'Dual Greening' for today's networks

by Manish Gupta, Vice President of Global Networks, Kabira Technologies

Companies are increasingly recognising their social obligation to reduce their environmental impact. Environmental responsibility, once considered a burden, frequently prove to have a variety of unforeseen benefits - often measurable on the bottom line. Meeting social obligations often requires improving operational efficiency, developing new processes and products and results in the discovery of ways to cut costs - especially those for energy. The drive to be green is also creating unsuspected new markets and services.

Manish Gupta is the Vice President of Global Networks at Kabira Technologies; he is responsible for all of Kabira's marketing functions worldwide, including product management, product marketing, marketing strategy, public relations, and marketing communications. During the past nineteen years, Mr Gupta has established marketing and business development programmes at Aperto Networks, Apple, Jetstream Communications, Megisto Systems and National Semiconductor. In addition to his executive operational roles, Mr Gupta has been a member of the Board of Directors at Aperto Networks and the WiMAX Forum. Mr Gupta is a globally active voice in a variety of communications sector issues including 3G, WiMAX, DSL, VoIP, webcasting, interactive appliances, and satellite communications.

Manish Gupta received his B.S.E.E. and M.S.E.E. from Georgia Institute of Technology, and an MBA from Santa Clara University in California.

The global 'green' movement very rapidly established itself as much more than a passing fad. This is clearly both advantageous and fortuitous, as there is little debate left that without conservation and earth-friendly policies, we all will suffer. Those of us in business, especially those who control large networks and the technology that drives them are therefore placed in a position of even greater responsibility, since we can impact a larger 'eco-footprint' than the average individual.

This acknowledgement of a heightened environmental responsibility brings an additional burden to our businesses, as failure to respond not only encumbers us by affecting our own ideas of morality and self-preservation, it could also rapidly affect our companies' bottom lines, as network operators and end-users are likely to react en masse to any perceived eco-unfriendliness or arrogance - especially if the competition heavily publicizes its own efforts in that area. Therefore, we have to contend with the fact that failure to 'go green' could put the self-preservation of our businesses at risk. Nevertheless, going green means changing current processes, procedures and investment, and changing what currently works in a large network, for whatever reason, means assuming additional businesses risks.

This alone is enough to leave us, the guardians of the network architectures and technology, with a dilemma, but that is not all there is. Marching in lock step with the need to go green (and wearing significantly larger boots in this march at that), is the need to 'make green' - that is, to earn a profit. For companies to survive, with or without an ecological agenda, they must make money. Furthermore, to continue making money, businesses must seek to install technologies that optimize top-line growth while simultaneously looking to process and technology changes that harvest additional savings from operations expense. This is part of the life cycle of our industry and continuing to feed its flow is what we all do.

In the pursuit of a profit, operators today require customer life-cycle solutions that can meet the demands of real-time, always-on subscriber services.

Rapid implementation is essential to the success of these solutions, which must also offer much better performance at substantially lower cost than that delivered by traditional solutions. The technology must provide solutions that deliver better revenue, cost and network transaction performance - they must make and save money faster and better, including for the communications providers' core business processes. One technology that expressly addresses all these needs is 'in-memory' transaction processing. With in-memory transaction processing, the server that actually processes the transaction holds all the data needed for the transaction in its own memory. This provides immediate benefits by reducing transaction latency, increasing throughput and reducing the need for hardware and the associated license and maintenance costs. So how does this technology that makes more 'green' (dollars) help us become more environmentally responsible?

Let us examine some recent operator deployments of in-memory transaction processing. Although all these deployments sought to create new revenue opportunities while delivering cost-effective scalability, they had different immediate objectives and addressed different core business needs. They were also located on three different continents - Asia, North America and Africa. Although the problems the technology was to resolve varied from increasing charging transaction throughput, to improving the security of financial transactions carried over the network, the in-memory solutions were primarily chosen for the same two reasons. First, in-memory solutions could provide the increased performance needed for network support of skyrocketing transaction growth. Second, and equally important, was the ability of in-memory transaction processing to reduce the cost of their business processes and lessen the cost of scaling these businesses. Each of these applications of in-memory technology delivered a huge increase in processing volume as well as a six-fold reduction in the number of servers used in each of these company's various data centres.

Consider the mathematics of a change such as this. Reducing from say, 36 servers to six servers means a savings of nearly 85 per cent in energy costs, heat generation, real-estate needs, licenses and ongoing operations support expenses. Since the new six-server configuration also delivers a substantial increase in performance, these savings are over and above those derived from the additional capability. This added capacity, in itself, creates opportunities to generate revenue, improve customer experience or improve business process efficiency.

"Reducing the need for servers significantly reduces energy utilization, heat and resource waste."

Reducing the need for servers significantly reduces energy utilization, heat and resource waste. In these examples, by pursuing profitability, the operators substantially reduced their carbon footprint. These are examples where corporate conscious was in fact stimulated by economic incentive. Are companies less eco-responsible because the initial motivation for these changes was making green instead of going green? No matter, since pursuing green initiatives without taking profitability into account can cause the business to fail and, consequently, cause the failure of the green initiatives as well. Companies are catching-on to this duality of greening their networks. So, as they pursue efforts to build revenues and profitability, operators are increasingly opting for solutions and architectures that bring ecological benefits as well.

What changes can we expect in 2010? First, the efforts to reduce the environmental impact of their operations and to improve profitability will no longer be considered to be at cross-purposes. Telecommunications service providers will now become ever more open in their desires, efforts and requirements to pursue both initiatives simultaneously. Furthermore, given the growing understanding of the linkages between going green and cost savings, previously overlooked green initiatives will be re-examined for previously overlooked cost benefits and will have a much better chance to be implemented. Vendors will spend much more time in 2010 enhancing - and communicating - their dual-green impacts.

The telecommunications sector controls massive networks and, by practicing environmental responsibility, can have a massive impact. The good news is that practicing environmental responsibility no longer has to hurt profitability, so the telecommunications service providers and the technology vendors who supply them would be wise to pursue green objectives in their design and implementation of networks and products. Failure to do this may not mean much…unless your competitor does so first. ●