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## SUMMARY

Peter Grindley is a director with Berkeley Research Group in its London, UK office. Dr. Grindley has broad experience in economic consulting for both litigation and non-litigation purposes in the areas of intellectual property and licensing, standards, competition policy, finance and damages and government policy. He has particular interests in the electronics, computing, telecommunications and energy industries. His consulting work has included major international and US-based cases as well as UK and other European proceedings.

Dr. Grindley holds a PhD in economics from the London School of Economics, an MBA from Stanford University, and a BA in electrical engineering from the University of Cambridge, UK. Prior to joining BRG, he was a principal with LECG for many years, working in London and California. He has been a Visiting Professor of Economics at the University of California, Berkeley, and an Assistant Professor of Economics at London Business School. He previously spent several years in the semiconductor industry, with management positions in engineering and finance in the US and Germany. Dr. Grindley has authored numerous publications in the economics of intellectual property and government policy, including: *Standards, Strategy and Policy*, Oxford University Press, 1995, and "Managing Intellectual Capital: Licensing and Cross-Licensing in Semiconductors and Electronics," (with David Teece), *California Management Review*, 1997.

## EDUCATION

PhD, Economics, London School of Economics, 1986  
MSc, Economics, London School of Economics, 1981  
MBA, Stanford University, 1972  
BA, Electrical and Mechanical Sciences, University of Cambridge, 1968

## LANGUAGES

German (Advanced)  
French (Advanced)  
Spanish (Moderate)

## PRESENT POSITION

Berkeley Research Group (UK), Managing Director, 2010 to present.

## PREVIOUS POSITIONS

LECG, London, UK, Principal, 1998-2010

LECG, Emeryville, CA, USA, Managing Economist, 1994–98

Segal Quince Wicksteed Limited, Cambridge, UK, Senior Consultant, 1993–94

National Semiconductor Corporation, Santa Clara, CA, USA, 1974–81:

Planning Consultant, Singapore, 1981

Assistant Controller, Munich, Germany, 1979–80

Controller, Manager of Financial Reporting, Santa Clara, USA, 1974–79

Fairchild Camera & Instrument Corporation, Mountain View, USA, Financial Analyst, 1972–74

Westinghouse Electric Corporation, Pittsburgh, PA, USA, Systems Engineer, 1968–70

## TEACHING EXPERIENCE

University of California at Berkeley, CA, USA, Visiting Professor of Economics, 1992–93

London Business School, Assistant Professor of Economics, 1986–92

University College London, Visiting Lecturer, 1986–90

London School of Economics, Class Teacher, 1980–86

## PUBLICATIONS

### Books

1. *Standards, Strategy, and Policy: Cases and Stories*, Oxford: Oxford University Press, 285 pp., 1995.
2. *Standards, Business Strategy and Policy: A Casebook*, Report Series, Centre for Business Strategy, London Business School, 216pp., 1992.
3. *The UK Software Industry: A Survey of the Industry and Evaluation of Government Policy*, Report Series, Centre for Business Strategy, London Business School, 87pp., 1988.

### Journal Articles

1. "Patents and 'Patent Wars' in Wireless Communications: An Economic Assessment", (with David Teece and Edward Sherry), *Communications & Strategies*, No.95 - The future of patents in communication technologies, 3rd quarter, 2014.
2. "Standards wars: the use of standard setting as a means of facilitating cartels – third generation wireless telecommunications standards setting", (with D.J. Salant and L. Waverman), *International Journal of Communications Law and Policy*, vol. 3, Summer 1999.
3. "Managing Intellectual Capital: Licensing and Cross-Licensing in Semiconductors and Electronics", (with D. Teece), *California Management Review*, vol. 39.2, pp. 1-34, 1997.
4. "Sematech and Collaborative Research: Lessons in the Design of High-Technology Consortia", (with D. Mowery and B. Silverman), *Journal of Policy Analysis and Management*, vol. 13, pp. 723-758, 1994.

