



The iPhone Halo Effect

Strategies for CTOs from the Tech Support Trenches

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About MacCentric Solutions, Inc.

MacCentric Solutions is an Apple-certified systems integrator and cross-platform consulting firm, serving the San Francisco region since 1998. The firm has two focuses: providing deep vertical expertise on Mac and related technologies, and integrating and supporting them in mixed networks. Rather than being merely a gang of Apple evangelists, the company's broad aim is to support its customers' goals, regardless of what technology platforms best serve that purpose, by taking into account traditional quantitative, and nontraditional qualitative, variables of the IT ecosystem.



Executive Summary

The iPhone “halo effect” has greatly accelerated the trend toward cross-platform corporate computing and has begun to change the calculus of technology planning in many small and medium businesses (SMBs). Acting initially as retail consumers, business executives have independently purchased iPhones and Macintosh computers for their personal use. Highly pleased with those products as standalone devices, these executives have then sought to integrate them into their work environments despite lack of support, or even downright hostility to the idea, from their IT staff. This has often raised tensions between CTOs and the colleagues they must support, as their executive user base exerts either deliberate or trending pressure to have their companies’ IT environments support those new technologies with the same dedication of resources with which they support traditional technologies. This paper discusses the causes and consequences of the iPhone halo effect on technology planning, with examples of the kind of technical hurdles both users and IT departments must grapple with in the process. It concludes with action-plan recommendations for CTOs struggling to incorporate these unfamiliar technologies into their companies.



The iPhone Watershed

The IT industry is in the midst of a rare grassroots sea change which is swelling up not from the impetus of the IT professionals who caretake it, but from the executive user base. Apple's original 2007 iPhone software packed more eye candy for consumers than horsepower for professionals. However, unlike the trickle-down "halo effect" that had, over the course of years, only slowly converted iPod ownership into Macintosh sales (and did so primarily in the retail consumer market only), the iPhone's halo was extant within days after its release: loathe to carry separate devices for business and personal use, and enamored both with the technical elegance and social cachet of Apple's new phone, corporate executives began asking their IT departments how to integrate these slick new gadgets into the workplace. Beginning with questions as innocuous as, "Can I get my email on this thing?" these inquiries raised a host of concerns for CTOs and their staff, including the relative data security of iPhones, and whether IT departments were appropriately staffed, trained, and funded to support them.

At MacCentric Solutions, our own phone began ringing within weeks with calls from CTOs asking how to configure iPhone and over-the-air synchronization with user accounts on their Exchange servers. What is remarkable about the only possible answer – that it could not be done, since at the time iPhone software did not include the ActiveSync technology essential for this task, nor did the public know that it eventually would – is not that it led to tension between CTOs and their executive user base, who were clamoring for a solution that nobody could provide.

Rather, the salient point is that this disappointing conclusion did not dissuade executives from retaining and even increasing their iPhone dependence, often quickly adopting other Apple products with similar barriers to enterprise integration. Soon after the iPhone's release, technology publications reported that, despite iPhone 1.0's well-documented lack of appropriate enterprise security features, many executives simply configured the devices on their own to check their work email, despite their IT staff's refusal to support the devices and unqualified assertions that the iPhone posed a business security risk. Even unabashed Apple enthusiasts agreed with these warnings; nevertheless, the executives ignored them. Because the C-level

was hooked on iPhone, everyone else was on the hook, too.

