

Book Reviews

Personal, Portable, Pedestrian: Mobile Phones in Japanese Life

Mizuko Ito, Daisuke Okabe and Misa Matsuda (Eds)

Cambridge, MA and London, England, MIT Press, 2005, xii + 357 pp., £25.95, ISBN 0-262-09039-2 cloth

After a slow start, books on mobile communications are pouring forth from the presses: in 2005–06 alone at least 11 volumes appeared (not counting numerous other technical, scientific, engineering, economic, and business studies).¹ *Personal, Portable, Pedestrian* is a worthy addition to this burgeoning literature and field of study, attesting to the importance being accorded to studying the social, cultural, and innovation aspects of technological change in the areas of mobile and wireless devices and networks.

Japanese society has been a subject of fascination, regarded as an exotic, technophilic culture, something of a laboratory of the future or haven for pioneering technology use. Certainly Japanese take-up of mobiles has often been discussed in these terms, but one of the problems for scholars, industry, and policymakers wishing to study this phenomenon is the relative inaccessibility of material for those without fluency in Japanese.

The first service then that *Personal, Portable, Pedestrian* provides to potential readers is a comprehensive, multi-faceted, and multi-perspectival account of the emergence, use, and significance of the mobile—termed the *keitai* in Japan (as Ito explains in her introduction, literally ‘something you carry with you’). Most of the chapters were written in Japanese, then translated and edited in close collaboration with the authors.

The book is divided into five sections. The first section, ‘The Social and Cultural Construction of Technological Systems’, contains foundational information on the history and characteristics of the *keitai*. Misa Matsuda discusses ‘Discourses of *Keitai* in Japan’, Tomoyuki Okada looks at ‘Youth Culture and the Shaping of Japanese Mobile Media’, while Kenji Kohiyama charts ‘A Decade in the Development of Mobile Communications in Japan (1993–2002)’. In ‘Cultures and Imaginaries’, the second section, Kenichi Fujimoto proposes ‘The Third-Stage Paradigm: Territory Machines from the Girls’ Pager Revolution’, and Haruhiro Kato also focuses on juvenation with ‘Japanese Youth and the Imagining of *Keitai*’.

The third section of the book is 'Social Networks and Relationships', with a contribution by Matsuda again on 'Mobile Communication and Selective Sociality', and a co-authored piece by Kakuko Miyata, Jeffrey Boase, Barry Wellman and Ken'ichi Ikeda, comparing Japanese use of the Internet via computer and mobile phone (the latter of which they, awkwardly and not convincingly, refer to as 'webphone'). Finally the fourth section covers two recurrent themes of mobile scholarship, 'Practice and Place'. Here editors Okabe and Ito join forces to explore 'Keitai in Public Transportation', Shingo Dobashi gives a treatment of 'The Gendered Use of Keitai in Domestic Contexts', Eriko Tamaru and Naoki Ueno cover 'Design of Keitai Technology and its Use among Service Engineers', with Ito and Okabe switching precedence for a consideration of mobile e-mail under the rubric of 'Technosocial Situations'. The final section includes another discussion of young people's use of *keitai*, this time with a chapter on elementary and junior high school students authored by Yukiko Miyaki. The book ends with a rich evocation of the 'Uses and Possibilities of the Keitai Camera', with the prolific Okabe and Ito (much noted for their pioneering work on mobile photography) joined by Fumitoshi Kato and Ryuhei Uemoto.

The result is that the book is a treasure trove of otherwise difficult to obtain documentation, information and analysis of the *keitai*. While there is one excellent collection on Japanese Internet and cybercultures,² a few other studies either written in English focussing on a more industrial, business or policy perspective,³ or translated (such as accounts by those involved in the development of the celebrated i-Mode mobile Internet or data technology),⁴ *Personal, Portable, Pedestrian* very much provides the reference work by which other discussions of mobiles (and the Internet) in Japan can be evaluated and compared.

The book is also very interesting indeed as one of the few full-length *national* studies of mobiles, or indeed telecommunications more generally, from a social and cultural standpoint. While the literature on mobiles phones has had a cross-cultural, international orientation from its inception in the early-to-mid 1990s (rather different, for instance, from the early sociological and cultural accounts of the Internet), there are relatively few comprehensive studies of mobiles in particular national, regional, or cultural or linguistic contexts.⁵ *Personal, Portable, Pedestrian* indicates the potential the national still holds as a frame for shaping technology. Admittedly, because of particular features of Japanese society, culture and language, studying the national dimension may be especially fruitful here.

