netherlands damages are almost never part of a settlement.

8.9.8 The same is true of Austria.

8.9.9 In Belgium agreed damages are very low at €6,000, and

8.9.10 In Sweden damages are only agreed in 15% of settlements.

8.10 Damages: less certainty than as to costs

8.10.1 Patent practitioners speak more authoritatively with regard to costs than damages. This could account for a certain reluctance of insurers to cover damages in the early stages of a scheme when this would add greater uncertainty. Even though damages do not figure as largely as might be expected in litigation in any Member State, they are relatively unquantifiable compared with costs.

8.11 Cost and damages in global actions

8.11.1 In the case of global actions (largely pharmaceuticals), the major costs are only capable of an estimate on a global or multinational basis. Costs of opinions, investigations of the prior art, technical assessment of infringement and expert evidence are not attributable to any particular Member State; and in practice much of this work is done in-house by the company concerned. The rest is farmed out to experts regardless of national boundaries. Any purely national litigation that remains is conducted in the context of the larger conflict as a whole. Thus in Member States where the action follows a lead elsewhere, expense is largely confined to: adaptation to national procedures; court appearances; and translations. In addition, settlements in these cases are multinational or global, and the sums agreed are unknown to national patent practitioners in any particular Member

State. They would often not be covered by insurance for damages as no particular proportion of them can be attributed to a particular Member State.

8.12 Settlements

8.12.1 The incidence and timing of settlements are of great importance from the point of view of costs. The extent to which settlements occur before judgment at first instance (but after substantial costs have been incurred), or before first appeal judgment, vary substantially from one Member State to another. In Member States with separate infringement and nullity proceedings the effect of settlement on costs is further complicated. The incidence of settlement in general, and especially as to when it occurs, differs surprisingly from one Member State to another. See Appendices 1-4.

9 DETAILED ASPECTS OF LITIGATION SPECIFIC TO PARTICULAR MEMBER STATES

9.1 France

9.1.1 Half French patent actions are settled before judgment at first instance, and in about 10% of these interlocutory proceedings are started, and the same proportion of these are settled similarly. A high proportion (80%) of first instance judgments are appealed, but 70% of these appeals are settled before appeal judgment. Most first level appeals are appealed to the second level.

9.1.2 Costs have not risen as fast as inflation in the last ten years. The costs of a defendant at first instance are significantly lower than those of the patentee, and any costs of interlocutory proceedings will come out of the costs for the main action. Plaintiffs' costs at first instance average €80,000.

9.1.3 Average appeal costs are significantly lower than first instance costs being €45,000, and the second level appeal is significantly lower still, average costs being €35,000. Costs awarded by the court to the winner represent a small but useful proportion of actual costs. Generally, damages awarded or agreed are moderate, if anything. The ratio of litigation to European Patents in force is very low, being 1:5,000.

9.2 Germany

9.2.1 Germany is entirely exceptional in a number of vital respects. In the first place litigation has doubled over the last ten years. Secondly, regarding infringement and nullity together, the number of actions commenced, an average of 500 per year, is far higher than in any other Member State taking into account the number of European Patents in force.

9.2.2 A further abnormal factor is the high proportion (400) of first instance litigations which go through to first instance judgment without settlement. However these high figures are greatly compounded by the legal system in Germany whereby infringement and nullity are tried in separate courts notionally in parallel, but not necessarily so. This means that the true number of actions started, is on average 1,000 and those going to first judgment with full costs are 800.

9.2.3 Interlocutory proceedings however are, compared to some Member States, very rare, being only 10% of infringement actions commenced. But they are expensive.

9.2.4 Appeals to first appeal are very high at about 90% although once a nullity decision has been made, this may lead to settlement of the infringement proceedings.

9.2.5 Settlements during appeal are over a half, and very few cases go to second appeal on infringement (second appeal is not available on nullity).

9.2.6 Agreed damages are not particularly high and only occur in 30% of settlements. Costs awarded to a winning party are low in relation to actual costs, and damages when on the rare occasions they are ordered, are normally not particularly high. Actual average costs, however, are relatively high for infringement at first instance, being €165,000; and indeed increase on appeal, being €200,000 for infringement and €200,000 for nullity. Interlocutory injunction proceedings average €150,000. Costs have not however increased over the past ten years in real terms.

9.2.7 The ratio of litigation (infringement and nullity separately) to European Patents in force is very high compared to other Member States, being 1:300.

9.2.8 In the course of discussions among the Patent Lawyers and Patent Attorneys there was general agreement that insurance to enable medium sized Germany

companies to exercise a patent, and therefore to make it worthwhile to incur the costs of application, would be an important national economic factor. This opinion was expressed by all the practitioners and they also stated that Germany had 80% of the litigation in Europe. The figure is in fact 70%; but if one compares like with like (i.e. infringement and validity tried together as one action), the German total litigation is only 45% of total EU litigation.

9.3 United Kingdom

9.3.1 The costs of a patent action in the UK are notoriously high compared with other Member States; however this ignores the activity of the Patents County Court which takes one third of litigation and in which the costs are about one third of those in the High Court.

9.3.2 Compounding the two costs proportionately at first instance those for the Plaintiff are €650,000 and for the defendant €500,000 and on first appeal €430,000 each and on second appeal (which is very rare indeed) €300,000 each. In addition, the ratio of litigation to European Patents in force is low, being 1:2,000.

9.3.3 As such a high proportion of UK cases are settled very early it might be fairer to stress that the ratio to first judgment cases is 1:12,000. Interlocutory proceedings are very rare. Appeals are relatively rare compared with Germany and France.

9.3.4 Settlement rates are very high, being five out of six cases initiated. Average agreed damages on settlement are moderate, being €150,000 and damages are rarely ordered by the court. Settlement of damages is normal because of the expense of the court enquiry as to damages (as is the case in France and Germany). A settlement is more likely to result in cross-licensing with no damages. There is also the alternative possibility of an account of profits. This also encourages settlement because of the cost of the inquiry. Costs awarded are fairly substantial, rising to half of those incurred. As with damages however, the expense of the enquiry involved in an award of costs is high and therefore rarely pursued.

9.3.5 Modification of the defendant's process or product and designing round the monopoly is a common result of settlement before judgment at first instance.

9.3.6 If damages or an account or profits are pursued in the court after judgment, the award is likely to be high, up to €3,000,000 or more.

9.4 Italy

9.4.1 The discussion meeting with Italian practitioners in Milan established litigation costs and damages but because eleven Italian courts hear patent cases, although it was felt that Milan took 40% of them, it was not possible to establish the incidence of litigation. It was felt that litigation had remained steady and that 20% of actions that were started were settled.

9.4.2 Problems arose because it was only possible to state tentatively that 40% of patent actions concerned European Patents. They were clear that damages were not usually agreed in settlements or awarded by the court and that in the latter case they amounted to no more than a royalty rate, thus detracting from the desire to seek a court order. Interlocutory injunction applications are common.

9.4.3 Average costs are on a moderate level, approximately €70,000 including first instance judgment, and the same again on appeal. Court awarded costs are low.

9.4.4 The biggest problem for insurers is that there are no Patent Office figures for European Patents in force. European Patents validated rose from 17,965 in 2000 to 30,576 in 2004, but this rise could clearly not be maintained over a long period and is probably an illustration of the slow-down and speed-up of grants in the

EPO referred to section 6.6.1. It is not possible to estimate the European Patents in force from these figures because there is no information as to the average life of European Patents in Italy.

9.5 Spain

9.5.1 The ratio of litigation to European Patents in force is low (1:2,000). There is substantially less settlement of actions at first instance than in France but somewhat more than in Germany; thus there are on average 35 first instance actions that go to judgment annually.

9.5.2 Appeal judgments are fairly high as a proportion of litigation, being twenty. There is some feeling that new reform of patent action procedures now about to be implemented may lead to fewer appeals because results from expert judges will be more acceptable.

9.5.3 Interlocutory injunctions are more common than not in patent actions, and all are appealed. Their cost is low compared with those of the main action.

9.5.4 The costs of a patent action (average cost at first judgment €40,000) are far lower than in the other large Member States. Damages are not often awarded or agreed in settlement, and an award of costs will represent about half of those actually incurred.

9.6 The Netherlands

9.6.1 Litigation at an average of 50 cases per annum is low (ratio to European Patents in force 1:2,500). It is thought that litigation is increasing at 10% a year, which, if sustained, is very high, but it seems unlikely that this is a long term trend.

9.6.2 Settlements at first instance before judgment are 20%. Three-quarters of first instance judgments are appealed, and half these go to appeal judgment, so the settlement rate is not high. Three-quarters of cases involve interlocutory injunction applications and half these are appealed.

9.6.3 Costs are on the low side, being €50,000 at first instance, but interlocutory injunction proceedings double this cost. Appeals cost more than first instance cases, costing €85,000 on average. Agreed damages are very infrequent as are court awards of damages. Costs awarded by the court are very low.

9.6.4 An opinion was hazarded that in a global pharmaceutical action a settlement (presumably including costs and damages) might be capable of having €300,000 of the total attributed to the Netherlands. This was not an annual figure. However, this opinion was very conjectural. It was not suggested that such a break-down attributable to the Netherlands would actually be made in a global pharmaceutical settlement. There are two or three Supreme Court appeal cases (without a hearing) per year, the cost being €45,000.

9.7 Austria

9.7.1 Like Germany, Austria also has separate actions for infringement and nullity. Nonetheless the ratio of litigation to European Patents in force is low (1:2,000). In fact litigation is notably low despite each conflict involving two actions. Interlocutory injunction applications are always pursued and are fought to a first instance judgment, and are always appealed up to the second appeal. The main actions, both parts, infringement and nullity, are in the great majority of cases settled before judgment, thus leaving the interlocutory judgments (at 10 per year on average in number) as the final arbiter.

9.7.2 Average costs are very low compared with all Member States discussed above, averaging between the two types of actions, €14,000. Damages are rare and not particularly high, and costs awarded by the Court are substantially 100% of those incurred. The amount of litigation has remained steady over the past ten years. Costs appear to be bound by tariffs, formal or informal, and

therefore to be predictable in any particular case. The costs of experts and court experts figure high in the total. The separate nullity action is less expensive and there is only one appeal.

9.8 Sweden

9.8.1 Patent Litigation is considered by the patent lawyers and Patent Attorneys to be increasing slowly. The proportion of settlements before judgment at first instance is relatively low being less than half the actions initiated. Numbers going to first instance judgments are ten. Appeals from first instance judgments are practically invariable. Interlocutory injunctions are applied for in half of the cases which do not settle. Appeal is normal in these cases too. Appeals to the Supreme Court are rarely allowed.

9.8.2 The ratio of litigation to European Patents in force is extremely low, being 1:6,000, a little lower than France. The award of damages is rare and agreed damages, which may amount to €100,000 are also unusual. Costs, except for interlocutory injunctions, are high, at first instance judgment averaging €120,000. Appeal costs are also high averaging €65,000, but court awarded costs are 100% of actual. The patent practitioners consider that costs are rising slowly in real terms.

9.9 Belgium

9.9.1 The proportion of patent litigation to European Patents in force is notably low, being 1:3,000. Two-thirds of actions are settled before judgment at first instance, and preliminary injunctions are applied for in half of actions initiated.

9.9.2 Preliminary injunction applications are ex parte but can be met by a motion to set aside the decision; however these decisions are based on balance of convenience not the merits. Preliminary injunction decisions are normally accompanied by an order for saisie to disclose whether infringement has taken place. Most decisions are appealed but a high proportion of these are settled before appeal judgment. There is no second appeal. Court awards of damages and agreed damages of settlement are both rare. The average damages ordered are very low. Average costs are not notably low being €75,000 at first instance and costs awarded by the Court are very low.

9.10 Denmark

9.10.1 Litigation is notably low in Denmark, having a ratio of 1:3000 of cases to patents in force, but it is increasing slowly. European Patents are held for a relatively long time; it takes six years for annual validations to reach the number of patents in force.

9.10.2 Interlocutory injunctions (of which there are on average 15 a year) rule Danish court proceedings here as nowhere else, it being normal to start with and rely on an interlocutory injunction application and to settle the main action once it is concluded. Approximately half interlocutory injunctions are appealed. It is generally accepted that these proceedings are notably favourable to the patentee.

9.10.3 Thus there are only half the number of main action proceedings as interlocutory proceedings which go to judgment. Interlocutory proceedings cost €150,000 on average at first instance, substantially more than the cost of a main action. Appeals are more costly than first instance, being €230,000 on average.

9.11 Finland

9.11.1 There has been too short an experience of validation of patents in Finland to give useful data of European Patent litigation. Therefore national patent activity is relied on to show the characteristics and costs of patent litigation. In fact 130 European Patents were validated in 1998 and this figure rose to 1,833 in 2001 and 5,759 in 2004. There were 7,808 European Patents in force in 2002, 13,362 in 2003 and 17,825 in 2004, but these have not led to sufficient litigation to give any useful guidance.

9.11.2 Expert judges are being introduced in the near future which may reduce the number of appeals. There was some

feeling among the patent lawyers and Patent Attorneys that the difficulties of the Finnish language might deter actions in Finland when they could be pursued elsewhere. About half actions initiated (20) go to first instance judgment. Interlocutory injunction proceedings are normal.

9.11.3 Nearly all judgments are appealed. Damages ordered by the court or agreed on settlement are very rare. Costs to first instance judgment are relatively high and average €120,000 each for infringement and nullity. Costs of interlocutory proceedings are also high. Appeal costs average €25,000. Court ordered costs amount to the full actual cost.

9.12 Greece

9.12.1 The proportion of litigation to European Patents in force is relatively high 1:1,300. The amount of litigation has been steady for the last ten years. It is normal to apply for interlocutory injunctions in all actions, and settlements before judgment at first instance are rare. The average number of judgments at first instance is 18. Appeals from first instance judgments are rare and settlements during these are unusual. Higher appeals are not taken. There are very few awards of damages or damages agreed in settlement. The average for both of these is €20,000. Costs are low, being on average €20,000 at first judgment, and court awarded costs amount to10% of the actual.

9.13 Poland

9.13.1 Poland started validating European Patents in March 2005 and therefore the appropriate way to evaluate patent litigation is by reference to national patents. By this measure, patent litigation as a ratio of patents in force is very high being 1:400 partly because infringement and nullity are tried separately, resulting in two actions.

9.13.2 Litigation has increased with regard to national patents by 50% in the last five years. This is in contrast to all the other Member States, except Germany, as to patent litigation trends. Judgment at first instance is obtained in an average of 20 cases, half infringement and half nullity. Interlocutory injunctions are normally applied for and about three-quarters of these, and of infringement and nullity proceedings, go through to first instance judgment. Half of the infringement judgments are appealed. There are few settlements during the appeal stage. There is no further appeal.

9.13.3 Patent Attorneys are permitted to litigate without a lawyer and this can render the costs very low. Average costs of each type of action at first judgment are €14,000. Although in most cases there is an application for an interlocutory judgment these are rarely granted. Damages are not known to have been ordered by a court. Costs have not increased in the past ten years. Court ordered costs are very low.

9.14 Czech Republic

9.14.1 As with Poland national patent statistics have been used to show the characteristics and costs of patent litigation because validation of European Patents started in 2004. In the first nine months of 2005 452 European Patents were validated and 557 were in force in September 2005. National patent litigation as a proportion of patents in force is high (1:600). A very low proportion (1/8) of actions initiated goes through to first instance judgment. The same is true of interlocutory applications which are normally started with any patent litigation. Cases on which judgment is given are normally appealed. Damages are rarely ordered by the court or agreed on settlement. Costs are moderate, being on average €13,000 each for infringement and nullity actions, those for experts represent a high proportion these. Appeal costs are low, on average €4,000 each for infringement and nullity. Costs awarded by the court are moderate only.

