Pre to postmortem: the inside story of the death of Palm and webOS

- Mobile
- Feature

By Chris Ziegler on June 5, 2012 02:09 pm 381 **Comments**

Thirty-one.

That's the number of months it took Palm, Inc. to go from the darling of International CES 2009 to a mere shadow of itself, a nearly anonymous division inside the HP machine without a hardware program and without the confidence of its owners. Thirty-one months is just barely longer than a typical American mobile phone contract.

Understanding exactly how Palm could drive itself into irrelevance in such a short period of time will forever be a subject of Valley lore. There are parts of the story that are simply lost, viewpoints and perspectives that have been rendered extinct either through entrenched politicking or an employee base that has long since given up hope and dispersed for greener pastures. What we do know, though, is enough to tell a tale of warring factions, questionable decisions, and strategic churn, interspersed by flashes of brilliance and a core team that fought very hard at times to keep the dream alive.

The following is an account of Palm's ascent prior to the launch of the Pre, the subsequent decline, and eventual end, assembled through interviews with a number of current and former employees.

JON 'RUBY' RUBINSTEIN

ED COLLIGAN
PALM CEO 2005 - 2009

LÉO APOTHEKER
HP CEO 2010 - 2011

MEG WHITMAN
HP CEO 2011 -

MARK HURD
HP CEO 2005 - 2010

MIKE ABBOTT
PALM SVP 2008 - 2010

MATIAS DUARTE
HUMAN INTERFACE AND UX

PAUL MERCER
'PRIMA' ARCHITECT

SAM GREENBLATT
HP CTO FOR WEBOS 2012-2012

MITCH ALLEN
FORMER PALM CTO

"PC guys are not going to just figure this out. They're not going to just walk in."

History has proven that tossing out a familiar platform that prints money for your business and starting anew isn't easy: just ask Apple and Microsoft, whose next-generation desktop operating systems in the 1990s (codenamed "Copland" and "Cairo," respectively) floundered aimlessly for years before being replaced with other initiatives. The politics of a mobile platform are no different. The entire process can quickly devolve into a holy war, it turns out, never mind the risk of alienating your users and third-party developers — the very people by whom any platform is ultimately made or broken.

Around 2004, Palm — or palmOne, as it was known at the time — found itself in precisely this position. Though the company had endured a rocky decade of acquisitions, spinoffs, and splits, Palm OS had delivered it consistent success on iconic devices like the Pilot, the Palm III, the Palm V, and the Treo series. And unlike many of its competitors in the PDA space, Palm had managed to undergo a reasonably smooth transition into the nascent smartphone arena (granted, it required the acquisition of Palm OS licensee Handspring to get there). Regardless, by 2005, it was clear: Palm OS had become an aging, architecturally deficient platform from a bygone era that was being progressively outclassed both by the hardware it ran on and by the capabilities that end users expected from their devices. The company eventually bridged the gap by licensing Microsoft's Windows Mobile, which debuted on the Treo 700w.

Ed Colligan, who served in a number of executive roles at Palm before taking the helm in early 2005, had come from Handspring. In fact, in one way or another, Colligan had been connected with Palm since the company's founding in 1992 with Silicon Valley luminaries Jeff Hawkins (whose final product, unfortunately, was the doomed Foleo) and Donna Dubinsky. Though Palm was in desperate need of a thoroughly new platform, it's easy to understand why Colligan thought that time was on his side: the PDA and smartphone markets were supposedly tough to crack. "PC guys are not going to just figure this out. They're not going to just walk in," he famously quipped in 2006, believing that Palm had amassed enough experience and expertise to put it years ahead of a rumored Apple phone.

After spinning off its software division as PalmSource in 2003, Palm elected not to produce any devices running Palm OS's intended replacement — version 6, later named Cobalt — that the two companies had spent years writing from the ground up. In fact, neither Colligan nor his predecessor Todd Bradley ever brought a Cobalt device to market. Instead, the company continued producing phones and dedicated PDAs based on incremental revisions of Palm OS 5, while a selection of Treo smartphones based on Windows Mobile served power users.

By 2007, iterating on Palm OS 5 was akin to squeezing blood from a stone: even though it had been re-engineered to function on newer ARM processors, the user interface bore an eerie resemblance to Palm devices from ten years prior and still shared some of its limitations. The iPhone had been released, but the App Store had yet to be announced; traditional smartphone OEMs like Palm weren't yet cognizant of the revolutionary effect that the iPhone would ultimately have on the market. And the resounding success of the small, colorful Centro in late 2007 — one of the first entry-level smartphones — may have dulled Palm's sense of urgency.

Internally, though, the company realized its own operating system still needed to be replaced, lest it face becoming little more than a Windows Mobile licensee in the long run. And at that point, it didn't even own Palm OS 5 or Cobalt anymore: both platforms had gone with the PalmSource split and were later acquired by Japan's Access (in fact, Cobalt lives on even today as ALP — Access Linux Platform — though no major global OEMs have ever brought it to market).

Nova Prima

Nova Prima

Enter Paul Mercer. Mercer had been a Macintosh software engineer at Apple in the early 90s and made a name for himself as the founder of Tacit Software, which later became Pixo. Pixo's development environment was selected to help power the original iPod. Cupertino was working on a lightweight OS designed specifically for the iPod's singular focus as a mobile music player, and parts of Mercer's platform factored into the equation.

"We paid a lot of money for Iventor."

