Reinvigorated Approach to Intangible Asset Pricing

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Introduction

Intangible assets include forms of intellectual property that are legally identifiable but of obscure value. Increasingly, they have become the most valuable of corporate assets. How else can one explain the fact that Microsoft, with few major physical assets, is worth far more than GM, with its myriad plants, vehicles and land? How else can Yahoo be worth more than the New York Times Co., or Amazon.com be worth more than Barnes & Noble and Borders combined? The growing disparity between company stock prices and per-share book value suggests that new approaches to the valuation of company assets is needed. Management is responsible for effective stewardship of all assets under its control, yet probably few companies have a good understanding of the value of intellectual property which they own, let alone the less identifiable intangibles which combine to make the business worth far more than the costs of its bricks, mortar, cash and machinery. The books of account treat tangible assets in detail, but provide only limited information about intangibles, although these may represent the greatest value for the company and the greatest source of potential growth and profits.

Set forth below is a discussion of a current issue associated with the valuation of intangible assets. The discussion begins with the identification of the issue and a presentation of an alternative school of thought designed to serve as a guide to simplifying the valuation of intangibles and goodwill, which the professional community commonly refers to as one of the most complex of all valuation endeavors. The analysis is expanded to include specific approaches to the valuation of certain intangible assets deemed by the investment community as key to success of many high technology companies today. A comparison is made between the results of a valuation performed under outdated concepts and a residual valuation analysis designed by an alternative school of thought directed toward an aggressive and M&A-savvy market. This is the first of a series of articles on intangible asset valuation.

The lack of appropriate identification of intangible assets to be valued, either for the purpose of allocating a purchase price in an acquisition or simply valuing intangibles for investment or internal planning purposes, results in a gross overvaluation of those few assets identified. This overvaluation is especially resounding when the analyst proceeds with the valuation under the notion that a near-complete absorption of the entire company value (or the purchase price) yields a prudent valuation. From a potential investor's standpoint, an inappropriate valuation of goodwill, resulting from a lack of proper identification of intangibles and the analyst's focus during the analysis on the absorption of company value, also creates a gross misrepresentation of the company's prospect as a potentially strong acquisition target. The focus of the analyst should, at the commencement of the valuation engagement, shift toward ensuring that all of the intangible assets are identified and that all of the non-goodwill and non-tangible asset value of the company is captured within those intangibles. This frequently abandoned measure is a crucial step toward ensuring that the value of the intangibles, and the business enterprise that envelops them, is an accurate representation of value.

Accordingly, and of paramount importance, is the responsibility of the company to exercise prudence in selecting an independent and well disciplined appraiser, who has exhibited, through either reputation or example, a keen knowledge of tools necessary to determine whether the concluded value assigned to each of the intangible assets identified is consistent with the importance attached to that item during the presentations to the board of directors concerning a potential acquisition.

The following scenario will assume a hypothetical sale of a business and compare the results of two independent valuations of intangible assets. The comparison is designed to demonstrate the potential magnitude of variation in intangible asset value that can result from an application of inappropriate valuation discipline during the analysis. Both appraisals were prepared as a basis for allocation of the purchase price to the underlying intangible assets acquired.

Overview of the Transaction

In November 2000, GlobalCom (the"Acquirer") and Exice Corporation ("Exice" or the "Target") announced that they had entered into a merger agreement. The merger brings together unique hardware and software technologies with global presence and partnerships, advancing GlobalCom's thrust in wireless telecommunications and parallel service markets. GlobalCom will pay $20.00 in cash for each outstanding share of Exice common stock. The consideration paid by GlobalCom is expected to reach approximately $300 million. GlobalCom plans to begin selling Exice's product line worldwide immediately following completion of the merger. GlobalCom will integrate Exice technologies into GlobalCom products. Similarly, Exice will benefit from GlobalCom's technological, manufacturing, and global sales prowess. These actions support GlobalCom's strategy to deliver leadership communications solutions for both business and

residential customers worldwide. GlobalCom had retained PacEast Valuations, Inc. ("PacEast"), an independent appraisal company with offices worldwide, to perform a valuation of its intangible assets. After the valuation was complete, the board of directors of GlobalCom voiced strong concerns over the allocation of the purchase price to the intangible assets identified by PacEast. GlobalCom's position was that the concluded value assigned by PacEast to each of the intangible assets identified was highly inconsistent with the importance attached to those items during the presentations Exice has made to the board of directors of GlobalCom, and that a second opinion should be performed by another independent valuation firm. GlobalCom's management retained the services of Able Business Advisors, Inc. ("ABA"), an independent valuation firm based in San Francisco that specializes in the high-technology M&A sector. The following sections develop an alternative school of thought and describe the approaches ABA utilized. The detail supporting each approach and the ultimate derivation of intangible asset value is non-exhaustive in presentation, providing only an overview of the concept and methodology employed.