Over and above this achievement as an important national study, *Personal, Portable, Pedestrian* holds wider significance also for discussions of mobiles but also technology more generally. The editors have endeavoured to assemble a collection that does justice to an integrated framework that includes the social and cultural construction of the *keitai* (in line with traditions in social studies of science and technology); cultural and communicative practices; as well as the representation and imagination of such technology (drawing on work in communications, cultural and media studies). Their gambit is to work with the paradox of striving to map and locate 'Japanese *keitai* use and discourse in historical, social, and cultural contexts', while at the same time as moving 'beyond national identity as the primary tag for social and cultural distinctiveness' (p. 15). In my view, the book achieves its objectives very successfully, and offers a suggestive, rich, and mostly cohesive set of studies. The only thing I felt was missing as a capstone was a conclusion, drawing together the various contributions and the sometimes varied concepts, methods, and findings contained in the chapter. Such a conclusion

would have been a worthwhile reflection on what new, theoretical insights and questions the collection has generated.

Notes and References

1. Recent edited collections on mobiles include: S. Dong (ed.), *When Mobile Came: The Cultural and Social Implications of Mobile Communication*, Communication Books, Seoul, 2005; P. Glotz and S. Bertschi (eds), *Thumb Culture: Social Trends and Mobile Phone Use*, Transcript Verlag, Bielefeld, 2005; R. Harper, L. Palen and A. Taylor (eds), *The Inside Text: Social, Cultural and Design Perspectives on SMS*, Springer, Dordrecht, 2005; R. Ling and P. E. Pederson (eds), *Mobile Communications: Re-negotiation of the Social Sphere*, Springer, London, 2005; K. Nyíri (ed.), *A Sense of Place: The Global and the Local in Mobile Communication*, Passagen Verlag, Vienna; M. Pagani (ed.), *Mobile and Wireless Systems Beyond 3G*, IRM Press, Hershey, PA, 2005; R. Pertierra and I. Koskinen (eds), *The Social Construction and Usage of Communication Technologies: European and Asian Experiences*, Singapore University Press, Singapore. Forthcoming is *The Mobile Communication Research Annual*, as part of Transaction Books general series on mobile communications. Monographs include: G. Goggin, *Cell Phone Culture: Mobile Technology in Everyday Life*, Routledge, London, 2006; J. E. Katz, *Magic in the Air: Mobile Communication and the Transformation of Social Life*, Transaction, New Brunswick, NJ, 2006; D. Steinbock, *Mobile Marketing: The Making of Mobile Services Worldwide*, Kogan Page, London, 2005.
2. N. Gottlieb and M. McLelland (eds), *Japanese Cybercultures*, Routledge, London, 2003.
3. J. Beck and W. Mitchell, *DoCoMo: Japan's Wireless Tsunami: How One Mobile Telecom Created a New Market and Became a Global Force*, AMACOM, New York, 2003; K. Coates and C. Holroyd, *Japan and the Internet Revolution*, Palgrave Macmillan, Houndsmill, Basingstoke; J. L. Funk, *The Mobile Internet: How Japan Dialed Up and the West Disconnected*, ISI Publications, Pembroke, Bermuda.
4. M. Matsunaga, *The Birth of i-Mode*, Chuang Yi Publishing, Singapore, 2001; T. Natsuno, *i-Mode Strategy*, John Wiley, Chichester, England, 2003, and *The i-Mode Wireless Ecosystem*, John Wiley, Chichester, England, 2003.
5. Exceptions that come to mind are: E.-L. Kasesniemi, *Mobile Messages: Young People and a New Communication Culture*, Tampere University Press, Tampere, 2003; R. Pertierra, E. F. Ugarte, A. Pingol, J. Hernandez and N. L. Dacanay, *Txt-ing Selves: Cellphones and Philippine Modernity*, De La Salle University Press, Manila, 2002, available at: <http://www.finlandembassy.ph/texting1.htm>; R. Pertierra, *Transforming Technologies: Altered Selves—Mobile Phone and Internet Use in the Philippines*, forthcoming.

Gerard Goggin
The University of Sydney, Australia

Innovation and Its Discontents: How Our Broken Patent System is Endangering Innovation and Progress, and What To Do About It

Adam B. Jaffe and Josh Lerner

Princeton and Oxford, Princeton University Press, 2004, xi + 236 pp., US\$29.95/£18.95, ISBN 0 691 11725 X hbk

This book addresses two important and much neglected issues: how the US patent system has changed over the past two decades, and how these changes impact on innovation and growth. In doing so it redresses, to some extent, the domination of the patent literature by lawyers and theoretical economists. The authors have a track record of empirical research on patents and innovation. Here they attempt to

assess the economic impact of the very real changes that have occurred in the US patent system since the early 1980s.