9.15 Hungary

9.15.1 Validation of European Patents commenced in 2004 and therefore national patent figures and litigation are used as a guide. These show that litigation as a proportion of patents in force is high because infringement and nullity proceedings are separate (the ratio is 1:500). Interlocutory injunction proceedings are normal in any infringement action. Fewer than half of actions initiated are continued to first instance judgment, but practically all of these are appealed to one level of appeal. Damages agreed or court ordered are rare. Costs are low, averaging for each infringement and nullity €4,000 and court ordered costs are low compared with actual outlay.

9.16 Varying national procedures

9.16.1 The incidence, importance and litigation history of interlocutory and preliminary injunctions proceedings differ in all the Member States and their significance for the course of litigation is very considerable in many cases, and even determinative. The complexities are shown in Appendix 1, but Appendices 2-4 show the simplified statistics prepared to give insurance experts a sufficiently full picture without showing details unnecessary to them at this stage.

9.16.2 The key findings are summarised in Table 1 in the Executive summary

10 THE COMMUNITY PATENT

10.1 The possible number of Community Patents

10.1.1 There is, of course, no way of knowing for certain what the figures for Community Patent grants annually and total numbers in force will be. Three alternatives can be given as a guide.

10.1.2 The Proposal for a Council Decision establishing the Community Patent Court and concerning appeals before the Court of First Instance, COM (2003)828 suggests, in its legislative financial statement, that EPO is expected to grant each year 50,000 new Community Patents but does not indicate how many years it will take for number of grants less lapses to reach a steady state. The average life of a European Patent ranges from 4 to 8 years, depending on the Member State. Assuming a figure between these for Community Patent the steady state might range from 200,000 to 400,000 Community Patents.

10.1.3 Looked at differently it has been suggested that the number of community patents considered likely could be those European Patents for which the patentee would have preferred a Community Patent at the present time. On this basis a guess can be hazarded that most pharmaceutical, biotechnology and a proportion of chemical patents would take the Community Patent route. On the other hand, engineering, electronics and the rest, where competition is more local, would continue to be taken up via the European Patent route. There is no way of making the calculation simply by distinguishing the European Patents which are validated in a large number of Member States from the rest, because there is no way of establishing how many European Patents are validated widely, this figure bearing no relationship to national designations in the EPO. On this basis the number of Community Patents granted annually might be as low as 14,000. If the average time to build up to steady state of Community patents in force is not dissimilar to those of European Patents in the Member States, there might be 100,000 Community Patents in force in due course.

10.1.4 Alternatively again, one could note that as there are between 100,000 and 300,000 European Patents in force in each of the largest Member States for which figures are available (Germany, UK, France and Spain), most of these will be equivalents of each other. In this view there would be 100,000 to 200,000 Community Patents, i.e. one third or two thirds of European Patents in these countries. It seems unlikely that totals will exceed totals for all European Patents in the UK or France (250,000).

10.2 Estimates of litigation data

10.2.1 There is no way of estimating accurately the amount of litigation to be expected for Community Patents. The legislative financial statement of the Proposal for a Council Decision put forward a figure of 50 cases per annum in the first year (1 per 1000 patents). The statement bases its conclusion on the then-assumed ratio of actions to patents in force. However, the statistics of the present Study show ratios of 1:600 to 1:5000. The legislative financial statement inherently proposes increases of the number of litigations each year until steady state of Community Patents in force is reached. This could amount to 160 to 400 cases a year.

10.2.2 Alternatively, patent practitioners put the figure of multi-Member State actions low (about 10%), but a good deal of uncertainty existed. Furthermore, patent practitioners in each Member State will have been in effect multi-counting the same global actions and therefore the figure should probably be 3%. On this tenuous basis, taking German litigation as the yard-stick (Germany is by far the most litigious Member State), one might suggest

that 30 cases a year would be considerable. Looked at differently, if one took an average ratio for litigation rates in Germany, UK, France and Spain (regarding German actions as being joined infringement and nullity actions), the figure would be 40 actions a year. If German litigiousness is the sole yardstick the figure would be 160 actions.

10.2.3 Although there is no reason to suppose that nullity would be hived off in Community Patent actions it could perhaps be conjectured that costs between those of Germany and the Netherlands might give a reasonable indication of costs. This would mean costs at first instance including interlocutory injunction applications, of say €300,000 for each party at first instance (with €220,000 for settlement before first instance judgment) and €240,000 on appeal.

11 CONDITIONS FOR DIFFERENT TECHNOLOGIES

11.1 The significance of technology

11.1.1 On the significance of the technology of a European Patent from the point of view of enabling insurers to calculate premiums and other conditions of cover, the patent practitioners were quite clear that no breakdown is required to obtain accurate litigation costings and incidence of litigation except in the case of pharmaceutical and bio-pharmaceutical cases, and to a much lesser extent, information technology and telecommunications. All other technologies were considered by them to be similar in their effect on costs and incidence of litigation. They recognised that it was more usual for all these other technologies to be litigated between national competitors rather than global competitors.

11.1.2 Information technology and telecommunications were somewhat more difficult to assess for average litigation costs and incidence than chemical and mechanical cases. However, following full discussions in each Member State, the patent practitioners were able to incorporate information technology and telecommunications into their overall averages

11.2 Pharmaceuticals and Bio-pharmaceuticals

11.2.1 So far as pharmaceutical and bio-pharmaceutical cases are concerned, when these did not involve global competitors, the practitioners again were able to incorporate these cases into their averages for costs and incidence of litigation without seeing the need to differentiate from other technologies. When, however, litigation was between global competitors different considerations had to be accommodated. Such actions are fought on a multinational basis with one or two active litigations taking the lead. The latter generate the legal and technical assessments of validity and infringement. Furthermore, a large proportion of this work is carried out in-house. This relates to the evidence both factual and expert; the legal arguments and documentary presentation of these; and, where necessary, the experiments and evidence relating to them. In all other courts the cost is confined primarily that of presenting these cases in accordance with national court procedures and of translations and appearances in court.

11.3 Patent practitioners' assessments

11.3.1 The factors set out in the last two paragraphs were fully in the contemplation of the patent practitioners in their discussions in each Member State, and the figures arrived at by them for costs and incidence of litigation in general include their assessments of pharmaceutical and bio-pharmaceutical cases. The occurrence of such heavy litigation is of course relatively low, and therefore the patent practitioners were averaging the costs over more than one year, which helped to enable them to incorporate them in the overall costs and incidence of litigation statistics. Nonetheless, despite the patent practitioners having incorporated pharmaceutical, bio-pharmaceutical into their general statistics, it is most likely that insurers would require higher premiums or other conditions for cover for patents on these technologies. To a lesser extent they are likely to take the same line with information technology and telecommunications.

11.4 Detailed opinions expressed by patent practitioners: Pharmaceuticals

11.4.1.1 In all Member States the patent practitioners at once distinguished pharmaceutical cases (and some also specified bio-technology cases, and medical devices) from the rest. Some stated that these were likely to decrease in number or had already started to do so because the patents relating to "blockbuster" drugs (drugs with very high

global sales) were thought to be drying up. With some difficulty these cases were integrated into the rest, so far as statistics as to costs were concerned. On the one hand the costs were higher, as were agreed damages. On the other hand the costs of these actions in each country were shared, as they were part of global litigation.

11.4.1.2 As a consequence, the costs in each Member State were not so out of line with other technologies, even though there was, not unnaturally, a "no-expenses-spared" aspect to these cases.

11.4.1.3 Settlement damages were a particularly difficult subject to follow up. These were not apportioned nationally but agreed on a global or pan-European basis, and patent practitioners were normally left unaware of agreements made with regard to damages and costs. It is probable, but not specifically known by patent practitioners, that costs and damages are mingled in overall settlement figures.

11.4.1.4 Because costs are shared over a wide geographical area, and despite some uncertainty as to damages, pharmaceutical cases can reasonably be integrated with general figures given by the patent practitioners for litigation.

11.4.1.5 If damages are court awarded in a Member State, they could be far higher than in other types of cases. But they were rare and treated somewhat anecdotally. They are excluded from the statistics.

11.5 Parties to pharmaceutical cases

11.5.1 Some pharmaceutical cases are between global multi-nationals. In the majority of pharmaceutical cases however, one of the two parties will be generic manufacturers, either Indian, Israeli or European, or will be European distributors, but they may be part of global litigation.

11.6 Detailed opinions expressed by patent practitioners: information technology and telecommunications

11.6.1 Only in a few Member States did patent practitioners indicate that they expected, or were already starting to experience, information technology cases and telecommunications taking their place alongside pharmaceutical cases. However, costs and damages here were not yet significant enough to skew the statistics for cases in general. It was expected by some that because of patent pools (where a large proportion of the industry exchange licences in a pooling arrangement), which are predominant in this field, there would not be so much global litigation. Some practitioners however, pointed out that Chinese opposition to patent pools might lessen the effect of these on litigation. In the small minority of Member States where these were specifically regarded by the practitioners as being on a par with pharmaceutical cases, the points relating to pharmaceutical cases also apply to information technology and telecommunications cases.

11.7 Detailed opinions expressed by patent practitioners: other technologies

11.7.1 All other technologies were regarded as equal from the point of view of costs and damages, incidence of litigation and their effects on the nature of the patent actions with which the courts are concerned. Generally, in referring to other technologies, the practitioners merely cited "mechanical, chemical etc". These actions are the classic examples of litigation either between two larger companies primarily based in one Member State, or a larger company and an SME or between two SMEs.

11.8 High cost and low cost patents

11.8.1 For the purpose of this Study, therefore, only two classes of patent are considered henceforth. Those termed 'high cost' include pharmaceuticals/biotechnology, medical devices and information technology and telecommunications. Those termed 'low cost' include all the rest. The Study

therefore treats 'low cost' patents as the norm for the scheme, and 'high cost' as the exception.

12 A WIDESPREAD SCHEME OF INSURANCE

12.1 The conditions necessary for widespread insurance

12.1.1 Only a scheme providing sufficiently widespread insurance, enough to have significant beneficial effects on the patent system and technical advance in Europe could be of interest.

12.1.2 It has for many years been possible for insureds to obtain PLI. However this has been far from widely used and it has been suggested that the proportion of patents covered by such schemes is less than one tenth of one percent of the patents. No current scheme can be described as widespread.

12.1.3 Earlier studies have however made clear the strong desire of patentees for PLI if it can be obtained at a reasonable cost. Why is currently available insurance so expensive and so unattractive to patentees? This issue was comprehensively explored in the 2003 Report on patent litigation insurance. The clear conclusion was that to reduce costs and premiums, any widespread scheme must be operable *without the expense and time consuming consequences of a technical risk assessment at the time of taking out the insurance contract.* Such initial technical assessments appear to be almost universally required in current bespoke PLI tailored to individual patents. For any scheme, mandatory or not, this is the prime requirement to be resolved.

12.1.4 In order to calculate premiums for a widespread scheme, insurers need to know the incidence and cost of litigation. Figures of the annual incidence and cost of litigation relating to European Patents in force in an individual Member State have been obtained in the course of this Study. They show the average risk per patent, but are only reliable in calculating premiums if all patents coming into force from the beginning of the scheme are covered. If fewer patents are covered the litigation statistics are of guidance to insurers in setting premiums and other terms IF, and only if, the risk of those covered is typical of the risk indicated by the statistics for the whole. In that case an insurer can give cover without having to carry out a highly expensive and time-consuming technical risk assessment at this early stage. This is the distinction from bespoke insurance given on the relatively few patents insured hitherto.

12.1.5 The aim is to assess the viability of a widespread insurance scheme capable of

- meeting the needs of patentees generally;
- enhancing the insurance system and technical advance in the EU; and
- being of sufficient interest to attract insurers to offer insurance

12.1.6 This Study has for the first time ascertained statistics which will enable insurers to calculate typical premiums. However the limitation is that these statistics relate to all patents in force in the Member State in question and cannot be used unless the patents covered are typical of the whole. When the typical risk cannot be relied on because specific known prospects of litigation exist for a particular patent, the need arises for bespoke insurance with a technical risk assessment before cover is considered. Such bespoke insurance is outside the objectives of this Study.

12.1.7 If the statistics for patent litigation in general are to be relied on in setting a premium, two conditions are necessary. First, the patent must be insured from its inception, before it gains a commercial history of its own and hence becomes a 'unique' risk. Secondly in the absence of a mandatory scheme, in order to prevent a patentee from selecting the specific risks they want to insure ('adverse selection'),

each and every one of its patents coming into force after the patentee enters the scheme must be covered by the scheme.

13 THE ALTERNATIVES

13.1 The status quo

Arguments against viability

13.1.1 Continuation of the status quo with very little, disproportionately expensive, bespoke PLI, cannot be recommended. It became clear through work on this and previous studies that continuation of the status quo would be unlikely to lead to the objectives desired for patent and technological development in the European Union.

Arguments for viability

13.1.2 None. This is therefore considered no further.

13.2 A voluntary scheme of PLI

Arguments against viability

13.2.1 No insurers either among those contacted through the CEA or the insurance experts consulted, believed such voluntary insurance to be an attractive proposition. The CEA had consulted its members in 2004, and gained a limited response to further consultation in 2005, when only Belgium, Italy and Germany had responded. The CEA was keen to help, but the evidence showed that its members took virtually no interest in this market. The evidence is clear: this market has not so far proved popular either for patentees or for insurers. The availability of PLI is very limited and indeed during the course of this Study one of the world's major insurers decided to withdraw from significant involvement in the market.

13.2.2 A voluntary scheme has to be able to meet the key criteria of a widespread scheme, namely avoidance of an initial technical risk assessment and sufficiently wide uptake that the statistics for all litigation can give a true measure of the average risk of the patents insured. Furthermore, it must be big enough to dilute fixed costs over a sufficiently large client base to ensure economic viability to the patentee. However, the opinion of the insurance experts was that this would be unachievable, leading to adverse selection.

Arguments for viability

13.2.3 If public funds were involved in the form of substantial subsidies, those arguments against the viability of a voluntary scheme may be overcome. With public funding, public administrations would have to insist on certain minimum conditions of cover. In order to get such a scheme off the ground it might be necessary for public administrations to accept some of the underwriting risk, and/or to provide a subsidisation of premiums.

13.2.4 The possibilities put forward relating to a possible voluntary scheme were not considered robust and attractive enough to justify further consideration given their obvious disadvantages.

13.2.5 Nevertheless, all of the considerations explored below (except those actually required to put a mandatory scheme into effect) would be appropriate to a widespread but voluntary scheme should the conditions for one subsequently be discovered, and thus it must be stressed that this Study includes all the requisites and desirable features of a widespread voluntary scheme.

13.3 A mandatory scheme

Arguments against viability

13.3.1 Experts concerned with Legal Expenses Insurance associated with the CEA, made mention of the perceived disadvantages of a mandatory scheme. In their view, mandatory schemes involve controls and administration and have conditions which could restrict the freedom of insurers to offer within such a

scheme what they might think to be a superior product.

13.3.2 A further disadvantage of compulsion is the need for legislation and control. If the scope of legislation required were too great or the costs of control too onerous, this would weigh heavily against compulsion.

13.3.3 Finally, it is proper to draw attention to the political dimension of public administration involvement in the market place, though this is overcome when the advantages are sufficiently clear.

Arguments for viability

13.3.4 In view of the points raised under '13.2 A voluntary scheme of PLI', only a mandatory scheme can provide the economic and technical benefits to the EU and individual patentees which would arise from a widespread scheme of PLI.

13.3.5 Insurers concluded that the only basis on which they would wish to be involved would be on a scale which only a mandatory scheme could provide.

