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IP strategy and the rise and rise of Bill Gates

Microsoft's signature of a consent decree in the early 1990s with the United States Justice Department had an interesting 30 year "evolutionary" background.

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Cliffs are one of the favourite haunts of students of human evolution. The sides of cliffs expose fossils and layers of archaeological history. In the most primative form of animal husbandry, our ancestors drove creatures great and small over cliffs into gorges and valleys below. Picking among the bones archaeologists have pieced together a story of human evolution with its moral of survival of the fittest.

Computer history is benefiting from similar investigations. Examples include a recent work by Charles H Ferguson and Charles R Morris *Computer Wars: How the West Can Win in a Post-IBM World* (Times Books, 1993/94).

Competition is a complex phenomena. Its pace and depth in recent decades has inspired several investigative approaches to understand it. Some have focused on factors relating to technology ("faster, cheaper, better"). For others the solution involves improving business operations (eg TQM, JIT, benchmarking), business structures (eg business process re-engineering), marketing strategies (relationship or database marketing) or finance methods.

Few have ventured into the labyrinths of the law. Yet it contains a rich but under-researched lode balancing the laws of competition, intellectual property and contract.

Most recently, Microsoft signed a consent decree with the US Justice Department thereby averting a suit which could have restricted, with greater severity, Microsoft's software licensing policies deemed to be anti-competitive.

In biting the bullet, Microsoft averted this consequence and the more radical surgery threatened or imposed in prior decades against IBM, Xerox and AT&T. All have at some time faced the Justice Department or the Federal Trade Commission in US courts or over bargaining tables.

Beginning in January 1969, IBM was faced with a 13 year debilitating competition law action by the Justice Department which used US antitrust law, the Australian equivalent of which is contained in Part IV of the Trade Practices Act.

The Justice Department's suit alleged IBM monopolised the computer market. IBM had unveiled in 1964 the competition-killing System/360 which dramatically increased its market share. As an integrated family of software and hardware products, reflecting its name, System/360 provided an all-round bundled solution achieving said the Justice Department customer "software lock-in".

Gates turned to Seattle Computing and bought licensing rights for $US25,000 from it for its QDOS (Quick and Dirty Operating System).

By 1980, as personal computers proliferated under names like Apple, Tandy, Atari, Commodore and Osborne, IBM recognised that it was missing an opportunity. With one eye looking over its shoulder at the Justice Department, IBM set August 1981 as the target date for release of the first IBM PC.

Although it was not apparent at the time, two of the most critical decisions for the future of the industry were IBM's choice of a microprocessor and the PC's basic software. IBM selected Intel's 8088 as the microprocessor. With time running short, 25 year old Bill Gates was asked to supply an operating system. Microsoft and IBM signed their contract on 6 November 1980.

Gates turned to Seattle Computing and bought licensing rights for $US25,000 from it for its QDOS (Quick and Dirty Operating System). Subsequently he bought exclusive rights for $US50,000. The operating system was further developed and was renamed MS-DOS.
IBM announced its PC in August 1981. In a review of the IBM PC in October 1981 BYTE magazine expressed surprise that IBM was using software suppliers who were already well established in the microcomputer industry. In the rush to introduce a PC, hasty licensing decisions in

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time contributed to the decline of IBM. When sales of the IBM PC took off compatible machines followed as IBM neither controlled the microprocessors supplied by Intel nor the operating system supplied by Microsoft. Vulnerable as it was, IBM provided opportunities for a further stream of competitors like Compaq, Dell and Gateway.

Even though IBM created the opportunity for Microsoft, IBM never secured the right to the DOS source code. For IBM, DOS provided no "software lock-in". It was a fundamental error, with the only plausible explanation being, say Ferguson and Morris, IBM's fear that if it monopolised hardware *and* software then it would fall prey to the Justice Department's anti-trust actions. The jury is still out as to whether this is an adequate explanation.

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Even after the Reagan administration dropped the Justice Department's action against IBM in 1982, the company still made a deal in 1984 with Microsoft for OS/2 which with the benefit of hindsight leaves room for criticism. In introducing the PS/2 in 1987 IBM announced its collaboration with Microsoft in developing OS/2. Meanwhile Microsoft kept improving MS-DOS towards Windows and at the Windows 3.0 introduction Gates said OS/2 was the growth path from Windows.

As a biographer of Gates has observed, in 1990 when comparing Windows 3.0 and OS/2, BYTE asked whether Microsoft had committed "corporate fratricide" with Windows and OS/2. Its answer was "Yes and no...".