The authors address this ambitious goal in eight chapters (oddly set out as an Introduction and seven subsequent chapters). The Introduction provides an overview of the argument that will be presented in the remaining chapters, and as such provides no footnotes or references. While this ensures the reader is not distracted from the story, it is disconcerting. In a sense this first chapter is written for a general audience, though many such readers would wish to find substantiation of the arguments and facts put forward. Later chapters are better documented, but not all assertions are adequately referenced. As a consequence the audience for the book remains unclear.

The authors argue that changes in the US legal system, consequent on the establishment of a single court to consider patent appeals, have made patents much more powerful and valuable weapons. At the same time administrative changes in the US Patent and Trademarks Office (USPTO) have made patents much easier to obtain. The essential thesis of the book is that, in combination, these two effects now cause the patent system to have serious negative effects. Specific patent tales are used to show how the strength accorded to patents with very low innovative content can be used to undermine existing businesses, or to extract rents.

In reviewing the history of the patent system, the authors remind us that the purpose is to reward *new* and *important* inventions, so that investment in innovation will take place. Much of the discussion here and in the subsequent chapters revolves around the incentives created for various parties, leading to individually rational behaviours, which are pathological at the system level.

The first chapter presents an unusually detailed description of how the US patent system works. It documents the fact that applicants can continually revise their applications (in the form of 'continuations' or 'divisionals'), thus updating the technology presented in the claims, while retaining an earlier date against which inventiveness is assessed. This process involves only the applicant and the USPTO, with all other potentially interested parties being quite unaware of what is going on. There is also a detailed description of the process of legal challenge to other firms' activities once a patent has been issued.

The authors use 'good news' stories to show how firms use patents to establish successful businesses around useful new technologies. They also run through the standard economic argument that, because technological innovation provides broad social benefits, yet is expensive, firms need incentives or they will not invest in new technology. The alternative view is also presented—that first mover advantages and trade secrecy also work to ensure an adequate return on investment in new technology. While the authors note that many firms never patent, their argument would have been stronger if they had referred to the range of empirical studies which document that most firms in most industries consider patents unimportant as a means of obtaining a return on their investments in new technology. These are well summarised by Mazzoleni and Nelson,¹ and have since been extended by the large European Community Innovation Surveys, to include small and medium sized enterprises.

To conclude the scene setting of how the patent system works, the cumulative nature of innovation is discussed. Several stories are presented about patent rights' holders holding up innovation in a field owing to unwillingness to license the patented technology. The issue of patent races is touched on briefly, and the fact that often a number of closely related patents are issued, with consequent

uncertainty about the value of the monopoly privileges granted. As if these stories were not sufficient to question the value of a patent system, in Chapter 2 the authors look in detail at some of the 'dark side' of patents, covering the escalation in patent litigation, and illustrating issues such as patent thickets and patent fences with detail from specific cases. This provides considerable colour and texture to understanding how the patent system works in practice.

In some ways Chapter 3 is a diversion, interesting as it is. It provides a brief history of patent controversies, from the disputes leading to the English Statute of Monopolies of 1624, to the Great Patent Debate of the late nineteenth century. Three conclusions are reached: the scope of administrative discretion in issuing patents has fallen; countries have shifted from registration to examination systems; and patents now last longer.

The real meat of the book is in Chapters 4 and 5. Chapter 4 looks at the Court of Appeals for the Federal Circuit (CAFC). Like patent systems in other countries, a patent cannot really be said to be valid until it has been tested in court. In commercial disputes between private parties, judicial decisions gradually shift the body of law. The thesis presented, and convincingly argued here, is that the effect of such decisions by the CAFC over the past 20 years has radically shifted the patent playing field. It has become extremely hard to prove a patent invalid, damages for infringement have risen significantly, and more often include injunctions rather than simple payments and patentable subject matter has been extended. The net outcome is that an issued patent is now a very much more valuable device than prior to the establishment of the CAFC.

In taking the reader through a range of areas where the CAFC has significantly broadened and strengthened the rights of patent holders, Jaffe and Lerner provide succinct descriptions of critical legal rules that are integral to the operation of patent systems. Summary statistics demonstrate the increase in patents found to be valid and infringed on appeal, while case histories flesh out the detail. The authors argue persuasively that such a change in outcomes has inevitably flowed through to initial court outcomes, where the proportion of cases found in favour of the patentee rose from 30% to 55%.

