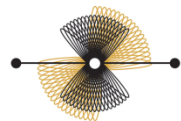
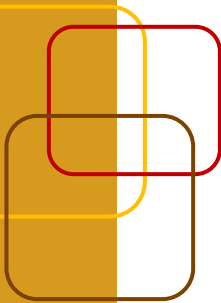


Environmentally Friendly before “Green”

Reducing consumption, costs and GHG emissions
with an all-in-one platform since 1994

By
Thomas Bailey

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Introduction

“Business enterprises must seriously consider initiatives to right-size their IT platform, reduce their carbon footprint, maximize virtual collaboration and implement eco friendly conservation strategies to optimize efficiency and minimize greenhouse gas emissions.” The intent, of course, is to “improve IT energy sustainability in their communications infrastructure and the data center.”

Give the communications industry credit. Now that climate change and environmental responsibility are being paid their rightful attention in technology circles, vendors have rolled out a whole list of new buzz terms and idioms to tell businesses they need to limit GHG emissions and protect diminishing energy supplies. And not surprisingly, the same vendors offer the very solutions a business needs to help save Mother Earth, which they're more than happy to tout on their web sites, in brochures, in articles and whitepapers.

Green, it seems, is everywhere.

The green wave aside, excessive greenhouse gasses are without question causing irreversible damage, and communications hardware systems are among the biggest GHG culprits. Energy consumption also has gotten so severe that businesses are being forced to rethink their entire IT infrastructures and office environments to cut back. In fact, ask CEOs and business owners what's at the top of their concerns list right now and it's energy costs. “They're out of control.”

All things considered, then, sounding the green alarm throughout the communications industry is a welcome move. Yet there's another side of the movement that often gets overlooked in all the hype. Buzz word: greenwashing.

Valerie Davis describes the greenwashing phenomenon to a tea in her article “Going Green Without Greenwashing” (prnewsonline.com, July 28, 2008). “Some businesses,” she writes, “spend more time and money telling the world how green they are than actually implementing sustainable business practices that lighten the environment footprint of their company and customers.” Davis is cofounder of Green Canary Sustainability Consulting and EnviroMedia Social Marketing, and she knows about companies going green just to say they're green.

In the communications industry in particular, greenwashing runs rampant. Whereas competition between vendors has led to some truly innovative technologies for IP telephony and voice over IP (VoIP), that same competition too often leads vendors to jump on the “latest issue” bandwagon just to keep pace, whether their story is legitimate or not. Green is a perfect example.

From the day Interactive Intelligence opened its doors and introduced a server-based all-in-one communications platform to the business world, it has tried to steer clear of buzz words and bandwagons — “going green” included. Still, we believe that saving energy, controlling costs and protecting the environment is the right thing to do... and always has been.

Here's our story, which we've been telling since 1994.



What Took So Long?

It's hard to say exactly when the communications and technology sectors collectively embraced environmental accountability, but many industry types point to May 2007 when IBM launched its Big Green initiative. Of course many people will argue the 2007 timeline and say other companies were eco conscious well before then (or go all the way back to the U.S. Environmental Protection Agency's "Energy Start" initiative conceived in 1992), but Big Green seemed to mark a definitive call to action for the communications industry as a whole to step up as an environmental steward. Since Big Green, IT energy initiatives from the likes of Microsoft, Cisco and Sun Microsystems have continued to reinforce green as an industry-wide priority for suppliers and their products. So has guidance from analysts including Gartner, which listed energy considerations high among its industry "Hot Topics" for 2008.

But think about the 2007 timeline and getting the industry to finally focus on greenhouse gas emissions and skyrocketing energy consumption. If the January 2008 study on server electricity use from Advanced Micro Devices (AMD) is any indication, the energy drain has been gaining traction for quite some time.

Based on IDC research for historical energy consumption worldwide, the AMD study found that server electricity use in the United States, Western Europe and Japan actually grew an average of 16% per year from 2000 to 2005. The AMD report also says consumption grew 23% annually during the same period in the Asia/Pacific region (excluding Japan), a pace that could see server and IT electricity use in APAC more than double from 2005 to 2010. Overall, the report adds, global consumption could potentially require 10 new 1000 MW power plants.