Apple would eventually pay a lump sum to license some of Pixo's software in perpetuity; Sun later acquired the company itself. Mercer, meanwhile, had left in 2000 to start another company, Iventor, that advertised many of the same services that Pixo had: "Our mission is to bring the best practices of the PC industry to embedded software development. Iventor has developed a high level runtime environment for deployment of advanced, dynamic user interfaces," read the company's backgrounder. Iventor briefly made headlines in 2006 for working with Samsung on its "iPod killer," the Yepp YP-Z5.

Mitch Allen, a member of Palm's old guard who'd come from Handspring, served as the company's director of software and later as CTO. Allen had been laying the groundwork for Palm's latest attempt at a next-generation operating system — codenamed "Nova" — since mid-2006. He didn't have a UI layer, though, so Colligan hired a few of Iventor's employees (including Mercer) in February of 2007 to help on that end, and later decided to buy Iventor outright in the third quarter of the same year. This was a particularly critical time in Palm's history: Elevation Partners, the investment firm co-founded by the affable Roger McNamee and

backed by Irish superstar Bono, had already begun due diligence on an agreement to infuse Palm with a fresh $325 million in cash. In the process, it had tapped former Apple SVP Jon Rubinstein — coaxed out of retirement with a personal visit to his Mexican villa from Colligan — to serve as Palm's executive chairman.

Rubinstein was "connected." Though he'd been retired from Apple for over a year at that point, Ruby (as he's widely known) had former co-workers throughout Cupertino's iPhone and iPod teams on speed dial — precisely the kinds of people you'd want working on a legitimate iPhone competitor. And he didn't hesitate to start making those calls, even before officially stepping into his very active board role at Palm (his contract called for him to spend at least half of his time working on Palm activities) in October.

"[JOBS] KNEW WHAT WAS GOING ON... ONCE YOU STARTED PULLING THAT THREAD, THEY'D KEEP LEAVING."

And indeed, the talent came to Palm in droves. With the original iPhone having already shipped, people were tempted by the prospect of a new challenge. Rubinstein was selling his old industry contacts and co-workers on the opportunity to go out and make the next blockbuster consumer product. Andy Grignon, Rob Tsuk, and Rich Dellinger, to name a few. Matias Duarte, who'd done stints at Danger and Helio, was hired to lead Palm's UI design after considering and turning down a position at Google with former Danger boss Andy Rubin. From Microsoft, Ruby brought in Mike Abbott to run the software team. Palm's acquisition of a startup called Lampdesk, founded by Manu Chatterjee (who ended up working on Palm's Touchstone accessory) and former Pixo employee Greg Simon, closed in early October.

"Steve [Jobs] knew what was going on," one source told us. "He knew that once you started pulling that thread, they'd keep leaving." He made personal appeals to some of the departing staff. A 2009 *Bloomberg* report revealed that Jobs approached Ed Colligan in August of 2007 — the month that the first Apple employees left for Palm, we've learned — and asked for a mutual no-poach agreement, hoping to nip a potential hemorrhaging of the iPhone team in the bud. And Colligan's cold reply left little doubt that Palm was going for blood: "Your proposal that we agree that neither company will hire the other's employees, regardless of the individual's desires, is not only wrong, it is likely illegal."

Arguably, Palm was in the midst of amassing perhaps the greatest talent pool in the Valley at that time. People who'd done truly great things in the industry — many of whom already knew each other and had professional chemistry — had been enticed to Sunnyvale en masse under the leadership of Ed Colligan and Jon Rubinstein, both of whom were considered highly charismatic and influential individuals who could get things done. And Palm management had

indicated to leadership that their Windows Mobile business was healthy enough to carry the company for a while, giving engineers the breathing room they needed to make Nova great.

"You needed to write five lines of code to center text."

While this influx of talent continued in late 2007 and early 2008, Mercer and his small team from Iventor had been plugging away on their vision for Nova, codenamed "Prima." In some respects, Prima borrowed from Mercer's time tested playbook: it was a lightweight operating system designed for resource-constrained devices. But it wasn't what Nova needed. "Mercer's stuff was garbage," one source bluntly told us. "All he had was a nice demo, but nothing really worked," said another. "The software team was getting close to mutiny. It was untenable to build what we wanted to build." Simple tasks like centering text on the screen required five lines of code. If a single app crashed, it would often take every running app down with it. Palm engineers trying to write apps and services for Prima were stymied by an archaic debugging scheme that required the entire UI layer to be stopped and restarted each time, a process which took about a minute and a half. Though it was Java-based, writing Prima code required the use of "custom keywords that no one could understand."

SEPT

Matias Duarte joins

OCT

Elevation Partners closes funding deal; Jon Rubinstein joins as executive chairman

APR

Greg Simon and Andy Grignon begin work on WebKit-based UI layer

APR -
MAY

Mercer's "Prima" platform is
killed and replaced with "Luna"

JAN

webOS and Palm Pre announced
at CES

JUN

Jon Rubinstein replaced Ed
Colligan as Palm CEO, Palm Pre
ships on Sprint

NOV

Motorola Droid ships on
Verizon, hurting flagship
prospects for Pre Plus

And Duarte, who'd already used Prima to prototype the vaunted "card interface" with former
Helio co-worker Daniel Shiplacoff and the pop-up notification system with Rich Dellinger,
wasn't much happier. "If you squinted your eyes, you could kind of see Matias' vision" in
Prima, we're told, but everything looked very rough. The many visual effects Duarte wanted for
gestures and transitions led to poor frame rates. The system didn't support alpha blending,
meaning that buttons and icons could only be displayed as square tiles and not as arbitrary
shapes. Even simple changes from the design team would require Herculean engineering

efforts to implement. "We were taking shortcuts in the UI. Matias couldn't get exactly what he wanted."