13.3.6 Accordingly the detailed feasibility was performed on variants of mandatory schemes.

13.3.7 It may be possible to move back to a voluntary scheme later once a scheme is well established.

13.3.8 Needless to say, it is for the relevant policy makers to decide whether the expected public benefits justify the necessary action to introduce a scheme.

14 PROPOSALS FROM INSURERS RELATING TO POSSIBLE SCHEMES

14.1 Introduction

14.1.1 The insurance experts set out a large number of proposals relating to all major aspects of the relationship between the insurer and the European Patentee (or Community Patentee when this arrives), which define the manner in which insurance would operate. These are collected in this chapter in broad groups showing all aspects of the operation of the relationship. *It should be noted that those matters not obviously relating to the mandatory nature of a scheme would be those to be applied to a voluntary scheme.*

14.2 Simple start-up and preliminary points

14.2.1 The primary reaction of the insurance experts was that the first step must be to provide a clear, uncomplicated solution meeting the needs of SMEs to which, if there were the will, amplifications and developments could be added. The concept of mass insurance for patent litigation is sufficiently novel and radically different from any existing insurance in this field that it in their view would be fool-hardy to commence by building up a complex edifice. An attempt to institute such a plan would be faced by too many unknowns at the same time. Furthermore no insurance interest would enter on a commercial basis on a long term commitment with many uncertainties and unknowns if these were not limited severely in order to allow reasonable estimates of their effect to be made beforehand.

14.3 The impact of the technical risk assessment in present insurance practice

14.3.1 Virtually all existing patent litigation schemes are based on an insurance contract which requires an individual estimate of all the risks profile, and in particular a technical risk assessment before the premium is agreed. The technical risk assessment involves varying degrees of technical and legal Study of the patent in relation to discovering any possible risk relating to validity and infringement of it. This step forms part of the negotiation of the premium and other conditions. It is time-consuming and expensive of expert man-hours for the insured, its experts and the insurer, and raises premiums and costs catastrophically. The early timing of the risk assessment is completely impractical and undesirable when insurance on a widespread scale of typical patentees is involved. It makes insurance attractive only when a significant risk is apparent, thus raising the premiums still higher. Not surprisingly, such insurance currently is taken up only in the smallest proportion of patent dispute activity.

14.4 Technical assessments and their timing

14.4.1 Clearly there must be a technical risk assessment before serious costs are incurred by the insured entity, but the exact placing in the order of events of this costly exercise and whether the insured is liable for any portion of it are critical to the success of a scheme. Timing of the risk assessment pertaining on the one hand to the circumstances of the patentee and on the other hand to the technical assessment of the patent is thus a vital point. The solution proposed to this problem is that the technical risk assessment should be postponed until a specific risk – by which is meant a circumstance which is likely to give rise to a claim under the policy - is known.

14.4.2 The basic characteristic of a widespread scheme in contra-distinction to existing bespoke insurance, is that the assessment of technical risk relating to a patent is deferred until a known prospect of litigation arises. Thus the technical nature, possible strength, breadth of patent claim cover, prior art, and measurement of possible inventive step and the question of

infringement, would not be considered at the outset.

14.4.3 If and when a known prospect of litigation arises, the strategic position to be taken up by the insured, and whether and how to fight or negotiate, have to be decided. At this stage these technical risk assessment and the existence of the insurance will affect events, leading to better consideration of the true strengths of both sides by the parties and the insurers, and better informed approaches being decided by each side, probably leading more often to a reasonable, equitable and just settlement in negotiations.

14.5 Non-technical assessment of patentee at the time of agreeing policy

14.5.1 On the other hand a risk assessment of the *patentee* (as distinct from the patent) can conveniently take place when the cover is agreed. This will relate to the patentee's size, place in the market, industry type, technical family size of the patent in question, the number of other Member States in which the European Patent is validated, etc. None of this involves the expense of a technical assessment. Its purpose is simply to give guidance as to the premium to be charged.

14.6 Responsibility for cost of technical risk assessment

14.6.1 It has been proposed that there should be no cover for investigation costs (the costs of an opinion regarding an insured's likelihood of success in defending or pursuing a claim) other than in the course of making an insurance claim. If the patentee makes a claim and in consequence of this an investigation is carried out and a 51% or better chance of success is concluded, the cost of the technical investigation (subject to the insured's excess) is covered by the insurer. If the cost is less than the excess the patentee pays the costs, however, the excess is reduced by the amount of that cost. Once the excess is consumed, the insurer pays all investigation costs of that and any subsequent investigations commenced in the year in question. It is of course up to the insured whether to take the risk of commencing the investigation, in view of the fact that they will be liable to the costs with no erosion of the excess in the event of an opinion giving them 50% or less chance of success.

14.7 When the patentee is attacked for alleged infringement of another's European Patent

14.7.1 Contrary to the previous case, when a European Patentee defendant is involved, the insurer pays the cost of the technical risk assessment, whatever odds of success are established by the investigations, and whether or not the advice in the end is to settle. (Settlement would be advised if the chances of success were less than 51%).

14.7.2 The reason for the difference of treatment in the above cases is that the patentee is taking the initiative in raising the issue of infringement in a pursuit action while on the other hand it is the alleged infringer – the defendant – which is responding to an attack from a third party.

14.8 Investigations by patent practitioners

14.8.1 Technical investigations as to the merit of an insurance claim, whether there is infringement and whether the allegedly infringed patent is valid, are carried out by an independent patent practitioner acting for the insured.

14.8.2 An insured patentee may wish, without making a claim, to carry out a technical investigation as to possible infringement of its patent or of its validity. The patentee has no expectation or intention of going to litigation (i.e., in cases where the patentee is making what in legal parlance is called a "fishing expedition"), and these expenses are not paid by the insurer.

14.8.3 Similarly, if a patentee (who is of course covered for its infringement of another's European Patent) undertakes a general technical investigation of the patents in the field relevant to its manufacture, these costs are not paid by their insurer.

14.9 Use of statistics in a widespread adoption of a scheme

14.9.1 The first conclusion of the insurance experts was that any widespread scheme would have to be based on good statistics in order that premiums could be determined in a way that would avoid excessive risk to the insurer. Without such statistics experts took the view that no insurer would underwrite the risk at a reasonable premium, if at all.

14.9.2 As the statistics previously referred to cover the whole of the market in each Member State, it follows that any scheme widely usable by European Patentees in general must be based on the assumption that the patents covered are 'typical of European Patents in general' in that Member State. In other words, that statistics relating to the whole body of European Patents in any particular Member State (numbers of European Patents in force and all data relating to litigation) could be relied on as a measure of the average risk. In these circumstances the insurers would be able to rely on ascertainable general statistics to decide on an appropriate premium without holding a technical risk assessment at the time of agreeing cover.

14.10 Freedom of choice of insurer

14.10.1 Freedom for the insured to choose the insurer is regarded as important, and any scheme (such as obtaining the insurance through a national Patent Office or the EPO) which reduced in practical terms the freedom of the patentee to choose, would lessen the attraction of the scheme very substantially in the eyes of the insurers and patentees.

14.10.2 For clarity it is stressed that if European Patents are the subject of insurance, each European Patent validated nationally will be insured separately. Thus the total premium will differ according to the number and identity of Member States in which it is patented.

14.11 Policing compliance with mandatory insurance

14.11.1 The simplest mechanism to ensure insurance by all patentees, except those possibly exempted, is to require proof (a certificate provided by the insurers) by the patentee at the time of validation in a particular national Patent Office that the insurance of its European Patent has been obtained with subsequent confirmation of this at each date of renewal of the patent in the national Patent Office. This is analogous to procedures for mandatory third party vehicle insurance.

14.12 Cover regardless of principle place of business.

14.12.1 Patent and insurance experts have advised against excluding foreign based proprietors of European Patents. A public policy issue was that foreign patentees might object that they were discriminated against if the system were supported by public authority intervention. In any case the exclusion of foreign-owned patents could easily be evaded by non-EU based patentees putting such patents in the name of EU-based subsidiaries. At present, different patenting policies of companies result in either local subsidiaries or in foreign parent companies being named as proprietor. These considerations suggested that the exclusion of foreign-based patentees from the scheme would not be desirable.

14.13 The nature of the premium and basis of insurance

14.13.1 The insurance experts do not feel that uniformity is desirable or just and that greater flexibility would be an improvement. Further there is no need for

a minimum premium to be required because conditions of minimum cover incorporated in a scheme automatically lead to a realistic premium

14.13.2 If a mandatory scheme is selected, the freedom of the patentee to choose its insurer is beneficial and makes it possible for the patentee and the insurer to choose varying degrees of shared liability (insurance over a selected sum - the policy excess - to be borne by the patentee, or a co-insurance where a patentee bears a proportion of all payments out as they arise).

14.13.3 Depending on the attitude of the patentee, different preferences may be selected. For instance a patentee in the case of a mandatory scheme which considers insurance a financial burden would opt for a low premium and a high excess. Because of this there would be the need for obligatory provisions which limit the maximum excess or degree of co-insurance.

14.13.4 Various minimum terms of cover are set out in the selected options for an insurance scheme in Chapter 20. To ensure that the insurance is not merely illusory a definition of minimum terms as to limit of indemnity, and maximum terms as to excess/co-insurance would be required.

14.14 Cover for defence against infringement of another's European Patent

14.14.1 In addition to pursuit (enforcement) cover, all proposals considered in this Study include cover for defence against an allegation of infringement of another's European Patent. Defence cover has been shown to be at least as important to patentees as cover to pay the costs of an action against an alleged infringer. Defence cover would relate to products and processes involving the insured patent.

14.15 Scope of defence cover

14.15.1 It would seem appropriate that defence for infringement would be confined to infringement of the European Patents of others. It would not cover infringement of national patents except in the case described under 15.3.1. At the time of agreeing insurance it may be that insurers will desire to confirmation that the patentee's commercial products and processes involve the patent which is to be insured. This should most certainly not lead to the insurer wanting a technical assessment until there is likelihood of a claim.

14.15.2 The question is quite distinct from the complex technical question as to what is the valid scope of the patentee's patent claims. This is important in view of the objective of avoiding technical assessments at the time of initiating an insurance contract

14.16 Geographical scope of defence cover

14.16.1 The insurance experts felt that defence cover purchased in one Member State should cover that patentee for infringement anywhere in the EU. When the patentee has equivalent European Patents in more than one Member State this will lead to questions as to which particular insurance will respond (there being one insurance policy for each Member State in which the patentee holds a patent), and if risk is deemed to be shared, in what proportions.

14.17 Insurer covering both sides

14.17.1 The question as to whether one insurer can effectively act for both parties in a dispute has been discussed with the insurance experts. In principle there is no objection to both parties, being covered by the same insurer. This is, of course, common in, for instance, mandatory vehicle insurance. The matter is only more complicated with patent litigation insurance because of the prolonged nature of the disputes and the

difficulty in some cases of arriving at a just result to both parties.

14.18 Meritorious defendants

14.18.1 In the 2003 Report it was said that the defendant in a patent action is as meritorious as the patentee. It can be argued that both patentee and defendant are entitled to insurance support providing the latter is an alleged non-culpable infringer (as defined).

14.18.2 Some patentees, particularly large patent holders, have pointed out that importers of "counterfeit" goods do not fall into this category. This of course is perfectly clear from the definition referred to above. Nor would such importers normally be patentees of European Patents, and thus in a scheme.

14.19 Settlement and the right to fight

14.19.1 As has been made clear in the 2003 Report the right of the patentee to litigate to judgment and appeal must not be curtailed, even if settlement were commercially sensible, because only the threat of injunction and damages awarded by a court can maintain the value of patents in general. A patent is a property right which the owner is entitled to enforce; and a monopoly in the market will, in many cases, be more commonly attractive to a patentee than an agreed compromise licensing arrangement.

14.19.2 A party must be entitled to fight with insurance cover if it has a 51% or better chance of success as rated by a technical risk assessment carried out by an independent expert. In fact the insurance experts prefer to define this right by reference to the rate of 51:49 although the exact phraseology is to be agreed upon. Patent practitioners revealed that a significant proportion of disputes were settled during the course of litigation, while the discussions on costs of negotiation showed the benefits of settlements where this is possible. The figures are found in Appendices 1, 2 and 3.

14.19.3 Normally speaking in any patent litigation which actually gets as far as the court (apart from so-called "counterfeiting") both patentee and alleged infringer will be honestly rated as having a 51% or better chance of success. Despite the somewhat discouraging scenario of such odds for litigation on each side, to preserve the effectiveness of the patent system, parties must be free to decide their litigation policy themselves with the advice of their insurers.

14.19.4 Despite the importance of maintaining the right of a patentee to pursue its rights, commercial commonsense imposed by the insurer is a positive, not a negative, element of insurance and tends towards settlement, which is certainly in the general interests of efficient working of the patent system. In extreme cases a stubborn patentee would have to continue the fight at its own expense if it refused reasonable terms of settlement.

14.20 Mediation procedure

14.20.1 When mediation is decided on, perhaps at the recommendation of the insured's legal adviser or the insurer, the ambit of dispute may be narrowed in the mediation process and the remaining points go to arbitration or litigation. In such cases cost would be saved.

14.20.2 In some cases mediation may sufficiently clarify and resolve the issues so as to permit settlement.

14.20.3 Mediation may thus be of substantial importance in reducing costs and ultimately, premiums of a scheme.

14.21 Vexatious or frivolous litigants

14.21.1 The problem of vexatious litigants is answered by the application of excess and co-insurance. In addition, of course, no action which qualified for insurance support because it had a 51% or better chance of success could be called vexatious or frivolous.

14.22 Family of patents

14.22.1 If the patent to be covered is part of a technical family belonging to the patentee this may lower the premium. However the size of the patentee's total patent portfolio is not relevant to risk when the scheme is for mandatory or widespread insurance.

14.23 Validating a European Patent in several Member States

14.23.1 The existence of the same European Patent validated in other Member States is not likely to have a relevant bearing on the premium although, it gives an idea of the importance of the patent and the scope of activity of the patentee. This information is readily obtained.

14.24 Cancellation of cover

14.24.1 In the case of a mandatory scheme, where cover is cancelled for failure to provide full disclosure of risks known to the patentee and the patentee is therefore deprived of cover, it will be able to follow the procedure to obtain validation or renewal in the national Patent Office by obtaining from the insurer a certificate of exemption. However, the patentee will then be obliged to enter the pool, which could increase his overall cost.

14.25 Patentee delaying suit against infringer

14.25.1 It may be that a patentee is aware of an infringement but considers it too small to commence an action or make a claim under the insurance policy. If later the infringement increases in scale, the patentee is entitled to claim under the policy provided it had formally notified the insurer when first aware of the infringement.

14.26 Refusal of cover unjustified in retrospect

14.26.1 When an insurer refuses cover because the technical risk assessment concludes that the insured has less than a 51% chance of success, and the insured goes ahead with the action, or defends an action for infringement against it nonetheless and wins, the insurer would, or should pay the costs as if the technical risk assessment had concluded a 51% or better chance of success for which the insured was covered.

14.27 Review of prospects during conduct of litigation

14.27.1 The insurer will repeatedly review the prospects of success during the conduct of a litigation, and this will tend to strengthen the chances of settlement. Thus, although insurance (either a widespread or a mandatory scheme) should increase litigation, it should also reduce the number of actions fought to judgment and beyond.

14.28 Patentee's obligation as a manufacturer

14.28.1 An insured patentee (who will be covered for defence against infringement allegations) will have no particular obligation to assess whether any of its well-established industrial activities infringe another's European Patent. However, insurers will no doubt impose an obligation on an insured patentee that in the event that it commences to use a substantially new process or new manufacture it shall carry out a reasonable technical search to detect possible infringement of another's European Patent, as is good business practice in any case. Cover for defence, both in the 2003 Report and this Study, has been confined to the non-culpable alleged infringer.

