



trash your desktop

IF SOFTWARE PIONEER MITCH KAPOR GETS HIS WAY AGAIN, ALL THE ELECTRONIC INFORMATION YOU NEED—E-MAIL, ADDRESSES, APPOINTMENTS, DOCUMENTS, AND MORE—WILL ALWAYS BE AT YOUR FINGERTIPS. WELCOME TO CHANDLER, A BOLD ATTEMPT TO REINVENT THE WAY WE USE COMPUTERS TO MANAGE IDEAS.

by michael fitzgerald | photographs by angela wyant

Kapor's calling: Lotus founder Mitch Kapor sees Chandler as a return to his first love—software.



“Thwump” sounds happen in boxing matches, not offices.

So when a loud thwump bounces off the exposed-wood ceiling in an office in San Francisco's once trendy south-of-Market district, every head turns. Programmer Jed Burgess is flat on his back next to a blue fitness ball. Burgess gets up, pulls his socks off for traction, and manages to balance atop the ball. Applause breaks out. Then the office returns to quiet discussions of software architecture punctuated by the clicking of keyboards. Welcome to Mitch Kapor's Open Source Applications Foundation.

Kapor himself, famous as the founder of Lotus Development and one of the software industry's chief malcontents, is away from the commotion. But if his foundation succeeds, it'll make a thwump the entire software business will hear. The organization's 13 programmers are hard at work on a piece of software that could change the way we manage our digital lives, curing the headaches of having to juggle the dozens of types of information stored on personal computers by a variety of applications—and, Kapor hopes, making computer users happier and more productive in the process.

Code-named Chandler, after the mystery writer (because, Kapor says, what they're creating was something of a mystery even to them when the venture launched two years ago), the software promises to put all related e-mail messages, spreadsheets, appointment records, addresses, blog entries, word-processing documents, digital photos, and what-have-you in one place at one time: no more opening program after program looking for the items related to a specific topic. It takes the core functions of Microsoft Outlook, the Palm Desktop, and other personal information management programs and integrates them with the rest of your PC and the Internet. All the information you need to complete a given task or project is grouped on-screen, organized around the one function—e-mail—Kapor sees as the central conduit of our electronic lives.

Because Chandler presents information in its logical context—displaying all related items together—and not in the separate folders and application windows of the traditional desktop computer system, you can think of it as a new way into your computer. “It may be hubristic,” says Kapor, “but we're trying to push the edge of the envelope in terms of innovation, and trying to pioneer a new type of interface”—one that he thinks is sorely needed. “Software is too difficult, too limiting, and pretty severely so, and it's a raw deal. The average user really gets screwed.”

Ending this “screwage”—a term that pops up frequently in Kapor's Web log—is important enough to the software tycoon that he's funding the foundation with \$5 million of his own

money. And this summer, Kapor gave *Technology Review* the first in-depth look at Chandler and the organization building it. Word about Chandler has gotten out through conference presentations, Kapor's blog, and the foundation's Web site, creating a buzz in programming circles. It's a “very interesting project to watch,” says Chad Robinson, an analyst with the Robert Frances Group, a Westport, CT-based computer consultancy. “They are focusing on completely redesigning how you interact with” the data that flows through your computer every day. Robinson calls this strategy “wildly ambitious and a total crapshoot.”

Indeed, achieving success will require a shift in the way both programmers and users think about how computer data is presented and organized. Not only that, Chandler is an open-source project—meaning that unlike commercial software, it will depend partly on the work of volunteer programmers, and its resulting code will be free to all. It's audacious to try to build a user-friendly program without the structure imposed by market requirements and shipping deadlines, and whether the project can succeed by Kapor's intended December 2004 release date is, so to speak, an open question.

In its favor, the Chandler team has some stellar volunteers, including Andy Hertzfeld, a programming demigod who built much of the original Macintosh operating system, and Lou Montulli, one of the founding engineers at Netscape, along with a core, paid staff of programmers like balance-ball Burgess.

At stake is a new, more intuitive way of handling information that could be as revolutionary as the replacement of the text-based, command-line interfaces of the earliest personal computers with graphical computer desktops. That's the vision that pushes Kapor—though he would prefer to be designing software—to spend much of his time imposing structure on the project. “I'm the benevolent dictator,” he says.