The AMD study is telling because it takes one of the most comprehensive looks at the global IT energy dilemma. But it's more telling in that it tracks energy consumption back to well before the IT and communications industry made the environment a priority — as do studies from the EPA in the U.S. and sources such as Centre for Energy Policy and Economics (CEPE) in Europe. Given the historical U.S. trend for IT, communications and data center energy consumption, the EPA says enterprises doubled consumption from 2000 to 2006, and are now in a cycle that could see power bills go from \$4.5 billion in 2006 to \$7.4 billion in 2011. Carbon emissions, the EPA also says, will increase 63% in the U.S. by 2011. It's just as bad in Europe and especially Germany, where the CEPE reports that Germany is in the midst of 2003-2010 period in which energy consumption will double for office IT infrastructures and grow by more than 150% for telecom companies.

The question therefore isn't when the communications industry finally decided to pay attention to energy consumption levels. More ominously the question is: What took so long?

All-in-One Approach, Inherent Environmental Friendliness

Admittedly, greenhouse gas emissions and dwindling energy supplies were not primary drivers when Interactive Intelligence's all-in-one software platform first took shape in 1994. What did prompt our approach, however, was an idea to create a single solution that would replace what amounted to 10 or 12 different legacy systems in a traditional communications framework. A PBX phone system, an automatic call distributor (ACD), an interactive voice response (IVR) system, a call recorder, etc., etc.

By decreasing the sheer number of those systems, we thought, businesses would 1) reduce equipment and implementation expenditures up-front; and 2) reduce energy and maintenance costs thereafter, from having to power fewer system "boxes" to requiring less energy for the cooling fans and air conditioning systems needed to prevent overheating problems common in PBXs, ACDs, IVRs, call recorders, etc., etc.

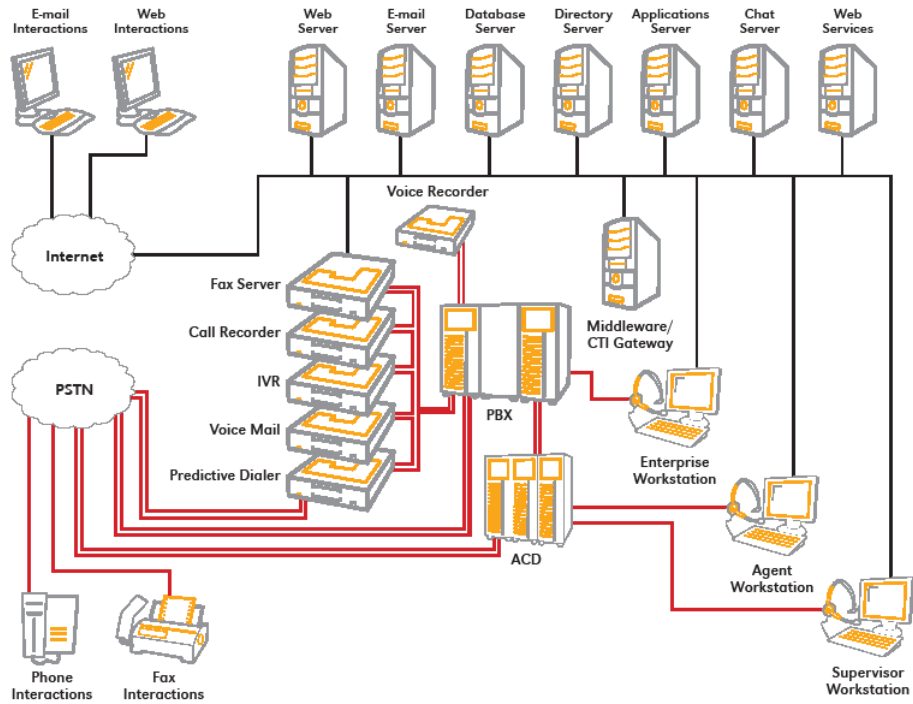
Our all-in-one idea worked: a software-based platform architecture and a bundle of applications running on one server, or on a small bank of servers at most if an enterprise or contact center numbered thousands of users and multiple locations. Look around in fact, and all-in-one has become the preferred design in the majority of solutions now available for business communications.

