

Under the Buzz

Back to Basics in e-Business

November 2002 - Vol. 3, Number 11

Under the Buzz is an electronic "newsletter" authored by Philip Lay, managing director at the Chasm Group, a Silicon Valley strategy consulting firm. It is published each month, and delivered free to subscribers via email. It is also posted on the Chasm Group website at: <http://www.chasmgroup.com/underthebuzz.htm>. Back issues can be downloaded from the site at: http://www.chasmgroup.com/underthebuzz_archives.htm.

In this month's issue:

- 1. A Contrarian's View of the Current Crisis of Investor Confidence**
- 2. Managing the Transition from *CEO-Only* to *CEO+COO* in a Growing Tech Company**
- 3. 'Just Shoot Me!': Managing the Services Function Inside a Products Company (article by Geoffrey Moore)**

By receiving this issue directly from Chasm Group Publications, you are already on the distribution list. To unsubscribe, send a blank email to: unsubscribebuzz@chasmgroup.com

Please feel free to send this to your colleagues and associates. They can get on the distribution list by entering their email address at <http://www.chasmgroup.com/subscribe.htm>.

The "It Could Never Happen To Us" Quote of the Month:

"They couldn't hit an elephant at this dist....."

- General John B. Sedgewick's last words at the Battle of Spotsylvania in 1864, as a Confederate musket ball hit him in the eye from 700 yards (graciously ceded by Toby Redshaw, head of IT Strategy at Motorola)

1. A Contrarian's View of the Current Crisis of Investor Confidence

In the article quoted below, Holman W. Jenkins, Jr. writes that the media and politicians have gone overboard on the current dip in investor confidence:

"Investors are said to lack confidence, but investors are also consumers whose confidence seems to be holding up remarkably well. Faced with 9.11 terrorist attacks, corporate meltdowns, a sluggish recovery and an impending war, consumer surveys show that nearly twice as many people still maintain that things are getting better than is typical at this point in a slowdown. ...

"After all, we are told repeatedly that \$4 trillion in personal wealth was wiped out by the Nasdaq meltdown. Such wealth, however, was of extraordinarily recent and wispy vintage, which perhaps even the wealth-holders themselves understood. Consider: Of that reputed \$4 trillion, half a trillion was one company, Cisco Systems, whose peak stock price in 2000 reflected a price-earnings multiple of 220. Half a trillion later, Cisco's still-rich multiple is 45. Does this sound like a crisis of confidence - or a return to sobriety, leavened by a good deal of residual confidence in Cisco's networking business?"

- "Revisiting the 'Crisis of Confidence'", Holman W. Jenkins, Jr. in the Wall St. Journal, 12.13.02

2. Managing the Transition from *CEO-Only* to *CEO+COO* in a Growing Tech Company

One of the most critical, though problematic, transitions in high-tech companies is the one from *CEO-only* to *CEO+COO*. This change, commonplace once a fast-growing enterprise technology company has reached revenues of \$60m.-\$150m. or higher, can be quite traumatic, not only for the employees to whom 'it happens', but for both individuals directly involved, as well as for the executive team and Board,

and even for the company's customers, partners and suppliers. Among the reasons for this are (a) that the organization needs for, the first time in most cases, to absorb the effect of having two leaders, rather than just one; (b), that the new COO is likely to be quite different in approach and style from the current CEO; and (c), that the new mixture may turn out to be an explosive or unpredictable one. People forget that there is no real academic curriculum available for CEOs to learn their jobs, nor for CEOs and COOs to learn how to combine their efforts productively. Basically, the only school I've heard of in this area is the school of hard knocks. Another factor in this puzzle is that there aren't usually many easily available sources of sound advice to these organizational leaders to learn as they go, except for the occasional mentoring from a gray-haired board member or friend who has done the job before, and experienced CEO-to-COO leadership transitions first-hand. And, as regards business or other literature, I have yet to find a book or paper dealing with this specific transition.

There are many variations on the type of situation that ends up provoking the need for the company to bring in a COO. The most common external elements forcing this change are complexity and change or, if to make it worse, *changing complexity* – in other words, it's not just that the company faces stiff challenges to get products out the door, make sure they are marketable, find the most suitable market opportunities, establish and maintain a revenue stream, and so on; to complicate things further, the challenge of introducing new products the next time around, finding new markets in a dynamically evolving competitive landscape, managing to close business within anticipated sales cycles, and administering the business to conform to legal requirements, all are becoming increasingly risky and complex, as the complexities themselves morph from one type to another. Few people realize it, but the level of complexity of running a technology company rivals that of running a much bigger business in a mature market, such as most consumer businesses.