5. "Sematech After Five Years: High-Technology Consortia and US Competitiveness", (with W. Spencer), *California Management Review*, vol. 35.4, pp. 9-32, 1993.
6. "Regulators, Markets and Standards Coordination: Policy Lessons from Telepoint", (with S. Toker), *Economics of Innovation and New Technology*, vol. 2, pp. 319-342, 1993.
7. "Turning Technology into Competitive Advantage", *Business Strategy Review*, vol. 2.1, pp. 35-48, 1991.
8. "Winning Standards Contests: Using Product Standards in Business Strategy", *Business Strategy Review*, vol. 1.1, pp. 71-84, 1990.

### Book Articles

1. Entries for Patents, Standards, Licensing, Cross licensing, Licensor, Licensee in Mie Augier and David J. Teece (eds.), *The Palgrave Encyclopedia of Strategic Management*, Palgrave Macmillan, <http://www.palgraveconnect.com/esm/>, 2013.
2. "SDO IP Policies in Dynamic Industries: A Submission to the ITU Patent Roundtable, Geneva, 10 October 2012", (with Ed Sherry and David Teece), 10 October 2012.
3. "Patent licensing and standards setting – IP collides with antitrust", (with Mark Bezant and Daniel Ryan), *Licensing in the Boardroom 2008*, IAM magazine, pp. 49-53, 2008.
4. "Understanding the Licensing Option", (with E. Sherry and D. Teece), Chapter 8 in Teece, D., *Managing Intellectual Capital*, Oxford: Oxford University Press, pp. 133-155, 2000.
5. "Case Studies in Licensing and Cross-Licensing: The Semiconductor Industry", (with E. Sherry and D. Teece), Appendix A in Teece, D., *Managing Intellectual Capital*, Oxford: Oxford University Press, pp. 193-224, 2000.
6. "Case Studies in Licensing and Cross-Licensing: The Glass Industry and the Pilkington Float Process", (with E. Sherry and D. Teece), Appendix B in Teece, D., *Managing Intellectual Capital*, Oxford: Oxford University Press, pp. 225-276, 2000.
7. "Irreconcilable Differences? Managing the Knowledge Creation Interfaces", (with P. Sullivan), in Sullivan, P. (ed.), *Profiting from Intellectual Capital: Extracting Value from Innovation*, pp. 84-102, New York: Wiley, 1998.
8. "The Design of High-Technology Consortia: Lessons from Sematech", (with D. Mowery and B. Silverman), in Teubal, M. and Foray, D. (eds.), *Technological Infrastructure Policy: An International Perspective*, pp. 1-46, Dordrecht: Kluwer Academic Publishers, 1996.
9. "Licensing and Business Strategy in the Chemicals Industry", (with J. Nickerson), in Parr, R. and Sullivan, P. (eds.), *Technology Licensing Strategies*, pp. 97-120, New York: Wiley, 1996.
10. "The Future of the Software Industry in the United Kingdom: The Limitations of Independent Production", in Mowery, D. (ed.), *The International Computer Software Industry: A Comparative Study of Industry Evolution and Structure*, New York: Oxford University Press, pp. 197-239, 1996.
11. "Regulation and Standards Policy: Setting Standards by Committees and Markets", in Bishop, M., Kay, J. and Mayer, C. (eds.), *The Regulatory Challenge*, pp. 210-226, Oxford: Oxford University Press, 1995.

