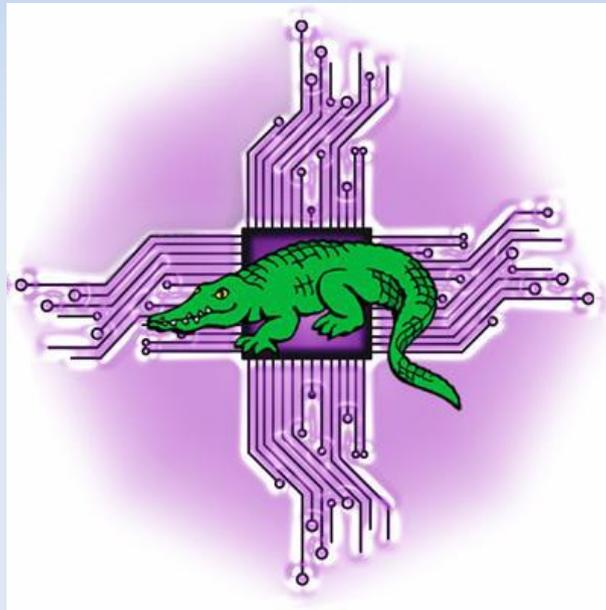


# Business Logic and Free Software

## Presentation to Software Freedom Day



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<http://levlafayette.com>

# Naïve Business Logic

1.1 A simplistic approach argues that the purpose of going into business is to "make money". In the short term, this means gaining income and reducing expenses. In the longer term, and for stability, it means acquiring assets, and reducing liabilities. From an equally simplistic approach, free software is obviously useful in reducing costs. A comparison (see <http://levlafayette.com/node/252>) between Linux and Microsoft, for example, in an average business environment suggests that the cost of software and maintenance is \$2950 and \$1550 per annum, per seat. This was partially due to licensing costs (c. 33%), but mostly (c66%) due to operating costs.

1.2 However such an examples across other business metrics is not immediately obvious. How does free software contribute the income of a business? How does it generate assets? Or reduce liabilities? These questions require a more thorough analysis of the meaning of these terms, and most importantly, the relationship between economics and commerce.

1.3 To begin with, a definition of free software is provided, as per the Free Software Foundation (<http://www.gnu.org/philosophy/free-sw.html>). Expressed simply "The users have the freedom to run, copy, distribute, study, change and improve the software... 'free software' is a matter of liberty, not price". Despite this definition, there is an imperative in this analysis to consider pricing issues. Of particular importance is the recognition that there are different categories of software, ranging from the free ("copyleft") to proprietary software.

# Economics and Commerce

2.1 There is a common assumption that economics and commerce are synonymous, that what is good for business is good for the economy. A comparison is made here between the business logic of competitive advantage and the economic model of "rent-seeking". Competitive advantage (c.f., Michael Porter) is a strategic approach used in business to give the organisation an advantageous position over rival firms. This is achieved through business activities or product differentiation. Business activities refer to positioning in regards to the "five forces", i.e., Threat of New Entrants, Bargaining Power of Buyers, Bargaining Power of Suppliers, Threat of Substitutes, Intensity of Rivalry within Industry. Much of Porter's theory of "competitive advantage" is actually about behaving in a monopolistic fashion.

2.2 Reducing competitive threats as a path to profit reduces productivity as it requires monopolistic behaviour. In economics, a monopoly is defined as a persistent market situation where there is only one provider of a product or service. Monopolies are characterized by a lack of economic competition for the good or service that they provide and a lack of viable substitute goods. Monopolistic companies can, and do, provide damaged goods which deliberately reduce overall utility and overall production. A company is said to have monopoly power if it faces a downward sloping demand curve. This is in contrast to a price taker that faces a horizontal demand curve. A monopoly will sell a lower quantity of goods at a higher price than firms would in a purely competitive market.