14.29 Certainty and term of cover

14.29.1 It is important that the liability for cover of a claim does not drag on for a prolonged period. Thus a "sunset" clause would be triggered in respect of pursuit actions to the effect that if a claim is made, and then the patentee takes no

action to advance the issue for a period of three years, the insurer would cease to have any further liability for that claim.

14.30 The insured limit of indemnity

14.30.1 The insured is covered up to a certain aggregate sum ('limit of indemnity') for the year to which the premium applies, and whenever during that year a claim is notified to insurers, the subsequent costs incurred will be paid up to the aggregate regardless of whether they fall in that or a later year. However the excess (the sum to be reached before the costs are paid) relates to each claim. Thus if two claims are made in one year in each case the excess must be reached before payment is made by the insurer.

14.31 Claims control

14.31.1 Effective claims control is essential to insurers. Conditions and procedures for accepting claims, and controlling the subsequent course of the litigation must be unambiguous and complete. It is essential that the cover shall be absolutely clear. This is far removed from existing bespoke patent litigation insurance with its immense complexities, when cover is given in an atmosphere of anticipated or actual risk. Such simplicity will also help greatly with questions of policy translation into multiple languages.

14.32 Representation of patent and insurance interests

14.32.1 In view of the open nature of a mandatory or widespread insurance scheme, it might be desirable to establish bodies representing the interests of patentees, of insurers and the public interest, where developments and modifications could be agreed and where, if a scheme followed an undesirable development, remedial action could be agreed. It would be very likely that three years' development would result in unforeseen trends which would call for modification of a scheme to reflect enhanced knowledge of the true balance between premiums and claims. For instance a substantial increase in litigation might call for higher premiums. This trend could be reversed later if more patent applications, encouraged by the more clearly beneficial nature of European Patents, led to more patents being taken out.

14.32.2 It is important to recognize that representative bodies would not remove free market competition, because they would only, or primarily, concern themselves with the alteration of the legal minimum requirements for insurance.

15 REQUIREMENTS AND DESIRABLE FEATURES FOR ESTABLISHING AN INSURANCE SCHEME FOR EUROPEAN PATENTS

15.1 Introduction.

15.1.1 Although this Study only recommends mandatory schemes for reasons stated in section 13.3, *requirements and desirable features for a voluntary widespread scheme are implicitly covered below,* being distinguished when necessary.

15.2 European Union-wide legislation

15.2.1 Legislation by public administration, presumably primarily by EU Regulation, would be required to make provision either for a widespread or for a mandatory scheme.

15.2.2 If the scheme is for mandatory insurance with a specified minimum cover for patent litigation, European Patentees would show a certificate of insurance provided by the insurer to the National Patent Office where it wishes to obtain validation of its European Patent and subsequently renewal of it by that Office. Uninsured European Patents would not be validated or renewed and thus would not be in force in that Member State.

15.2.3 In cases of uninsurability (because no insurer is willing to give cover) or of exemption from the insurance scheme because perhaps a known prospect of litigation already exists at the time of validation or for other reasons which predicate that only bespoke insurance would be appropriate, a certificate of exemption would be given by the insurer (or other body to be decided upon) allowing validation and renewal by the national Patent Office.

15.2.4 If the scheme is for a widespread but non-mandatory scheme a legislation would provide that after the starting date a widespread scheme would provide specified minimums for both limit of indemnity and policy coverage, and that if insurance is taken out for a European Patent it shall be done at the time of validation of the European Patent in the Member State in question. If a patentee entered the scheme by insuring a patent it should then insure all its European Patents validated after that date in that Member State. Failure by the patentee to do this would terminate existing cover.

15.3 National Patent equivalent of European Patent in the Member State of the European Patentee

15.3.1 In some cases European Patentees maintain in their home Member State a national patent which is identical to the European Patents they have elsewhere, because there can be advantages in doing this. It would be necessary to provide that such a national patent should be regarded for insurance purposes as a European Patent.

15.4 Provision for minimum scope of cover

15.4.1 A legislation would define the minimum conditions for European Patent litigation cover with provisions enabling modification of the minimum conditions for cover in the light of experience in the operation of a scheme. Various examples of minimum cover are found in the options put forward in this Study.

15.5 Legal obligation to insure in accordance with the scheme

15.5.1 In the case of mandatory insurance legislative provisions, presumably by EU Regulation, there will be a requirement on a European Patentee after the start of a scheme, to show proof of insurance, of uninsurability or exemption from insurance.

15.6 Proof of insurance cover in a Member State

15.6.1 In the case of mandatory insurance, there is the possibility that proof

of insurance (or of uninsurability or exemption) at the time of validation or renewal in a Member State might not result in all European Patents being insured in accordance with the relevant legislation. Appropriate legislation could ensure that means are provided in the Member State to remedy any such shortcoming. An example of this issue is provision for ensuring insurance cover in cases where renewals are not required in a Member State annually from the date of validation, as for instance in the U.K

15.7 Ombudsman

15.7.1 It may be desirable to establish an EU Ombudsman to provide resort for European Patentees' complaints as to the operation of a scheme and as to the satisfactory nature of insurers' cover to patentees, insurers' treatment of claims, and in carrying out their legal obligations. In the case of mandatory insurance the Ombudsman would also investigate complaints regarding the procedures in each Member State for ensuring that all European Patentees are insured in accordance with a scheme. He would also consider complaints concerning uninsurability and exemption from cover.

15.8 Overseeing office

15.8.1 It may be desirable for public administration to establish an office or body to act as a clearing-house for unforeseen problems or issues that arise for national authorities, European Patentees and insurers in the early stages of a scheme. This office could also be available to assist other bodies such as lawyers' and Patent Attorneys' associations, insurers and commercial providers of administrative services, to establish simple and, so far as possible, uniform systems for providing information to patentees wishing to obtain insurance cover and for paying premiums and dealing with claims.

15.9 In the case of mandatory insurance, provision for inability of National Patent Offices to provide the necessary services

15.9.1 The office referred to in section 15.8 or another similar institution could fulfil the task of ensuring that cover exists for European Patents in cases where insuring this requirement cannot be arranged by a national Patent Office. Thus for instance, in cases where annual renewal fees are not always required in a particular Member State after the coming into force of a European Patent in that state, (and thus there being no occasion to show the certificate of insurance) and when the national Patent Office is unable or unwilling to make alternative arrangements, this office or similar body could assume responsibility.

15.10 Insurers' and brokers' administrative costs. Outsourcing

15.10.1 The simplest procedure for the insurers, particularly for those that do not have a large administrative structure, may be to choose a single outsourcing company to take charge of contract administration between the insurers and the insured, namely policy issue and control and claims handling. The complications and costs of administration are thus separated from underwriting. This is an existing practice of many insurers.

15.10.2 Regular Bordereaux reports, showing the insurer the precise situation with regard to premiums, policies and claims, would be prepared by the administrator if outside the insurer.

15.11 Involvement of public administrations in normal circumstances

15.11.1 Whilst public administrations need normally play no administrative part in an insurance scheme, in the case of mandatory insurance they would have oversight of the activities of the national Patent Offices in

their duty to provide that all European Patents in force in a Member State, not exempted from insurance, are insured appropriately.

15.12 Activities of national Patent Offices

15.12.1 It should be explored with each national Patent Office what activities, other than those required by any new provision concerning insurance for European Patentees, each national Patent Office wishes to undertake to assist in the running of a scheme, and to agree those activities.

15.13 Committee of representatives

15.13.1 It may be desirable for a committee of representatives of the Commission, of European Patentees, (perhaps through national associations of inventors and industry bodies) of insurers, patent lawyers and Patent Attorneys, of the European Patent Office, national Patent Offices and of national Ministries of Industry to be established to have surveillance over the operation of a scheme and to consider problems and possible improvements.

15.14 Local legal requirements of the policy

15.14.1 Experts take the view that the insurance policies must be kept extremely simple and understandable. There are however different legal requirements in many Member States and therefore it will be necessary for each policy to be translated not only into local language but also into local legal form. There is however no problem over this; for instance each state in the US has different rules and it is common practice for insurers to include in a common policy, warnings describing the differences applicable to policy holders in different states, while in the EU, legal expenses insurance contracts from one insurer, but for different Member States, include the differences of language and local legal form. However, the initial cost would be substantial and would be a deterrent to potential insurers from participation.

15.15 When failure to insure does not prevent validation or renewal of a patent in the national Patent Office

15.15.1 In a mandatory insurance scheme where no insurer will offer cover to a specific patentee, the patentee should be able to obtain from insurers a certificate of exemption which it presents to the national Patent Office to obtain validation or renewal. Meanwhile the patentee applies to the pool for uninsured risks (see section 15.16).

15.16 Pool for uninsurable patentees which do not qualify for exemption

15.16.1 In a mandatory insurance scheme, as with vehicle insurance and other mandatory insurance for lawyers' and accountants' negligence in some Member States, a pool will be necessary to enable patentees who are refused cover for any reason, to be insured and thus comply with the requirements when they go for validation or renewal of their patent. Whatever figure is required to account for this cost, it would need to be spread over and added to the premiums of all patentees as a charge, and would not enter into the calculations and negotiations of insurers and insured in regard to any particular policy. Patentees exempted from mandatory insurance on the grounds defined in Chapter 18 would also be liable, see paragraph 18.2.5.

15.17 Participation in an insurance scheme by national Patent Offices, patent lawyers and Patent Attorneys. Some bans on commercial activity

15.17.1 It is was not felt appropriate at this stage to raise at official level the question of possible national Patent Office co-operation in an EU insurance scheme, but on an informal basis

this was discussed with a number of personnel in national Patent Offices. In Austria where indeed the matter was taken up by the President of the Austrian Patentanwaltskammer, the Patent Office's reaction was that it was not permitted to take part in commerce. This was also the reaction of French Patent Attorneys. No other negative reaction was encountered, and there were informal expressions of positive interest in co-operation, particularly by Patent Offices in Scandinavia, while in all countries except France the patent lawyers and the Patent Attorneys took it that they would be involved in some way in the operation of any scheme. At the least they would expect to advise their clients on aspects of a widespread or a mandatory scheme if it existed.

15.18 The Premium offer and disclosures made at the time of the offer

15.18.1 The premiums offered to individual European Patentees would take into account a non-technical risk assessment of the Patentee, for instance size of company, commercial field, and the number of patents already owned in the technical field of the new European Patent being covered, and number of equivalent European Patents validated in other Member States. There would not however in the normal way be a technical risk assessment of the patent itself at the outset, although underwriters would reserve the right to request this should they believe there are grounds to do so. It is an essential feature of a widespread or of a mandatory scheme that the technical risk assessments are carried out only when an insurance claim is made.

15.18.2 If the European Patentee operates in more than one technical sector the insurer will also wish to determine the technological sector of the patent, but this does not call for a technical assessment.

15.19 Apparent known prospect of litigation at time of validation of European Patent

15.19.1 The patentee would be under the normal obligation to disclose any infringement it considers exists in relation to its European Patent being insured, and any possible infringement by itself of a third party's patent in the same field as that of the new European Patent being insured.

15.19.2 If before the insurance commences, a prospect of litigation becomes apparent to the European Patentee, this specific risk must of course be disclosed to the insurer which could then exclude it as a 'known event'. This is common to all insurance policies and a technical risk assessment of the patent may become necessary. The risk may be of an action against a possible specific infringer, or the need for defence against a third party patentee for infringement. Experts suggest that if the known event was not excluded by the insurer with the agreement of the patentee, the insurance would fall outside the scope of the scheme for mandatory or widespread insurance which is predicated on no technical risk assessment of the patent concerned being needed at the time of settling the initial premium. If the European Patentee does not wish to have a technical risk assessment leading to a "bespoke" insurance, it would (if a mandatory scheme were in effect) obtain a certificate of exemption from the insurer for the purposes of obtaining validation, and later renewals from the national Patent Office.

15.20 Known prospect of litigation becoming apparent at the date of second and subsequent renewals of insurance

15.20.1 If the specific risks and circumstances specified in any of the above paragraphs arise at the time of renewals of cover, the insurer would not have the right to alter the premium on this account (though the premium may

conceivably change anyway on the basis of the age of the patent), and will proceed with whatever technical risk assessments are required and meet claims, if the European Patentee is entitled to it, on the basis of the technical risk assessment.

15.21 Co-insurance, excess, no-claims bonus

15.21.1 On acceptance of a minimum mandatory insurance cover, the patentee may limit its premium payments by agreeing to a co-insurance, or increased excess. It will, however, be necessary to set legal limits to the extent to which cover can be reduced by these means so as not to permit virtual evasion of insurance by patentees or insurers taking part in a mandatory scheme. Also the insurer may front-load the premium, either because the market is not yet predictable or because of the nature or history of the patentee, with the possibility of a no-claims bonus return in later years.

15.22 Cover as European Patentee

15.22.1 A European Patentee will be covered for its European Patent in the Member State(s) for which European Patent is validated. If it has the same patent in a number of Member States, each will be covered separately (not necessarily by the same insurer or on the same terms). This is, of course, essential because of the very different costs and litigation characteristics in different Member States.

15.23 Significance of oppositions in the EPO

15.23.1 It is not proposed that the cost of oppositions should be covered by an insurance scheme. Opposition may be instituted to a European Patent in the EPO. About 3.5% of granted patents are opposed in the EPO within the nine months period after grant permitted, and a higher proportion, 7.5%, of pharmaceutical and electronic patents. The opposition, without appeal, may easily last three years, and appeal takes another three years. Validations in national Patent Offices are made regardless of the opposition and infringement actions may be brought. Sometimes these are stayed, however the factors relevant to such cover are discussed in Chapter 29.

15.24 Effect of opposition

15.24.1 If the European Patent is opposed, in some cases the opposition is likely to be known at the time of national validation of the European Patent. In this case there will be a clear and known prospect of litigation relating to the patent at the date the insurance is being negotiated, because it will be clear that potential infringers have a concern. If the parties agree that there is a known prospect of litigation, this can either be excluded as a “known risk” and the balance of the risk insured under the scheme, or a technical risk assessment be agreed before insurance is accepted. In the latter case the patent is outside the scheme and, if the latter is mandatory, it is exempt from mandatory insurance, but bespoke insurance could be agreed.

15.25 Where an opposition is instituted after agreement of insurance cover and premium

15.25.1 If an opposition is started to an already insured patent during the first nine months after grant in the EPO, any risk which subsequently becomes apparent because, of the opposition arises at that stage is treated exactly in the same way as any other risks arising in the normal course after cover has started. Of course if at the time of negotiating the insurance the patentee is aware that an opposition is likely it must inform the insurer.

15.26 Insurers’ attitude to legal and technical expertise investigations

15.26.1 The insured person has a right under EU law to choose his legal representative. However insurers have stated that they need to reserve the right to limit this to legal experts in the field and

would prefer a panel of patent lawyers and Patent Attorneys to investigate claims of infringement or validity, those advising on the likelihood of success of an insurance claim should not take part in any subsequent action because of conflict of interest and would be independent of both sides.

15.26.2 Without prejudice to the right of the insured, insurers also prefer to have a panel of lawyers and Patent Attorneys to conduct litigation, who operate under an agreed protocol covering the reporting back of changes in the odds of success as the case progresses, with regular re-evaluations of the case, with the ever-present possibility of settlement in the light of new evidence or other factors. The protocol would also regulate charges for each step and to what extent and how the practitioner acts. It is normal for the practitioner to have a limited costs authority whereby when costs reach a certain level (for instance €10,000) the underwriter or their representatives will take direct control of the conduct of the case. An examination of the litigation cost statistics shows that, except in a very few Member States this means that all litigation will be directly overseen by the underwriters or their representatives.