For the sake of argument, let's assume that we are dealing with the situation in which the demands of running the business have begun to stress the CEO's versatility and energy beyond acceptable limits, and the organization has begun to misfire in one or other critical functional area, or across all functions. I define this as the '*complexity-driven*' change. Sometimes it occurs as a way of providing relief to the incumbent CEO so that they can play to their strengths, instead of having to deal with activities or issues that they find tedious or otherwise challenging; at other times, the company needs them to relinquish some of the duties so that they can 'do less harm'; this is especially the case when the CEO is a member of the founding team, and only took the job in order to get the business off the ground. Once 'lift-off' has been accomplished, the current CEO – if they are more the entrepreneurial type - may have found that the growing organization's needs for constant nurturing and more formalized 'processes' go beyond their (limited) vocation for structuring, coaching, supervising, cajoling, and coaxing their executives and employees to play their roles appropriately.

At other times, the change occurs because, even though the current CEO has done a fine job, it is just time for a change – to benefit them, as well as the organization. This is what I term the '*fresh voice*' change. The final variation on this leadership transition situation that I want to comment on here is the one involving a CEO who has simply met their match in terms of having encountered a set of circumstances that forces a dramatic reinvention of the business beyond their ability to detach from the current business vision. This is the one I call the *business reinvention change*. There are also many situations that combine several of these factors.

One important thing to bear in mind is that, when a *CEO-only* to *CEO+COO* transition occurs, the incumbent CEO has been doing both jobs up to the transition point; conversely, you can say that the new COO's job is being created for the first time, first by stripping away some of the duties of the current CEO, then by adding some that were supposed to get done but may have been largely ignored. Often, the 'ignored' things are processes for managing customer relationships or solving implementation problems that, instead of being managed informally by a few heroic individuals, need to become more formalized in order to produce predictable outcomes on a regular basis so that the organization can scale its business going forward. This being the case, it is hardly surprising that the transition provides plenty of challenges to both parties, as well as everyone around them. Another important facet of the makeup of anyone who has been a CEO is that tend to see themselves as someone who must cope with just about any crisis that the business can throw at them, so they become very self-sufficient. This is compounded by their

perception that they have few if any people to turn to when they just want to share their anxieties and vulnerabilities, and talk them out.

Selecting and Recruiting the Right COO

This is undoubtedly one of the most critical single hires in a young company's life, because if it fails, the original CEO is likely to want to step back into the role, saying "well, I tried to find someone else to do this job, but it didn't work, so I suppose we'll have to go back to doing things my way." Furthermore, a failed attempt may actually prevent the company from successfully making the transition to the next level of growth and, in fast-moving tech businesses, this can turn out to be a near-fatal experience for everyone involved.

What I advocate in cases where the current CEO is staying in the company is that the CEO (and perhaps the Board) should think exhaustively about the type of individual that the company most needs, considering the pluses and minuses of the current CEO. The key idea here is to find a complement to the current leader, not necessarily an 'opposite'. Secondly, they must form a short list of three to five candidates, all of whom have the potential to become CEOs, or are already proven CEOs with an operational management bent. Thirdly, I suggest that the incumbent CEO spend time with the lead candidate(s) over many long conversations, and that at least three members of the board as well as the executive team do the same. Fourthly, the individual selected should have the ambition, capability and patience to run just part of the show for some time and, more importantly, develop an effective partnership with the CEO, while they are being groomed to take the top job. In fifth place, the Board and CEO should establish a clear set of guidelines on separation of authority, as well as overlap of authority. The sixth priority is more of an option: one board member should attempt to mentor the CEO, while if possible another should take on this responsibility vis-à-vis developing the COO's capabilities in their role.

By saying this, I am implying that the hiring strategy designed to hire a ready-made COO who does not demonstrate any capability to become the eventual CEO, while not necessarily doomed to failure, is a sub-optimal proposition. Although it may work in the short term, inasmuch as the new COO might cope well with the operational management aspects of their job, one thing will be lacking: the current CEO will not have found a potential successor, and the organization will not have a satisfactory for the CEO when key strategic leadership calls are required and the CEO is away. Also I am against the practice of making the CFO into a default COO, unless they have the potential to be a CEO-type leader of the organization, for the same reasons just explained regarding limiting the COO's profile to that of a financial or operational manager.