Alas, Palm pressed onward and assembled an event with key third-party developers — organizations that it knew it needed support from in order to make Nova successful — to show off Prima's API and early drafts of its programming documentation in the opening months of 2008. "They were like, 'No way. No way in hell,'" one source says. "This is too complicated. It's too different, you won't have any users. You need to come back with something standard."

"This is too complicated. It's too different, you won't have any users."

Complicating matters even further, Verizon had originally been tapped by Palm to carry the lead Nova device — the phone that would ultimately become the Pre — but the carrier backed out for unknown reasons (American carriers are famously fickle in negotiations with OEMs). That led Palm to sign up with Sprint, a company with a much smaller and less lucrative customer base. Meanwhile, the Windows Mobile market that executives believed would carry Palm long enough to give them time to put polish on Nova dropped like a rock, taking sales of the flagship Treo Pro with it.

And amidst the turmoil, Colligan and Rubinstein were committed to debuting the Pre at CES in January of the following year. Time, money, and patience were running out.

They had no choice.

For the launch of the Pre, Palm's designers made playing card boxes for employees that represented the company's storied history (notice the Palm V on the front) and its scrappy comeback attitude. On top, "Castle" represented the Pre's internal codename.

Skunkworks

Skunkworks

It wasn't looking good. Just months into Elevation Partners' investment, morale in Palm's engineering corps was already flagging. Executives had sold them on a change-the-world

mentality and Duarte had delivered the blueprint for a revolutionary user interface, but Mercer's operating system had few believers beyond the small group of engineers (around four, we're told) that he directly controlled.

Platform director Greg Simon and VP Andy Grignon — who'd worked together many years prior at Pixo — thought they might have a solution. The two set aside a weekend to see if they could take a radically different approach to the UI layer: create it using WebKit alone, the open source web rendering engine best known for underpinning Apple Safari and Google Chrome. Prima's inability to easily align text was clearly a sore point for engineers, several of whom mentioned it during the course of our conversations. "Instead of having a guy write code that centers text, we could stand on the shoulders of giants and let WebKit do it," one source told us.

"Instead of having a guy write code that centers text, we could stand on the shoulders of giants and let WebKit do it."

The way Simon and Grignon saw it, using pure HTML and JavaScript would have a few key advantages. One, it would allow large chunks of functionality to be implemented very quickly because the underlying standards were simple, straightforward, and widely understood. Two, Duarte was intrigued by the notion that his designers would be able to apply their handicraft to apps, screens, and UI elements without extensive assistance from engineers, all of whom had other things to worry about. And perhaps most appealing, WebKit already existed — Palm just had to port it.

Of course, it wasn't that simple. WebKit simply wasn't created for doing this kind of thing. No one working on the core WebKit project had a mobile device with limited RAM, processor, and battery in mind — certainly not for the entire user interface, anyway. Granted, Nokia and Apple had already ported WebKit for use in their mobile browsers at that point, but what Simon and Grignon were spitballing was a considerably more ambitious idea.

One weekend later, though, the two believed they'd cobbled together enough of a mockup to prove that Matias' vision could indeed be realized using nothing more than a web engine. They took the demo to software boss Mitch Allen; Rubinstein saw it not long after. Allen was impressed enough that Grignon was given approval to peel off ten staff members and crank for a month with the goal of bringing up WebKit and basic functionality on a very early prototype handset called "Floyd," essentially a modified Treo 800w. There was no guarantee from Palm leadership that this was the direction they were going, only a promise that they'd be allowed to give it a shot.

And the project had a name: "Luna."

The ten-strong Luna team went into full-on stealth mode, taking over a conference room inside Palm's Sunnyvale offices and papering over the windows. It was, for all practical purposes, its own startup inside Palm. "That's the way you do it inside a big company. You have to protect the engineers," a team member told us. Mike Abbott, who'd just been hired by Ruby from Microsoft to take over software duties from CTO Mitch Allen, ran interference with the rest of the company so the "startup" could stay focused. Sunrise to sunset, they hashed out the details of what exactly it would take to make a phone based entirely on web standards. Personalities clashed, arguments ensued. It was an emotional time — everyone involved was united in their desire to get away from Prima, and they wanted to get it right. Considering the schedule, they had one shot, and there wasn't a spare second to be wasted.