15.26.3 This is a natural consequence of a sector of insurance where (except in the case of Germany) the incidence of litigation is so low. In Germany a higher figure for direct involvement might be adopted. There would also possibly be provision for direct control in the case of pharmaceutical actions from the start.

15.27 Legal and technical assessment by insurers

15.27.1 There was informal conjecture, not on the agenda in the meetings with patent practitioners, as to how insurance companies would estimate the risks in any proposed litigation in the event of a threatened action. No problem was seen by patent lawyers and Patent Attorneys in providing independent expert legal advice for insurers in the event of a threatened infringement action. This is the stage at which a technical risk assessment will be required by the insurer.

15.28 Patent practitioners' representation

15.28.1 If the insurers establish panels of qualified patent lawyers and Patent Attorneys in each Member State to take on litigation and advise on infringement and validity, this presents no problem with regard to Patent Attorneys as these are registered. However, lawyers who undertake patent work are not identified by a particular qualification. In the larger Member States there are patent law associations to which all serious patent lawyers belong, and this should be sufficient qualification. In Member States where this is not the case, it would be wholly practicable to require membership of one of the EU-wide or worldwide patent law associations such as the International Association for the Protection of Industrial Property (AIPPI).

15.29 Patent practitioners' attitudes

15.29.1 Practitioners, patent lawyers and Patent Attorneys, would not be averse to a limited panel from which the practitioners to make investigations would be chosen, because this activity would not normally be carried out by the most senior practitioners, and middle ranking practitioners who wish could no doubt get on the panel. However litigation itself involves the most senior and the most junior practitioners too, and is in the mainstream of the two professions, which are focused on a narrow field of expertise. In all Member States this is a very limited group. It is clear that exclusion from such activity would not be acceptable. On the other hand practitioners would accept the advisability of the protocols.

15.30 Graduated start-up between four and eight years

15.30.1 Assuming legal requirements for a mandatory or widespread insurance scheme are in place, insurers will face a start-up period of between 4 and 8 years (depending on the particular Member State) by which approximate time the number of patents covered will have increased annually until the total number of insured valid European Patents amounts to the total, or near the total, number of European Patents in force in that Member State. This calculation does not take account of insured patents which are dropped during the period. It will therefore be somewhat longer than the period stated above. This circumstance allows a reasonable learning curve for insurers and for a measured build up of risk.

15.30.2 Thus, ignoring abandoned patents, the approximate time taken to reach full numbers, that is the steady state, is in the case of Austria 4 years, Spain, Belgium and Greece 5 years, France, the Netherlands, Denmark and Sweden 6 years, Germany 7 years, and UK 8 years. These figures which can only be approximate, indeed also indicate the differing average lengths of time that European Patentees in each country maintain their European Patents from the date of validation. It is interesting that there is considerable difference between jurisdictions. The explanation for this is not immediately clear, but presumably reflects some aspect of the national market and/or national litigation characteristics as these affect European Patentees, rather than the nature of the patentees selecting different Member States, bearing in mind that the latter are from all over the world.

15.30.3 This start-up period will also enable European Patentees, national Patent Offices, patent practitioners and others concerned to adapt relatively gently, as the number of patents concerned would build up at over 270,000 per annum (subject to possible exemptions) to a total of over 1,300,000.

15.31 Early life of the European Patent

15.31.1 The opinion of patent practitioners in the Member States is that not many patent actions are started in the first two years after validation, and that the most active period is from approximately year five to year eight. This is quite independent of the average life of a European Patent in a Member State, because patents sued on are clearly not typical or average, and may well live for the maximum twenty years possible (or in the case of pharmaceuticals, possibly, longer). This fact therefore also relieves pressure at the start of a scheme, and is reflected in the model of the scheme.

15.31.2 Pharmaceutical patents, have a different litigation pattern with a peak in the early years after certification by health authorities, and then a second peak in the latter years. This factor would no doubt be reflected in the premium and other conditions agreed.

15.32 Front-loaded premiums?

15.32.1 Because of the uncertainty surrounding the claims behaviour in an insured market, namely that it may differ significantly from a previously uninsured market, insurers may wish in the first two years to employ a no-claims bonus system through which premiums are slightly loaded at the start with pay back thereafter when the scheme has bedded down, to show that the claims experience is not materially worse than estimated, based upon information available at the outset.

15.33 Term on obligation to provide cover

15.33.1 Insurers could arrange contracts so that in the event of material unforeseen developments in the initial period from 6 months to three years, they could opt out from the scheme, while still

honouring all policies taken out before that time.

15.34 Growth of competition

15.34.1 If stand-alone insurers decide not to enter the market at the outset, it is not impossible that insurance could be provided through a single set of capacity from Lloyd's of London, it being a market place of many independent competing interests. Alternatively a mutual system might be set up. In these cases further competition might develop later.

15.35 "Sitting on a long tail"

15.35.1 Despite the fact that it is likely that litigation will be less in the first two years than in the next few years of a patent's life, and that the resultant excess of premium over claims will be invested and earn interest, it must be remembered that in accounting terms when costs arise from claims initiated in the early years, they relate back to those years and it is not therefore possible to relate costs to income until the former arise. Early year accounts are no guide to the eventual cost/premium ratio outcome. For this reason the feasibility calculations given later in this Study extend for 10 years, and were investigated over 16 years.

15.36 Set-up costs

15.36.1 Some insurers felt that their set up costs would be small because they would be contributed to by brokers as a part of their remuneration. However if brokers remuneration is as low as is predicted for the market, that would not be the case. Aspects of costs are listed below (this list is not deemed to be exhaustive):

- Provision of local lawyers' advice on the form of the common insurance contract in each Member State, and translation costs of all descriptive documents of each insurer.
- Setting up an interactive Web site, possibly, giving particulars of all cover on offer from all insurers participating in the scheme together with maximum and minimum premium figures on offer by each insurance company for each type of patentee (large or small company, age of business, commercial field, size of patent family of the European Patent to be insured). This may cover all other criteria which different insurers may wish to know, but nothing relating to the technical issue of the validity or scope of the European Patent in question.
- A telephone help-line which would be heavily used in the first six to twelve months by Patent Attorneys familiarizing themselves with the system as they make arrangements to insure their clients. The help line would be little used after the Patent Attorneys have become familiar with the system, unless patentees themselves decide to conduct their own validation and renewal applications in the national Patent Offices. This seems unlikely.

15.37 National taxes

15.37.1 The insurance experts did not believe that different forms and levels of national taxation on insurance would be an obstacle to efficient and economical operation.

16 PUBLIC FUNDING AS A POSSIBLE COMPONENT

16.1.1 Should general commercial insurers or Lloyd's syndicates indicate a firm interest in writing insurance in a PLI scheme, no further public funding will be required beyond that implied earlier relating to ancillary bodies and legislation.

16.1.2 However it is possible that insurers might seek some assistance with the basic administrative requirements needed to launch such a significant scheme from scratch (dealing with policy issues such as translations and local law requirements, claims handling, etc., and, in all probability, computer systems).

16.1.3 Corporate experts already advise the insurance industry on seeking suitable administrators for various aspects of policy and claims handling. It is estimated that setup costs would be in the region of €2 million.

16.1.4 It must be stressed that no public funding is directly incorporated or assumed in any of the options in this Study.

17 INSURANCE POSSIBILITIES AND ESSENTIAL FEATURES OF A SCHEME

17.1 Availability of insurance

17.1.1 No scheme, nor legislation, could be brought into force unless the relevant policy makers were satisfied that insurers/carriers were available to take the risk and offer insurance contracts. Public involvement is thus essential in ensuring that this is the case.

17.1.2 In practice, cover can only be provided from within the insurance industry or by a public body set up by public administration. In view of the complications and risks the latter has never been regarded as feasible. Thus the scheme is wholly dependent on the willingness of parts of the existing industry to assume the risks and rewards of a mandatory PLI scheme. There is however the possibility, discussed in section 17.4, of a large mutual being especially set up.

17.2 The large Insurance companies

17.2.1 The CEA has indicated that on the evidence of members of its legal insurance committee, there seems little appetite on the part of the large insurance companies for patent litigation insurance. This is largely because of the record of this type of business in the past. The Study's findings are that it is probable that none of these large insurers will wish to participate at the start, and this feasibility Study has thus given careful thought to other possibilities. See also Appendices 6 and 7.

17.3 Lloyd's

17.3.1 The insurance companies and syndicates grouped together in Lloyd's appear to be somewhat more interested, despite their equal understanding of the difficulties in PLI in the past, though probably based on the idea of a lead underwriter followed by a series of underwriting lines from other syndicates (as is common), together with a possible re-insurance. This approach might be the only option at the outset until an actual pattern of claims under the mandatory system became clear, and further competition entered the market.

17.4 Mutuals

17.4.1 Another avenue is that (possibly together with insurance companies and syndicates or in competition with them), mutuals could be set up by all, or any group of, European Patentees. They might, for instance, be a group of one nationality or of one technology, or of particular company size. The minimum protection would be the same as for commercial insurers, as would whatever else is provided by a mandatory or widespread insurance scheme. The premium would be subject to the same legal requirements, for example relating to cover and excess, as any other provider.

17.4.2 Providing for the start of a mutual (if one were not in any case envisaged) could be an important fall-back option for public administrations if no ordinary commercial insurer were found to be willing to write the business at the start. Public funding might be involved in such additional preparatory work and Study as was deemed necessary to set up a single mutual covering the EU.

17.4.3 The criteria for the conduct of a mutual are agreed by its members, as are the directors of the mutual. The advantage of a mutual is that the members have control of the rules of the conduct of the mutual, for instance they may provide for more freedom to fight rather than settle a case, where insurers' control of a case under conventional insurance might lean towards settlement. The disadvantage of this, however, is that the other members of the mutual pay, which drives up costs.

17.4.4 The mutual might have different rules for dealing with circumstances where two members of the same mutual are in conflict than would be the case when two

parties are covered by the same insurance company.

17.4.5 Mutuals often confine their direct cover to the more predictable risks, re-insuring the more difficult risks, and this can lower the premium to the mutual itself. However, the re-insurance costs will most likely be higher owing to adverse selection. The mutual may re-insure higher limits of indemnity (vertical cover) or re-insure more than a certain amount of normal risk if an unexpected amount of risk at this level occurs (horizontal cover). The mutual might exclude certain types of patentees whose risks its members thought were higher than theirs, again to reduce the premium, however, this could only work if other mutuals would accept them or a conventional insurance solution could be found within a scheme.

17.4.6 It may thus in principle be feasible for public administrations, should no other insurer show real interest, to be involved in supporting the launch of a mutual or mutuals through which all eligible patentees would find protection. Public funding could aid the set-up costs so that a fully functioning fund would be available at the outset of the scheme, however, such a scheme would be subject to any capital requirements to satisfy regulators.

17.4.7 The advantage of the mutual is the certainty of its creation (subject to capital requirements); but the downside is the exposure of the members to subsequent calls which could be a major concern in view of the unknowns of a new scheme. As an example, one insurer pointed out the problem faced by insurers of extended warranties, where the advent of insurance led to an unexpected large increase in claims and costs.

17.4.8 Reinsurance is often of fundamental importance to a mutual, when finding the right level of reinsurance is crucial. Sometimes, mutuals scale down claims, for similar reasons; and this is often regarded as a major disadvantage of the mutual approach.

17.5 Insurance Pools

17.5.1 It should be noted that if a patentee can find no protection through any of the above insurance possibilities, an insurance pool or pools might need to be created as a default option. These pools are similar to mutuals in many respects but are normally directed by statute and administered by an official body and are run for the public benefit or to advance public policy rather than for the insureds. This will not be further pursued as it is not being proposed as a voluntary insurance solution. As a compulsory solution it would involve heavy continuing public involvement.

17.6 Brokers

17.6.1 It is clear that insurance brokers are likely to play an important role in any PLI scheme other than a single mutual (with the exception of arranging re-insurance), through the initial creation of the scheme, providing the interface between insurers and patentees in a manner familiar in many markets and orchestrating ongoing reviews of policy coverage and premiums as agent to the patentees.

17.7 Re-insurance

17.7.1 The present position is that with the very small amount of patent litigation insurance in operation, re-insurance cannot be obtained. This could alter with a mandatory scheme.

18 EXEMPTIONS TO A MANDATORY SCHEME

18.1.1 Many innovative companies operating primarily at the national level have been discouraged from taking out patents, and from exercising their patent rights - even if they had gone to the expense of taking out a patent - by the notorious litigation costs of enforcing patent rights, particularly against larger companies. This led to consideration of the desirability and possibility of a widespread insurance scheme.

18.1.2 The object of widespread or mandatory insurance is the beneficial effect on European technology of a full, healthy use by industry of an effective patent system in a way which encourages innovation. This includes amelioration for SMEs of the classic case of the large patentee which sends to a smaller enterprise a list of a hundred patents and calls on the latter to Study them to ensure that it is not infringing, with naturally serious consequences on the costs, innovation and enterprise of the smaller company.

18.1.3 Concern was expressed[1] that a mandatory scheme might be unattractive to large companies which were large patent portfolio holders. They might consider the premium a disguised tax for the benefit of smaller companies. The insurance experts in the present Study have pointed out that with the more sophisticated proposals for premiums under consideration in this Study there should be no difficulty in accommodating the needs of large companies and large patent portfolio holders, as the normally-used sliding scales for premiums, co-insurance, deductibles and maximum cover, should be used to set up policies attractive to and tailored for larger patentees' needs. These views relate to large patent portfolio holders which do not, however, conduct globally integrated patent litigation. The latter are discussed in paragraphs 18.2.1 to 18.2.5.

18.2 Possible right of exclusion for globally oriented companies

18.2.1 The 2003 Report and this Study found clear evidence that globally oriented companies do not in general wish to be covered for the European market because they have annual patent litigation budgets designed for global litigation strategies. Litigation in their case is a budgeted loss not a risk, and part of their global business. Equally insurers are reluctant to be involved in covering merely the European segment of global litigation strategies, where a great deal of the policy and substantive legal and technological work is carried out in-house in the context of the global interests of the patentees, and where an insurer would have no opportunity to influence litigation policy in the particular Member States in a manner relevant to the European Patents it has insured. Often, a globally oriented patentee will, for commercial reasons, endeavour to keep the legal process going whereas insurers are seeking a just settlement as soon as possible. For these reasons such companies should be given exemption from a mandatory scheme under specific conditions the issues adumbrated in the 2003 Report 10.26.1-10.

18.2.2 Any desire for insurance by globally oriented companies could be appropriately catered for in one-off bespoke cover, in effect above their own patent litigation budget, for those years in which the litigation spend is disproportionately high.

18.2.3 It seems likely that neither side therefore will wish a scheme to cover globally oriented litigation. The issue for public policy will be deciding objective, workable criteria for exemption where the desire for exemption is mutual. There will be economic forces on both sides. Globally oriented companies will have no desire to pay what they deemed to be unnecessary

[1] the 2003 Report paras 9.26.1-10

premiums; while insurers will not wish to be involved in covering a portion only of global costs while having no shared control of litigation strategy.

18.2.4 Thus there should be an exclusion when a patentee's patent activities, and most particularly their litigation policies, are conducted on an integrated global basis so that they do not found their policies on any particular national considerations but on global factors and integrated global policies, bringing these to bear on each national litigation strategy with regards to:

a) global settlement or settlement for reasons irrelevant to a particular Member

State concerned,

b) expenditure on and use of evidence or technical expertise and legal argument on

global basis

c) and where an insurer in any particular country would have no influence over the course of the action in that market nor over the costs appropriate to the litigation in that country.

However these points are arguable and if it becomes apparent that a definitive measure is required, it may be necessary to introduce a threshold measured by a company's turnover as set out in their last audited Report and Accounts. The level of threshold to be decided upon by the insurers.