Indeed, despite that iPhone 1.0 proved difficult to fully integrate into the workplace, and with no prodding from us, in the months following its release a high ratio of MacCentric Solutions' customers increased their investment in Macintosh and iPhone products while decreasing their investment in Windows and Exchange. Scads of both hard evidence and empirical observation, emerging even as this paper goes to press, can corroborate that this trend is widespread across the IT industry. This evidence includes:

- ⊙ A Gartner report showing that Apple's sales rose 38 percent in the second quarter of this year — more than triple that of top dog Hewlett Packard;
- ⊙ A DisplaySearch report showing that Apple's laptop market share rose from 6.6 to 10.6 percent over the year ending Q2 2008;
- ⊙ The neck-in-neck competition between virtualization titan VMWare and upstart Parallels to corner the hot new Windows-on-Mac virtualization market, especially as evidenced by both of their recent enterprise product announcements for a heretofore absurd proposition: virtualization of Mac OS X Server on Intel hardware;
- ⊙ The explosion of cross-platform troubleshooting threads in every possible Macintosh support forum; and,
- ⊙ An increasing sense, amongst the staff of traditional Windows consulting firms, of being left out of something new and important, as these firms' standard refrain ("We don't support Mac") is suddenly losing their clients' confidence — and even losing their clients.

For example, enthralled with their iPhones, and enticed by the customer service and retail pleasure of shopping at the Apple Store, we saw many executives replace their own Windows laptops with Apple's MacBook Pro line. Two qualities of this decision were remarkable: first, they justified the expense of switching despite the fact that the Windows laptops were



often not yet due to be end-of-lived; and second, they switched to Mac in spite of the contrary recommendations of their own IT support staff — **often without consulting their IT staff whatsoever**. It goes without say that this is not a traditional way to make decisions which affect the workplace.

To these executives, something elusive justified the switch despite numerous hurdles, such as:

- ⊙ The difficulty of having to learn a new operating system;
- ⊙ Lack of adequate Apple product support in their organizations;
- ⊙ Well-known technical barriers in integrating Macs into Windows infrastructures; and
- ⊙ The (debatably) higher price of Apple products.

For many executives, switching to Mac on the crest of their iPhone halo thus brought a number of disadvantages with it. However, the marvel is that these disadvantages were not critical enough to dissuade these executives from making the switch.

While it could be argued that the execs in question, enthralled by Apple's mythic marketing, simply made poor business decisions, we believe this radically over-simplifies their motivations. For starters, the sheer number of such Switchers across industries and regions belies a demographic intelligence that can't be accounted for as merely something in the water; **the effect of the iPhone halo has been an economic and cultural phenomenon**. We believe that, rather than being duped by some diabolical sleight of hand during Steve Jobs' keynote speeches, or the intoxicating background colors of iPod billboards, the actions of these renegade executive Switchers proved a critical point: **the aesthetic pleasure of corporate executives' computing experience** (demonstrated here by the elegance of Apple's industrial and OS design) **is as vital to their sense of accomplishment and well-being as more traditional, quantifiable bottom lines**. Those traditional analyses have historically justified investments in what is increasingly being perceived as distasteful technology — technology so concerned with being super-utilitarian that it lacks elegance and intuition, thus losing a good portion of its purported utility. The iPhone halo effect realigns the relative weight of

the values used to make technology purchasing decisions, giving credence to qualitative considerations that have not traditionally been considered valuable in enterprise IT.

We realize that calling Apple's products *elegant* and non-Apple products (i.e. Microsoft's) *distasteful* may sound like merely a rehashing of the now-tired debate that began in 1984. However, the fact that we have recently seen so many companies increase their investment in desktop and mobile technologies that often integrate *less* efficiently with existing infrastructure has been awesome testimony to the fact that this shift has been driven by the personal computing experiences of the user base, and not from CTOs' formal technology planning processes. The user experience, represented by the nagging physical presence of iPhones on executive belt loops, has exerted enough pressure on CTOs to challenge traditional approaches to IT infrastructure planning, especially the default tendency to replace or augment aging infrastructure with more of the same (i.e. replacing Windows desktops merely with faster Windows desktops).

The following two examples demonstrate the kinds of technical hurdles that these executives have faced, and the workflow inefficiencies they have been willing to put up with, in order to have their iPhone halo effect, and eat it, too. These examples are each a melange of real-world experiences drawn from more than one of our clients. Although they do not represent singular case studies, they have been very real challenges for our clients who went through them.