But after a month, Luna was real. It worked. The team celebrated late into the night at Cupertino haunt Alexander's, running up a several thousand dollar bill and nearly giving Abbott a heart attack in the process. It was a pricey outing, yes, but perhaps not when put into perspective: "This was effectively their bonus," a source pointed out. "Think about it. If you gave a [Silicon Valley engineer] a $500 cash bonus for that level of effort, he'd probably quit on the spot."
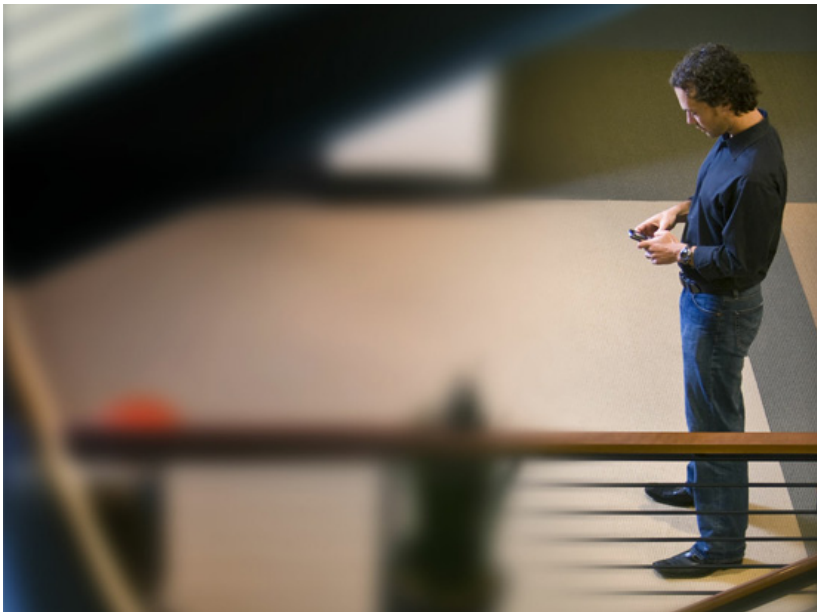
Sprint to the finish

Sprint to the finish

They physically erected curtains around their desks

Greg Simon and Manu Chatterjee

Mike Abbott

But Mercer's Prima wasn't dead in the water. Prototypes of the original Pre first started showing up in Palm offices around April of 2008. Luna was far from perfect, especially running in just the 256 MB of RAM shipped with the original Pre. The system would regularly exhaust the limited space. To help speed things up, the Luna team had decided to port Google's high-

performance V8 JavaScript engine, making Palm the first company to ship V8 on mobile; Android didn't have it until Froyo. It was a sensitive situation: Android had been announced, and at that point, the debut of the T-Mobile G1 was just months away. Competition was fierce and distrust at an all-time high. "We had guys with fake names posting to Google's mailing lists [asking questions]. We didn't want to say, 'hey, Palm's making something with WebKit,'" one engineer said.

To help settle the Prima-versus-Luna debate, the company held "bake-offs" where both teams would try to implement key pieces of functionality as best they could within a set amount of time. Every source we spoke to with knowledge of the situation said that Luna consistently beat Prima both for speed of development and quality of the final product.

By mid-2008, Mercer and his allies became despondent, unresponsive, and unhelpful. For them, the Luna effort had gone from political to personal. One source tells us that they physically erected curtains around their desks — which were an open, see-everyone-around-you style — to distance themselves from the other engineers, most of whom were believers in Luna. While the Luna team had been in stealth mode for a month, Mercer had been given that same month to try to fix some of Prima's problems. "It was a decision in name only," said one former employee. Everyone had been convinced that Luna was the future at that point, and Abbott eventually announced that Prima would be laid to rest. A critical platform decision — one that would ultimately set the tone for Palm's brand — had just been made with only six months to go before the big CES unveil.

Mercer was shuffled into a new role looking for ways to optimize WebKit, but sources tell us that it quickly became apparent he was only using it to advance his cause: he'd created benchmark tool after benchmark tool showing that the web "wasn't ready for primetime" on mobile. And in a way, he was right — at that time, it wasn't ready for primetime, but Palm's engineers were on the bleeding edge trying to get it there. "It was obvious that this stuff was the future," one senior-level source told us. As the saying goes, they were trying to skate to where they believed the puck was going; Mercer was trying to skate to where it was.

"We practiced like it was an Apple event."

At that point, the entire UI layer was wiped clean and it was all hands on deck to get Luna ready to show in January. Late nights, early mornings. Palm feared Sprint's reaction to being told that it was abandoning and rewriting a significant portion of the platform with just a half year to go, so Sprint executives were told that it was just a "reskinning." When Sprint had previously been shown Prima, they'd only seen a locked-down version of the Phone application, so they were none the wiser.

There simply wasn't time to extricate all of Prima in time for version 1.0, though, so much of the team's work focused on finding ways to make the web-based UI layer interact with the old Java-based core. Third-party developers were never given access to the Java framework (as they would have been had Luna never existed), but it was there. "I would've pushed it past 2009, but oh well," one engineer lamented.

Eventually, Duarte, Colligan, and Rubinstein began running through the CES event with engineers in attendance. They understood the gravity of the situation — it had to blow minds, and it had to be perfect. "Duarte would practice all day, and we'd take notes," one staffer told us. "We practiced like it was an Apple event."
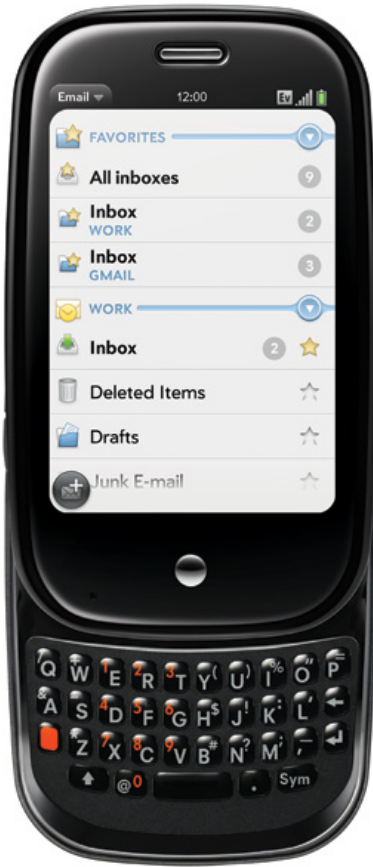
And indeed, the January event did blow minds: both the hardware and software put smiles on

the faces of a spellbound capacity crowd in a ballroom at the Venetian hotel, a stalwart for big CES announcements every year. "This is a huge win for Palm. People are stoked," our own Joshua Topolsky wrote in his *Engadget* liveblog. There was some confusion and disappointment that Sprint — a smaller carrier that used CDMA — had the exclusive, and the vague "first half of 2009" release window was a cause for concern. Negative comments about webOS or the Pre themselves, though, were hard to come by.