About the Acquirer

GlobalCom operates satellites that serve a region comprised of parts of Africa, Asia, Australia, and Europe, covering 75% of the world's population. GlobalCom's five satellites, which have a capacity of over 150 transponders, broadcast in the C- and Ku-bands. Weathering weaker demand resulting from the Asian economic downturn, the company has signed up World Communications to lease virtually the entire capacity of its most modern satellite, the StarComIIR, over the module's remaining life. GlobalCom's services include the transmission of telecommunications and TV broadcasting. In addition, as a competitive exchange carrier, GlobalCom provides local, national and international long-distance, as well as data and Internet services to more than 10,000,000 business and residential customers. GlobalCom's strategic network combines land and undersea cable and satellite links with fiber-optic rings located in the region's business centers. The company has also developed independent wireless communications networks offering data, multimedia, and voice services.

About the Target

Exice Corporation (the "Target" or the "Company") is in the fixed wireless telecommunications industry. The Company designs, develops, manufactures and markets products based on its proprietary interface technologies, which provide the capability to bridge wire-line telecommunications customer premises equipment, including standard telephones, fax machines, data modems and alarm panels, with cellular-type transceivers for use in wireless communication networks in the Cellular and PCS bands. Applications of the Company's technology include fixed wireless telecommunications as a primary access service where wire-line systems are unavailable, unreliable or uneconomical, as well as wireless backup systems for wire-line telephone systems and wireless security and alarm monitoring signaling.

Intangible Assets Identified

After thorough discussions with the Acquirer's and Target's management, the intangible assets were identified, by ABA, as complete technology, technology under development, patents and patent applications, strategic partnerships, assembled workforce, customer accounts and distributor agreements, tradenames, and goodwill.

Technology Complete and Under Development

At the time of the acquisition, the technology of Exice was complete in certain areas and under development in others. The classification of the technology as complete or under development was made in accordance with the guidelines of FASB Statement Nos. 86 and 2 and Interpretation No. 4. On the basis of our conversations with GlobalCom and Exice management, we classified each of the Exice product classifications into one of the following categories: 1) Current products - complete, 2) products in-development - incomplete, and 3) next-generation - incomplete. The in-development technology will be replaced by the year 2005. The surviving technology is referred to as next-generation, and although it will have its foundation from existing complete and incomplete technology, it will have changed significantly so as to be considered new technology. Next-generation technology has not been valued separately; it is included in the residual value of goodwill. Whether classified as completed technology (current product) or incomplete technology (product under development), the Company has the advantage of software in various stages of development that will contribute to its future success and is of significant value to the Acquirer. Each classification of software and the related copyrights were valued through the application of the income approach. For the purpose of the appraisal, we were furnished with a five-year detailed forecast by GlobalCom. In addition, Exice provided its own forecast. Although this information was accepted as management's best estimate of future results of operations, it was reviewed for its reasonableness in light of the available independent information. The detailed forecast was extended to cover the period in which existing complete and incomplete technology would be fully exhausted and would be replaced with new technology. The value of each technology acquired was the sum of the present value of projected debt-free net income, in excess of returns on requisite assets over the life of the technology.

In the high-tech industry, new technology is sometimes developed under a royalty agreement whereby the developers are funded through initial payments and a series of royalty payments for a specified product life. To recognize the contribution of prior or complete technology to the incomplete technology, we employed this concept in the valuation technique. This charge would be assessed against incomplete technology revenue and credited to the completed technology. The duration of the charge is based on the economic life of the incomplete technology. A life cycle of this duration is reasonable since that would be sufficient time to develop the incomplete product without reliance on the prior technology. To estimate the charges, we reviewed several indicators, including: 1) Profit margins to determine ability

to pay a royalty, 2) importance of the existing technology in developing the incomplete technology, 3) technology turnover, and 4) economic life of incomplete technology. A profit split, whereby complete technology would receive 33% of incomplete technology's earnings before interest and taxes, was concluded. Although the results from the incomplete technology are uncertain, GlobalCom made an informed decision to purchase the incomplete technology and to abandon its efforts to develop similar software with its existing development operations. It paid a fair market price for the assets acquired and will continue to pay fair market prices for R&D services to be received in the future. The amount GlobalCom paid for the acquisition, unlike the amounts paid for future services, must be allocated to the various acquired assets. If it had not received the rights to own the incomplete technology, GlobalCom would have paid substantially less for the stock of the business. In essence, the decision to acquire the technology, through acquiring Exice, reflects its conviction that the incomplete software is unique and could not be added to the portfolio by any other lower-cost method. The returns, while potentially great, are uncertain and will not be realized until all of the research and development milestones will be met. Based upon the preceding methodologies, the fair market value of the acquired technology is $122,900,000, distributed as follows:

	Technology Classification		
Product Line Classification	Complete	Under Development	Total
Internal Products	$7,700,000	$59,080,000	$66,780,000
External Products	$30,800,000	$25,320,000	$56,120,000
Total	$38,500,000	$84,400,000	$122,900,000

Patents and Patent Applications

Patents are secured in the software/hardware industry to achieve recognition of unique and efficient methods to perform tasks, to secure cost-effective methods of processing data, and to avoid being excluded from designing/selling products by competitors that also pursue patents. The Company currently holds ten patents and eight pending patent applications (hereafter referred to as "the patents"), which cover important ancillary features and functions associated with the software architecture. Exice's management discussed the patents in terms of their importance to present and future sales, apparent and practical defensibility, importance in terms of comprehensiveness or uniqueness to products, and the difficulty competing firms would meet in designing around them. The management described the patents as major product components, concepts, or improvements that might be desirable to a competitor or give the Company a competitive edge. The patents were valued based on the relief-from-royalty income approach. The cost approach, which examines only the historical cost to develop a patent, would not reflect its true value as a sales and margin enhancer. Also, market data generally related to outright sales of patents are not available. Because the technology embodied in the patents is included in all core products, we have included total sales in our valuation.

The premise of the income approach is that if GlobalCom had not been assigned the rights to the patents it would have to pay royalties to continue to exploit the technology covered by its claims. GlobalCom enjoys the exclusive right to exploit the technology without having to pay a royalty. To estimate the royalty charges, profit margins were analyzed to determine ability to pay a royalty. Based on market indications that licensees will pay 25% to 33% of available income for the use of technology, an analysis of the Target's projected profit margins, and the fact that management has indicated that patented technology accounts for only 25% of the overall technology incorporated in product development, a royalty rate of 2% of revenue was deemed appropriate. Discounting the cash flow generated by the savings, using an 18% discount rate, over the estimated remaining economic life of the patent, yields an indication of the value of the patent. Based on the analysis, the value of the patents and patent applications was determined to be $23,500,000.

Strategic Partnerships

As of the acquisition date, Exice had several strategic and marketing relationships. The underlying agreements can be either revenue or non-revenue generating. The revenue-generating agreements entail either the resale of Exice's products or the bundling and subsequent sale of Exice's products with the partner's products, such is the case with its distribution relationships. Non-revenue generating agreements include cooperative marketing agreements with partners that have complimentary products or at least products that share similar end users. Non-revenue generating agreements also include arrangements whereby Exice is provided pre-release versions of new systems and platforms, so that it can make sure that the products are compatible. Such is the case with Zylex, ProNet, and other partners. The partners thereby ensure that their products are supported as much as possible by independent software/hardware, and Exice can market products that are compatible to the system/platform. Exice views these agreements as being valuable and key to future success. GlobalCom has expressed its desire for Exice to maintain its relationship with other partners and also considers the agreements a key to Exice's success. Exice has expended significant resources contracting and cultivating the agreements. The agreements are not exclusive, nor do they place any purchase or expenditure requirements on the parties. What the agreements represent is an understanding between parties. By acquiring the agreements as a part of the purchase of Exice, GlobalCom has avoided the costs and delays associated with making contacts; establishing a rapport; expending the time needed for the partners to test Exice's products and, in some cases, the capability with the partners' products; and cultivating the relationship to establish an efficient exchange of ideas and day-to-day communication. These cost

savings represent a significant and measurable value to GlobalCom. An outside investor acquiring the assets of the Company, but not the existing agreements, would incur an expense to replace them. Based on discussions with Company management, a model was developed to project the development time to cultivate the agreements. This was estimated to be one year, assuming that a prospective buyer, like GlobalCom, would have a relationship with the partners already. The one-year development time estimate serves as a basis for the derivation of incremental value associated specifically with Exice's products and technology. In addition, a time-to-market factor was considered and incorporated into the model. This was accomplished by estimating that it would take approximately four years to recapture market share and revenue levels that are projected with the agreements in place. We compared the cash flows with the agreements in place and the cash flows based on a one-year lag to cultivate the agreements and an additional three years to recapture market share; the difference reflected the value of the existing partners' agreements. The cash flow differential for each projected year was reduced to present value at a rate commensurate with the risk of investment. An after-tax rate of 18% was selected as reasonable and consistent with returns on tangible assets and overall business returns. This was also consistent with the Weighted Average Cost of Capital ("WACC") computed for the business enterprise in total. Based on the foregoing, the concluded fair market value of Exice's strategic and marketing partnerships was determined to be $29,700,000.

