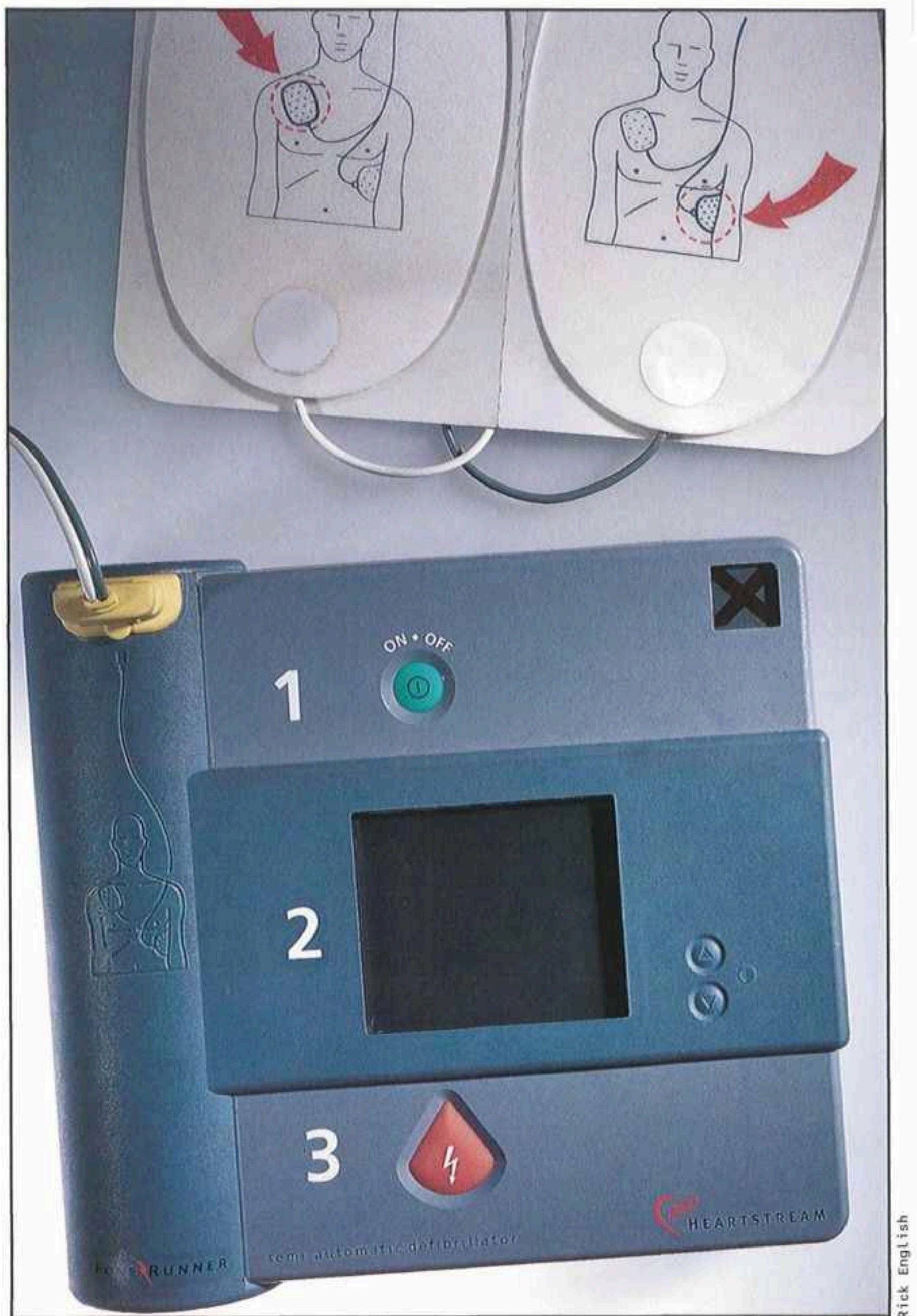


IN SEARCH OF THE "WET NAP" INTERFACE



how do you refine an innovation? How do you streamline a product or service to the point where it's as simple and powerful as the Palm V or the Heartstream

defibrillator?

It's no easy task, but if you're successful, you may just get a chance to come out with version 2.0. There's no finish line. Once customers start to use your products or services, you need to refine them again.