Topolsky and I were ushered into a small meeting room just minutes after the press conference where we had a half hour to play with the Pre. It was rough around the edges (both literally and figuratively), but it felt nearly as convincing as what Matias Duarte had just demonstrated before a packed room; it felt like Palm had essentially all the parts in place to ship a solid product.

"The emperor had no clothes."

The demos at CES weren't faked, but large swaths of critical functionality were still missing under the covers. "The emperor had no clothes," one source told us. Even though Palm had left webOS's Prima underpinnings in place to save time and effort, there was still a tremendous amount of work to do in order to get the Pre ready to ship, and everyone inside the company knew it. Palm made the controversial decision to prevent any members of the media from touching the phone after CES prior to launch, a move that raised eyebrows and led many to start asking questions about the company's readiness.

An iPhone-less Sprint, meanwhile, was moving full steam ahead. The Pre was seen as a huge differentiator for the carrier at that time. In fact, Sprint certified it for use on the network before it was even finished, a rarity in the US wireless industry — only the iPhone had had that distinction beforehand.

The Pre launched in the US on June 5th, 2009, making good on the "first half of 2009" guidance issued at CES. Just days later, longtime CEO Ed Colligan stepped down and made way for Jon Rubinstein, who'd already been deeply involved with the company in his role as executive chairman. The changing of the guard was complete.

Blowfish

Blowfish and the deal that 'devastated' Palm

The launch, in some respects, was only the beginning. "We fucked up a lot of things" in the early releases, one source says. 1.0.3, 1.2, 1.2.1, 1.3.1, 1.3.2, and 1.3.5 all came before the end of

2009, closing gaps and fixing bugs that the team had left open in its breathless race to launch the Pre on time.

Internally, Palm had a two-tier codename system for new software releases: major versions were fish in alphabetical order (webOS 1.0 was "Albacore," for instance), while minor releases were alcohols that started with the same letter (like "Absinthe"). Toward the end of 2009, focus on iterating Albacore — which had started to become a major drain on morale — shifted to Blowfish, better known as webOS 2.0. In some respects, Blowfish is what Palm engineers had wanted to release on day one: it was the true "de-Mercerization" of the platform, to use a term one source floated with us. Unlike Albacore, which still had significant chunks of Prima left behind with special hooks into Luna, Blowfish would be a clean-slate effort with Prima completely removed. For the first time, Java would be entirely gone.

Meanwhile, the Pre wasn't the blockbuster that everyone had been hoping for. The decision to launch as a Sprint exclusive was frequently cited as a killer, but the situation may have been exacerbated by a bizarre ad campaign that featured a vaguely unsettling, ghostly woman urging viewers to "just go with the flow" — it was strange enough, in fact, that it inspired a string of parody videos that circulated the internet.

But the company was in the midst of securing the Verizon deal that it had wanted in the first place. Verizon placed an order for an extraordinary number of Pre Pluses and Pixi Pluses, promising Palm that the Pre Plus would be the carrier's headline device going into 2010. The launch of the Motorola Droid in November of 2009, then, sucked the air right out of the room — it caught Palm entirely off guard. In retrospect, Verizon may have been leveraging the Palm deal to strike a more lucrative one with Google and Motorola for the device that would go on to spearhead its most important brand.

The Droid, of course, became extraordinarily successful. The resources that Verizon had promised it would pour into marketing the Palm devices largely evaporated, and what little advertising it did suggested the Pre Plus was a gender-specific device. Verizon ended up refusing shipment on a majority of the devices that Palm had manufactured for it, a devastating blow to the company's bottom line — in fact, multiple sources have described it to us as the final nail in Palm's coffin. The misstep cost Palm hundreds of millions of dollars and the executive team quickly realized in early 2010 that there was no way forward without an acquisition. It had enough money left in the bank to scrape by for a while, but not enough to advance the platform and the product portfolio.

Even now, former employees are reticent to talk about the acquisition process that ensued, which was cloaked in secrecy at the highest levels. Duarte and senior engineers would be

whisked into meetings to describe their technology to people they didn't know and weren't allowed to inquire about. "Sometimes you could figure out who it was. You'd say, 'oh, this must be Samsung,'" one source recalled.

The launch of the Motorola Droid in November of 2009, sucked the air right out of the room

At some point, it became evident internally that HP was the frontrunner to buy Palm. Things moved swiftly. Several sources have told us that Mark Hurd, HP's then-CEO, and Todd Bradley, who ran HP's Personal Systems Group (PSG), were genuinely "gung-ho" about the company and its platform. In an effort to return the company to its glory days, Hurd had just finished trimming as much fat as he possibly could and he knew that HP's cash cow — the printer business — wouldn't last forever. He was looking to grow businesses that had a future, and he understood that mobile was a keystone to that strategy. And Bradley may have had a soft spot for Palm — he'd left it several years prior to join HP, so he had a healthy understanding for the company, its challenges, and what it had been through.