"A revolutionary new approach" when we started? A few analysts called it that. "One of the early communications system precursors to protecting the environment?" Not quite, although it is fair to say the Interactive Intelligence platform inherently laid an energy-saving groundwork. By its all-in-one design alone, fewer servers equate to less energy consumption and lower GHG emissions than the multi-point legacy systems our platform was designed to replace.

See the "before" and "after" system diagrams on the next page to get a better idea of what we mean. With a few modifications along the way for new Internet Protocol (IP) technologies, our platform architecture is the same as when we drew it up in 1994 and first implemented it at a customer site in 1997.

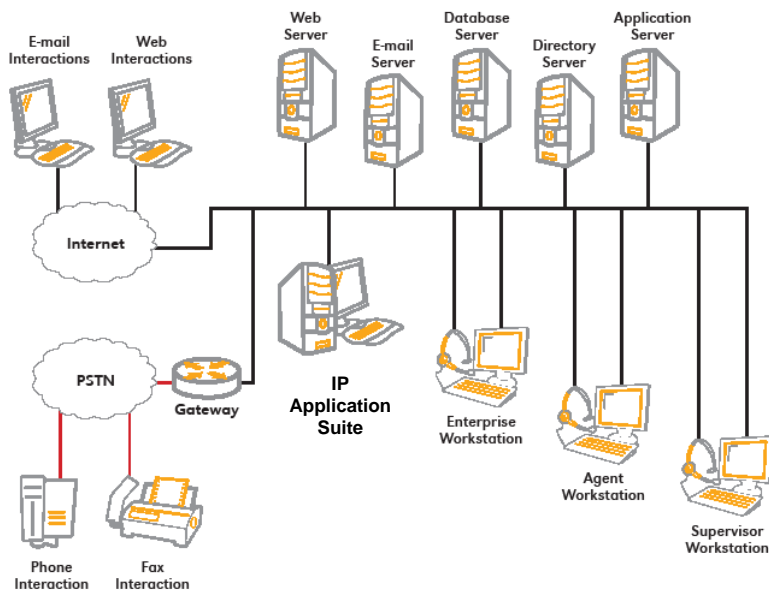
Traditional multi-point communication systems

Multiple systems in traditional communications infrastructures leave a giant carbon footprint.



Server-based all-in-one platform for IP communications

A single platform and pre-integrated application suite reduce energy consumption and greenhouse gas emissions inherently.



One Server Architecture for Full Media Processing

“Right-sizing a virtual infrastructure” is another idiom in the green vocabulary and applies primarily to data centers. The thinking behind a virtual infrastructure is to consolidate large numbers of servers into one virtual machine that runs multiple application workloads. That single virtual machine then simultaneously maximizes computing capacity and reduces energy consumption and carbon emissions.

In the same way for voice communications, the Interactive Intelligence all-in-one platform provides a virtual architecture that allows companies to handle call switching, call control, and various call processing and media processing functions with fewer “boxes” (see top diagram on previous page). Functions can include:

- Playing and recording audio for IVR, ACD and unified messaging applications
- Conducting multi-party conferencing (used as a conference bridge), or addressing complex customer service scenarios
- Supervisor monitoring for ACD
- Call analysis/call progress detection for outbound predictive dialing/campaign management environments
- Voice recognition as an enhanced IVR, ACD or unified messaging capability

While IP PBXs and softswitches have made it possible to run voice over IP (VoIP) and perform a number of call control and call management features, many IP PBXs and softswitches now on the market aren't capable of handling media processing in the same server architecture. If media processing is required, additional servers or third-party solutions must be added to the IP network, which begins to limit how media processing can be used within the organization — and which increases power consumption as well as the potential for system failure. The result therefore is really no different than the multi-system, CTI-oriented solutions that have existed for many traditional circuit-based PBX environments.