In 1992 IBM and Microsoft divorced, with IBM left to sell OS/2 by itself and Microsoft having the right to any code it could use from the OS/2 project. The subsequent success of Windows is well known.

The record of IBM is not unique. Comparisons have been made with the record of lost opportunities by AT&T, Xerox and Apple. But the ultimate Olduvai Gorge of computer history is in the centre of Silicon Valley, at Palo Alto. You may recall that it was at Olduvai Gorge in 1959-60 that Louis and Mary Leakey uncovered stone tools and many bones to unravel the Homo erectus stage of the story of human evolution.

Xerox's Palo Alto Research Center or PARC is perched on a hill overlooking the campus of Stanford University. Recognising IBM's strengths in the mainframe market Xerox set up PARC in 1970 to search for alternative electronic tools. If you dig among the broken bones of Xerox near the PARC you'll find plenty of lessons on failed competitive strategy.

Here's a list claimed by a number of authors as inventions at PARC: the first WYSIWYG word processing software, the first hand-held mouse, object oriented programming, the first PC local area network, the Ethernet technology, the wide area network, the first laser printer and several other works of brilliance.

Despite this extraordinary record of achievement, at least five reasons can be discerned for Xerox's failures at PARC. Little protection was given to innovations with patents. Insufficient attention was given to commercialising innovations. The culture of the Xeroids, as the PARC researchers named themselves, grated against the management style of the Xerox company. Xerox's vision was too wedded to its past record with copy machines. And fifthly, Xerox failed to prevent a significant brain drain, leaking out intellectual property owned in know-how and confidential information.

Lost opportunities for Xerox provided a feast for its competitors. The chief designer of Microsoft Windows, Charles Simonyi, came from PARC. Apple's co-founder, Steve Jobs, saw the potential for graphic user interfaces and recruited key PARC researchers before the 1983 release of the Apple Lisa, the precursor for the 1984 release of the Macintosh. While PARC invented the first page description language, Adobe was set up by "PARC refugees" who established PostScript as an industry standard for printer software.

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The 30 year history from the 1964 unveiling of System/360 to today illustrates the need for computer companies to balance their legal policies.

The legal environment for the computer business is comprised of largely three categories of law. Competition law provides rules for the market. Secondly, there is intellectual property law. Thirdly we have the vast body of contract law. Together they form a matrix within which only the legally astute can survive.

Among the allegations against Microsoft is the claim that it overstepped the mark in its practice of requiring computer vendors to pay software royalties per computer they ship regardless of whether the computer was sold with Microsoft software.

For Microsoft and others the challenge is to get the right balance. The conflicting orientation of the laws of competition, intellectual property and contract involve a difficult balance. In essence, the last two can be used to create proprietary systems and legal monopolies while the rationale of competition law involves tempering monopolist excesses and misleading practices.

The matrix affects companies large or small. Many a marketing campaign has fallen apart due to breaches of the consumer protection provisions of the Trade Practices Act. Anti-competitive practices are also regularly struck down by Australia's Trade Practices Commission.

To survive, companies must get the right mix between what they should own, control, sell, share or give away. As the failures of Wang and the limited market share of Apple illustrate, proprietary systems have their competitive limitations in a market that now reserves its highest rewards to those who have a business model for innovations involving a three part strategy of creation, diffusion and licensing.

One direction is provided by the current "Silicon Valley business model". It stands at the peak of the evolutionary ladder created by decades of competition in the computer business. The model is neatly encapsulated in the visions of venture capitalists who look for companies (like 3DO) whose business is not so much products and services, but relationships with customers and alliances between competitors.

No company can for too long be an isolated island monopolising all its intellectual property. At the same time, any bridges joining with other land masses need to have their in-built traffic flow mechanisms. To stretch the analogy, licensing clauses need to work like traffic lights, toll gates or drawbridges. Competition law provides the road rules but as the drivers, computer companies must have a vision of where they're heading, it may be over a cliff.

Credits & Solutions

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Noric Dilanchian is a lawyer in Sydney with almost two decades of experience in helping clients identify, develop, manage, protect and effectively commercialise their intellectual property.

Noric founded Dilanchian Lawyers & Consultants in 2000. IT and e-commerce are integral to the firm’s core business and key clients. The firm is very active in IT integration and outsourcing projects, IT project management, business model development, e-commerce implementation, Web site development, spin-off venture funding and content deals.

The firm is also active in advising clients on a range of potential business decisions for compliance with the prohibitions in the Trade Practices Act 1974 (Clth) against restrictive trade practices. As a proactive solution the **Trade Practices Compliance** solution of the firm involves development and implementation of trade practices compliance programs for clients.

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