JAN

Palm Pre Plus and Pixi Plus ship
on Verizon

MAY

Matias Duarte leaves HP, joins
Google

AUG

Mark Hurd resigns from HP

SEP

Léo Apotheker named HP CEO

OCT

Fully "de-Mercerized" webOS 2.0
released on Palm Pre 2

FEB

Pre 3, webOS 3.0, TouchPad,
Veer announced

JUL

TouchPad goes on sale

AUG

HP announces discontinuation of
Palm hardware

SEPT

Meg Whitman replaces Léo
Apotheker as HP CEO

DEC

webOS transition to open source
announced

JAN

Open webOS announced for
September 2012 completion, Jon
Rubinstein departs

MAY

Key members of Enyo team
depart for Google

The deal was announced in late April of 2010, and closed on July 1st, for roughly $1.2 billion. HP famously noted at the time that it planned on "doubling down" on webOS — a buzzphrase that has been used countless times in reference to a product that's gotten off to a slow start and necessitates a public show of renewed commitment from its owner. The mood inside Palm's offices was positive and trending upward: everyone knew that HP had the money that Palm needed to make competitive products, and Hurd and Bradley were intent on going big.

Hurd said that he wanted webOS on printers and PCs — it was a platform that HP could call its own, and he wanted it everywhere. A new team in Fort Collins, Colorado started working on webOS for Windows. HP actually completed work on a webOS-powered printer in its San Diego office, but couldn't figure out how to sell it: it was essentially a smartphone grafted onto an inkjet, which necessitated smartphone pricing, and the bean counters weren't willing to subsidize the cost of such a printer quite enough to make it affordable. The unit was never released.

Meanwhile, HP almost immediately dictated that Palm put a tablet at the top of its priority list. Most of the engineering organization was left to focus on finishing webOS 2.0 for the stopgap Pre 2, while a small team under the leadership of Matt McNulty had already begun work in March on a more flexible next-generation application framework — Enyo — which would become the foundation for "Dartfish," webOS 3.0 (webOS 2.1 had taken the "C" codename, "Catfish").

Hurd said that he wanted webOS on printers and PCs

It quickly became evident, though, that HP's financiers (up to and including CFO Cathie Lesjak) didn't share Hurd's enthusiasm. At that time, Apple was almost singlehandedly dominating the smartphone supply chain and it took an enormous commitment — the kind of commitment that only a giant like HP could offer — to tip the scale. "We told HP we needed better displays [for the Pre 3]. They'd come back and say, 'Apple bought them all. Our suppliers tell us we need to build them a factory if we want the displays' and they weren't willing to put the billion dollars upfront to do that," one source said. "The same thing happened with cameras. We'd pick a part, turns out Apple picked the same part. We were screwed left and right." Without HP's full financial support to buy its way into relevance, Palm was essentially left to pick from the corporate parts bin — a problem that would strike particularly hard later on with the TouchPad.

And while Palm was fighting the battle of dollars and sense on the HP front, Blowfish (webOS 2.0) had become a massive undertaking for the company that spanned the better part of a year. Important people started to leave. Mike Abbott, who'd been instrumental in getting Luna pushed through before the launch of the Pre, left HP for Twitter just days before the acquisition was announced. Then Matias Duarte — the man who in many ways represented the soul of webOS — announced his departure in May to join the Android team under old friend Andy Rubin, a job that he'd turned down two years prior when he came to Palm. Though the HP acquisition may have accelerated his departure, sources tell us that Duarte had one foot out the door even beforehand. "Matias leaving set us back months and months and months," we're told. He'd started building the framework in Blowfish that HP would need to create a webOS tablet, but there was still much work to be done.

'Toxic'

'Toxic'

Apotheker's disinterest in Palm was almost immediately apparent

Léo Apotheker

By August 2010, Palm was learning some hard lessons about extracting investment from its new corporate parent, but at least Hurd and Bradley were intent on pushing webOS throughout the organization. Then Hurd suddenly resigned amidst allegations of misconduct: one of Palm's staunchest (and most important) allies inside HP was gone. Lesjak briefly stepped in to keep the company running before the board selected virtual unknown Léo Apotheker, SAP's former chief executive. Once again — as if by some curse — a jarring transition was happening at a particularly important time for Palm, which was working on two major platform releases, several new phones, and its first tablet.

The bizarre, almost comical story of Apotheker's brief tenure at the helm of HP has been well documented, and it's a tenure that generally didn't help Palm's cause. He inherited many of Hurd's problems, but he had his own strategy for solving them: while Hurd wanted to solve them by investing in growth businesses like mobile, Apotheker was "a software guy" — he dreamed of turning HP into the next IBM, a company that enjoys tremendous margins on apps and services without the overhead of running a cutthroat hardware business.

And Apotheker's disinterest in Palm was almost immediately apparent. Among the people we

spoke with, there were rumors that he visited Palm's campus perhaps once, though no one could pinpoint exactly when that occurred or what he did while he was there. Talented Palm staff, rapidly becoming prime poaching targets, were departing one after the next. Each got a one-on-one meeting with Rubinstein where he'd try to convince them to stay.