Assembled Workforce

The assembled staff was valued by estimating the cost to replace the employees as of the appraisal date. This technique has been commonly accepted and used by the professional community. By purchasing an operating business, GlobalCom avoided the expense necessary to recruit and train personnel if the business had been purchased without the assembled staff. The value of the assembled staff includes management experience and the technical know-how of certain employees. The replacement cost approach was based on discussions with management regarding the availability of replacement personnel, degree of specialization of people in the organization, salary and fringe benefits, other compensation, search fees and expenses, and non-productive time during a training period. The assemblage cost reflects the expenses that would be normally incurred to recruit and train new personnel to reach the productivity level possessed by the existing personnel as an effective and cohesive group. The expenses associated with each classification of employee were based on discussions with management and others concerning normal hiring practices at Exice.

For each of the expense categories, all of which were based on the Company's actual experience, total costs were calculated by employee classification, from which a cost per employee was derived. By multiplying this per-employee cost by the number of personnel in an employee classification, the total cost of recruitment by employee classification was derived. Training costs were based on the productivity of a typical new hire and the estimated time that will elapse until the employee reaches full productivity. For all employee classifications, initial productivity should be relatively high, as the assumption is made that all personnel have the basic skills and experience on the date of hire. Any shortfall in productivity is attributable to the employee's need to adapt to the procedures and circumstances of the position. Unproductive time is greatest when the person is first hired and normally diminishes to near zero within six months. Applying the resulting training period factors to the average annual salaries, which include fringe benefits, for each classification yields the average training cost associated with each employee. Again, multiplying this cost by the number of personnel in an employee classification derives the total cost of training by classification. Adding the total cost of recruitment to this amount yields the total cost of replacement per employee classification. By summing the individual employee classification's total cost of replacement, the total replacement cost of Exice's assembled workforce was estimated. Based upon this method, the fair market value of the assembled work force was reasonably represented in the amount of $12,000,000.

Customer Accounts / Distributor Agreements

At the Valuation Date, Exice's customer accounts numbered 300+. The propensity of the customers to generate revenue for Exice beyond the initial sale is the underlying worth of the customer accounts. The additional value from existing customers is generated from the support renewal fees. A natural barrier to switching products is the initial expense of purchasing the product and then the cost of training personnel to use it. Exice, like most enterprise-wide software producers, charges an annual fee for technical assistance and for the right to receive updated versions of the product. Given the expense to switch products, the customer can be relied on to pay the annual maintenance fee, which averages between 10% and 15% of the initial cost. Customer accounts are very important assets of this business. The business does not have to duplicate historical marketing, training, and start-up expenses to develop a customer base to the same level of purchase as of the appraisal date.

GlobalCom can expect to realize revenues from existing customers in two ways: from annual service-support renewal revenues and from incremental sales to the existing customer base. The way in which customers survive over time (i.e. the assets' survivor curve) is important in determining how the future income from, and hence the value of, this income-producing asset declines as the asset base declines. The retention rates associated with services-support renewals and the customers were used to estimate the asset's survivor curve. The data were analyzed using a turnover rate formula to calculate an estimated remaining life. Other factors considered in determining the remaining life included new customers to total customers historically and the fact that technology turnover is approximately five years. The estimated average remaining life was therefore concluded to be approximately 5.0 years (rounded) for existing customers. The resulting cash flows were discounted to present value at 18%, a rate commensurate with the risk of investment and consistent with the WACC computed for the business enterprise in total. The value of the customer base acquired was the sum of the present value of the projected debt-free net

income, in excess of returns on requisite assets over the life of the customer base. Based on the foregoing, the concluded fair market value of the Exice customer base was $19,000,000.

Tradenames

End-user recognition and acceptance of a trademark/trade name may be valuable assets that can be separated from other intangible assets. GlobalCom has represented that the Exice tradenames will only be maintained through a transitional period. As such, the tradenames provide GlobalCom with cost savings or continuing value over the short term and were valued as such. We valued the tradenames that are currently being utilized in operations by means of the relief-from royalty method of the income approach. The value of a tradename is typically measured by the benefits it provides, either in terms of royalty income from licensees, royalty cost savings (since ownership means no royalty payments need be made to others), or other non-royalty cost savings. GlobalCom will now enjoy the exclusive right to exploit the trade names without having to pay a royalty fee.