FIGHTING FEATURE CREEP

It can happen at nearly any point in the development or refinement of a product or service. It's the enemy of innovation, and every team molding a product or shaping a new service fights it sooner or later. When real innovation stalls, feature creep often sets in. Several years back, for instance, Matsushita asked us to help it introduce a new steam iron. What could be simpler, right? Think again. In Japan steam irons were laden with features that, while impressive, weren't really valued by their customers. A typical iron at the time had three different kinds of steam, a detachable water reservoir, and a little "garage" for storing the iron during cool-down. Packing those features in pumped up the price of Japanese irons to a whopping two hundred dollars, while the Southeast Asian models were hitting the market at thirty dollars. Ironically, many of the Japanese irons' more technical features didn't appeal to *women*, who made up nearly 100 percent of the domestic market. So we dumped the techno focus, eliminated features that were confusing or underused, and ushered in a simpler, softer iron that could be made for less than half the original cost.

We're all in search of what Carl Ledbetter, former president of AT&T Consumer Products, used to call the Wet Nap Interface, products built to be used as simply as the directions on those little moist towelettes you get with take-out foods: "Tear open and use."

We haven't quite scored the Wet Nap Interface yet, but we've tried. When we were designing Apple's first mouse in 1982, it was up in the air as to whether it would be better to make it a one- or two-button mouse. We believe Apple made the right decision in sticking to a single button. Apple was already asking people to shift from a world of keyboard-based commands to a graphic, mouse-controlled environment. Adding an extra button was too much to demand of users in the first version of the product.

I've seen feature creep happen so often that I can almost see it coming. When design is done by committee or the goal is fuzzy, you can be sure that feature creep isn't far behind. It's a little like restaurants that list dozens of entrées on the menu when only one or two ingredients in them are different. Remember how the original VCR was absurdly difficult to program? Nobody bothered to separate the unnecessary features from the critical ones, let alone create a user-friendly

interface. If you find yourself struggling with a manual, you're likely a victim of featuritis. Texas Instruments, for example, once came out with a digital watch that practically required programming skills to set the time. Not surprisingly, it flopped. The thick manual was a sign that something was wrong. And we've all cursed overly complex digital clocks on the bedside table of our hotel room, when what we really want is something that works as simply as the old mechanical versions.

Everybody occasionally lets the details crowd out the objective. Who hasn't written a report a dozen pages too long or padded a PowerPoint presentation? Over the years, IDEO has received its share of run-on résumés that seemed to chronicle nearly every major life event. Not that we're perfect either. We once tinkered incessantly on a programmable robot for kids until we weighed it down with so many capabilities that it was too complex to understand and too expensive to sell.

We've all seen featuritis run amok. Open up the average in-flight mail-order catalog, and you'll probably find a cornucopia of feature-crammed products that seem to have no reason for being other than the fact that an awful lot of people must have big attics. Most of us could live without an electric tie rack or a collapsible shoe horn.

The software industry has always competed by comparing feature lists, and as a result, the "new, new" version is always bigger and often clumsier than the one before. During the 1990s, for example, Microsoft introduced a series of new versions of its popular Word program. Each one seemed to be loaded with new features, but ran noticeably slower on some machines. (Imagine if Intel came out with a new chip family that was slower than the previous one.) Since I seldom use those high-end features, I feel like I'm driving a Chevy Suburban down a bike path.

Companies and, yes, executives, too, need to spend more time "driving" their own products. A few years ago, when Hertz introduced its NeverLost GPS navigational system, I became an enthusiastic early adopter. I'm dyslexic at map-reading and hopeless at directions. I like nothing better than to program in my destination and then follow the little arrows. But in the first two versions of NeverLost, the most basic feature was missing. Inexplicably, NeverLost lacked "a last-number re-dial," as in a "take me back where I just came from" command. If I've just driven from my hotel to the client's office, shouldn't there be a "return to origin" feature—like HOME on your Web browser? Last I checked, it took half a dozen clicks with a mandatory wait after each one on NeverLost to accomplish this.

Try "driving" your own products and services, as if you were trying them for the

first time. My guess is you'll find something missing you may want to incorporate in version 2.0.

GIVE SIMPLE DIRECTIONS

Simplicity in design is like clear directions. Give customers fewer turns in the road, and they're more likely to lock onto their destination. Where there's featuritis—or fat—opportunity is nearby. What is Sun Microsystems's Java software but the promise of a slimmer, simpler programming environment? Even the VCR, after a few years, became a little easier for taping one's favorite shows. Stereo and TV manufacturers, too, seem to have learned some of the same lessons experts put in practice long ago in fighter cockpits. Simplicity is essential. We can only remember seven numbers easily, and we can only make sense of a limited number of controls. That's why manufacturers created that little door at the bottom of your TV to hide the knobs you rarely use. Good remote controls also have little covers that protect us from obscure features, since we mostly use only the power, volume control, and channel buttons.