For organizations that have a combined IP telephony requirement and high media processing or complex application requirement, the Interactive Intelligence platform provides switching and media processing capabilities from the same vendor, with fewer systems. While a selected IP telephony platform might impose certain requirements on the application architecture, the overall goal of reducing the number of servers eventually results in less energy consumption, lower energy costs, and reduced greenhouse gas emissions.

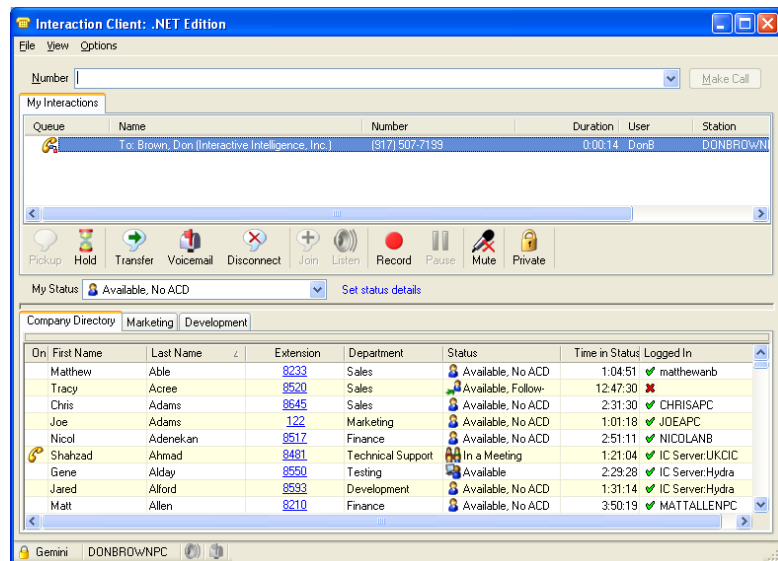
Reduce Energy with the Remote Workforce

Imagine more than 100 million U.S. workers working from home by the year 2010 and about 30 million at-home workers in Europe by then. That's what WorldatWork Telework Trendlines for 2006 predicted. Now imagine that by 2010 all those remote workers, at least in the U.S., could potentially save their companies from 9 to 14 billion kilowatt hours of electricity and 14 million tons of greenhouse gas emissions annually — along with 840 million gallons of gas. Those numbers come from the U.S. Consumer Electronics Association.

With its all-in-one platform architected especially for networked Internet Protocol (IP) communications and mobility, and with an easily deployed .NET client for desktop communications control, the Interactive Intelligence platform allows workers to work from virtually anywhere.

Remote workers get several advanced capabilities including:

- The ability to participate in ACD queues for contact center operations
- Ad hoc conferencing
- Ad hoc recording
- Real-time presence management
- A company directory up to 100,000 entries
- User and organization-defined directories for departments, project teams, remote locations, customers, resellers, vendors, etc.
- A built-in soft phone with quality of service that turns any PC or laptop into a complete communications end point that can be used anywhere in the world
- Complete security-enhancing encryption of voice and data sessions
- Personal call-handling rules
- A version that runs within Microsoft Outlook
- A version that can be used from any major web browser (Explorer, Firefox, Opera, Safari, etc.) and on machines running Windows, Linux, or Mac O/S
- A version that runs on Windows Mobile smart phones



Are Remote Workers Really Working?

Make sure they are with the desktop client's real-time supervisory monitoring capability to view station, user, and workgroup queue activities at all times.

Take Action

Since 1994 Interactive Intelligence has offered a fully integrated, standards-based all-in-one software platform for multimedia business communications. In 2002, we architected our platform on the SIP communications standard to take advantage of VoIP and SIP's voice and data security mechanisms — one of the industry's first vendors to do so.

The result is more than 3,000 organizations worldwide now protecting voice interactions and critical customer information using our platform technology and pre-integrated IP contact center and IP PBX application suites.

Visit us at www.inin.com to learn more about our solutions... and how they can be your business's best friend for reducing energy consumption and costs.