Over the long term, it is GlobalCom's intention and business plan to phase out the use of the names in favor of a GlobalCom derived name. Based on conversations with management, the phase-out should be completed over the next five years. However, by acquiring the rights to use Exice's current names, GlobalCom is able to achieve sales and associated profit utilizing the current names in the marketplace in order to retain market share and to maintain brand awareness with consumers. Employing the relief-from-royalty method, we valued the names on the basis of the incremental after-tax savings accruing to the owner of the names, because the owner does not have to pay a royalty to someone else for their use. The royalty rate that the names could command was estimated as a percent of sales, with the rate depending on the profitability of the products represented by the names as well as the importance of the names in achieving sales.

The valuation of the names incorporated the assumption that the Company, if it did not have the rights to use the names, would be willing to pay for their use. As GlobalCom is planning to phase out the current names, it was assumed that they would only be willing to pay for the use of the current names during the interim to achieve sales and earnings, as well as to maintain market share and consumer brand awareness. After consideration was given to the range of royalty rates and to the current status of the Company and the industry, it was concluded that the royalties would warrant a 0.5% royalty rate. The next step in the application of the income approach was to apply the selected royalty rate to the estimated level of product revenue. The after-tax savings were calculated using the tax rate in force as of the Valuation Date. Value was determined by discounting the after-tax savings for the projected time period at an 18% discount rate. Based on our analysis, the value of the tradenames was determined to be $5,900,000.

Summary

Goodwill is defined by the American Society of Appraisers as follows:

> *That intangible asset which arises as a result of a name, reputation, customer patronage, location, products, and similar factors that have not been separately identified and/or valued but which generate economic value.*

Business acquisitions are usually driven by the purchaser's intended use of some, or all, of the target's tangible and intangible assets, including goodwill. The remaining value of a business, i.e., that value not separately identified as a specific asset, can be allocated to goodwill based on the provisions of APB Opinions 16 and 17. Goodwill is recorded as the residual between the total purchase price and the sum of the fair market value of the working capital, tangible, and identified intangible assets. The summary below compares PacEast's understanding of the allocation of GlobalCom's purchase price, for the acquired assets of Exice, to the residual allocation analysis prepared by the second appraisal company, ABA.

Able Business Advisors		**PacEast Valuations**	
Purchase Price	$300,000,000	Purchase Price	$300,000,000
Actual Working Capital	55,000,000	Actual Working Capital	55,000,000
Tangible Assets	21,000,000	Tangible Assets	21,000,000
Intangible Assets		Intangible Assets	
Assembled Workforce	12,000,000	Assembled Workforce	21,500,000
Customers	19,000,000	Customers	52,500,000
Technology - Complete	38,500,000	Technology - Complete	97,500,000
Technology - Incomplete	84,400,000	Technology - Incomplete	52,500,000
Patents	23,500,000		

Strategic Partnerships	29,700,000	Subtotal	224,000,000
Tradenames	5,900,000		
		Total Assets Identified	300,000,000
Subtotal	213,000,000		
		Goodwill	*$0*
Total Assets Identified	289,000,000		
Goodwill	*$11,000,000*		

As exhibited on the preceding page, PacEast has failed to identify a number of intangible assets considered by the Acquirer's board of directors and the Target's management as key to the newly formed entity's future success. Careful examination of PacEast's methodologies, and the application of those methodologies, revealed numerous factors that contributed to the resulting disparity between the concluded value assigned by PacEast to each of the intangible assets identified and the importance attached to those items during the presentations Exice has made to the board of directors of GlobalCom. In addition, the fact that PacEast's appraisal yields no goodwill value, may be perceived by a third party challenging the analysis and its conclusion, as strongly suggesting that the thrust of the analyst was driven by the motivation to completely absorb the purchase price, and thus resulted in an artificial maximization of values of those few assets identified.

Valuation of intangibles represents an important area for future research, requiring accounting beyond that for business combinations and identifiable intangibles. Accordingly, and of paramount importance, is the responsibility of the company to exercise prudence in selecting an independent and well disciplined appraiser, who has exhibited, through either reputation or example, a keen knowledge of the tools necessary to determine whether the concluded value assigned to each of the intangible assets identified is consistent with the importance attached to that item during the presentations to the board of directors concerning a potential acquisition. There is a role for this type of supplementary information in internal company management as well as for external investment analysis. Careful stewardship of all intangible assets will benefit all company stockholders and ultimately result in more effective management. Intangible asset valuation is a detailed process that includes the complete understanding of the business operations and the intangible asset's impact on the business, as well as sensitivity analysis. An appropriate valuation involves a thorough analysis of the factors that support and enhance value in a business.