The Outlook-Entourage Dilemma

Microsoft Exchange is far and away the industry's dominant messaging and groupware platform, and will likely stay that way for the foreseeable future. Given its entrenched position in the server room, the question for CTOs is not so much *whether* to support an Exchange infrastructure, but rather, **What's the best desktop client application to work with Exchange?**

On Windows, there's not much argument that it's Outlook. From our viewpoint, Microsoft's



mission with Outlook is to create such a powerful, versatile experience in both communication and collaboration — two mainstays of desktop productivity — that users are willing to stick with Windows as their desktop OS despite its other flaws, and CTOs are inclined to stick with Exchange as their groupware platform. In this way, Microsoft products continue to rule as both the desktop and server status quo. Even the most stalwart of Microsoft's critics have difficulty devaluing the power of the Outlook-Exchange duo.

But what happens when executives basking in their iPhone halos follow their glow into the local Apple Store? There they discover that many of Windows' flaws are obviated in Mac OS X, especially if their current point of comparison is Windows Vista. With users' loyalties to Windows thus compromised, the only thing preventing them from plunking down plastic and marching a new MacBook Pro into the office on Monday is their deeply entrenched dependence on Outlook.

Suddenly the above question changes to, **What's the best desktop client application on the Mac to work with Exchange?** All they need is an adequate answer to this question to cement their decision to switch to Mac, and to insist that their IT department supports this decision. The answer to this question exemplifies the kind of challenge that Switchers face on the desktop.

And the Winner Is...

What they discover, if they even do the research (which, already swayed by their iPhone experiences and their initial Mac OS X experiences to blindly trust all Apple products, many do not), is that their options for attaining parity with Outlook on a Mac are each flawed.

⊙ They could run Outlook by booting their new Intel Apple laptops straight into Windows. However, this forces them to abandon the elegance and power of Mac OS X which drew them to consider switching in the first place, and turns their Apple computers into little more than the prettiest Windows PCs they ever owned. Very few of our customers have taken this option.

⊙ They could run Outlook inside a Windows virtual machine atop Mac OS X. However, depending on the Mac's configuration, this may hog the CPU, creates roughly one-and-a-half times the support requirements as running just a single operating system, and in general principle dilutes the power of using Mac OS X as their productivity platform. Nevertheless, some of our customers have chosen this option because their affinities to *both* Outlook and Mac OS X were each very strong.

⊙ They could run Entourage, Microsoft's native Outlook equivalent on the Mac. However, Entourage is buggy, resource-intensive, lacks many of the "killer" features that make Outlook so popular, and has technical limitations that make the iPhone's otherwise elegant desktop synchronization procedure time-consuming and prone to data loss or duplication. Most of our Switcher customers have taken this option; their willingness to risk peppering their PIM data with duplicates, or struggling with failed synchronizations on a frequent basis, is testimony to the strength of their conviction that running an Apple environment will eventually bear other kinds of fruit, too.

In short, for Mac users in an Exchange world, there is currently no perfect answer. Each of these options entails some significant measure of either technical or workflow inefficiency. We're certain that after facing these imperfect options, many executives have wisely decided that maintaining strong desktop productivity trumps their desire to switch. However, those executives are unsung in the wave of recent statistics that show the Mac's business desktop share growing faster than any other PC brand, and one analyst declaring the Mac to be "recession proof" despite the current economic climate.

To be sure, some of our customers who switched without consulting us on the decision are dissatisfied. However, of those who have admitted this, very few have chosen to switch back to Windows. In some cases, this seems to be resignation that the Switch was a sunk cost, and reluctance to invest more in their desktop platform in order to switch back to Windows. While this may simply seem like good, frugal



sense, we must consider another analysis of why disappointed Switchers don't switch back: although these particular executives' Mac Switch was not what they had hoped, they still lack confidence in the efficacy of other platform options. Although the Mac has not yet allowed them to be all that they can be, their decision to stay with it rather than invest in a reverse-Switch indicates ambivalence with all possible desktop platforms.