Patent validity is a most interesting question. Economic analyses of patents generally *presume* that patents are only issued for inventions that are both new and sufficiently different from previous technology to constitute a 'non-obvious' development. Data on appeal outcomes to 1990 are used to tell a story of a massive shift in outcomes in regard to patent validity. US law presumes that an issued patent is valid. When a company is accused of infringing a newly issued patent, the usual response is to counter-sue, challenging the validity of the patent. However, the presumption of validity places the onus on *the allegedly infringing company* to demonstrate *clearly and convincingly*, that the patent is invalid. In other words, the party that was quietly getting on with its business has to prove, to a demonstrably high standard, that the patent should not have been issued. In fact patent examiners have been increasingly limited, by CAFC decisions, in what they are allowed to reject as being non-inventive.

Chapter 5 focuses attention on the performance of the USPTO, arguing that budgetary matters, performance indicators and poor computer systems combine to encourage uncritical examination to the point that the US patent system is now little more than a *de facto* registration system, with very many issued patents having little inventive content. The outcome is an extremely low rejection rate. However, the lengthy discussion of Patent Office financing and computer systems might

better have been replaced by an assessment of the FCAC's decisions on patent examiners' ability to reject any application. Elsewhere the authors note the CAFC decision that the combination of two old ideas should not be judged non-obvious by a patent examiner, unless the idea of such a combination can be found in writing. With such restricted freedom to apply genuine concepts of non-obviousness it is not surprising that patent examiners feel constrained to accept a very high proportion of applications, including many which the average person in the street would judge to be obvious. The lack of attention to this issue is, in my view, a major reason why the proposals for reform put forward in Chapter 7 are less than convincing.

Before making specific proposals to re-balance the patent playing field, the authors take a diversion into the recent history and politics of attempts to introduce an oppositions procedure into the US system. Oppositions play a useful role in European patent systems, and since the *State Street Bank* case, there has been considerable interest in the US in the introduction of an *effective* oppositions procedure. This would allow other interested parties to present evidence on the current body of knowledge (the *prior art*), and argument as to why the alleged invention is in fact obvious. Doing this within the administrative system would reduce costs and avoid the presumption of validity. It would provide an opportunity for patent examiners to consider a wider array of information against which to judge whether the application is in fact new and non-obvious. The story of attempts to reform the patent system told in Chapter 6 is a prime example of the theory of regulatory capture, which is nicely explained. One fascinating tidbit is the role apparently played by radio talk commentators G. Gordon Liddy, Oliver North and Phyllis Schlafly in creating a climate of public opinion against reform.

Chapter 7 presents proposals for reforms designed to reduce the number of 'bad' (i.e. uninventive) patents issued. These revolve around improved pre-grant review and post-grant opposition procedures. The clear attention to getting incentives right for all parties is commendable. As with many regulatory interventions in the market, incentives for 'strategic' behaviour are high all round, and it is important to ensure that parties are not further encouraged in such behaviour. Another strength is the focus on getting maximum information to patent examiners.

However the limitation of reform proposals to these two administrative changes is disappointing, particularly after the very eloquent argument that the presumption of validity should not apply to patents. The argument presented revolves around three points: that the underlying legal presumption (that evidence from all parties has been considered) is not met; that USPTO practice demonstrates its inaccuracy; and that the 'rational ignorance' principle (that most patents will not be used so why waste more time examining them)² means that adequate examination resources will never be provided. After this eloquence, the reader would anticipate an argument to change the presumption of validity. Perhaps the authors are merely demonstrating a deeper understanding of US political realities, but the argument that removal of this presumption would lead to patent cases being decided on the flip of a coin is unconvincing in the extreme.

The disappointments of this book are the weakness of the reforms recommended; the lack of *systemic* evidence on dangers to 'innovation and progress'; lack of any information from the empirical studies showing that patents are considered by most firms to be unimportant in protecting innovations; a number of places where references are not provided; and the lack of a bibliography. These are offset by the life and colour brought by the effective use of individual stories about the

use and abuse of patents; the very clear descriptions of legal rules and analyses of their impact on incentives; the focus on how incentives operate to lead to strategic behaviour impacting negatively on other parties; and the analysis of why so many firms choose to pay royalties on patents they consider invalid. For those whose work focuses on innovation, but who have not yet thought in any depth about the patent system, this book would be an excellent and very readable introduction.

Notes and References

1. Roberto Mazzoleni and Richard R. Nelson, 'The benefits and costs of strong patent protection: a contribution to the current debate', *Research Policy*, 27, 1998, pp. 273–84.
2. Mark A. Lemley, 'Rational ignorance at the patent office', *Northwestern University Law Review*, 95, 2001, pp. 1495–532.

Hazel Moir
Australian National University, Australia