All this was happening in the midst of a focused drive to prepare the tablet for an early 2011 announcement. The TouchPad project was approved in August; the hardware team had already started preparing for it in July, but the small team led by McNulty wasn't joined by the majority of the engineering department until they'd started to come off the Blowfish project in September. The first prototype TouchPads — a device made of "cast-off reject iPad parts," to hear Palm's software staff describe it — didn't arrive until late November. Meanwhile, members of the software team were leaving in droves, including original Luna architect Greg Simon who'd left (along with several others) for Google's Chrome and Android teams. The TouchPad helped replenish those ranks to an extent, but not to anyone's complete satisfaction. It felt like the run-up to the Pre all over again, and Palm wasn't getting the assistance it needed (and had assumed it would get) from HP, either in financial support or staff. "Léo wanted us to be cash-flow neutral," one source said, meaning that Apotheker wasn't willing to sink money into the business that he couldn't immediately get back out; it wasn't a long-term investment for him.

By December, Palm needed to make a call on whether to proceed with the planned introduction of the TouchPad and webOS 3.0 in February of the following year. The decision was eventually made to go ahead, but it couldn't have been any tighter: we're told that very little worked correctly on the device other than the precise path that product director Sachin Kansal took on stage during his demonstration at the San Francisco event. For bookkeeping purposes, HP kept insisting that the TouchPad be released around March, but Palm staff were tracking for a more realistic June ship date, which is what Ruby ultimately held the team to. The TouchPad was on American shelves on July 1st.

It was immediately apparent that the TouchPad wouldn't be a retail success. The stories were depressing: it was said that so many units piled up en masse at Best Buy locations, which had expected a solid showing for HP's first consumer tablet, that it was forced to send some back and refuse new shipments. Our sources couldn't agree on what ultimately caused the tablet's failure; some said it was the decision to ship with 3.0 rather than waiting for the less buggy 3.0.1 or 3.0.2. Others said it was HP's unwillingness to subsidize the device and sell it for $199, knowing full well it couldn't compete head to head with the gorgeous, well-established iPad 2 at the same price point. Stephen DeWitt replaced Jon Rubinstein as senior vice president of webOS days later; Ruby assumed an ill-defined "product innovation role" in the company while DeWitt assured that the "Palm brand will continue to evolve."

"Léo was the worst person ever... the most toxic thing by far."

Apotheker appeared to jump at the opportunity to sideline a division that he viewed as excess baggage. HP announced on August 18th — just six-odd weeks after the TouchPad's release — that the company would be discontinuing the the device, ceasing all Palm hardware development, and "exploring options to optimize the value of webOS software going forward." Virtually everyone inside Palm was taken by surprise, including Rubinstein and Personal Systems Group boss Bradley (whose division was set to be spun off in the same press release). They'd been intentionally left out of the plan, which had been in the works for at least a week by the time of the announcement.

The TouchPad's 7-inch stablemate, the TouchPad Go, was just two days away from starting full production when it was killed. HP's two "Catfish" devices announced at the February event alongside the TouchPad — the Pre 3 and the bizarre, diminutive Veer — were released, but the Pre 3's American launches on AT&T and Verizon were both scrubbed. Similarly, the Fort Collins team's webOS for Windows was nixed just as it was ready to be released as a beta. (A full-touchscreen handset codenamed "Stingray" was also killed, though that one was already dead at the hands of AT&T: HP had pushed the phone into 2012, which went beyond the carrier's cutoff date for requiring that all new smartphones be LTE-capable.)

The company blew out remaining TouchPad inventory for as little as $99, a move that one employee we spoke to called a "joke." At that point, it was nothing more than a dead tablet walking. (Demand for the $99 TouchPad was so strong from internal sales to HP employees alone that it brought down the company's entire public e-commerce system, which shared the same infrastructure.)

"Léo was the worst person ever... the most toxic thing by far," said one source. Another took a more diplomatic view. "Look at what Microsoft is doing with Windows Phone — it's going to be billions and billions of dollars over a bunch of years to buy yourself into third place. I think Hurd knew that and saw that as the future, whereas Léo said no. It's a totally fair decision. [Spending that much money] is a ballsy thing to have to do."

The "options" that HP had alluded to in its press release included an outright sale of webOS, which many inside the company saw as the last hope to saving the platform. Among the suitors were Amazon and Facebook, though talks didn't get very far; at the end, the two who came closest were Google and Apple. "There was never an offer in writing, but talks got far enough along so that Google had verbally communicated something to HP," we're told. It's believed that Apple got involved only to drive the price up or keep webOS out of Google's hands

altogether.

Meg, open source, and the end

Of course, HP didn't sell webOS. Sources say that the company made the strategic decision that it didn't want to offer the platform to a company that it viewed as a competitor like Google, as generous to HP as that may be. It was starting to seem that it might be willing to simply eat its $1.2 billion investment and move on with Apotheker's vision of an HP focused on enterprise software and services.

But just one month after Apotheker's decision to kill Palm hardware, all bets were off when he was ousted and replaced by former eBay CEO Meg Whitman. Board member Ray Lane — who'd been instrumental in bringing in Apotheker in the first place — said that the job of CEO now required "additional attributes to successfully execute on the company's strategy." For beleaguered Palm staffers, this was their fourth CEO in less than a year and a half (and sixth in under three years, for those who'd been with the company since the launch of the Pre).

Palm was in stasis: the hardware team was gutted and the software team was left idled. Nobody knew what they should be working on, what strategic direction they were taking, or whether they'd be sold. "We'd hold staff meetings, just because we felt like we had to, and no one would show up," one former employee says. Richard Kerris, head of developer relations, left to join Nokia (which had just recently opened its new Sunnyvale office) after just nine months on the job, taking several staff with him.