18.2.5 Companies which satisfy an agreed definition of globally orientated companies so far as PLI is concerned may be included in the scheme on a special ' opt out' basis where the annual fee covers solely the contribution to the fund for uninsurable risks, and a modest amount to cover the administrative costs of the insurer which certifies that the patent in question is on an 'opt out' basis. A certificate or secure identification number when presented to the relevant patent office would enable the patent to be renewed or validated.'

18.3 Exemption certificates for companies excluded on account of the likelihood of globally orientated litigation

18.3.1 Companies exempted from a scheme on specific grounds would receive exemption certificates from insurers (or a body to be decided upon) to enable validation and renewal of European Patents in the national Patent Offices in place of the insurance certificate in the event of a mandatory scheme.

18.4 Actuarial effect of exclusion of globally oriented large patent portfolio holders from the scheme

18.4.1 The insurance experts have studied the risk and premium situation in the event that a widespread or mandatory scheme excluded large patent portfolio holders operating their own globally related patent litigation budget (possibly in conjunction with specific bespoke insurance for certain contingencies). They considered the effect of the removal of 50% of patents from the premium base of a widespread or mandatory scheme. The conclusion was that the only effect of removing globally oriented large portfolio holders from a scheme would be a reduction in premium income commensurate with the reduction in total risk. It will be recalled that the patent practitioners themselves when considering this aspect, concluded that the litigation activity arising from global litigation did not cause them to alter substantially their estimate of litigation incidence and costs.

19 OUTLINE OF A GENERAL MODEL FOR A SCHEME

19.1 A general model

19.1.1 Experts agree that the first cardinal requirement for insurance for PLI is that it shall be attractive to and practical for both patentees and insurers. This requires emphasis on features that are standard and easy to understand and operate.

19.1.2 The second cardinal requirement of the model is that the basket of insured patents has the litigation risk characteristics of the whole body of European Patents in force in a particular Member State (that is, it is a widespread scheme), and that insurance is taken out at the start of the life of the patent. This is necessary so that the patent at the time of agreeing cover will normally have no known prospect of litigation attaching to it which would exclude it from the scheme. (If such a risk is known to exist the patent is outside a widespread scheme in that Member State; see Chapter 15, section 19). Consonant with this condition, required to protect the "average" nature of the body of insured patents, if a patentee insures one patent it must insure all it obtains as they become qualified for validation thereafter, so that it is not exercising selection against insurers by putting forward only its riskier patents for cover.

19.1.3 The third cardinal requirement is that - as previously explained - a technical risk assessment will not be carried out unless and until an actual or alleged patent infringement issue arises. Thus no bespoke features would be directed to specific existing risk characteristics of the European Patent to be insured. If the prospect of litigation is known to attach to the European Patent (for example a known infringement) the patent is excluded from the scheme but could be considered, of course, on a bespoke basis.

19.1.4 All insurers can take part, and mutuals may be set-up. Minimum conditions for scope of cover will be established. These will include cover for defence against infringement of a European Patent. Premiums will be offered by insurers as appropriate in their opinion to the nature of the patentee and its commercial field, the technological field of the patent, the number of other patents owned in that field (family) and the number of other Member States in which the patentee has an equivalent European Patent.

19.1.5 An insurance contract will relate to a particular Member State; thus where the equivalent European Patent is held in different Member States there will be a separate agreement for each. Differences in premium will thus depend on these factors and not on the technical issues of the patent's validity or possible infringement.

19.1.6 If the insurers wish, they may exclude a class of patentees which they consider to be inappropriate and unattractive for non-bespoke insurance of this widespread nature, on the grounds that their patent litigation activities are globally oriented and that they operate under their own globally oriented patent litigation budgets with or without specific bespoke cover in particular cases, and because in general such large patent portfolio holders do not wish to take part in a widespread scheme. Perhaps the overriding point, however, is that often companies of such a size and global market presence wish to, and do, draw out litigation for as long as possible so as to delay challenges to their patents for as long as they can. This, of course, is the diverse view of insurers who are seeking a just and swift outcome.

19.1.7 Patentees can seek exemption on the ground that they can demonstrate their own significant patent litigation spend and thus have no external risk to cover; or because of their global orientation.

19.1.8 Clearly the second cardinal requirement above is fulfilled if all European Patents in force in a particular Member State are insured in this way. To obtain complete cover presumably would

require a mandatory scheme with appropriate exclusions. A widespread scheme would meet economic requirements provided it was designed to result in a body of patents being insured which had the same risk pattern as the whole body of European Patents in force in the Member State in question. What cannot be admitted is selection of patents for insurance at the decision of the patentee on the ground of suspected risk (adverse selection).

19.2 General Feasibility

19.2.1 For any scheme to be feasible, its terms must be attractive to patentees and acceptable to insurers. The financial model for each must be economically attractive. The figures involved are examined in the feasibility studies that have been undertaken herein.

19.2.2 It was not possible to give detailed figures for a purely voluntary scheme because there can be no assurance that there would be sufficient uptake by patentees. In these circumstances, as indicated by the CEA, it is highly likely that insurers would not come forward as is the situation at present.

19.2.3 On the other hand a mandatory scheme with possible envisaged exceptions can be studied for feasibility, and it is clear from the figures of the feasibility studies herein that schemes likely to be economically feasible can be identified.

19.2.4 The political feasibility of a mandatory scheme depends primarily on a general appreciation that PLI will be likely to substantially increase the innovation and competitiveness of European companies and hence their long term global competitiveness. In other words the 'cost' in terms of political involvement must be more than covered by the 'reward' to innovation. The conclusions of the 2003 Report show the support for this objective in industry.

19.2.5 If the number of European Patents in force in a Member State is known, and the average cost of each step in litigation (e.g. preparation, first instance hearings; appeal from first instance; interlocutory proceedings; first appeal, second appeal) is known together with the number of such steps occurring per year, and the number and timing of settlements, the average risk per patent is ascertainable. From this factor appropriate premiums and other conditions can be calculated for a widespread or mandatory scheme covering a substantial proportion of European Patentees.

19.2.6 In order to avoid an initial technical risk assessment, the insurer *has* to be able to use the litigation costs and statistics from the whole market. This is only possible if the body of patents insured is typical of the whole body.

19.3 The need for assurance of sufficient take-up of a scheme

19.3.1 The insurance experts considered that there could be no assurance that such widespread take-up of a non-mandatory insurance scheme could be presumed to arise, and certainly not sufficiently speedily for the launch of a scheme to have the vital characteristics set out in the last paragraph. Thus a successful start-up was unlikely. They therefore considered that PLI should be mandatory for all European Patents, (excepting globally oriented patentees which have such a substantial patent portfolio that they operate their own global patent litigation budget so that European litigation forms part of their global policy, and is subject to wider global priorities).

20 THE MAIN OPTIONS CONSIDERED BY INSURERS

20.1 Option 1: European Patents covered for pursuit, defence, and damages subject to certain limits of indemnity, with certain excesses.

20.1.1 Pursuit cover against infringement by third party

20.1.2 Defence cover against allegation of infringement by third party

20.1.3 A ceiling for the cover of costs and damages (Note: costs and damages are aggregated because they are not separated out in insurance contracts)

20.1.4 Excess/possible co-insurance for the plaintiff/defendant of the first € *x* for each claim/possible percentage of claim above this.

20.2 Option 2: Option 1 with damages excluded

20.3 Option 3: Option 1 with minimal excess/co-insurance only for defendants

20.3.1 Note: a realistic excess is always required of a plaintiff, defendants could be covered with a minimal excess/co-insurance for an additional premium.

20.4 Option 4: Option 1 with damages excluded and minimal excess/co-insurance only for defendants

20.4.1 Damages are not covered and there is a minimal excess/coinsurance only for defendants.

20.5 Options 5 -8: as for Option 1 to 4, with premiums variations only being impacted by difference in rating between Member State (no other weighting factors taken into account)

20.6 Options 9-16: as Options 1-8 but for Community Patent when it exists

20.6.1 Family size is not relevant.

20.7 The large number of variables

20.7.1 Based on the requirements above, with four main options, a further four subsidiary options; and eight options for the Community Patent, together with other considerations, variable cover limits, variable amounts for excess, and considerations relating to the technical field – clearly there are many hundred permutations. Drastic simplification was therefore needed in the interests of clarity, and also at the request of insurers.

20.8 Central Option chosen for Study

20.8.1 Insurance advisers were unanimous that, given the difficulties in the prior history of PLI and the benefits of a compulsory scheme, the simplest and most balanced scheme was also the most likely to succeed and was the best to Study in depth. This is in effect Option 2, which excludes damages, and this was therefore chosen for the most detailed Study, the 'Central Option'.

20.9 Dealing with the other options

20.9.1 The other options and variables were dealt with by difference from the Central Option, reflected in the end in the indications of premium. The methodology used in this is apparent from the insurance questionnaire (see Appendix 5).

20.10 Running costs

20.10.1 Many running costs could be included in outsourcing fees. Running costs include:

- Issuing a certificate of insurance (or exemption) for each European Patent at the time of its validation in the national Patent Office, and subsequently on renewal.
- Receipt and payment of premiums into a centralized trust account in the names of the insurers concerned.
- A procedure for handing over details of claims made by patentees to the relevant insurer. This last point is a much more limited operation than the rest because of the estimated low proportion of claims compared with many other types of insurance activities.

- Collation of statistics for underwriters including premiums received, volume of claims notifications, paid claims, number/percentage of exemptions.

21 THE INSURANCE QUESTIONNAIRE

21.1 Methodology

21.1.1 This questionnaire, building on the vital results obtained from patent lawyers, enabled the Study to derive clear indications of the differences between the options based on careful Study of one of them.

21.1.2 Respondents were asked to assume the existence of a compulsory scheme for all new European Patents from a certain date, each insured before validation in the national Patent Offices; with a separate insurance policy for each Member State in which the patentee is validating a patent, as described earlier. (A patentee who chooses to validate in five Member States will have five insurance contracts, though possibly, but not necessarily, all issued under one cover by one insurer or broker in the patentee's Member State.) Litigation, mediation or arbitration as appropriate will be supported if the claimant is assessed by experts to have a 51% or greater chance of success.

21.1.3 While there will be no technical risk assessment of the patent at the outset, there will be assessment of the patentee relating to the size of company, industry sector, and technology etc. Respondents were asked to consider the premium as an average premium for a typical European Patentee. The policy (Option 2 was chosen as being the preferred option at the start of a scheme) excludes damages, but covers legal expenses for pursuit (enforcement), and defence against allegations of infringement of a third party's European Patent.

21.1.4 Globally oriented companies with regular annual patent litigation budgets were assumed to be excluded: both they and insurers regard them as unsuited for this insurance. Insurers will no doubt continue to offer bespoke insurance outside the scheme for particular risks, following a full risk assessment of the patent(s).

21.1.5 The exemptions will reduce the number of European Patents in the scheme and thus the premium income. The number of patents held by globally oriented companies is not known, and could not be found, but for the purpose of this Study it was assumed that 50% of European Patents are excluded.

21.1.6 No distinction is being made between technologies of European Patent because, as stated above with the exception of pharmaceuticals/medical devices and biotechnology, which, because of their differences from the rest, the insurers classed as high risk, patent practitioners in each Member State have concluded that there is no useful distinction between other technologies from a cost point of view.

21.1.7 For the favoured option, one that excluded damages was chosen. Damages are excluded because of their relative uncertainty. They are included in some other options. However it will be seen from the tables of patent practitioners' statistics that damages are surprisingly rare and not very high, but they are more uncertain.

21.1.8 The questionnaire, assumed that the premium could be set at a level which will give an average profitability (except for possible early year loading) – not high or low - after all claims and expenses. Claims generally arise from year three on, are negligible before that, and are maximum between years 5 and 8.

21.1.9 At the end of the questionnaire insurers were asked for their best estimate as to the likely range of annual premium, in euros, for standard cover on an average patent, for Germany or another Member State. Germany was suggested as the largest Member State, with most patents, and most patent actions, and greatest cost.

21.2 Recommended cover

21.2.1 Given the country statistics provided by the patent practitioners in respect of costs and damages, insurers were asked to recommend low, standard and high cover levels for each Member State being considered. Obviously higher levels of cover would attract greater premiums.

21.2.2 Similarly insurers were asked to propose 'standard', 'low' and 'high' levels of excess to be paid by the insured. There is a complication in this because the excess may be a fixed amount in euros or (and possibly with) a percentage of the claim paid. Again each of the countries covered was considered separately.

21.3 The premium

21.3.1 Assuming that a standard cover premium is '100 units', given the country statistics provided by the patent experts in respect of claims and costs, and the standard cover defined in the previous questions, insurance respondents were asked for their 'best guess' at a sensible premium ratio for the all the countries standard, low and high cover (They were invited to say to themselves "I would not be surprised if it were…") for example UK 75 would mean that the UK premium would be 75% of that for Germany. Obviously determining a premium is one of the high arts of insurance and generally the results obtained are no more than a broad indication. However several of the insurers gave substantial thought to the premiums, deriving more sophisticated results.

21.4 Pattern of claims

21.4.1 Patent practitioners, brokers and insurers were invited to consider the average pattern of claims arising during the life of the patent. Of the total claims (100%) arising in their lives (covered by a succession of annual policies) one possibility is that they arise in the following pattern during years one to 10 and after. They were asked whether from their experience of patents or legal expenses litigation, that the pattern described was reasonable, or to suggest alternatives. It was assumed at this point for simplicity, that a claim made on a particular year's policy is paid in that year, though in reality it might be paid one or two or even five years later.

21.4.2 The same group was asked to comment on the likely average 'tail' (length of time a claim might be paid over) for an annual policy on which there is a claim. Would most claims be paid within one to three years or more? Would this vary by Member State?

21.5 Cost of administration

21.5.1 A significant number of insurers find it convenient and cost-effective to outsource Claims and Policy Administration. Others keep this administration within the underwriting concern. Insurers were asked what proportion of premium income might be taken by claims and policy administration, and that the respondent should give the most likely figure a maximum and minimum.

21.5.2 They were also asked what they would expect broker costs, included in the administration costs, to be as a proportion of premium income, again with a range.

21.5.3 A similar question was asked about central underwriting costs.

21.6 The combined ratio

21.6.1 Of all single figures used by insurers, the combined ratio is probably the most important. It is defined as the total of costs and claims in a year divided by premiums received. Insurers were asked, assuming an average profitability, within what range they expect the combined ratio to fall.

21.7 Return on investment

21.7.1 Obviously the investment return on the cash inflow (premiums less administrative costs) will be an important factor. The return on investment will clearly vary substantially according to economic circumstances, central bank rates, and the state of the stock market.

21.8 Set-up costs

21.8.1 A few respondents suggested that set-up costs would not be too high, and might be included in the administration costs for the first years. Others, given the nature of the scheme, took the view that there might be considerable set-up costs. Respondents were asked to estimate set-up costs expressed as a percentage of the first years premium.

21.9 The annual premium in euros for standard cover in Germany or another Member State

21.9.1 Insurers were asked for their best estimate of the likely range of annual premium, in euros, for standard cover, for an average European Patent in Germany or another (stated) Member State. It is worth commenting that the system of asking experts for their best estimate has some scientific validity in cases where judgment is important. While the estimate of one expert may vary considerably, the aggregate of estimates or guesses by many experts has been found likely to give a useful result.

21.9.2 Given the earlier questions which had elicited an expected ratio between premiums in different Member States, knowledge of the actual premium, or the best average, for one key Member State permits the calculation of indicative premiums for other Member States.

21.10 The other options selected

21.10.1 Finally, respondents were asked to turn their attention to the other options selected. The standard premium so far considered, for what is Option 2, was taken as 100 for Germany. Respondents were now presented with all the other options and in relation to a most likely premium of 100 units for Germany, invited to state the most likely (and minimum and maximum likely) premium in units for a further 11 variants.