Thus, even in the case of an unsatisfactory Switch, the iPhone halo effect has achieved a broad minimum result: it has opened an opportunity for widespread questioning of the values of the desktop computing experience. If Windows or other, non-Apple platforms truly were the best business desktop platform, even those who mistakenly switched would drum up the capital to switch back. In the vast majority of our observed cases, however, this has not happened. Most of our clients who are disappointed Switchers, while grappling with the challenge of working with two technology platforms that don't always work perfectly with each other, have retained their confidence that although cross-platform computing is still a nascent trend, their investment in switching will ultimately pay off. What may inspire that latter confidence is a certainty that their own experience of the iPhone halo effect is not isolated, and that other executives with the same experience will ultimately gather enough steam to become a demographic that shifts markets. Already, in the growing adoption of Apple products by corporate consumers, we're seeing this trend pick up considerable steam.

The Halo Effect in the Server Room

Scrutinizing how executive Switchers demonstrate their new Apple brand loyalty vis-à-vis their daily computing experiences, as we've done above, shows how the iPhone halo effect affects SMB desktop computing. In our example, pressure is exerted on IT departments to support the user's efforts to emulate Microsoft Outlook with the imperfect options available on Mac OS X. However, because this is a change on the desktop, it's possible for IT departments to keep it contained to the individual executives that bring their Macs into the workplace without asking first. Those executives' isolated experiences do not have to penetrate into the company's larger IT policies, where they would

have a wider, watershed effect on the rest of the company's users.

However, the possibility for such penetration is not out of the question. SMBs, by virtue of their smaller size, may have technology decision-making processes that are driven by one or two dominant executive personalities. When individual proclivities inform technology planning, those individuals' preferences have an outsized effect on IT decisions — potentially as strong as a CTO's. We have supported more than one SMB which made technology planning decisions without much knowledge of the current technology landscape or basic considerations of the planning process, and without relying on expert outside resources such as ourselves or our colleagues in the field. Indeed, in small enterprises, the corporate culture can be so personality-driven that often the executive whose tech preferences determine company policy is the CTO!

In such cases, something as personal as the iPhone halo effect can have fallout that penetrates into the server room. In these scenarios, dominant executives become so enamored of Apple technology, and simultaneously so jaded with the company's platform status quo, that their belief in the need for platform change reaches across the organization: desktops and servers alike. "If Apple can make such a perfect phone," goes the reasoning we've heard from clients, "and such a perfect desktop OS, then they must be able to do the same in the server room, too."

Our characterization of this process may sound critical or even flippant. Indeed, we believe that good technology planning is not driven by individual preferences, but takes into account the totality of systems that make an organization tick, such as budgets, team workflows, and the sense of each user that the furtherance of his or her best professional (and personal) interests is the ultimate goal of the planning process. These are all parts of the corporate technology ecosystem.

In some companies, to be sure, criticism of this process (or of such a process' absence) is warranted. Nevertheless, it is not our intention to criticize SMBs whose corporate culture leads to personality-dominated technology planning. In



some companies the executive personalities who dominate the decision-making process are precisely consonant with what the organization needs. Most salient for the purposes of this paper is not the ethic of any company's technology planning, but just the simple fact that in SMBs, this planning can be so driven by an interest in questioning the status quo that it can effect change of the server infrastructure as well as the desktops.

In many of our SMB clients who have reached a level of planning this deep, a consensus seems to be growing that Exchange is not the only or best option for an SMB collaboration platform. Attention is turning to other such platforms; Kerio MailServer is the one that we have seen meet with the most success, and which seems to have the brightest future.