Managing the Actual Transition of Duties and Authority: Who Should Do What

The vital element not to be compromised is that the existing CEO and the new COO must be able to quickly develop a close, symbiotic relationship, where one can essentially sub for the other when needed. Thus, in software companies larger than, say, \$100m. in sales, the optimal span of direct control should be at most five reporting to each. However, in order to streamline decision-making, the less actual *separation* in reporting relationships they have, the better. In other words, each executive should have a *primary* reporting relationship with the CEO (or COO), and a *secondary* reporting relationship with the other.

In outline, insomuch as there needs to be some clear distinctions between the CEO and COO in terms of their essential roles, my belief is that the CEO should be the primary 'thought leader' around vision/purpose/values, as well as strategy, competitive advantage, and identity (of the company), whereas the COO should be the main 'action leader', managing the company's main engineering and field operations. Whereas the CEO has the added responsibility of managing investor and board relations, the COO should also drive the operating plan and run all operationally-focused activities. Even more importantly, both should deputize for each other 'intuitively', in order to accelerate decision-making so that their direct reports and the rest of the organization can get on with their activities. Finally, both should be proactive about spending time

with prospective and existing customers (i.e., not just the 'closing the deal' and 'damage control' visits).

In detailer terms, how should reporting lines be divided between the CEO and COO? As a rule of thumb, a classical approach - though not generally implemented to the letter in tech companies - would have all *long-term* focused (i.e., 'strategic') functions reporting primarily to the CEO, while all *short-term* focused (i.e., operational) functions would report to the COO. Strategic support functions include corporate marketing, investor relations, corporate strategy / bizdev, technology, finance, and HR (the part that involves career path development and succession planning); whereas operational functions might include engineering, industry and/or field marketing, consulting, sales, support, operations, and possibly the operational bits of finance (A/R and A/P).

Letting Each One Do What They Like to Do

Above all, recognizing that everyone performs better in the activities they most enjoy, the CEO and COO should be able to allow each other the luxury of spending as much time as possible on the activities they most relish, even if they are slightly out of the strict job description. Thus, the CEO who loves working with the product engineers on upcoming product releases should be able to pursue this interest at times, while the strategically-minded COO should feel free to run brainstorming sessions on strategy, especially on issues they care deeply about. In this way, the organization is able to see the symbiotic aspect of their relationship played out live, and the COO also gets to rehearse for the next step in their career.

3. "Just Shoot Me!": Managing the Services Function Inside a Products Company

[This article was written by Geoffrey Moore, chairman of the Chasm Group and author of bestseller 'Crossing the Chasm' and three other books including his most recent, 'Living on the Fault Line'.]

Editor's introduction: Captive service operations inside tech companies live a perilous existence, buffeted by the need to be 'all things to all men' – and still make a profit! Unfortunately, however, they are usually constrained by the fact that they are subordinated to the company's product business, and the economic model that gives preference to product sales. In this article, Geoffrey Moore points out the contradictions that torment these organizations, and proposes a 'get-well' program for improving the situation.

As customers become more demanding and products become more complex, the services functions inside product companies are becoming more and more visible, not only operationally but financially as well. It is a rare manufacturing enterprise these days that does not have a services strategy, and more than a few are following the example of IBM, GE, and others actually redefining major portions of themselves as services companies.

Moreover, as the world economy heads into perhaps its most challenging decade in recent history, enterprises are relying more and more on their services functions to provide both high-margin and high-reliability revenue streams to supplement their more cyclical product returns. In so doing, inevitably their performance gets compared to that of independent service providers, more often than not unfavorably.

To be sure, there is a great gulf between the independent service provider and the captive, with the latter lagging severely behind in terms of best practices and effective returns on invested capital. But that is because there are deep, although not often acknowledged, differences between the two business models that work to the disadvantage of the latter. Why that is the case and what can be done about it are the twin topics of this article.