12. "Standards Strategies for Telepoint: The Failure of Cooperation", (with S. Toker), in Roos, J. (ed.), *European Case Book on Cooperative Strategies*, Oslo: Prentice-Hall, pp. 21-40, 1994.
13. "Establishing Standards for Telepoint: Problems of Fragmentation and Commitment", (with S. Toker), in Pogorel, G. (ed.), *Global Telecommunications Strategies and Technological Changes*, Amsterdam: North Holland, pp. 201-225, 1994.
14. "Managing Technology: Organizing for Competitive Advantage", in Swann, P. (ed.), *New Technology and the Firm: Innovation and Competition*, London: Routledge, pp. 36-53, 1993.
15. "Technological Change Within the Firm: A Framework for Research and Management", 23pp., in Cozijnsen, A. and Vrakking, W. (eds.), *Handbook of Innovation Management*, Oxford: Blackwell, 1993.
16. "Standards Strategy for Personal Computers", (with R. McBryde), in Berg, J. and Schumny, H. (eds.), *An Analysis of the Information Technology Standardization Process*, Amsterdam: Elsevier, pp. 227-236, 1990.
17. "Standards and the Open Systems Revolution in the Computer Industry", in Berg, J. and Schumny, H. (eds.), *An Analysis of the Information Technology Standardization Process*, Amsterdam: Elsevier, pp. 99-110, 1990.
18. "Assessing the Alvey Software Engineering Program", in *Information Technology: First Report*, House of Commons Paper 25-II, pp. 352-357, 1988.

#### **Commentaries and reports**

1. "SDO IPR Policies in Dynamic Industries: A Submission in Connection with the October 2012 National Academy of Sciences Symposium on RAND Patent Policies," (with Ed Sherry and David Teece) , 20 December 2012.
2. "SDO IP Policies in Dynamic Industries: A Submission to the ITU Patent Roundtable, Geneva, 10 October 2012," (with Ed Sherry and David Teece), 10 October 2012.
3. "Patent licensing and standards setting – IP collides with antitrust", (with Mark Bezant and Daniel Ryan), *Licensing in the Boardroom 2008*, IAM magazine, pp. 49-53, 2008.
4. "Review of Proposals for Legal Aid: New Working Arrangements and Best Value Tendering", Report to the Law Society, 30 April 2007.
5. "Legal Aid Reforms Proposed by the Carter Report: Analysis and Commentary", Report to the Law Society, 25 September 2006.
6. "The Proposed EC Technology Transfer Block Exemption Regulation: An Economic Assessment" (with Henry Kahwaty, Ed Sherry and David Teece), 26 November 2003.
7. "IP, Cross-licensing and Patent Pools: Similarities and Contrasts", presentation to FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy, Washington DC, April 17, 2002.
8. "Regulation of Access in Vertically-Integrated Natural Monopolies: A Discussion Paper", Comments submitted to New Zealand Government Officials, 16pp, September 1995.

## **PROFESSIONAL EXPERIENCE**

### **Standards (IP and antitrust)**

Assessed competitive impact of IP disclosure and FRAND royalty rates commitments in standards setting organisations on technology adoption and licensing in broadband and mobile phone industries. Reviewed issues relevant to non-producing entity (NPE) licensors. Examined standards setting procedures for IEEE Wi-Fi and WiMax, Bluetooth, and ITU W-CDMA standards. (2010)

Reviewed historical intellectual property policies of global standards development organisations and actual IP policy implementation procedures for JEDEC standards organization for litigation in computer DRAM memory industry. Expert report and deposition testimony. (2007-08)

Reviewed historical intellectual property (IP) policies of standards development organisations and specific IP policy implementation procedures in response to EU Statement of Objections for investigation in semiconductor memory industry. Expert report and aural testimony. (2007)

Assessed competitive conditions for the development of semiconductor memory architectures and standards, building on previous industry analysis. Reviewed economics of alternative dynamic random access memory (DRAM) technologies, the valuation of patents implicated in standard designs, and alternative development strategies for the industry members. (2005–07).