The first step to refining products or services is chucking preconceptions about how complex something needs to be. Virtually every industry has established thinking about which features are or are not necessary. To refine a product, you need to challenge that status quo. You need to be an editor, willing to cut away what's not essential to your story line.

Medical products have been notoriously feature-laden. But in dozens of products, we've managed to cut through that unnecessary complexity. My favorite of all the four thousand products IDEO has worked on is the sophisticated but simple Heartstream defibrillator. In spite of its complex underlying technology, the 1-2-3 interface on this device is so simple that even a child can figure it out. Literally. I handed my six-year-old a demo unit and asked her to give it a try. Without hints or help from me, she successfully pushed the big green start button and plugged the chunky yellow connector cords (which deliver the shock) into the defibrillator. (We were running it in training mode, of course, so the machine couldn't actually deliver a shock.)

"Now push the orange button," a calm voice directed my daughter. The same words appeared on a screen. The orange button flashed and beeped. My daughter pushed. In reality those steps could have saved a life.

We've learned that the public and even supposed experts are often not the best judge of which features need to disappear. Refining products is not a popularity contest. You have to take risks and you will alienate some people. For example, a number of reviewers criticized Steve Jobs for not including floppy drives in iMacs

and iBooks. But they missed the point. The iMac was designed to catch the Internet wave, and a floppy drive would have demanded extra space, fattened the price point, and focused on a soon-to-be-obsolete technology. Jobs wisely decided that the machine couldn't look like something from the Jetsons yet be weighed down with eighties technology.

SIMPLE AS A FRISBEE

At Stanford, where David teaches, he talks about "low mass" solutions. One of his favorite examples is the Frisbee, an innovation that bridged modern plastics and aerodynamics with the classic Greek discus. It boasts no moving parts, requires no instructions, and delivers fun with very little practice—all with about fifteen cents worth of molded plastic.

We've found that this simplicity factor applies to all kinds of products. Ironically, we've often found that version 2.0 can be an ideal time to streamline, but that's exactly the point at which software companies are tempted to add bells and whistles. We believe that approach is flawed and out of favor. Companies today understand that what people want is more integration and simplicity. The reality is that it takes time. You often can't achieve it in the first version of your product. You've got to get to market, gain market share. Version 2.0 may be your best bet.

Several years ago AT&T asked for some help in redesigning its phones. The telecommunications giant wanted us to create a "design language"—a kind of visual style guide—to help inspire and inform current and future designs. We eschew traditional "rule book" style guides and think you should too. They're often written too narrowly and end up suppressing innovation. But AT&T had a huge problem on its hands. Decades of monopoly control had distanced it from customer needs and desires. When AT&T came to us, it had a mishmash of twenty-seven different handsets in active use. As Carl Ledbetter said at the time, "I don't know what the right number of handsets is for our product line, but I'm sure it's less than twenty-seven!"

The irony was that AT&T should have been designing great phones. They'd collected amazingly useful human data on how phones work best, everything from how to achieve an acoustic seal with the earpiece to optimizing the spaces between the keys. But in a company as large as AT&T, that knowledge didn't always transfer to the products.

We came up with something we called the Allegro design language. You've probably seen the phones it inspired, as the design language was widely implemented by AT&T and later by Lucent. Before, most AT&T phones were flat and rectangular with hard, off-putting edges. Allegro strikes a more human,

receptive tone. The phone literally points to you, the receiver and handset tapering down and in. Keys are cupped to fit fingertips so you don't misdial. Small "signature details" help locate or emphasize functions. The answering machine's play button is the largest, for instance, and less-used features like flash, mute, and hold are grouped together. Color coding distinguishes between the telephony and answering machine functions.

HANDS ON

The best products understand something fundamental. You need to spend the most design attention at the place where you touch the product the most, like the spongy grip we made on the Oral-B toothbrush, so kids could "squish" the toothbrush in their fists, or the color-coded "touch points" on the McGaw Horizon infusion pump we designed that draw the nurse's eye to the points of interaction. We all know this principle because we've seen it. Good VCRs make the play button the biggest, for example, because it's the one most frequently used. Similarly, most of the heavy machinery in our shop has a gigantic red shut-off button you can hardly miss in case of emergency.