Kerio MailServer

Kerio MailServer (KMS) is a messaging and groupware server which is a powerful replacement for most of the features of Microsoft Exchange which are of interest to SMBs. Of particular interest regarding the iPhone halo effect, amongst KMS' benefits for organizations whose executives are adopting Apple technologies are:

- ⊙ Microsoft ActiveSync is built in; thus, KMS can conduct over-the-air synchronization for iPhone 2.0 and other ActiveSync devices.
- ⊙ KMS is OS-agnostic; it runs on Windows, Mac OS X, and Linux, thus providing cross-platform options for IT departments.
- ⊙ KMS has built-in support for CalDAV clients, such as Apple iCal and Mozilla Sunbird. At the same time, via an Outlook plugin, it supports the groupware features to which Outlook users are accustomed.
- ⊙ Unlike Exchange, KMS supports basic synchronization of Apple Address Book. Combined with Apple Mail and iCal (via the CalDAV connector, as noted above), KMS thus provides a true groupware alternative for Switchers faced with the Exchange-Entourage dilemma we discussed above.

- ⊙ KMS integrates with numerous directory services, including LDAP, Active Directory, and Open Directory, thus furthering its strength in cross-platform infrastructures.
- ⊙ As if to prove KMS' strength as an SMB alternative to Exchange, Kerio has developed a migration tool for moving domain and user data from Exchange environments. Additionally, its webmail interface design clearly takes a strong cue from the appearance of Exchange's webmail interface, Outlook Web Access.
- ⊙ The price point of KMS is well below half that of a comparable Exchange 2007 license, and takes a fraction of the time to configure. Maintenance and administration costs are negligible.

Kerio MailServer is an unusual solution in the landscape, because unlike Exchange, not only does it have many features that appeal to the cross-platform organization, but its costs of deployment and maintenance are significantly lower. In this sense, KMS is a perfect example of a technology that appeals to both the traditional, bottom-line technology planning analysis and the new, grassroots culture in which IT departments must find ways to integrate executives' cross-platform technology preferences into the organization. It also can satisfy SMBs whose technology planning is dominated more by personality and computing aesthetic than traditional planning analyses. It is a stable, full-featured, inexpensive solution that can run on, and support, platforms which are distinctly not part of the status quo.

Current Limitations of ActiveSync, Kerio MailServer, and iPhone

CTOs who are considering implementing Kerio MailServer in order to provide a cross-platform messaging and collaboration solution that pleases iPhone users and challenges the IT status quo should be aware of the following caveats, which apply to ActiveSync connections between iPhone 2.0 and KMS. (Note: some of these limitations are those of iPhone 2.0, and some are those of KMS' current ActiveSync implementation.)

- Ⓢ ActiveSync in KMS is hard-coded to run over port 80 or 443. There is currently no way to reconfigure this setting. This fact must be central in the network planning of any iPhone-KMS deployment.
- Ⓢ You cannot change the calendar color for the Kerio calendar; this is a “feature” of the iPhone. It may sound minor, but if executives are pushing a switch on aesthetic grounds, it should be included in setting user expectations.
- Ⓢ You can only have one Exchange account (i.e. Activesync/KMS account) configured on iPhone at one time.
- Ⓢ Email attachments are not currently supported in KMS-iPhone ActiveSync. This feature will be added in KMS 6.6, whose release candidate should be available within days of this writing. As a workaround, users can forward messages with attachments to IMAP or POP accounts that are configured on their iPhones in addition to the ActiveSync account.
- Ⓢ HTML messages are not yet support via ActiveSync, only plain text. Again, forwarding to another account on iPhone is the workaround, and KMS 6.6 should fix this omission.
- Ⓢ Although KMS, like Exchange, offers a public folder feature, there is currently no support for public folder syncing with iPhone. A corollary missing feature is the inability to view other user’s delegated KMS calendars and contacts on the iPhone; only the iPhone user’s ActiveSync data is viewable. (Global Addressbook Lookup is supported, however.)
- Ⓢ Currently, push ActiveSync doesn’t work over wifi; it will only work over the iPhone’s EDGE or 3G connections. This is because iPhone’s ActiveSync implementation uses the cellular networks to maintain a server heartbeat. This does *not* mean the iPhone will stop communicating with the server over wifi; it will still do so, but using data pull, not push. We include this caveat because some users are so reliant on the immediacy of push data that it may be important for IT staff to set this user expectation.