Chandler & Outlook

Microsoft Outlook and Chandler will have common elements, such as a calendar, e-mail reader, and contacts list, but Chandler hopes to add a number of novel features as well:

- An adaptive user interface that displays all the information relevant to what you are working on, no matter what form it is in—e-mail, word-processing document, digital photo, or Web page
- The ability to run on Windows, Macintosh, and Linux systems (Outlook does not work on Linux, and not all features are available for Macs)
- Built-in instant messaging
- The ability to swap out the calendar, the e-mail reader, and other software components if someone writes programs you like better
- Calendar and contact sharing that doesn't require a central server (and someone to maintain it)

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A NEW AGENDA

Kapor hopes Chandler will draw droves of converts but says he knows how fickle the software business can be. The seminal Lotus 1-2-3 spreadsheet was the must-have application that did more than any other to launch the personal-computer revolution. But Kapor, who founded Lotus in 1982, left the company five years later to lead On Technology, which had less success. He quit the software world altogether in 1990, when he cofounded the Electronic Frontier Foundation, a digital-civil-liberties group that filed, and won, some of the earliest cases involving privacy

Software revolutionaries:
Chandler has attracted
some of the best and most
irreverent programmers.



protection and free speech online. After that, Kapor became a philanthropist and investor, hitting it big with founding investments in Real Networks, the Seattle-based streaming-media giant, and UUNET (now part of MCI), which runs the largest privately owned chunk of the Internet's backbone network.

Now he's back to his first love, software design. He thinks most of the "productivity" programs available to workers and consumers today are too complicated and inflexible. Case in point: Kapor and his wife Freada Kapor Klein, who leads a small sexual-harassment consulting firm, wanted to use the calendar-sharing feature of Outlook to coordinate their schedules and those of their assistants. But to do so they had to install and administer Microsoft Exchange, a heavy-duty server program for corporate messaging and collaboration Kapor calls expensive and hard to maintain. "It's total overkill and it's horrible," he says.

That experience was on Kapor's mind as he considered reviving the ideas behind Agenda, a database and information organizer that was his Lotus swan song. Agenda automatically stored free-form database entries—such as "Call Alice on Friday about the Australia trip"—under multiple categories, such as phone calls, Alice, Australia, and Friday. It then recalled the entries at the appropriate times—for example, when the user reviewed Friday's to-do list. Even though Agenda ran on Microsoft's original DOS operating system, requiring users to learn many typed commands, devotees raved about the program's ability to sort related data from disparate sources. But the program never sold well, and Lotus abandoned it after Kapor left.

Kapor thinks Agenda was merely ahead of its time. And because so many of the ideas that keep our lives and businesses

humming are now shared over the Internet, he believes that any program that revives some of the principles behind Agenda should be, first and foremost, built around the Internet's killer app: e-mail. Despite the Internet revolution and the tremendous amount of money and energy invested in creating software for it, the main interface to your computer—the desktop—looks much as it did the first time you used a computer that featured graphical icons, even if it was a Macintosh in 1984. But with Chandler, Kapor envisions e-mail as the main interface with computers, with entities like calendars, contact managers, instant messaging services, and file folders grouped around *it*.

"People spend enormous amounts of time in their e-mail; we're totally e-mail-centric. It's the hot ticket in productivity applications," Kapor says.

SECRET AGENT MAN

Chandler puts the user's convenience above all else—which means the way e-mail and other entities are grouped is changeable, depending on the tasks at hand and how users want their information arranged. The foundation's programmers are calling the groups of files "contexts," since the point is to let users easily access related items, and to control what types of items appear.

The "to-do" screen, for example, could be a context, with e-mail mixed in with related task items. So if you're planning a party, Chandler might put a calendar with key dates on it (when to pick up a cake, say), the invitation form, RSVPs, a task list, and even a budget on-screen at once. When a guest's e-mail request for veggie hors d'oeuvres arrives, arranging for them would auto-

matically be added to your to-do list. Contexts will mean Chandler can reorganize the screen every time the user shifts between projects, as if she were replacing her desk with a new one. That's a far cry from today's software, which forces people to dig through applications and file folders to find things, and to print them out if they want to see everything in one place. And while Chandler will offer preset contexts, Kapor expects other open-source programmers to build them, too. If someone develops a better way to run spreadsheet analyses, a user can simply pull out existing contexts and replace them. (Try that with Outlook.)

Driving some of Chandler's flexibility will be a technology with a checkered past: software agents. These are small pieces of code typically designed to perform individual tasks, such as beeping when an e-mail message arrives. Attempts to build more sophisticated agents, such as Microsoft's much-loathed "Clippy," an animated paper clip that purports to help people use Microsoft Office programs, have faltered. That's where Chandler volunteer Andy Hertzfeld comes in. The exuberant, boisterous programmer, whose Mac OS remains perhaps the most user-friendly program ever, thinks agents done well could reshape how people use software. "On the network, there's a whole world that's constantly churning out there," he says. "So can we allow end users to express their desires automatically and then track them?" For instance, Hertzfeld asks, why shouldn't your computer have an agent that will perform mundane tasks such as making hotel reservations when it finds a room for the right price, or update your address when it sees that a friend's contact list is out of date?