The essence of the argument is that while many services models are money-makers, firms must specialize in one or another of them in order to develop best practices and achieve sustainable competitive advantage. This is the opportunity that is open to independent service providers (although not all of them take it). By contrast, specializing is not normally open to captive service providers, who are more typically chartered to be a one-stop shop for all the services needs of the

product company's customer base. To some this might be a "gift" of a broad market with all kinds of opportunities, but there is dark side to it, namely that the company is not prepared to invest strongly or deeply enough to capitalize on this across the board. The net result is a function typically stretched too thin to achieve the aspirations it and the executive team set for itself.

First we will examine the depth of the one-stop challenge, with a view toward creating, if nothing else, some empathy on behalf of the captive service provider organization. At the same time, we will acknowledge that its mandate is not likely to change. So in the second half we will lay out a blueprint for how managers of captive services functions can take control of their situation and deliver strong results in the face of a dauntingly complex set of demands. At the end of the day, what differentiates a captive from an independent service provider is that the former must seek to optimize the returns from the parent company's entire portfolio of offers, products and services combined, whereas the latter need only optimize returns from its own operations. Our first challenge, then, is simply to understand the magnitude of that impact.

Product Category Life Cycles: Evolution in the Services Business Model

The value of a product evolves over two life cycles. The first of these is the Technology Adoption Life Cycle, governing the adoption of its enabling technology. For the gasoline-powered car, this cycle is long over, but for the new hybrid fuel-cell car it is just now beginning. Once the market has adopted the necessary enabling technologies, a second life cycle begins, the Product Category Life Cycle, governing the longevity of the category's relevance, ending in its obsolescence. In developed economies PCs are mature from a technology adoption point of view, but still very active as a product category. Typewriters, on the other hand, have become obsolete, as have telex machines and adding machines, and in the world of photography the emergence of digital appears to threaten to obsolete the category of camera film. Based on where a product is in the technology and category life cycles, market dynamics change dramatically. This in turn leads to as many as six different business models being privileged at different points in the market's evolution, as follows:

1. **The project model.** At the onset of a new technology, it is unclear whether the market will support the necessary infrastructure required to enable the category to thrive. Early customers are sometimes willing, however, to fund specific instances of this infrastructure by themselves on a project basis, just to gain a competitive advantage. Thus Amazon and Cisco invented their own e-business systems in house, and companies like independent consulting service providers like Scient, Viant, and Sapient ran the projects for fast followers. The model is 20% tools and products, 80% custom labor, so it is expensive and time-consuming, but it is also highly differentiating to the customer. Consulting services providers are the key leader in this phase of the market, and assuming they can recruit the talent, and find enough work to keep it employed, they can enjoy high margins on revenues.
2. **The solutions model.** When enough projects have been funded to indicate at least a niche demand, markets mutate to support more of a prepackaged solutions model, trading off competitive differentiation for lower cost and higher reliability. This model is comprised of more like a 50/50 mix of product and services. The results are not custom, but they are customized, in part through special integration with legacy systems, in part through the addition of new modules which have yet to be commercialized broadly. Thus, for example, when the Customer Relationship Management vendors all added "e-processes" to their suite of modules at the turn of the century, e-business moved to the solutions model. For the first time companies like Amazon and Cisco were at a disadvantage in that their competitors could gain equal capabilities without having to assign in-house resources or consume multiple years in development. Consultative service providers still play a key role in this phase of the market, but they share the stage with the application software package vendors.