Analysis of antitrust implications of intellectual property disclosure and licensing rules for standards development organisations (SDOs) in semiconductor industry. Reviewed historical standards setting behaviour within JEDEC SDO. Major US FTC investigation and litigation. (2003)

Reviewed IP disclosure responsibilities and likely impact on outcomes due to participation in regulatory proceedings of the California Air Resources Board (CARB) to define reformulated gasoline. Outlined parallels between regulatory and standardisation processes and reviewed possible IP disclosure obligations and licensing commitments. Major US FTC investigation and litigation. (2001–04)

Assessed IP disclosure responsibilities and competitive consequences for participation in standards setting organisations in semiconductor industry, for litigation appeal. Analysed impact of IP disclosure on standards adoption. (2003)

Assisted the UK Department of Trade and Industry (DTI) in the development of the National Standardisation Strategy Framework (NSSF). Coordinated inputs from industry, government and national standards bodies. Reviewed links between standards and government regulation policy for the Better Regulation and New Approach EU initiatives. NSSF published in March 2003. Expert part time secondment. (2002)

Reviewed the economic consequences of participation in standards setting organisations and obligations for disclosure and licensing in the semiconductor industry. Assessed compliance rate and effectiveness of patent disclosure rules. (2001)

Analysis of the relationship between standards and intellectual property in standards development organizations in the electronics industry, and appropriate patent policies to resolve conflicts. (2000)

Assessed procedures for developing international third generation mobile telecommunications standards. Included detailed analysis of ITU process for IMT2000 and review of strategic and policy alternatives. (2000)

Evaluated the competitive impact of the development of third generation mobile phone standards in the European Telecommunications Standards Institute (ETSI) standards setting organization. Investigated competitive strategies for standards and relationship between standards regulations and competition. Prepared standards strategy literature review. Case manager. (1998–99)

### **Intellectual property and licensing**

Prepare policy reviews for ongoing IP project to study economic impact of FRAND conditions on IP rights, licensing terms, competition and technology development. Includes responses to regulatory proposals for changes to standards setting organization (SSO) IP policies and legal/economic antitrust treatment of standards essential patents. Focus on wireless communications technologies. Joint case manager. (2012-14)

Assessed reasonable royalties for FRAND licensing by a non-practising entity (NPE) in the mobile phone industry for UK action, as part of European and global litigations. Analysed royalty rates for standards-essential patents and compared with industry licensing rates. Reviewed economic implications of standards requirements and relationship between individual patent and portfolio rates. Joint expert and case manager. (2011-13)

Assessed reasonable royalties and competition effects for FRAND and other licensing for major global litigations in mobile phone/smartphone industry. Analysed implied royalty rates in cross-licenses and compared other industry patent portfolio licensing rates. Reviewed industry development and economics of competition and standards setting in mobile phones. Prepared and coordinated economic analysis and testimony for cases in Europe, Asia, Australia and US. Joint expert and case manager. (2011-13)

Jointly prepared policy review of FRAND licensing procedures and implied royalty rates. Assessed implications of proposed changes to standards setting organization (SSO) IP policies. (2012-13)

Assessed reasonable royalties for FRAND and other licensing for patent portfolio in wireless communications. Reviewed royalty rate theory and compared rates from representative industry licenses. Reviewed standards setting procedures. (2012)

Assessed reasonable royalties for FRAND and other licensing for major patent portfolio owned by a non-practising entity (NPE) in mobile phones. Reviewed FRAND royalty rate theory and compared rates from representative industry licenses. (2012)

Determined reasonable royalties for FRAND and other licensing for global litigations in wireless communications. Reviewed royalty rate theory and compared implied rates from representative industry licenses and patent pools. Reviewed implications of licensing

commitments in standards setting and distinguished IEEE and ITU-T interpretations of “non-discrimination”. (2011)

Reviewed competitive implications of MFN provisions and other factors in determining reasonable royalties in mobile phone industry. Applied transactions cost economics analysis to the evaluation of licensing contracts. Reviewed interpretation of entire market value (EMV) rule. (2010)

Investigated relevant factors in determining FRAND royalty rates for MPEG-2 patent licensing pool and potential competition implications of licensing terms. Reviewed IP content of pool and comparative rates for other pools, and impact of standards and licensing on the introduction of new technology. (2009)

Assessed appropriate damages for patent infringement in computer DRAM memory industry. Reviewed opposing experts’ reports for four separate defendants in consolidated case. (2008)