Hertzfeld can't resist plays on words—he's working on "postal agents" for e-mail, "travel agents" for booking trips, and "secret agents" to handle software encryption. But his purpose is not to be whimsical. "Mitch is afraid I'll make it too cutesy," he says. "I have to make things Mitch-friendly."

FROM BLUE SKY TO NUTS AND BOLTS

As Chandler's lead designer, Kapor has fun dreaming up new things. But he's also the boss. "You can't coordinate a project of this scope in an ad hoc structure," he says. In one of the programming team's regular Thursday morning meetings, Kapor lays down the law. "We should aspire to a rare and unprecedented level of honesty" about schedule slips and bugs in code, he tells the team. Kapor's voice is slightly hoarse, a vestige of his pre-software days as a DJ, and he has a balky back, so he's often more comfortable in meetings when he stands. He commiserates with the staff about the difficulty of meeting targets, saying "things never take shorter, they always take longer.... We're not going to change human nature here. But let's have a reality-based schedule, if we can bring ourselves to do it. We're not VC-backed, so we have more of an opportunity to do things differently."

The chance to work with Kapor on a groundbreaking product has attracted exceptional software people. Besides Montulli, a

number of other former Netscapers are involved. John Anderson, who has to figure out how to build what Kapor dreams up, is one of Silicon Valley's best contract programmers. E-mail architect Kaitlin Duck Sherwood has spent most of her life around computer messaging: her parents worked on PLATO, a seminal 1970s communications project at the University of Illinois. Hertzfeld seems to speak for them all when he says, "The purpose of coming in to work every day is to improve life for the user."

But that won't be easy. Though Kapor has put serious resources behind the foundation, Chandler is by no means a sure bet. The project has moved slowly since its kickoff in the summer of 2001, with more vision than code to its credit so far. Critics say Kapor is better at concepts than execution, noting the failure of several of his products after 1-2-3, including Agenda. And Kapor's attempt to reorganize functions like e-mail, calendaring, and contact management has some labeling Chandler an "Out-

look killer" and questioning the wisdom of taking on Microsoft. Kapor, however, says it would be "psychotically suicidal" to challenge Microsoft commercially, and he thinks it's far fetched to talk about dislodging Outlook from its market dominance anytime soon. Still, since he does expect Chandler to have mass appeal, he says if that forces Microsoft to rethink its approach to applications, great.

Kapor says the skeptics are also missing the point when assessing the group's progress. After all, it was only in August, once the idea of contexts coalesced, that Kapor declared the end of the "blue sky" phase of the project, directing programmers away

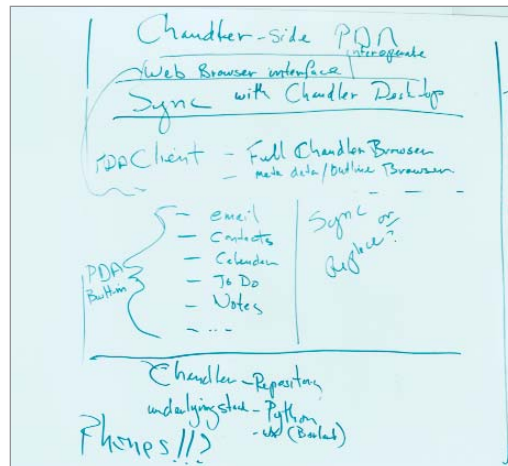
from developing models and demos to actually writing code for the program's major pieces. Kapor now believes that late 2004 is a realistic ship date for the first full version of Chandler.

And while some doubt, too, that open-source efforts can produce programs that rival commercial software, the spread of products like Linux suggests otherwise. Indeed, Douglass Wilson, chief technology officer for Lotus (now a division of IBM), says that open-source methods can build very high-quality software "by virtue of having lots of eyes." He says the key is getting the right eyes. "What makes open source go is the community. If a technology spawns a community of interest...then you have both a very powerful creative force and a market force."

It's too early to say whether Chandler will develop such a community. Besides the technical challenges and the user issues, it's hard to picture exactly what Chandler will look like, and until its basic framework exists, developers outside the foundation's San Francisco office can't write code for it.

So will Chandler succeed? Kapor pauses. "Uh, uhhh, yeah...." And suddenly Kapor the open-source advocate morphs into Kapor the CEO, and asserts, "It's like any other startup. When you're doing something new and different, there are always risks. But I'm increasingly confident that it's going to work." He chuckles. "But maybe you caught me on a good day." ■

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Beyond blue sky: A hand-scrawled list shows features that will let Chandler interact with handheld devices.