3. **The product model.** When enough solutions have been deployed to indicate the possibility of mass demand, markets mutate again, this time to a standard products model where specific user needs are met, if at all, through configuration rather than customization. Again, the trade-off is in pursuit of yet lower costs and higher reliability. The typical offer mix is now typically 20% services, 80% product, with the services portion being highly programmatic. Indeed, for the first time, one should think of services as being *transactional* rather than *consultative*. Also for the first time a consumer market is enabled as transactional services fall within the range of a retail channel's capabilities. Consultative service providers are now at a significant disadvantage and must exit the market either upstream, working with very large customers who will always have complex needs, or by seeking out a new category of offer altogether, one that is earlier in its life cycle and thus willing to pay the premium for consultative value.
4. **The consumables model.** Once the product model expands its footprint to capture all the latent demand, growth rates diminish, and going forward more revenues come from repurchasing than initial purchases. Once again markets mutate, this time into one of three patterns that complete this survey. In one form of mutation, the product becomes a platform for consumables, and the latter capture more and more of the value in the offer. This is a time when Gillette goes from being a razor to a blade company, Kodak from a camera to a film company, and HP from a printer to an ink cartridge company. The primary role for services in this model is simply support for the purchase transaction, be that provided by a store or over the Internet, with the cost included in the price of the consumable. From a revenue standpoint, this is a 100% product model.
5. **The maintenance or subscription model.** For products that do not have consumables, once market expansion is largely accomplished, competition from late entrants commoditizes the category, and profit margins become slimmer and slimmer. Under this pressure, markets mutate yet again, transforming back to a services model, but one optimized for routine transactions as opposed to special projects. Thus in the automobile market, the bulk of the revenues and profits come not from selling cars but from selling car maintenance, car insurance, car financing, car detailing, and the like. The car itself has become a platform for selling these peripheral value-adding services, and the product service mix is back closer to 20% product, 80% services. Nonetheless, because the customer's buying decision is still governed by the choice of product, it is still a model that favors the product provider as the gatekeeper (and often as the service provider of choice).
6. **The outsourcing model.** Finally, for offers which are too complex to ever commoditize, an alternative end state is for the market to endorse a utility or outsourcing model, where specialized service providers take over the ownership and operation of the solution and sell it back to the customer on a pay-as-you-go basis. This frees the customer from the responsibility for the product while still delivering its benefits. It is a 100% services model which completely insulates the customer from the product vendor, thereby transferring substantial market power to the outsourcer.

As even this cursory survey suggests, there are numerous opportunities for an independent service provider to succeed in every phase of the market, but to do so they have to focus on a particular type of service demanded at a particular stage. That is, each phase calls for different levels of sophistication, rewards different kinds of infrastructure investments, supports different profit margins, and therefore requires different operating ratios. The great opportunity for an independent is to focus on just one of these models, hone its capabilities to a fine differentiation, and exploit them to the full wherever markets are in the phase that matches up. And since there are always product markets in every phase of the life cycle, as long as the service provider is willing to learn new categories, there will always be a demand for its type of service.

Now, to be sure, real life is not quite that easy for the independents. There are times when the markets do dry up, and other times when the “matching” categories are simply too big a stretch for the team to take on. But at least the core strategic idea is straightforward and the rewards are there when they can make it work. Such is not the case for the captive service provider.

Captive Service Providers: Nobody Knows the Troubles They’ve Seen

The captive’s dilemma is simply put. As a member of a products organization it is simply not allowed to specialize. It must instead support its parent company’s product offerings throughout their life cycle. And because it is typically part of a products organization, it will find it harder to attract the best services people because they will typically garner better offers from dedicated independents who can afford to compensate them for their skills more generously and who are more likely to value and promote their careers going forward.

Nonetheless, captives are not likely to get relief from their parent organizations when it comes to their charter, which without too much distortion might read as follows:

- Be competitive at the front-end in project effectiveness *and*
- Be competitive at the back-end in transaction efficiency
- *But don’t compete so hard that we alienate our service partners*

- Be a revenue source, often in a big way *and*
- Be highly profitable with good utilization
- *But find a way to support whatever the sales force has sold*

- *Oh, and help close top-tier prospects (no charge)*
- *Oh, and help rescue flagship accounts in trouble (also gratis)*

Such a stew of directives is typical of a syndrome one might call *Product organizations are from Mars, service organizations are from Venus*. There is no one item in the list above that is hard to achieve by itself. It’s doing the list as a whole that’s impossible. Yet that is what captive service providers routinely try to do. And shockingly, they actually have some success in the early years of the company as it is navigating its first set of life cycles. Indeed, there is even a moment in this first sequence when services people are the heroes of the day. It comes toward the end of the product model phase, when growth begins to taper off, and product sales are insufficient to make revenue targets. Just at this moment, however, services revenues, which typically lag product sales by one or more quarters, begin to assert themselves, and the day is saved. Hooray! Services is urged to continue on this trajectory, to build up the business even further, even at the expense of the partner community, and so they do, including staffing up to execute. And for the next few quarters the day is saved again. And again. But sooner or later, because services revenue is ultimately a function of product revenue, this strategy must come a cropper. And when it does the service executive is made the goat.

Going forward, the company lays off a huge chunk of its expensive consultative types, giving up the front end services market, and refocuses on the back-end transaction services for which there is still demand. And once again, services can become, if not a hero, at least a valued member of the team. Until the next technology or product life cycle comes along and falters for lack of consultative skills to help incubate the early market. Then it is a goat again. To which, if you are the services executive in charge, the only response is, *Just shoot me*.