There may be no better example of this hands-on approach than in the design we did for the Palm V. Jeff Hawkins of Palm wanted something with the impact and feel of the new strikingly small Motorola StarTac cell phone. At the time, this seemed crazy. Most manufacturers were treating cell phones as bland commodities, giving them away in exchange for subscription plans. But IDEO's Dennis Boyle thought it was a great idea to aspire to the StarTac aesthetic, and launched the project by buying lots of products that would give the team an immediate feel for the design goal. We passed around the IDEO brainstorming table a number of elegantly designed, high-priced Japanese gizmos: a Sony MiniDisc player, a Panasonic mini tape recorder, a pair of Pentax binoculars, and the Canon Elph camera—all a far cry from the heavy-boned gray PalmPilot.

From the outset, Hawkins approached the Palm V as a verb and not a noun. He carried a crude wooden prototype around in his pocket, even pulling it out during meetings to simulate the taking of notes or checking of his calendar. Whether he realized it or not, he was beginning a process of exploration that was similar to (but more advanced than) what Art Fry, inventor of the Post-it, engaged in when he handed out the little stickies to secretaries and fellow employees and watched his innovation take on a life of its own.

Yet the refinement Hawkins and Boyle were seeking might have easily been subverted by the sort of group feature-creep pressures I spoke of earlier. There were those in Palm who wanted to compete with Microsoft head-on, matching

Windows CE devices megabyte-for-megabyte and feature-for-feature. But the truth is users seldom use all those megabytes. Hawkins sensed the Palm might be able to break out of the geek stereotype and cross over to a new audience. Ideally, the product would appeal to men and women alike.

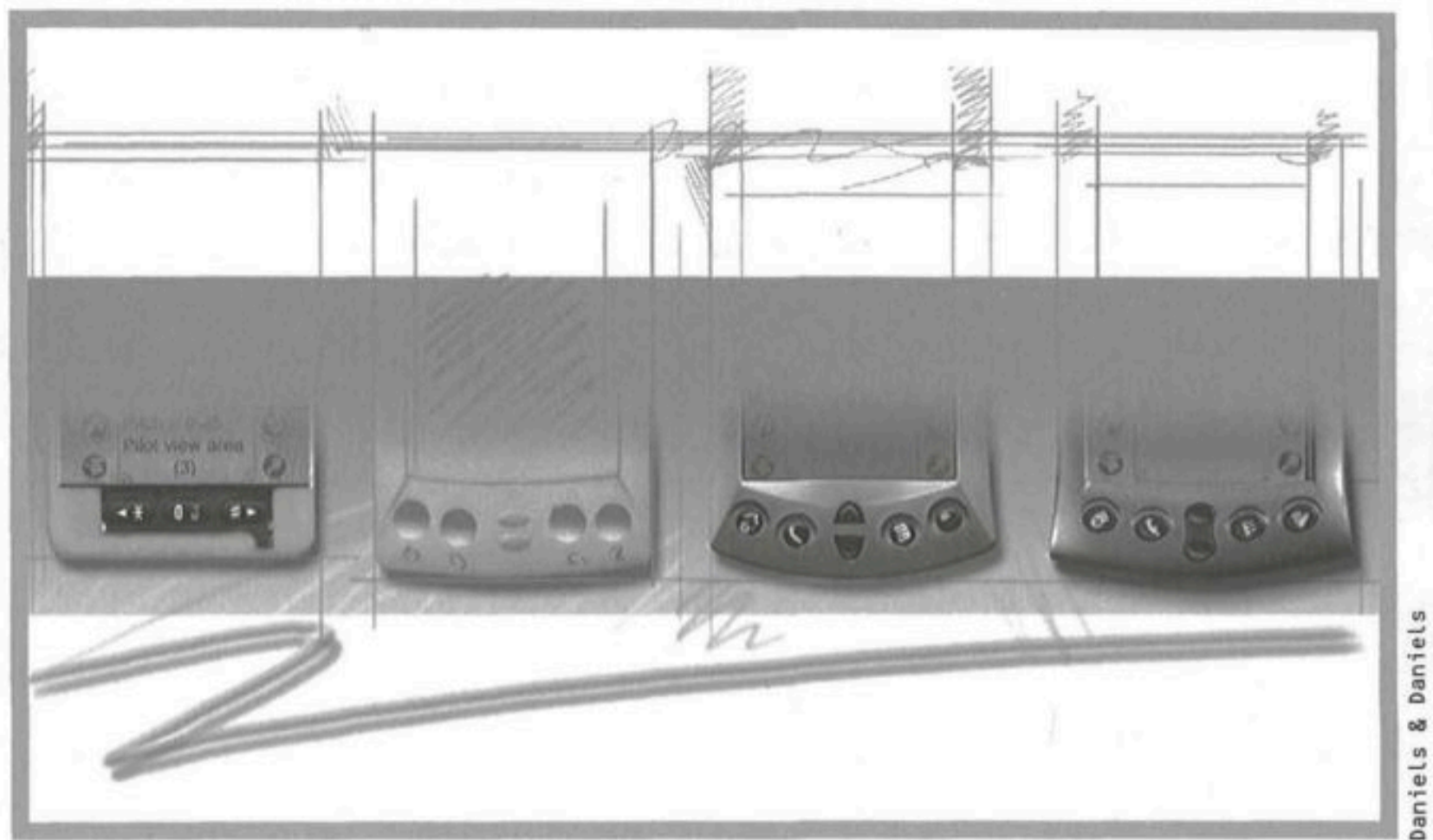
To gain a more gender-balanced viewpoint, Amy Han led a brainstorm with a group of IDEO women about the limitations of the Pilot. The female IDEOers trashed the Pilot's square-jawed gray masculine profile and added their voices to the movement for a softer, slimmer Palm.

