EXHIBIT H

PART 2 OF 3

Appendix B: Estimating the Value of Patent Applications

One way to measure the incremental cost of the proposed rule is to express the cost as a percentage of the expected value derived from the patent over its lifetime. Economists have been studying the expected lifetime market value of patents in order to measure the impact of technological innovation on the macro-economy. For reasons discussed below, however, estimates of patent value show significant variation among various studies and approaches.

One measure of the expected value is derived from estimating the total income from patented ideas. Eaton and Kortum (1995) estimated the value of all patented ideas in the U.S. to be about $197 billion in 1998. According to USPTO data, there were 84,272 patents granted in 1988 in the U.S. whereas the total number of patent applications in that year was 151,491. Thus, based on the income earned from patented ideas, the average value of a patent in 1988 was about $2.3 million per patent granted, and about $1.3 million per patent application.

Because of the hazard of imitation in some of the developing countries, economists estimating the worldwide value for patents (as opposed to in the domestic country only) find the average expected value to be significantly lower. For example, McCalman (2005) analyzed the worldwide value of patent applications filed by U.S. inventors in the same year as above, and estimated it to be about $163,700 per application in 1988.

Perhaps the most realistic measure of the market value of patents is provided by Hall, et al (2000). They matched USPTO's patent database to publicly traded firm-level data from Compustat to estimate the market value of patents. Using data from 1976 – 1992, they found the marginal shadow value of a patent to be $370,000. Drawing on USPTO data for this period, the ratio of patents granted to total applications was 59 percent. Therefore, the marginal shadow value of patent per application in this period was about $220,000.

This discussion illustrates the wide variation in the economics literature on lifetime patent values. One reason for such differences is whether the value of the patent is estimated for the U.S. only or for values accruing to patents around the world. Moreover, as Griliches, Hall, and Pakes (1987) point out, the distribution of the patent values is known to be extremely skewed with a few patents being very valuable, and many worth almost nothing.   Any exercise in estimating the future value of patents or patent applications is, therefore, fraught with uncertainty and likely to produce extremely noisy measures.

References:

Eaton, J, S. Kortum. 1995. "Trade in Ideas: Patenting and Productivity in the OECD." National Bureau of Economic Research Working Paper Series, No. 5049.

Griliches, Z, A. Pakes, and B. Hall. 1987. "The Value of Patents as Indicators