Still, key employees were hanging around. Ruby, though he'd fallen out of the public eye, was involved in sale talks and is said to have worked behind the scenes to move the software team away from Stephen DeWitt and into a "safer" position under corporate strategy chief Shane Robison (who ended up retiring in October). Some engineers took the opportunity to demonstrate Enyo, webOS's new application framework, on an iPad 2 as a proof-of-concept web app. It was an idea that foreshadowed Enyo's extraction from webOS as its own standalone framework, a move that may prevent it from dying should webOS be killed.

Everyone wanted to know what the platform's fate would be, and besides, many had retention (or severance) packages on the line. In early November, Whitman held a meeting with Palm employees where she was refreshingly honest: she didn't yet know how to proceed, and she told them as much. "She was so reasonable," said one source who'd planned to quit at the meeting and changed his mind after hearing what Whitman had to say. "The difference

between her and Todd [Bradley], DeWitt, or Jon [Rubinstein] even... she didn't go up and say, 'you should feel fortunate to work for the company that Bill and Dave started.' It was a sincere apology. It was, 'I have to convince the board to fund this.'"

"This has been a four and half year burn."

In early December, Whitman finally announced the fate of the platform: it would be open sourced with the promise of ongoing investment, contribution, and participation on HP's part. One source tells us that Sam Greenblatt, who served as CTO of HP's website, was instrumental in pushing Whitman and HP's board in that direction and was moved into a new role as webOS CTO alongside Martin Risau, an ally of Apotheker's who'd stuck around after the embattled CEO was fired. In theory, open sourcing an underperforming platform is an attractive proposition: you get to reduce your level of investment by crowd-sourcing work to enthusiasts in the community while still reaping the benefits. In practice, though, it doesn't necessarily work that way; Nokia's relationship with the defunct Symbian Foundation is a prime example.

Greenblatt's arrival was accompanied shortly thereafter by a new round of high-level departures from Palm's ranks: chief architect Brian Hernacki, a security specialist, left for Intel. Vice president of applications and platform Andy Grignon, who'd been recruited from Apple around the time that Rubinstein joined, left to start his own company. Ari Jaaksi, Nokia's MeeGo chief who Palm brought in shortly after the HP acquisition closed, cycled out of day-to-day webOS operations (though he remained a senior vice president at the company). It's said that Greenblatt's brief tenure at Palm's campus was an extremely political time: a power vacuum had been created by the rash of departures — both voluntary and from a 200-person cull in September — and infighting led by Greenblatt and Risau for control of the platform may have complicated an already delicate open source strategy.

Late January brought the unveiling of Open webOS based on open sourced modules of webOS 3.0, with the intent of releasing version 1.0 this September. As part of the effort, HP made the decision to switch to the standard Linux kernel in the hopes that it would help them "draft" off of Android by supporting the same hardware drivers, but some sources have expressed skepticism that it was a wise decision — webOS had featured significant customization at the kernel level for power management and advanced gesture support, and it's unclear whether any of that will be lost. Greenblatt, who a source called "well-intentioned but in over his head," was shuffled out of Open webOS just two months into the program in late March (another source was less generous, dismissing him as "useless").

And Jon Rubinstein — the public face of the "new" Palm, a man who'd called the shots for webOS since 2008 — quietly departed without so much as a press release just two days after

Open webOS's announcement. To those who know Ruby and to pretty much anyone who'd been following Palm's saga, it came as no surprise. "This has been a four and half year burn," he told Topolsky by phone from his home in Mexico. "What we accomplished in four and half years has been amazing. And I don't think people understand that — what we did accomplish during that time frame was amazing."

Meg Whitman

Former VP Andy Grignon's Porsche Carrera, complete with Palm license plate

Last month, McNulty — one of the last senior staff who'd been around for several product release cycles after the departures in January — called it quits along with other key members of HP's Enyo team to go to Google. Sources tell us they'll head to the Chrome group, where they'll rub shoulders with many former co-workers including Luna architect Greg Simon. Of course, Android's Matias Duarte won't be far away, either.

"Now that McNulty's gone, I don't know who the hell is left," one source said. Entire departments in the webOS team are said to be empty or nearly empty. Though HP has never technically ruled out the possibility of making webOS hardware again, everyone we spoke to

agreed that it no longer had the manpower to do so, even if it wanted to. A comeback would be "almost impossible," we were told.

And the software situation isn't much better: skepticism is high that the company will still be able to hit its target of September for Open webOS 1.0, particularly in the face of growing layoffs both inside Palm and throughout HP. Multiple sources tell us that there are specific tax benefits to keeping Palm "on the books" until July 1st, the second anniversary of the completion of HP's acquisition, and that Whitman could conceivably drop the axe shortly thereafter — the internal roadmap apparently extends beyond that date, but as always, those plans are subject to change.

"A thousand webOSes will bloom, I hope."

It's easy to look back at Palm's story arc from 1992 to 2012 and feel a sense of loss and sadness — this was a company that pioneered PDAs, popularized smartphones, and developed a revolutionary new platform on limited resources with an extraordinary concentration of industry talent before meeting its demise at the hands of HP. Staffers we spoke to took a more positive view, though, and one summed it up particularly well: "You ever see *24 Hour Party People*? You know the scene at the end where they're playing Happy Mondays' *Hallelujah* and Tony Wilson is standing over The Hacienda and he's like, 'well, it's all over — we have to shut down. Take the turntables, take the barstools, let a thousand Haciendas bloom'? Well, that's what this is like. It's that there are still people there, but a lot of people left, and they're bringing the spirit with them. A thousand webOSes will bloom, I hope."

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