Prepared quantitative assessment of damages and licensing revenues for patent infringement in mobile phone industry. Reviewed opposing experts’ reports on appropriate market definition and relevant products, and specific damages calculations. Assessed applicability patent exhaustion in this case and reviewed opposing experts’ opinions. (2008)

Reviewed appropriate basis for determining reasonable royalty rates under FRAND conditions in mobile phone industry, including relationship between theoretical *ex ante* and *ex post* rates and associated informational requirements. (2008)

Reviewed principles for assessing fair, reasonable and non-discriminatory (FRAND) licensing royalty terms for essential patents for standards in mobile phone industry. Reviewed competitive implications of FRAND commitments made to standards setting organisations such as the European Telecommunications Standards Institute (ETSI). Case manager. (2006-07)

Reviewed competitive implications of FRAND licensing commitments made to standards setting organisations for determination of royalty rates and availability of injunctive relief in mobile phone industry. (2006-07)

Assessed economic role of music link services and ISP providers and their potential contribution to unauthorised online music distribution and copyright infringement. Defined theoretical and empirical conditions to act as a market maker in a multi-sided market. (2004)

Analysed economic role of peer-to-peer file sharing networks and potential contribution to music copyright infringement. Investigated business model of two-sided markets and evidence that providers of peer-to-peer software act as market makers. (2004)

Assessed economic impact of loss of trade secrets and patent infringement associated with a technology cooperation agreement in the solid state memory industry. (2004)

Reviewed responsibilities of supplier and buyer for reliability of electronics components and relevance of standards qualification and other guarantees. (2004)

Reviewed literature on international joint venture structures related to a US-Japanese textiles industry joint venture, including rationale for management organisation and appropriate royalty and licensing terms. (2004)

Prepared joint commentary on EU Technology Transfer Block Exemption Regulation (TTBER), outlining competition concerns for proposed regulation of intellectual property licensing agreements in progressive industries. Report available on EU website. (2003)

Provided advice on patent infringement implications for innovation in personal computer industry. Expert. (2002)

Participated in expert panels for FTC/DOJ hearings on competition and intellectual property law and policy in the knowledge-based economy, Washington DC, April 17, 2002. Sessions on cross-licensing and patent pooling and standards setting and antitrust. Expert. (2002)

Analysed the effects on product pricing and competitive conditions following the introduction of generic versions of prescription drugs in the pharmaceutical industry. Assessed supply bottlenecks and the value of being first-to-market. Case manager. (2000)

Advised satellite imaging joint venture in an international arbitration. Assessed risk allocation in a joint-venture agreement and calculated damages for potential misrepresentation of product performance. (2000)

Evaluated general and specific measures of trade secrets disclosure in the medical equipment industry with overlapping technologies, for medical stent grafts. Assessed provisions in non-compete agreements and impact of statutory rules. (2000)

Assessed the economic value of residual assets and damages following contract termination in the defence industry, for a major international Arbitration. Developed an economic methodology for valuing partly completed equipment and materials and built a detailed decision-based financial model for valuing various classes of assets. Critiqued alternative methods and prepared testimony. Case manager. (1998–2000)

Reviewed role of International Patent Convention (IPC) and possible developments in international patent filings. Prepared report on the status of the Patent Control Treaty (PCT) for World Intellectual Property Organisation (WIPO). Expert. (1999)

Assessed value of textile patent and reasonable royalties payable under German Employee-Inventor Act. (1998)

Analysed cross-licensing agreements in the semiconductor industry and management of major patent portfolios. Reviewed appropriate competitive procedures for intellectual property holders in licensing and participation in industry standards setting bodies. Case manager. (1997)

Assessed damages in major litigation of patent infringement for reformulated gasoline required by California Air Resources Board (CARB) regulation. Evaluated reasonable royalties and lost profits given market demand, cost of non-infringing alternatives and likely price erosion. Followed case through jury trial and appeals. Case manager. (1996–97)

Preparation of monograph on intellectual property, licensing and antitrust policy, and other policy analysis, as part of commentary presented to the US Department of Justice on proposed new antitrust guidelines. Made the affirmative case for strong intellectual property rights and retaining the current antitrust treatment. (1995–96)