As we hope this example makes evident, Kerio MailServer and iPhone 2.0 are extremely viable, if imperfect, solutions when attempting to diminish corporate reliance on Exchange. While the technical caveats listed here are mostly innocuous, cosmetic, or replete with workarounds, one user’s indifference to a feature’s absence is another user’s enthusiasm at the killer feature they’ve been waiting for. The following suggestions may help CTOs avoid implementing new technologies that end up alienating more of the user base than they befriend.

Suggested Steps for CTOs

What’s a CTO to do when an executive insists on using their Mac with the company’s non-Apple infrastructure — or, more strikingly, pushes effectively for deep platform change at the server level? While the best course of action is highly subjective and situation-dependent, there are some general actions the CTO can take to make the outcome more pleasant for all stakeholders:

- Ⓢ **Set appropriate user expectations.** All of our natural Macintosh enthusiasm notwithstanding, the we can attest from decades of consulting experience that the iPhone halo can sometimes be blinding. Executives should know that any infrastructure or policy change will entail challenges, even if the result is a net gain in productivity and profitability. We have seen resentment and lost productivity ensue from shifts as small as switching a single user’s desktop OS if he or she was not aware of the need to make even rudimentary attempts to learn the differences between the old and new systems. This is a particular risk when switching to Mac, whose popular impression has been, “It just works!” when in fact, as with all technology, it only works if used correctly.
- Ⓢ **Attain buy-in from all affected users.** The organic, appealing nature of the iPhone halo effect stems from its bottom-up, not top-down, phenomenon. Users want to switch, or make other infrastructure changes, because they feel that doing so is in their own best interests. If those changes

will affect users other than the executives in the halo, engage in user education to prepare them for the technology shift. It's likely that it will be an easy sell, for by nature, bottom-up phenomena have more populist appeal than those imposed through formal, top-down planning processes.

- © **Gird your IT staff appropriately.** We have seen many environments where entire teams (usually marketing or design departments) have been neglected by the IT staff because they use Macs instead of Windows PCs. The resulting mutual animosity is good for nobody. Even if only a single executive chooses to switch, he or she will no doubt demand some kind of support. Whether you choose to train your entire IT staff in Mac support; limit the support responsibilities to one or two members; or outsource the job entirely, make a plan and inform your team of what's expected of them.
- © **Enlist a qualified consultant.** As with all major shifts in policy, hire a consultant to act, at minimum, in an advisory role. The firm should have experience with the kind of changes you're trying to make in your organization. Enlist them to plan the bulk of the transition and, unless you're willing to devote budget and staff resources to the implementation, lean on them to build whatever new infrastructure is required. You may also want to outsource the ongoing support if it doesn't conform with your internal IT focus.

Conclusion

The iPhone halo effect is taking IT by surprise, and will continue to do so for some time. Apple products have not been a factor in most IT formulae for over a decade, and their reentry into the enterprise through a back door is not making their renaissance any easier. The opening of users' awareness that they have options in their technology lives can lead to frustration and strife within the workplace as users recognize that their productivity differs depending on which technical tools they choose. With this realization, they are beginning to demand what seems to them logical: that they be given the choice to use the tools with which they feel most productive. That one user's produc-

tivity tool will be another user's time-waster is a challenge that CTOs should embrace, if for no other reason than that this dynamic will continue until the sea change passes. If the iPhone halo effect causes enough IT departments to invest in nontraditional technology, ultimately even the most disparate of platforms will grow more symbiotic, for the market trend toward cross-platform computing is picking up too much steam for solutions to be long in arriving. Rather than blindly embracing or rejecting their executives' iPhone-generated enthusiasm for eclectic computing environments, CTOs should simply learn what is necessary to manage it and provide their staff with the resources to do so.