LETTING GO

Dennis and Amy began an excruciating process of refinement and elimination. Twice a week over the next two years, they met Hawkins, invariably showing a new prototype of some small element at each meeting. Every button's placement, subtle variations in the size of the screen, every sound; even the placement of the stylus was considered (it slides onto either side to accommodate lefties). Until then, the buttons, for instance, had been convex. But Boyle's team discovered that a slightly concave button felt better on your finger. They machined dozens of different button shapes, trying them with different graphics. They even played with the numbers of pixels on the screen, packing a few more into every inch and shaving a millimeter off the size of the Palm V display.

A cynic might say the Palm V was bound to look and feel better than its predecessor simply because design became a priority. But if simplicity were easy, we'd see more of it. Halving the thickness of the Palm V required a tremendous amount of creative design, plucky engineering, and old-fashioned persistence. For example, Boyle wanted to break with the mold and make the case anodized aluminum instead of plastic. The material would help the team achieve its desired slimness and the elusive design goal of understated elegance.

But Boyle couldn't find an American manufacturer who would make the case. So he asked Naoto Fukasawa, head of IDEO's Tokyo office, to make introductions to the few Japanese vendors capable of making the slender case. They were reluctant. Why should they divert their attention



Dozens of prototypes helped fine-tune the Palm's simple interface.

from major Japanese brands like Sony and Panasonic for a lesser known enterprise called Palm? But after countless meetings, a vendor agreed to make the case.

There's a valuable lesson here. Genuinely new designs often don't just challenge your customers' perceptions of what your product should or shouldn't be—they often test your partners as well. Batteries, for example, were another potential obstacle to our plans, since even tiny AAA batteries were too big to meet the target dimensions. Lithium ion batteries were relatively new, and at that time no one made them that small. The team soon learned of another obstacle. No one had studied whether batteries would last when recharged just five minutes a day during the typical Palm "hot sync" cycle (when you attached the device to your PC). IDEO worked up prototypes, performed its own tests, and determined it was possible. Not only did we find manufacturers willing to make lithium ion batteries work in the device, but the battery makers wanted IDEO's test data.

In the end, refinement involves asking what you don't need, even if on first glance it seems to be holding everything together. Screws are what traditionally bind together the parts of electronics and computers. But Boyle ultimately decided that, just as they needed to move beyond the aesthetic of plastic to metal, the screws, too, had to go. It wasn't easy. Though the manufacturer had initially agreed it was possible, the main proponent of not using screws left the company, and the new manufacturing regime wanted to screw it together. The entire project nearly ground to a halt.

Hawkins called a "come to Jesus" meeting. "You guys are just going to do it,"

Boyle remembers Hawkins telling the manufacturer. "I'll take the responsibility if you can't." But IDEO, too, had to take responsibility. Amy Han, Jim Yurchenco, and Andy Switky of IDEO experimented with countless different adhesives and bonding methods. Han flew to the Salt Lake City manufacturer nearly a dozen times. Finally, they did it: created the first handheld computer that was bonded together with industrial glue.

Personally, I love the final product. I think it's an original that will stand the test of time, one of those products that define a category, right up there with our work on the Apple mouse. Which raises a great question. What if you're trying to improve something you thought you got right the first time? Or harder yet, a product that another company got right?