Determined reasonable royalties for damages for patent infringement in personal computer industry. Ascertained relevant licensing negotiation factors and industry cross-licensing practices. (1996)

Analysed of licensing strategy for US-Japanese textiles industry joint venture, including rationale for arms-length management structure, technology sharing agreements, and royalty-free cross licenses. Developed litigation testimony. (1996)

Background analysis for plaintiff in patent infringement litigation in US semiconductor industry. Preparation of industrial and corporate history, and analysis of changing methods of exploiting intellectual property as the industry has developed, emphasizing licensing and a more assertive intellectual property stance. (1992)

### **Telecommunications and media**

Reviewed basic policy issues for development and oversight of ICT industry in Saudi Arabia. (2011)

Quantified potential costs and benefits of functional separation of broadband in Italy. Compared the current Italian context with UK functional separation. Assessed economic impact of Telecom Italia's implementation of Next Generation Network. (2008-09)

Estimated potential economic impact of investment in 3G and other wireless telecommunications technologies on expanded broadband use and total economic growth. Focused on major developing economies such as China and India. (2008-09)

Assessed appropriate economic basis for determining inter- and intra-regional roaming rates under mandatory roaming requirements for Canadian mobile spectrum licenses. Included impact on competition between firms and alternative technology platforms. (2008)

Review structure of international submarine fibre-optic cable systems industry and economic impact of contractual performance. (2008)

Damages assessment for contract dispute in international ICC arbitration in submarine cable industry concerning conditions and pricing of landing station access in India. (2006-07)

Assessed competitive implications of distribution agreement for new global satellite broadband services for international arbitration. Included analysis of market definition for

different satellite services, product characteristics and historical development of satellite communications industry. (2006)

Prepared and presented training module on the economics of the telecommunications industry for UK regulation workshop. (2006)

Reviewed the development and introduction of ADSL broadband and related technologies in US and global telecommunications industry. Assessed interactions between standards setting, technology and product development, licensing and market strategies. Valued alternative broadband delivery platforms in patent infringement case. (2005–06)

Assessed competitive implications of programming supply conditions in UK cable and satellite TV broadcasting industry. Included review of regulatory decisions and recommendations for potential intervention. (2004)

Assessed damages and antitrust implications due to the performance and management of the national telecommunications service in Republic of Latvia, in a major international Arbitration. Estimated future value of telecommunications monopoly and counter-claim for performance of modernisation commitments. Assessment combined total economic and public impact, including the impact of technological development on the telecommunications industry, impact of telecommunications on growth, and the economic effects of EU entry. Reviewed competitive effects in the Baltic area. Joint case manager. (2001–04)

Summarised market information and competitive implications of proposed merger in UK independent television industry. (2000)

Reviewed the structure, activities and competitive strategies in the UK television broadcasting facilities industry. Investigated compliance with Fair Trading Commitment to ensure competitive behaviour by public broadcaster. Case manager. (1998–99)

Assessed the market structure and competitive conditions and merger analysis in the UK commercial radio industry. Included market definition, analysis of advertising structures and assessment of licensing conditions set by Radio Authority. Case manager. (1998–99)

Competition analysis of changes in royalty fee rates and incidence by Nordic performing rights collecting society, affecting music and cable TV. Supported complaint to EC. (1998–99)

Assessed competitive implications of proposed merger in German pay TV industry. Analysed vertical relationships between programming and distribution systems for satellite and cable. (1997–98)

Policy expert for economic analysis of interconnection pricing and standards setting for new mobile telecommunications services in New Zealand. Considered alternative strategy and policy directions in a lightly regulated telecommunications market. Presentations to industry/academic conferences and workshops as input to government

policy process. Developed arbitration procedures for interconnection negotiations. Expert. (1995–96)

### **Competition policy**

Reviewed competitive impact of conditions for online provision of real estate listing services in Canada. Applied two-sided markets analysis to pricing of service platforms. Joint case manager. (2011)

