

Government and Industry – Can we dance?

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As the 20th century draws to a close, it is generally acknowledged that this could be called the American century because of the profound influence the United States has had in influencing human civilization during this period. Our efficient free market of privately owned industry, competing for business has become the envy of the world. We are, especially in light of recent Asian economic problems, the engine driving economic growth in the world today. To maintain this influence, and our standard of living, going into the 21st century, will require our institutions to work together in a heretofore unprecedented way. Government and industry, especially high technology companies, have always had a contentious relationship, which going forward will require more understanding on both sides.

American high technology industries have demonstrated their worth in driving economic growth in our economy. The best paying jobs, with the most economic impact, have

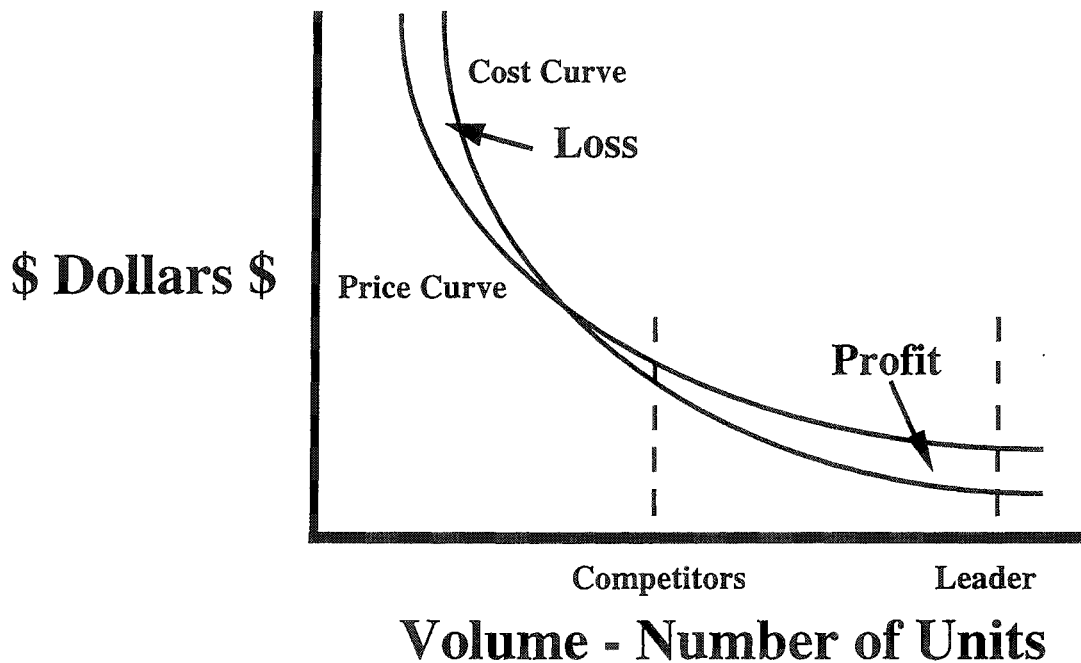
created enormous wealth for the communities lucky enough to be associated with high technology. Unfortunately, these industries have developed almost by happenstance and the nurturing of high tech industry is fraught with controversy. Government has tried to be supportive of industry efforts to maintain technical superiority of American goods vis-à-vis the rest of the world, but these programs have only been marginally successful.

I would like to point out in this paper, from an industry perspective, how government might better serve high technology industries by having a greater understanding of their markets. In addition, there is also a brief discussion on difficulties most commercial companies have in dealing with the government from an accounting standpoint. Although I do work for Corning Incorporated, these comments are not indicative of Corning's position, but merely my own, derived by my many years of experience commercializing technology.

First, we must examine the underlying model for high technology business and how it creates wealth through technology. Businesses do this by differentiating their products from their competitors using technical advantages to create demand. These differential advantages enable one to get a premium price for your product, which then allows even more R&D, to produce more differential advantages. This cycle very quickly produces a technological leader which produces a high cost, technically unique product, and a number of followers trying to catch up by offering lower cost products with less performance.

This business model, studied extensively in business schools across the country, has been well documented. Most importantly, it works, and by applying its principles, companies have been very successful gaining profitability and market position in their chosen businesses. One can very quickly see that it is not a free market in the commodity sense, and there are definitely winners and losers.

This well proven commercial model is shown graphically below:



Government programs, however, miss the mark by treating high technology products and markets as egalitarian, classic free markets. Perhaps at some point in our history, technology was traded like a commodity since our laws treat it as such. Unfortunately that time is long past, and our laws and regulations have not caught up with the reality of the late 20th century marketplace. Indeed government programs are still mandated to make any technology created under federal funding public, fully available to anyone who wants it. Unfortunately, this eliminates any possible differential advantage and basically devalues whatever technology is created.

In addition, under the guise of fairness, and the avoidance of technical monopolies, government programs seldom purchase materials from market leaders unless prodded by irate principal investigators. Market leaders selling innovative products, will seldom discount them, since they are selling very well commercially. Therefore government purchasing agents, seeking better “value”, will usually buy “equivalent” parts with slightly reduced technical performance from market followers.

Given this situation, the best thing government can do is simply to recognize that high technology markets are not the classic free market which exists for commodities. High technology products exist because of differential advantages and are priced accordingly. There are very good reasons to keep technology proprietary. If government research programs inadvertently eliminate these differential advantages, severe repercussions usually follow in the commercial marketplace. Indeed it is possible to halt research in promising areas by simply making technical data publicly available. If commercial firms perceive that this will eliminate their differential advantage, industrial research programs will be curtailed. Research generates intellectual property which needs to be kept proprietary to generate differential advantage to have value. Simply recognizing the market model and its economics will go a long way to keep government and industry working together constructively.

Commercial companies in general also have difficulties with the required government accounting system. Most federal contracts, grants, or transactions, will require a government audit, and even CRADA's are supposed to be monitored for cost share accuracy. (Although I have never heard of a CRADA being audited, the government has the right to do so.) The audit rules used are not the usual "GAAP" (Generally Accepted Accounting Principles), required by the SEC and the commercial world, but rather the more stringent "CAS" (Cost Accounting Standard). As most commercial companies do not use CAS, since it is a high overhead accounting system, industrial companies usually encounter difficulties when they face a government audit. This difference has traditionally kept the government contractor community and the commercial world separate and non-competing.

An enlightened DoD has pushed for the elimination of the CAS and a general relaxation of the accounting rules so that commercial companies using GAAP standards can comply, but there is resistance from the bureaucracy. The money recovered from audits has always been used to justify the "system", but no one has really looked at the real costs of these audits. In terms of the increase in overhead and the limited technology

choices from commercial companies opting out of government markets, the costs are probably considerable. Indeed in a recent study it was calculated that government only requirements have increased the costs for defense procurements by 18%. In another way of looking at this, if audits were that useful and efficient in reducing costs, why hasn't the commercial world picked up on this cost reduction method?

In summary, I have pointed out two potential areas of difficulty, faced by high technology commercial companies and the government. Intellectual property and accounting issues are two major areas that need accommodation before we can tango. When faced with the challenges of the 21st century, we can't afford not to partner.