BUILDING A BETTER MOUSE

That was exactly the challenge we faced with the Microsoft mouse in 1987. Microsoft had worked with original equipment manufacturers to introduce its first mouse in the mid-1980s. But after the first mouse got a lukewarm reception in the marketplace, Microsoft decided to go back to the drawing board. This was a classic version 2.0 opportunity: ideal for refinement.

Jane Fulton Suri enthusiastically dived into the problem, examining nearly every element of people "mousing" in countless designed exercises that tested speed, comfort, and accuracy. The ball, for instance, had generally been positioned in the center or toward the mouse's rear. Jane proved empirically that moving the ball forward and letting people drive it with their fingers yielded greater precision—sort of like sprinting on your toes instead of your heels.

She also found that people naturally draped their fingers over the front of the mouse, suggesting that buttons should extend the width of the entire mouse, including the front. We made the left button larger than the right, because Jane's observations told us that people rarely used the right button. And we created a slight ridge running down the middle of the keys like the bumps dividing a freeway, to keep you from accidentally "chording"—clicking both buttons at once.

Credit for the mouse's comfortable-to-grip and "Dove Bar" shape should go to industrial designers Paul Bradley and Mike Nuttall. The Microsoft mouse was the first computer accessory to sport the glossy, self-cleaning finish originally found in telephones. Boldly white, it broke from previous beige and gray tones, and became widely emulated. The team also came up with what at the time was a novel branding solution. Simply printing the logo wouldn't do, since frequent handling would wear it down. Instead, we used a "double shot" process, in which the gray Microsoft logo was molded directly into the white plastic of the case. It worked

perfectly, leaving an absolutely smooth surface and making the logo last for the life of the mouse.

The new mouse's look and feel made a huge difference, proving once again that design can make a breakthrough product. *PC Magazine* heralded "a dramatic, new shape" that was "a sheer pleasure to hold... the best feel of any mouse." The Microsoft mouse sold like hotcakes—more than 7 million units—providing Microsoft the brand recognition to expand into other lucrative hardware accessories.

HOW TO CREATE GREAT PRODUCTS AND SERVICES

Thousands of projects and hundreds of successful products have taught us some valuable lessons. Here are some of the objectives we try to keep in mind when starting work on the next new thing.

1. MAKE A GREAT ENTRANCE

Good buildings, Websites, and products make it easy to find your way about. They leave no doubt about which door to open or button to click. How do you welcome people to a service? When Wells Fargo asked us to help redesign its ATMs, we responded with curves. We introduced a subtle, curved cut-away Corian countertop that invites you to stand closer to the machine.

Strive to make the people who use your product or service feel welcomed and comfortable. At the Grand Wailea in Maui, you give your name to the guard at the front gate. A few hundred yards up the road, at the hotel entrance, you're then "magically" greeted by name. The warm welcome helps make a great first impression. It works partly because it's so personalized. One of the hallmarks of first-class service— on an airline or in any other environment—is that people address you by name.

2. MAKE METAPHORS

Try coming up with metaphors to inspire your new products. Several years back we were working on a portable disk drive called the Plus Passport. It had to be able to withstand being dropped from a couple of feet. You can express that in engineering terms, but the company had thought about this subject and managed to boil it down to a potent metaphor. "Think as though you're designing a thirty-five-millimeter camera," they told us. "Our drive should be just as rugged. Drop it six inches to the desktop, and you expect it to survive. Drop it three feet to concrete without its case, and you ought to blame yourself when it breaks." It may sound like a little thing, but that image helped our team immeasurably in designing a product with just enough shock resistance.

Is there a guiding metaphor or phrase that might help you make your product or

service focus on your customers' true needs and desires?

We all know how important names can be in defining and marketing products. Where would Apple be without the iMac, or Iomega without the Zip drive? That same spirit can be brought to themes or metaphors in the first stages of development. Encourage fun. Honda likes to come up with a philosophy, a mascot of sorts, to guide it through the design process. For a new engine it was designing several years ago, Honda came up with the concept of "a rugby player in a business suit," suggesting a balance between athletic prowess and gentlemanly professionalism. They even took it a step further with key phrases to capture specific attributes the car should evoke, everything from "tough spirit" to "stress-free." We've used metaphors on products from office chairs (the Vecta Kart chair that easily stacks, inspired by—you guessed it—a shopping cart) to soda cups (Pepsi's more durable, take-out Twist 'n Go cup is inspired by sports bottles).