# Economics and Commerce...

2.3 Rent-seeking is an attempt to obtain income by manipulating environment, rather than by creating new wealth. It differs from profit-seeking, which involves the creation of wealth and utility. It has become associated with monopolistic behaviour (Gordon Tullock). The effect is to reduce aggregate wealth (i.e., assets). It deprives a party to the transaction (usually the consumer) from normally transactable opportunities. As rent-seeking provides monopolistic profits, it can be more attractive for an individual organisation than wealth production. Thus it becomes damaging to economic growth; it allows an individual organisation to gain a greater percentage of a smaller aggregate market. Through this moral hazard, companies that are rent-seeking are both monopolistic in their behaviour, and produce "damaged goods", which are artificially restricted (in software such products have been known as "crippleware" or "feature limited" or product with "anti-features").

# Free Software and Externalities

3.1 In addition and contrast to the damaging general effects of monopolistic rent-seeking in proprietary software, free software also offers software in as a "complete good" (i.e., maximum utility can be derived) as well as providing positive externalities. An externality is a benefit or cost that arises in an economic action that is not borne or acquired by any direct party to that transaction, but rather to a neighbourhood of actors (which may include the economic actor). Externalities can be negative (e.g., polluting activities) or positive (e.g., generalised education).

3.2 Free software provides immediate and tangible benefits to all economic actors to use it, and indirectly those who do not. Positive externalities. Figures derived from Fromkin modified for Australian conditions suggest that \$13 billion per annum (2006 dollars) could be saved if publically funded research was publically available. Free software provides the well-known benefits of available source code (e.g., rate of improvement, capacity to find errors, educational benefits), plus the positive externality of network effects.

# Licensing Styles, Extensions, and Business Logic

4.1 Proprietary software advocates claim that software patents and copyrights provide an incentive for development, and encourages public disclosure. That is, an artificial monopoly is created for a limited time which the producer may enjoy this temporary advantage. It is argued this can give small firms an advantage where finance is not available. However the longer an intellectual property remains in force the more it stifles innovation. Further, an intellectual property right does not necessarily give the ability to produce the improvement ("suppressed inventions"). Politically, the liberal granting of such rights creates powerful industry groups which advocate for their extension in scope and time (e.g., the World Intellectual Property Organisation). Thus, it is larger firms that control a suite of intellectual property rights that impede the combination of new ideas and inventions, and encourage long-term rent and transaction costs.

4.2 Many software companies have chosen a hybrid model of licensing which combines free software with proprietary software in the same product. For Apple Inc. offers Darwin for free, while selling Mac OS X. Oracle provides VirtualBox as free software, but the VirtualBox extension pack requiring payment for business, and OpenOffice.org for free, while selling StarOffice. These sorts of hybrid licensing schemes means that the software product is a "partially damaged good", and the organisation is engaging in "partial rent seeking".

# Licensing Styles, Extensions, and Business Logic

4.3 This hybrid licensing must be distinguished from extensions and bespoke software. For example, the provision of complete free software with an additional cost for supported installations etc, does not constitute a "partially damaged good", as the recipient receives the full product as the marginal cost of production, and pays the market price for a different product, or contextual instance. For example. Canonical offers Ubuntu for free, while they sell commercial technical support contracts, or Red Hat's support and licensing for RHEL. "Extensions" can include a range of products such as support and deployment, education and training & etc.

# The Future of Free Software and Business

5.1 Conventional business logic, where decisions to positive individual firms can damage aggregate wellbeing, has an inbuilt tendency towards a free-rider problem. Information goods will increasingly tend towards a zero cost of reproduction, but with an increasing cost to produce ("cost disease of the service sector"). Therefore, individual businesses will be prone to corporate social parasitism ("leeching" in Internet parlance) extracting as much as they can from the near limitless pool of free software (a infinite commons), but seeking monopoly profits as a contribution. It is actually irrational, in a business sense, to take any other path - with the exceptions of public relations, strategic maneuverings etc.

5.2 The critical issue is effectively a conflict between the general good and the individual good. Free software benefits the individual, but funding it from the private sector cannot be sustained. As free software is therefore a public good (non-excludable and non-rivalrous) it is sound policy that they be subject to public funding. The most obvious existing institute for this is in the tertiary education sector, especially through research and development institutes.