Unfortunately for you, however, they won’t, so you can look forward to increasingly dysfunctional dynamics. In other words, if you are ever to get yourself and your organization off of this treadmill, it’s going to have to be by your own efforts. And that’s where we’d like to weigh in.

What Now? A Five-Step Program

Consider the following as a proposal for a get-well program. Each of the five steps brings a bit more order out of chaos.

Step 1: Sort Things Out

The key to a strong beginning is to isolate all the various service modalities one from another, setting up each as a separate and independent line of business—even if it is one you do not intend to be in. That is, at various times the market will require every one of the modalities described above. When that requirement surfaces, your company expects you to respond to it. It does not, however, require you to specialize in it, and so you can choose to execute one or more of these modalities through a partner.

But you still must control the outcome from a customer satisfaction point of view. In order to do that, you need a framework for managing each modality regardless of whether the work is done direct or indirect. And you will need a management executive in charge of that modality, again regardless of whether it is direct or indirect. What you may not need, on the other hand, is any staffing. That will get decided after Steps 2 and 3.

Step 2: Establish Priorities

The guiding principle of this get-well program is that no services provider, captive or independent, should try to be all things to all customers. In this step you need to help your company decide with you where your organization can add the most value. The goal is to maximize the shareholder value of your company, which means creating the best yield on the combined output of products and services.

When the services element is pulled out from this equation, it needs to be evaluated in two contexts. First, what is the financial opportunity if the company chose to specialize in this type of offer. The assumption is that, by focusing on this modality, your team can return optimal revenues and margins to the corporation as a whole. What might that be worth? You can use independent service providers as a benchmark here, although you should realize that going in they have a competitive advantage by being unencumbered with the other demands you must fulfill.

The second context for prioritizing which parts of the strategic mix are best fielded in house centers on what is the strategic impact on the rest of the enterprise. Here you are looking at the role that services play in accelerating adoption of or increasing satisfaction with enabling technologies and products. In a products company, it may be best strategy to subordinate the financial returns of the services function to strategic outcomes of the product function, but if so, it should be declared as such explicitly.

Regardless of what your company decides, it is critical that it decide as an executive team, by putting in priority order each of the six modalities based on a blended view of their financial and strategic value. You need your colleagues to buy into this prioritization because, downstream, you are going to enforce trade-offs that may cause them to balk.

Step 3: Organize the Work

Once priorities have been set, you can now decide which modalities you will staff in house and which you will execute in combination with partners. In either case you must recruit and train the execution team. The key learning here is that repetition of task work in the market with customers is the only truly reliable trainer, the more the repetition, the better the lessons learned. From this realization it is a short step to realizing you want to minimize, not maximize, the size of your team and/or the number of your partners. This in turn puts pressure on your recruiting for you need the A players to make such a strategy work.

Part of what you can use to attract A-quality partners is the offer to co-develop with them a business plan that truly is a win/win. That is, you are counting on these partners more deeply than is typical, and thus you have a more genuine stake in their success, and you can use that vulnerability as an asset in helping you differentiate your relationship with them.

Step 4: Manage Separately

Drilling down into each modality, allow each team to treat itself as a separate unit from the point of view of setting goals and objectives, establishing resource investment required, stating expected returns (both financial and strategic), establish key execution metrics, and finally tying those metrics to the inputs and outputs of your information system.

Step 5: Manage Closed-Loop

Finally, because customer satisfaction, like it or not, gets measured every day in the marketplace, you must aggressively keep on top of open action items. This means establishing closed-loop feedback systems, setting feedback cycle times, all focused on variance analysis. In the short term alarms keep you on your toes, while in the long term this same data becomes key to root cause analysis of persistent, systemic problems. Again, while this can all be handled by one system in the background, results must be reported out by modality so that the operational team can get unambiguous feedback on the consequences of its own actions.

Under the Buzz offers a monthly commentary on e-business. The goal is to provide provocative and accurate insights into the latest events and thinking shaping this rapidly evolving technology sector. *Under the Buzz* also provides commentary on strategies for building sustainable competitive differentiation and maximizing market valuations.

© 2002, Philip Lay

Disclosure: From time to time, the author and/or his firm may hold investments in, or provide advisory services to, one or more companies cited above.