Thinking up metaphors or phrases to guide your design and product objectives works even on small, internal projects. More and more companies have playful code names for products under development. Try it. You'll be surprised by how it can be a guiding light.

3. THINK BRIEFCASE

The traditional briefcase. It's a great way to help you think about products that bridge the gap between work and home. Why did the briefcase become such a powerful and loved icon for the American worker during most of the twentieth century? The classic American male worker loved his briefcase or lunch pail for the simple reason that it was one of the few things he could take home. You didn't lug your typewriter or desktop computer home on the train. People grew attached



Steven Moeder

The "stackable" Vecta Kart chair builds on the metaphor of the shopping cart.

to their weathered leather briefcases the way they grow attached to an old wallet. Apple PowerBooks, Montblanc pens, and a handful of cell phones have all attained briefcase-style status. Judging from some of the projects we're currently working on under nondisclosure, I believe we're bound to see plenty more of these in the years ahead. Devices that cross over between work and home will always resonate stronger than purely office-based equipment. We might have the latest Intel processor at work, but we're emotionally attached to our PDA or cell phone.

Imagine that your ideal customer is on the commuter train, headed home after a long day. Make him or her want to bring your offering on that journey, and you

can't help but succeed.

4. COLOR INSPIRES

Color works best when it's a pivotal, early step in design. I'm not an expert in color, but I've sat in on dozens of meetings with Mike Nuttall and listened to him make color part of the initial design goal. He'll ask a company what it wants to express with a product. If they say something along the lines of "powerful, for senior executives," Mike will come back with descriptions like "black, sleek, and angular." We made that machine for the Dynabook, and IBM has maintained that style— and color—to this day in its ThinkPad laptops.

OK, so you want your machine to be playful, nonconformist, express your artistic, right-brain tendencies. Well, you don't want black—or white. Maybe you're interested in lemon or orange. You've started on the path to an iBook, of course.

The key is starting early in the prototype stage. For all the color that's washed over consumer products in the past few years, most companies still live in a black-and-white world until the design and engineering are nearly complete.

Way before we had candy-colored Palms and iMacs, color made a huge difference. Olivetti introduced a rainbow of typewriters in the 1960s, equating color with, yes, portable typing—on the beach, in a sports car, and so on. In the flat plains of the Midwest, I've been able to spot from nearly a mile away whether someone is sitting on a green John Deere tractor or a red International Harvester. Color can be such a defining element in a product that certain companies seem to own pieces of the rainbow. Sony, for example, picked a distinctive orangish yellow to boldly announce its durable "sports" product line; Tiffany, meanwhile, seems to have the retail franchise on a certain shade of blue.

5. BACKSTAGE PASS

Let your customers know what's going on behind the curtain, and they'll reward you with business and perhaps even loyalty. Early on, Amazon wisely started sending confirmation e-mails, letting customers know the progress of their orders through the shipping process. Netscape created animated shooting stars to let you know the browser was busily connecting; the hourglass icon on your screen lets you know that the computer hasn't forgotten about you. Philips introduced see-through kettles and toasters that let you see when the water is boiling and your toast has reached the right shade of brown. Clue people into what's going on behind the scenes, and they'll be happier, even if they're still waiting.

Help your customers poke their heads above the crowd. I bought insurance on-line recently, and they sent me mail or e-mail virtually every day to tell me

where things stood, what the next steps were, and what they needed from me. Similarly, eBay—a Website I find practically addictive—sends you an update daily to remind you which bids you still have in play and which you've been outbid on. We all hate to be put on hold, but it's reassuring when the better "on hold" systems tell you how long you've got to wait before your call is answered.

6. ONE CLICK IS BETTER THAN TWO

Make your product or service work faster and simpler, and it will probably succeed. The one-click ordering process pioneered by Amazon makes a huge difference in the time-sensitive world of the Web (though it seems such a universal idea that I'm not sure it should be patentable). Off-line and on-line, there are lots of examples where companies make leaps by reducing clicks or eliminating steps. Have you ever noticed that price never gets discussed in most FedEx shipments? Not only does it make businesspeople less cost-sensitive, but it also speeds up the processing of your package.

I have always liked the one-click feature on some ATM machines. After entering your password, you just press "Express \$100," and you're on your way in seconds. The best Xerox copiers assume you want to make one copy on standard-sized paper—unless you tell them differently. Products need default modes. They should do the basics with minimal hand-holding.