Reviewed competitive impact of appropriate transfer fees for credit card services in Canada. Included international regulatory comparisons. Applied economic analysis of two-sided markets. (2011)

Reviewed competitive implications of UK merger procedures under the City Code of the UK Takeover Panel for major US/UK merger dispute. Assisted financial market expert in preparing testimony. (2010)

Assessed competition impact of merger in fertilizer production industry in Alberta for Canadian Competition Bureau review. Analysed potential price effects and compared actual and reference pricing within relevant regions. (2009)

Assessed competition and potential market power in the provision of membrane waste water treatment systems in North America. Evaluated market conditions, technological competition and potential entry. (2004–05)

Assessed competitive implications in the sale of football broadcasting rights. Reviewed market conditions and the implications of alternative selling arrangements on league performance for EU submission. (2003)

Assessed competitive impact of a joint-venture agreement for technology transfer, marketing, and R&D collaboration in membrane water treatment, for international arbitration. Defined relevant product, technology, and geographic markets for European and US antitrust purposes. Reviewed licensing terms and industry structures in specific countries and prepared relevant sections of EU notification documents. Case manager. (2000)

Evaluated competitive conditions and relevant market share analysis for merger in tobacco industry, applied to New Zealand market. (1999–2000)

Assessed industry and government research efforts regarding the health effects of smoking and the development of "safer" tobacco products. Compared international histories in UK, US, and other countries. (1999)

Evaluated competitive conditions and market power associated with product standards, for manufacturer of high density removable disks and computer disk drives. Applied to worldwide and European markets. (1998)

Evaluated development processes, competitive strategies for innovation, and the interface with government health regulation in introducing new "safer cigarette" products in the tobacco industry. Countered antitrust claims. Case manager. (1997)

Preparation of testimony in antitrust case concerning the licensing of float glass technology. Analysed social and private returns from innovation and confidentiality requirements for trade secrets learned by employees. (1996)

Preparation of testimony related to the antitrust impact of interface standards in the modems industry. Outlined the role of open standards in ensuring interoperability, and the likely effects on market expansion and competition. (1995)

Preparation of testimony for major antitrust litigation concerning the licensing of float glass technology. Provided economic analysis of intellectual property licensing conditions and commercialisation strategies, including patent and trade secret provisions, grantbacks, and territorial restrictions. Estimated global social and private returns from this major innovation and defined relevant markets for technology. (1994–95)

Antitrust analysis for an acquisition in the US medical instrumentation industry. Evaluation of competitive implications of the proposed merger on the development and introduction of a new technology in the diagnostic catheter market. Included arguments related to intellectual property and the behaviour of innovation markets, and new product standards. (1994)

Evaluation of competitive implications for litigation of a fixed price supply agreement in the UK textiles industry, between a garment manufacturer and a T-shirt printer. Applied principles of EU competition law. (1991)

### **Energy and regulation**

Analysed competitive conditions in upstream oil production and the impact of vertical integration for major merger in the Canadian oil industry for Canadian Competition Bureau review. Identified relevant markets and potential short and long term effects. (2009)

Reviewed benchmark methodologies for performance assessment for UK postal services regulator. (2005)

Assessed competition issues for advice on regulatory regime for Eastern gas pipeline in New Zealand. (2000)

Summarised current procedures and future trends in regulation in UK gas industry for international benchmarking study. (2000)

Assisted in project to advise the newly formed Dutch Electricity Regulatory Service (DTe) in setting up and running a new regulatory structure. Output included: "Price cap regulation in the electricity sector: information and consultation document", DTe, July 1999. Case manager. (1999)

Economic assessment of product price and volume behaviour in petroleum retailing, and the influence of advertising strategies on prices. Applied econometric modelling to assess behaviour in different regions and time periods in US markets. Input to class action litigations. Case manager. (1997–2000)

Assessed cost and profit impact of production and transport variations compared to contract damages calculations in joint-venture for Trans-Alaska Pipeline System (TAPS) Alyeska Pipeline. Included potential competition issues. (1995-97)

Assessed reasonable royalties for licensing of patented CARB reformulated gasoline. (1996-97) (See Intellectual property and licensing above).