21.10.2 The variants were the three other options; in the four main options it was assumed for simplicity that the premium does not vary with risk assessment of the patentee, only with the country concerned; and for the four further options, again based on the main options, but relating to the Community Patent assuming that the latter was in existence.

21.10.3 For the Community Patent options, insurance respondents were reminded that the Community Patent does not yet exist. They were invited to assume that the European Patent covers all Member States with a single validation and single insurance policy, and had come into operation. The assumption was that the single court would have an average cost between that of the German and Netherlands (both sophisticated patent environments but with very different litigation costs and procedures). A further assumption was that there would be 30 litigations a year and 100,000 Community Patents in force at any one time.

21.10.4 See Appendix 5.

22 PREMIUM STATISTICS ON LITIGATION COSTS

22.1 Wide differences in litigation cost per patent create significant differences in premium between Member States

22.1.1 As previously noted, the differences between Member States in terms of annual litigation cost per patent are found to be extreme, from €3.4 in Austria to €730 in Germany. When damages are added, the German figure rises to €741, but damages are generally, except in Spain, a small proportion of the total cost of litigation per patent.

22.1.2 These when taken into account by insurers, lead to significant differences in the likely premium.

Table 3: Levels of indemnity examined for premium assessment by country: maximum amount that would be paid by insurers on one year's claims

Member State Patent	Low indemnity Cover €'000	Standard indemnity cover €'000s	High indemnity cover € '000s
Austria	100	250	500
Belgium	100	250	500
Czech Republic	100	250	500
Denmark	100	250	500
Finland	100	250	500
France	100	250	500
Germany	100	250	500
Greece	100	250	500
Hungary	100	250	500
Poland	100	250	500
Spain	100	250	500
Sweden	100	250	500
The Netherlands	100	250	500
United Kingdom	100	250	500

Table 4: Levels of excess to be paid by the insured

Member State in which action brought	Standard excess €'000s	High excess € '000s,
Austria	2,500	+ 50% on standard
Belgium	10,000	+ 50% on standard
Czech Republic	500	+ 50% on standard
Denmark	10,000	+ 50% on standard
Finland	10,000	+ 50% on standard
France	10,000	+ 50% on standard
Germany	10,000	+ 50% on standard
Greece	2,500	+ 50% on standard
Hungary	500	+ 50% on standard
Poland	2,500	+ 50% on standard
Spain	2,500	+ 50% on standard
Sweden	10,000	+ 50% on standard
The Netherlands	10,000	+ 50% on standard
United Kingdom	10,000	+ 50% on standard

22.1.3 Insurers would be prepared to offer these levels of indemnity in all countries and did not wish to distinguish further at this stage between countries, on the grounds of simplicity. In effect, therefore, the cover offered in the 'low cost' countries is very substantial indeed, but when it comes to Germany and the UK even the 'high cover' will seem modest in the case of litigation that proceeds to the end of the possibilities.

22.1.4 Two points should be noted. First, there has to be a 10% co-insurance on all enforcement actions in addition to the fixed excesses shown in the table. Some insurers felt that much higher coinsurance was appropriate, perhaps 20% with fixed excesses in the range 10% to 30%

22.1.5 Second, high risk patents (that is, pharmaceuticals, medical devices, telecoms) would only be permitted to purchase cover with the higher level of excess.

22.1.6 Proposed levels of excess varied between €500 in Hungary and €2500 in Austria to €10,000 for Belgium, Denmark and Germany for the standard premium, with in each case a loading of 50% for high risk patents. No suggestion was made for a 'low excess' on the grounds that insurers were not prepared to accept a lower excess than the levels stated as 'standard'.

22.1.7 Importantly, and solely in the case of enforcement actions co-insurance of 10% was envisaged on all payments of claims over the fixed excess amount. Thus for example, a patentee facing costs of €50,000 in the major countries, would contribute €10,000 fixed excess plus 10% of the balance of €40,000, a total of €14,000.

Table 5: Premium ratios for varying limits of indemnity

Member State patent	Premium ratio for Low indemnity €100,000	Premium ratio for Standard indemnity €250,000	Premium ratio for High indemnity €500,000
Austria	10	+ 30% of 'Low'	+ 75% of 'Low'
Belgium	20	+ 30% of 'Low'	+ 75% of 'Low'
Czech Republic	10	+ 30% of 'Low'	+ 75% of 'Low'
Denmark	75	+ 30% of 'Low'	+ 75% of 'Low'
Finland	50	+ 30% of 'Low'	+ 75% of 'Low'
France	40	+ 30% of 'Low'	+ 75% of 'Low'
Germany	200	+ 30% of 'Low'	+ 75% of 'Low'
Greece	10	+ 30% of 'Low'	+ 75% of 'Low'
Hungary	10	+ 30% of 'Low'	+ 75% of 'Low'
Poland	10	+ 30% of 'Low'	+ 75% of 'Low'
Spain	20	+ 30% of 'Low'	+ 75% of 'Low'
Sweden	50	+ 30% of 'Low'	+ 75% of 'Low'
The Netherlands	50	+ 30% of 'Low'	+ 75% of 'Low'
United Kingdom	100	+ 30% of 'Low'	+ 75% of 'Low'

22.1.8 Insurers emphasise that the robustness of the premium ratios depends wholly on the accuracy of the figures obtained from patent lawyers, by country, in this Study.

22.1.9 Insurance respondents were asked to assume that a standard cover premium was '100 units', and given the country statistics provided by the patent experts in respect of claims and costs, and

the standard cover amounts, to estimate a sensible premium ratio for the countries concerned. In the table the UK is taken as the base of 100.

22.1.10 Again a simple approach was taken, quoting premium ratios for the 'low' level cover and standard excess. In each case the premium for standard cover was 30% higher than the low and for high cover, 75% higher than the low.

22.2 High risk/cost patents would attract a premium loading

22.2.1 High cost patents would have a premium loading of 60% based upon the average premium increases used in the risk modelling bespoke placements.

22.3 Claims and policy Administration

22.3.1 It was suggested that claims and policy administration might be outsourced or carried within the underwriting concern. Respondents were asked for their view of the proportion of premium income likely to be taken by the administration of claims and policies. The range considered was wide, from a maximum of 50% to a more likely 15%.

22.4 Broker costs as a proportion of premium income

22.4.1 While the most likely broker costs were given as 5% in view of the large scale and special nature of this insurance, some insurance respondents referred to broker costs of up to 35% if the broker assumed significant amounts of administration cost, or in bespoke cases.

22.5 Central underwriting costs (apart from claims)

22.5.1 It was thought that central underwriting costs would not be high, but insurers expected these might range from 5% upwards, with a most likely of 12.5%. This part of costs was estimated for each year as the market expanded, and then included as a fixed cost in the model.

22.6 Combined ratio

22.6.1 Given an assumption of average profitability, insurers expected the combined ratio to fall in the range 90- 95% with the former as the most likely, and indeed the most acceptable given the uncertainties.

22.7 Set-up costs

22.7.1 It had been suggested by a few insurance respondents that set-up costs would not be high and might be included in the administration costs for the first years. The majority view was that set-up costs would be around 20% of the year one premium. However this was not felt to be an acceptable measure as development costs are in effect fixed. In view of the scale of insurance, several insurers felt that set-up costs could be €2,000,000 in the time preceding launch (the same figure also suggested by a non insurance expert with experience of such schemes), a further €500,000 in year one, and continuing at €100,000 in further years. The model thus assumes these set up costs are fixed.

22.7.2 In the model of costs and returns, it has been assumed that costs would be incurred in this fashion and initially funded. It seems likely that a significant part of the costs might be attributable to computer/IT systems. Elsewhere in this report, we refer to the possibility of public funding being used to help with set up costs, but this has not been taken into account in the model.

23 DISCUSSIONS SUBSEQUENT TO THE QUESTIONNIARE

23.1 The impact of patent family

23.1.1 Insurers took the view that if the first patent in a family of related patents was insured for 100% of premium, subsequent patents might have a premium reduction of 25%.

23.2 Age of patent

23.2.1 According to patent practitioners, there are two patterns of claim.

23.2.2 First, for ordinary patents there are very few actions before year three, and most occur between years three to eight.

23.2.3 Second, pharmaceutical patents have an early peak of actions in years two and three after drugs approval, and a second peak much later, in years fifteen to eighteen. As all patents in the scheme will be insured for their entire life, age of patent is unimportant.

24 ANNUAL PREMIUM BY COUNTRY FOR OPTION 2

24.1 The annual premium for the base country

24.1.1 Insurers generally chose to take the UK as the base case due to more PLI experience historically (though in the questionnaire it had been suggested that Germany, as the market with most patents and most costs, might be used)**.**

24.1.2 The premium estimated for the UK, for Option 2 (without damages) was estimated by insurers to be a minimum of €400 per patent, with a maximum likely of €1,000 and a most likely of €600. The weight of premiums as a % of total patent costs is discussed in chapter 27.

24.1.3 It was stressed that underwriting decisions never allow for the impact of income deriving from the investment of premiums prior to the payment of claims.

Table 6: The annual indicative premiums in euros per patent for the countries studied

Member State	Premium for low €100,000 indemnity €	Premium for standard €250,000 indemnity €	Premium for high €500,000 Indemnity €
Austria	46	60	81
Belgium	92	120	162
Czech Republic	46	60	81
Denmark	346	450	606
Finland	231	300	404
France	185	240	323
Germany	923	1200	1615
Greece	46	60	81
Hungary	46	60	81
Italy	N/a	N/a	N/a
Poland	46	60	81
Spain	92	120	162
Sweden	231	300	404
The Netherlands	231	300	404
United Kingdom	462	600	808

25 THE FULL RANGE OF OPTIONS

Table 7: Ratios for various options for standard cover

Insurance respondents were asked to use their judgment to compare the 'most likely' standard premium just considered, with that for other options selected. The standard premium for Option 2 is taken as 100 for the UK.

Description of the Option, in addition to the standard conditions	Cover against damages awarded if alleged infringement proven?	Excess as Defendant?	Maximum likely premium	Minimum likely premium	Most likely premium
Option 1	YES, within overall cover	Yes	150	130	140
Option 2	No cover	Yes	167	67	100
Option 3	YES, within overall cover	very small	200	150	175
Option 4	No cover	very small	165	85	125
In the 'A' options below, the only change assumed is that the premium does not vary with age of patent, technical field, risk assessment of the patentee, only with the country concerned					
Option 1A	YES, within overall cover	Yes	Insurers took the view that there would be no change in premium if changes related to age of patent, technical field etc were excluded		
Option 2 A	No cover	Yes			
Option 3A	YES, within overall cover	very small			
Option 4A	No cover	very small	No Difference		
In the 'B' options below, it is assumed that a Community Patent – which does not yet exist, and unlike a European Patent covers all Member States with a single validation and single insurance policy - has come into operation. Assume that the litigation costs are the average of litigation in Germany and the Netherlands. Assume also 30 litigations a year and that there are 100,000 community patents in force at any one time. As in the main option, the premium may vary with the risk assessment of the patentee, but here an average is being considered. The premium is stated in relation to Option 2 standard for UK as 100. If the number of community patents in force is higher so will the number of litigations per year be proportionately. However, the warning concerning incidences of litigation must be borne in mind (see Chapter 10, section 2). *Note: the rate of litigation suggested in COM (2003) 828 is three times greater than that used above. Taking this as an alternative basis, the premiums quoted below and in Table 13 would all increase by 50% (for an explanation of this calculation, see small type note under Table 13).*					
Option 1 B	YES, within overall cover	Yes	220	180	200
Option 2 B	No cover	Yes	130	77	100
Option 3B	YES, within overall cover	very small	250	200	230
Option 4B	No cover	very small	150	120	150

Table 8: Indicative premiums by country for Option 1

Member State	Premium for €100,000 indemnity €	Premium for standard €250,000 indemnity €	Premium for €500,000 indemnity €
Austria	65	84	113
Belgium	129	168	226
Czech Republic	65	84	113
Denmark	485	630	848
Finland	323	420	565
France	258	336	452
Germany	1292	1680	2262
Greece	65	84	113
Hungary	65	84	113
Poland	65	84	113
Spain	129	168	226
Sweden	323	420	565
The Netherlands	323	420	565
United Kingdom	646	840	1131

Table 9: Indicative premiums by country for Option 2

Member State	Premium for €100,000 indemnity €	Premium for standard €250,000 indemnity €	Premium for €500,000 indemnity €
Austria	46	60	81
Belgium	92	120	162
Czech Republic	46	60	81
Denmark	346	450	606
Finland	231	300	404
France	185	240	323
Germany	923	1200	1615
Greece	46	60	81
Hungary	46	60	81
Poland	46	60	81
Spain	92	120	162
Sweden	231	300	404
The Netherlands	231	300	404
United Kingdom	462	600	808

Table 10: Indicative premiums by country for Option 3

Member State	Premium for €100,000 indemnity €	Premium for standard €250,000 indemnity €	Premium for €500,000 indemnity €
Austria	81	105	141
Belgium	162	210	283
Czech Republic	81	105	141
Denmark	606	788	1060
Finland	404	525	707
France	323	420	565
Germany	1615	2100	2827
Greece	81	105	141
Hungary	81	105	141
Poland	81	1005	141
Spain	162	210	283
Sweden	404	525	707
The Netherlands	404	525	707
United Kingdom	808	1050	1413

Table 11: Indicative premiums by country for Option 4

Member State	Premium for €100,000 indemnity €	Premium for standard €250,000 indemnity €	Premium for €500,000 indemnity €
Austria	58	75	101
Belgium	115	150	202
Czech Republic	58	75	101
Denmark	433	563	757
Finland	288	375	505
France	231	300	404
Germany	1154	1500	2019
Greece	58	75	101
Hungary	58	75	101
Italy	0	0	0
Poland	58	75	101
Spain	115	150	202
Sweden	288	375	505
The Netherlands	288	375	505
United Kingdom	577	750	1010

Table 12: Indicative premiums for the Options with no variations except by Member State

In the 'A' options below, the only change assumed from Option 1 is that the premium does not vary with risk assessment of the patentee, only with the country concerned

Option 1A to 4A	**Premium for €100,000 indemnity €**	**Premium for standard €250,000 indemnity €**	**Premium for €500,000 indemnity €**
	Taken to be the same as the main options		

Table 13: Indicative premiums for the Options for the Community Patent

In the 'B' options below it is assumed that a Community Patent, which, unlike a European Patent, covers all Member States with a single grant, is in operation.

Option 1B	**Premium for €100,000 indemnity €**	**Premium for standard €250,000 indemnity €**	**Premium for €500,000 indemnity €**
	Low	Standard	High
Community Patent	1150	1500	2020
Option 2B	**Premium for €100,000 indemnity €**	**Premium for standard €250,000 indemnity €**	**Premium for €500,000 indemnity €**
	Low	Standard	High
Community Patent	580	750	1010
Option 3B	**Premium for €100,000 indemnity €**	**Premium for standard €250,000 indemnity €**	**Premium for €500,000 indemnity €**
	Low	Standard	High
Community Patent	1330	1730	2320
Option 4B	**Premium for €100,000 indemnity €**	**Premium for standard €250,000 indemnity €**	**Premium for €500,000 indemnity €**
	Low	Standard	High
Community Patent	690	900	1212

Note: The basis for these figures is explained in Table 7; but if the premium figures are centred on the '1 in 1000' estimate of litigation given in COM2003(828), then premiums in the table above might rise by 50%.

In order to transfer the best estimate loss figures to the hypothetical scenario which the Community Patent presents, it is possible to apply a premium rating profile to the best estimate figures in order to create a hypothetical model for the potentially different litigation behaviour of the Community Patent. The way underwriters amend their rating model for use in the event of an improvement or deterioration in litigation figures is as follows.