What's the opposite of "one-click"? Unfortunately, I know an office phone system that fits into that category. When you call in for messages, the system asks your extension and password, then gives you *eight* different options. Unfortunately "listen to my messages" is not the first one, even though that's all you want to do 90 percent of the time. When you select "get messages" it still doesn't play them. Instead you are informed, in a painfully slow voice, the day, date, and exact time of the first message. The system then waits for further instructions, as if you haven't really been clear about what you want. Yes, you have to press *another* button to actually hear the call. And another to hear the next, and so on. No autopilot here. You've got to work to retrieve every single message.

Compare this to the Palm's simple operating system. Even when the product is off, you just push the phone-icon button, and it assumes you want to look up a phone number, since that's what most people do. Scribble the first letter of the last name of the person you're looking for, and up pops a screen of names, including probably the person you want to call.

What's the point? It's the twenty-first century. People are busy and often a little impatient. Don't let your cloud of features blur the simplest, most common use of your product.

7. GOOF-PROOF

Where would we be without the "autosave" and "undo" commands when writing a memo or letter? Nearly every product or service could use a "mistake-proof" button, a real or virtual "Wite-Out."

At IDEO we try to apply the "undo" principle to nearly every stage of product development. Take prototyping. Hot glue guns give us a margin of error. It takes about fifteen seconds for the glue to harden, plenty of time to wiggle the parts into position. All good products help prevent mistakes, but the real winners help you recover *after* you've misstepped: like self-sealing bicycle tires or the foldable side view mirrors on cars that spring back instead of breaking when you bump into them. How about your product or service? If your customer accidentally steps off the intended path, how easy is it for them to get back on track?

8. FIRST, DO NO HARM

The physician's creed applies to products and services as well. It sounds obvious, but too many companies forget this most basic principle. Take the pain or struggle out of your products or services, and you'll not only win over customers but likely beat out the competition as well.

Think of the traditional iron. There's something terribly wrong with a product that makes you spit at it or fry your skin to find out if it's ready. Why must crutches be so cumbersome and painful? Why must tin cans slice fingers? Who looks forward to lighting the pilot on a typical household water heater? (I always say my prayers first.) I'd argue that the reason this hasn't been redesigned is that manufacturers don't consider or care about the pain and fear homeowners feel.

Reducing danger or saving just a few lives can generate an awful lot of goodwill. Think of the benefits Volvo has reaped by making its cars safer.

Look around. Are you causing your customers discomfort or even minor pain in some small way? At my local grocery store, a blast of cold air shoots down on your head when you enter. In rental cars, when you turn off the key in the ignition, the interior goes dark; couldn't a little LCD (they cost about eight cents) light up the door handle for a few seconds? And finally, as far as opportunities go, how about those hundreds of millions of CDs sold each year? I know retailers want to stop theft, but customers who just paid \$16.99 for their new music shouldn't have to arm wrestle the package to get it open.

9. CHECKLIST

There's often a basic feature and compatibility list you need to check off before introducing a new product or service. Fail a critical compatibility test, for instance, and you'll flop. This is one element of product development that is entirely

unforgiving. No matter how innovative your product may be, it must fit certain industry or public standards.

We once traded our services for stock in a computer company that flew in the face of this logic. In many ways, the Bytec Hyperion portable was superior to the first Compaq machine. The Bytec had a nicer screen, its keyboard and keypad neatly stowed away, and it was amazingly compact. But it was only 99 *percent* IBM compatible. That in itself wasn't remarkable, since even the Compaq lacked 100 percent compatibility. But the Bytec invited disaster by taking the unusual and ultimately fatal tact of advertising its incompatibility. In that 1 percent of incompatibility lay just enough free-floating anxiety to keep customers away.

Make a checklist of the "essentials" before you begin a project, the minimal elements your product or service needs in order to be accepted in the marketplace. Periodically check to make sure you haven't forgotten one of these basics.

10. GREAT EXTRAS

Great accessories or minor elements can carry a product, just as a great supporting cast can occasionally carry a movie whose star isn't up to par. Consider the features customers look for in a good cordless drill. A few years ago Panasonic had a cordless drill that sold extremely well not because it was the most advanced tool on the market, but because its *charger* worked better than most. It might seem like the tail wagging the dog, but the right accessory can make the product.

Automakers, genuine experts in the human psyche, understand this principle all too well. Think of what a difference little extras like comfortable seats make in your decision to buy a particular car. Or better drink holders. Or superior storage. Or even a better key.

People respond to the right small touches. It's up to you to come up with these surprises and fine details.