### **Government policy**

Analysed performance of medical capital equipment procurement plan for Canadian regional health service. Compared period exclusive procurement agreement with spot tendering. Included data analysis, literature reviews and interviews. (2011-12)

Reviewed UK government proposals for auction design for Best Value Tendering of legal aid procurement in the UK. Assisted the Law Society in its response to policy consultation. Expert. (2008-09)

Reviewed government proposals and developed possible alternatives for legal aid provision in the UK. Assisted the Law Society in its response to government policy consultation. Reports published. Expert. (2008)

Assisted in British Horseracing Authority submission to government for the determination of the horserace betting levy. Assessed potential market-based price for access to horseracing by the UK betting industry. Reviewed impact of other costs such as TV and value of other betting products. Expert. (2007-11)

Developed market analysis of the chlor-alkali segment of the UK chemicals industry and its role in sustaining other segments of the industry and its role in regional development. Assessed the impact of changes in the segment on total UK employment and output. Assisted in application for UK and EU government regional and private investment support for major project. Case manager. (2001)

Developed recommendations for alternative legal aid policy implementation in the UK. Included interview survey of solicitor firms. Report published by the Law Society. Report published. Expert. (2007)

Reviewed the implications of the UK government's Carter Review for reform of legal aid procurement. Commented on the implications for criminal defence services and overall delivery of criminal and civil & family legal aid. Report published by the Law Society. Expert. (2006)

Assessment of organization of major US research programs in innovation management to identify 'best practice' techniques for involving business users in the design and use of academic innovation research. Part of UK Education and Social Research Council (ESRC) study of innovation management. (1994)

EU-wide evaluation of the SPRINT program of the European Commission DG XIII, for promoting international collaboration between national research and technology organizations (RTOs). Preparation of final report and coordination of inputs from regional consulting teams. (1994)

Needs assessment study for EU assistance policy to medium sized enterprises in Poland, funded by the Cooperation Fund of the Ministry of European Integration and Foreign Assistance. Wide-ranging series of on-site consultations with businesses and organizations in Poland to determine requirements for support mechanisms and proposals for implementation. (1994)

Evaluation of ownership options for UK national research institute. Analysis of operations, future market requirements, and estimated performance under privatisation, with recommendations for action. (1994)

Assistance to the UK Office of Science and Technology (OST) in the preparation of the Technology Foresight Program (TFP). Design of program objectives, procedures, and reporting processes. (1994)

“Strengths/weaknesses/opportunities/threats” (SWOT) analysis of industrial sectors for trade and industry policy. Analysis of industrial and market characteristics for electrical transmission and distribution equipment sector, including competitive strengths and weaknesses and potential for growth. (1994)

Evaluation of UK Education and Social Research Council (ESRC) Management Teaching Fellowship scheme, supporting the training of new faculty in business school higher education. Managed project, designed evaluation plan, organized national surveys of participating fellows and institutions and prepared reports. (1993–94)

### **Business strategy**

Analysed strategic requirements and potential economic and legal considerations for developing new methods of trading intellectual property via an IP exchange. Project aimed to support the growth of the systems-on-a-chip industry and regional development in Scotland. Case manager. (1997)

Participation and support for Intellectual Capital Management Gathering, an ongoing workshop of senior IC executives. Helped develop leading edge techniques and benchmark best practice procedures for intellectual asset management and presentation of off-balance sheet reporting of intangible knowledge assets. Explored interfaces between knowledge creation and value extraction. (1995–98)

Analysis of pricing strategy for computer services division of UK corporation. Involved statistical modelling of usage rates and recommendations for workable contract scheme. (1992)

Developed information technology strategy for a diversified financial services division of a major UK bank. On-site evaluation of divisional needs and preparation of requirements for integrated financial systems. (1981)