If the litigation rate changes, the change to premiums will be proportionately less than the actual deterioration or improvement. For example, in the event that under the Community Patent the litigation rate improved by, say, 50% the premium rate might reduce by about 25%. Conversely, were the litigation rate to deteriorate by 50%, premium rates might rise by 25%. This is based upon the fact that litigation, albeit a major constituent, is only one part of several constituent parts within a rating model.

25.1.1 It is interesting that insurers in their discussions decided that the cost of a Community patent could offer a substantial saving to patentees who would otherwise cover several Member States and would have paid a multiple of this in premiums. This suggests the Community Patent may offer a major cost advantage. However, COM(2003)828 assumed a litigation ratio of 1 per 1000 patents as was then commonly the view. The present Study shows that the ratio of litigation to patents in force has a very wide spread from 1:600 (Germany, assuming infringement and nullity are tried together as would be the case for the Community Patent Court) to 1:5000 (France). See reservations with regard to forecast of incidence of litigation in Chapter 10, Section 2.

26 DISCUSSION OF THE FINANCIAL MODELS

26.1 Aspects of the premium model

26.1.1 In the absence of real market information for a mandatory scheme, any premium estimate assumes that the statistics derived from the current, largely uninsured, situation will be applicable. In practice differences are bound to occur. However the estimates developed are believed to give a reasonable picture for planning purposes.

26.1.2 Clearly any business will wish to allow for unexpected developments, and that is why the possibility of a 'no-claims' bonus after some years experience is important.

26.1.3 Another aspect already discussed is the emphasis by insurers toward assessment, mediation and settlement

26.2 Aspects of the business feasibility model

26.2.1 The business feasibility model (see Appendix 6) is very detailed in order to give the users the maximum opportunity to test assumptions. The figures thus generated are then, with various normal business assumptions taken through to Cash Flow, Profit and Loss accounts, and a Balance Sheet. Only if this is done can a full picture be obtained.

26.2.2 In the model it is assumed that there are 270,000 new patents per annum and that the renewal rate for these patents declines gradually to Zero in year 10, implying an average life of 5 years. In practice a few patents will continue for their entire legal life, but for the purposes of a model like this 10 years before a steady state was deemed to be adequate.

26.2.3 To give the maximum opportunity for amendment each 'cohort' of patents is started separately, there being one cohort per year of start. Each cohort is then studied over the 10-year period of the model. Thus the market size for patents coming under the mandatory scheme rises each year until (in the model) in year nine a maximum market size of approximately 1.6 million European Patents is reached. This is slightly in excess of the number predicted in the Study, although it is recognised that a successful mandatory scheme is likely to increase the number of patents.

26.2.4 A deduction from market size is made to allow for the European Patents which are given a certificate of exemption. These are mainly patents owned by globally oriented companies as explained in the Study. In the model 50% of patents are excluded on this ground, though the figure can be modified to any percentage. Changes really affect mainly the market size, and not the basic viability of the scheme.

26.2.5 Allowance is made, on recommendation of insurers, for a total of 20% for policy and claims handling and broker fees plus a further 12.5% for administration and management. Development costs are also included and it is assumed that share capital of €2 million is subscribed and that this covers the initial development costs.

26.2.6 The claims ratio pattern is a crucial aspect of the model. Based on the discussions of the patent practitioners it is assumed that no claims are made in the first two years, but the claims then rise to a maximum in years 4, 5 and 6, declining to zero in year 10.

26.2.7 The model then proceeds to calculate for each calendar year and each cohort of patents, the claims paid in each year. This is based on a single assumption of claims paid as a proportion of the premium, taken in this example as 65%. Results are obviously sensitive to this figure.

26.2.8 In the Profit and Loss account and Balance Sheet, allowance is made in each year for future claims. While true profitability is comparatively modest,

rising gradually to just over €20 million annually, there is a robust cash flow in the early years which is of great importance.

26.2.9 A model such as this cannot be viewed as predicting precisely what will happen. Its real value lies in permitting changes in assumptions in order to see how sensitive final results, or key performance indicators, are to these changes. In this way the management concerned with the business will be able to see what areas are critically sensitive. Obviously, an insurer would wish to experiment with different percentages of claims to premium; or with different patterns of claims made.

27 PREMIUMS AS A PERCENTAGE OF COSTS

27.1 The total costs of obtaining and maintaining a patent may be compared with the costs of insuring against litigation. This comparison is material in indicating the relative importance of insurance in the total outgoings of the patentee. While the cost of insurance may be comparatively large in some cases, this reflects the fact that the costs of a typical litigation are in these cases very high and would exceed by many times the total of premiums paid on that patent during its lifetime. This Study reveals clearly the dramatic difference in costs between different Member States.

27.2 The costs of obtaining a typical simple European Patent by the direct EPO-route and by the PCT-route, and maintaining it for ten years from the date of application have been studied[2]. This shows typical costs relating to an application for a European Patent in the EPO, direct-route, as follows: pre-filing expenditure €6,240, internal costs of processing €3,070, attorney's fees €4,930, translation costs €3,020, official fees €3,410, amounting to €20,670. Similar costs via the PCT-route (taken by 57% of applicants) were €31,130; thus the average cost was €39,746, though costs can double for biotechnology patents. Thus the average between the two routes of the cost was €26,679. Costs of validations in 6 Member States (Germany, UK, France, Netherlands, Spain and Belgium) are €9,870 and for 8 Member States (adding Austria and Sweden) are €15,640.

27.3 Costs of oppositions in the EPO average €1,950 per granted patent (5.5% of granted patents with an average cost of €30,000 at first instance and appeals at an estimated incidence on 1.5% of granted patents costing €20,000).

27.4 National Patent Office renewal fees and related costs for years 5-10 (after the period from application to grant which on average is 3.6 years) are €16,245 per patent for the six year period.

27.5 The sum attributable to licence handling during the 6 years after grant found by Berger is €8,568 per patent (€15,000 per year per average of 11 patents). The assumption has been made that this sum will cover negotiations on all the national patents validated on the one EPO grant.

27.6 The present Study has shown that litigation costs in the Member State per patent for Germany, UK, France, Spain, the Netherlands, Belgium, Austria and Sweden, (omitting Italy for the reasons explained in paragraph 9.4) for 6.3 years is €6,906 (€1,097 per year).

27.7 Similarly damages amount to €280 per patent.

27.8 For a full picture, there should be included the costs of settlement out of court, however these were not studied as they were irrelevant to the insurance systems considered by the Study, mainly due to the difficulty of obtaining statistics.

27.9 Premiums for these Member States for 6 years are €15,480 (see Table 9: Premium for Standard €250,000 indemnity, Option 2)

27.10 Premiums as a percentage of total costs are set out in Table 14. It is interesting to note that the Premiums as a percentage of total costs for a patent validated in all countries (22.5%) is higher than the figure for any individual Member State on its own. This is simply because the premiums remain the same, but the overall cost for covering all the Member States is much less than the sum of each Member State's cost individually, because some costs occur only once however many Member States are covered.

[2] Roger Berger Patent Study http://www.european-patent-office.org/epo/new/cost_analysis_2005_study_en.pdf

Table 14: Premiums as a percentage of total costs 10 years from application

Member States / Patents in Force	Costs to Grant (Average of Direct and PCT Route) €	National Validation Costs €	Opposition Costs €	National Renewal Costs €	License Handling €	Litigation Costs €	Damages €	Total	Premiums € / % of costs	Premiums as % of cost of grant, validation and renewal only
Germany	26,679	2,180	1,950	2,660	8,568	4380	66	46,483	7200	
307,488									15.50%	22.8
UK	26,679	1,450	1,950	1,582	8,568	1332	114	41,675	3600	
257,600									8.60%	12.1
France	26,679	2,150	1,950	1,807	8,568	60	42	41,256	1440	
252,798									3.50%	4.7
Netherlands	26,679	2,290	1,950	3,124	8,568	384	6	43,001	1800	
121,337									4.20%	5.6
Spain	26,679	2,020	1,950	2,134	8,568	144	42	41,537	720	
97,146									1.70%	2.3
Belgium	26,679	1,280	1,950	2,020	8,568	120		40,617	720	
84,621									1.80%	2.4
Austria	26,679	1,420	1,950	2,938	8,568	18	6	41,579	360	
83,636									0.90%	1.2
Sweden	26,679	2,850	1,950	2,500	8,568	150	6	42,703	1800	
82125									4.20%	5.6
All countries	26,679	15,640	1,950	18,765	8,568	6,588	282	78,472	17640	
									22.50%	28.9

Note: It is however useful to add a number of typical examples for European Patents validated in:

	All costs	premium	Premium as % of all costs	Premium as % grant, validation & renewal costs only
Germany, UK and France :	60209	12240	20	28
UK, France and Spain	49874	5700	11	15
Germany and Netherlands	52227	9000	17	24
Germany, France, Spain and Belgium	58242	10080	17	23

27.12 Indicated premiums for the projected European Community Patent (see Table 13) with putative costs to grant of respectively €10,000, €20,000 or €30,000, can be derived from forecasts in COM(2003)828 which assumes 50,000 new Community Patents granted annually and litigation rising by 50 cases a year with 25% of these appealed.

27.13 The present Study has proposed 100,000-200,000 Community Patents as being in the order of €100,000 (Paragraph 10.1.4). COM(2003)828 projects 50,000 new Community Patents per year. Taking the existing 5.5% proportion of oppositions presently existing in the EPO there would be 2750 oppositions per year with 25% being appealed. Similar costs to those of present oppositions in the EPO can be expected.

27.14 In view of the greater level of work that may be associated with Community Patent renewal costs may be taken as being at the upper end of existing costs for one Member State, for instance €2,500.

27.15 Litigation costs have been proposed in this Study at €300,000 at the first instance and €240,000 on appeal (Paragraph 10.2.3). COM(2003)828 indicates a litigation ratio of 1:1000 patents a year. This Study has projected 100,000-200,000 Community Patents (Paragraph 10.1.4) which, with the COM(2003)828 indication of one action per 1000 patents per year, may be taken to indicate up to 200 actions per year. Alternative projections are found in Chapter 10 of this Study. Standard premiums for €250,000 indemnity have been projected at €1,500 (see Table 13).

The figures given for all the Member States in Table 14 are more pessimistic than in any one Member State because application and opposition costs only occur once - regardless of how many Member States are covered.

Table 15: Putative premiums as a percentage of costs for the projected Community Patent 10 years from application

Costs to Grant (Average of Direct and PCT Route) €	**Probable Order of Opposition Costs €**	**Probable Order of Renewal Costs €**	**License Handling €**	**Litigation Costs (200 cases per year, first instance and 50 appeals) €**	**Total €**	**Premiums €**
						Percentage of costs %
10,000	1,950	2,500	8,568	360	23,378	1,500
						6.4
20,000	1,950	2,500	8,568	360	33,378	1,500
						4.4
30,000	1,950	2,500	8,568	360	43,378	1,500
						3.4

28 CONCLUSIONS ON ALTERNATIVE ROUTES FORWARD

28.1 The status quo

27.1. *Arguments against viability*

Continuation of the status quo with very little, disproportionately expensive, bespoke PLI, cannot be recommended. It became clear through work on this and previous studies that continuation of the status quo would be unlikely to lead to the objectives desired for patent and technological development in the European Union.

27.1.2 *Arguments for viability:* None.

Conclusion: The status quo does not meet any objectives for a feasible insurance scheme.

28.2 A voluntary scheme of PLI

28.2.1 Arguments against viability

No insurers either among those contacted through the CEA or the insurance experts consulted, believed such voluntary insurance to be an attractive proposition. This Study's findings are clear: this market has not so far proved popular either for patentees or for insurers. The availability of PLI is very limited and indeed during the course of this Study one of the world's major insurers decided to withdraw from significant involvement in the market.

28.2.2 Arguments for viability

If public funds were involved in the form of substantial subsidies, those arguments against the viability of a voluntary scheme may be overcome. With public funding, public administrations would have to insist on certain minimum conditions of cover. In order to get such a scheme off the ground it might be necessary for public administrations to accept some of the underwriting risk, and/or to provide a subsidisation of premiums.

Conclusion: The possibilities put forward relating to a possible voluntary scheme were not considered robust and attractive enough to justify further consideration given their obvious disadvantages.

27.3 A mandatory scheme

27.3.1 *Arguments against viability*

Experts concerned with Legal Expenses Insurance associated with the CEA, made mention of the perceived disadvantages of a mandatory scheme. In their view, mandatory schemes involve controls and administration and have conditions which could restrict the freedom of insurers to offer within such a scheme what they might think to be a superior product.

27.3.2 A further disadvantage of compulsion is the need for legislation and control. If the scope of legislation required were too great or the costs of control too onerous, this would weigh heavily against compulsion.

27.3.3 Finally, it is proper to draw attention to the political dimension of public administration involvement in the market place, though this is overcome when the advantages are sufficiently clear.

27.3.4 *Arguments for viability*

Insurers concluded that the only basis on which they would wish to be involved would be on a scale which only a mandatory scheme could provide.

27.3.5 It may be possible to move back to a voluntary scheme later once a scheme is well established. Accordingly, detailed feasibility studies were performed on variants of mandatory schemes.

27.3.6 It is clear from the figures of the feasibility Study herein that mandatory schemes, with possible exceptions, which are likely to be economically feasible can be identified.

27.3.7 The political feasibility of a mandatory scheme depends primarily on a general appreciation that PLI will be likely to substantially increase the innovation and competitiveness of European companies and hence their long term global competitiveness. Needless to say, it is for the relevant policy makers to decide whether the expected public benefits justify the necessary action to introduce a scheme.

Conclusion: Only a mandatory scheme is viable and can provide the economic and technical benefits to the EU and individual

patentees which would arise from a widespread scheme of PLI.

29 ADDENDUM: POSSIBLE COVER FOR OPPOSITION PROCEEDINGS IN THE EPO

29.1 Should insurance be available to cover the cost of opposition in the EPO?

29.2.1 Complications would arise with cover for opposition costs, which is therefore not recommended in the first instance. Some of the reasons for this are considered below.

29.2.2Oppositions are considered in the EPO itself and not in a national court. It would therefore be necessary to divide the premium between each of the national patents validated on the patent granted by the EPO, and thus different insurers would be involved in different Member States. However insurance cover would not attach to the EPO granted patent itself because this ceases to be an entity once converted into national European Patents by national validations.

29.2.3 As the cost of an EPO opposition is not related to litigation cost levels in the different Member States, the cost of insurance would in principle be shared equally between the national patents in force. However the premium in each Member State would need to be adjusted according to the average life of a European Patent in that state but also in relation to the average life of European Patents in the other Member States covered as the risk would be spread over different numbers of years in different Member States

29.2.4 5.5% of EPO granted patents in 2005 were opposed. Figures for national validations obtained during the Study suggest that on average there may be five national patent validations per EPO granted patent. However in a significant number of cases the likelihood of opposition would be apparent before insurance for national European Patents was agreed, and opposition costs for those patents would therefore have to be excluded as a known risk.

29.2.5 In 2005 just under 40% of patents opposed were revoked. Obviously, premiums for a revoked patent would cease immediately, and on average at a very early stage in the life the patent. While no exhaustive Study of opposition costs was called for during the full discussion with the legal practitioners it would appear that these average €30,000 at first instance of the opposition and a further €20,000 on appeal.

29.2.6 A further complicating factor affecting the premium would be that those European Patents which are maintained successfully in opposition proceedings in the EPO are likely to have a longer than average lifespan.

29.3 For these reasons, which bear little relation to the factors considered in calculating insurance cover for litigation in court, it is considered that insurance for opposition costs should not be included, at least in the initial system designed to cover patent litigation. This does not exclude the possibility of developing such cover at a later stage or as an independent operation.