Macintalk
Apple Wizards Monthly Interview

The Forgotten Prodigy — Raymond Lau

Welcome to Macintalk's fourth interview! Each month, Apple Wizards will interview one significant person in the Mac OS or Apple community. We will bring you interviews with programmers, executives, home users, and everyone in between.

This month's interview is with **Raymond Lau**, the creator of StuffIt. It is almost impossible to imagine any internet-using Mac fan going a single day without using StuffIt technology. Though the StuffIt products are now part of Aladdin Systems (at http://www.aladdinsys.com/) and no longer bear Raymond's name, he deserves much more credit than he receives for his creation.

Interview Conducted: 15 January 1998

Apple Wizards: What is your background in computing?

Raymond Lau: Prior to the Macintosh, I was an Atari 800 owner. I guess I was an early non-conformist since everyone else had Commodore 64s and Apple IIs at the time! Since then, I've worked primarily with Macs, UNIX workstations of various flavors, most notably IBM AIX, Sun (both SunOS and Solaris), and as a user, Win95/NT.

AW: Where did StuffIt come from? Did it come from a necessity for compression or was it just an idea that seemed useful?

RL: Back then, with 2400 bps modems just arriving on the scene, transferring data was quite painful, so compression was a matter of necessity for me.

AW: When did you start programming? What languages did you learn? What languages do you know now?

RL: Must have been 1982 on the Atari in BASIC. Other languages I've worked with include C, Objective C, C++, Pascal, FORTH, Scheme, LISP, a tad of mainframe work on PL/8 (this was when PCs were limited to 4 MB memory), Java, Perl, Tcl, and some flavors of assembly (6502, 680x0).

I am sure I must have missed a few less-significant languages. However, I don't think knowing a slew of languages is that important, since it doesn't take much effort to become functional in a new language and software engineering is more about design than language mastery.

AW: What language was the original version of StuffIt written in?

RL: C. Originally MegaMax C, but soon moved to the then Think Lightspeed C. Think was quite a revolution for the Macintosh. Scott Watson (of Red Ryder fame) once posted a comment on Think's speed. That was enough for me to get a copy. And boy, it was fast compared to its predecessors! What used to take 20 to 30 minutes to build took only 5 minutes or so with Think.

AW: Was StuffIt an immediate hit or did it take time to gain popularity?

RL: Depends on how you measure success. It took 3 to 4 months before becoming an accepted standard on all the then-dominant online services (CompuServe, GEnie, Delphi, Usenet's moderated binaries newsgroups for the Mac). It took maybe a year before registrations started coming in at a respectable pace.

AW: Before you released StuffIt, what were people's options for file compression? How did StuffIt improve over these?

RL: There were really only two, and only one of them was in widespread use. That was Harry Chesley's PackIt III.

The big improvement, in my mind at least, was not the better compression. (For that matter, the first release of StuffIt actually did a worse job on one class of files, MacPaint files, which had a built-in compression that foiled StuffIt but compressed slightly under PackIt III. Of course, with a slightly later release, StuffIt added an algorithm to address the problem). The big improvement was the ability to decompress, say, the fifth file without having to decompress files one through four. PackIt III not only did not show a list of files allowing you to pick what to expand, but to skip an item actually required expanding it, even if you don't save it to disk. On an 8 MHz 68000, this can be quite time consuming!

StuffIt presented a list of everything in an archive, allowing you to pick and choose what to expand.

AW: Do the StuffIt products still use your initial algorithms for compression or has that algorithm been updated?

RL: There were two generations since the initial set of algorithms. There hasn't been one for a few years now, probably because the cost of an incompatible generation is much greater than getting an extra 5% or even 10%. Seagate came out with a negative forecast for '98 today on the supply/demand situation in the disk drive industry. At under $300 for 6 GB, storage is definitely getting very cheap. And I've already stood on the soapbox on the telecommunications revolution. At this point, it's really more a matter of usability than squeezing a few percentage points.

AW: When you created StuffIt did you have any idea of how useful it would be for the Internet?

RL: Well, "what Internet?" Back then, it was bulletin boards, commercial online services, and UNIX hosts connected via UUCP! Yes, the ARPAnet did exist, but it consisted of only a handful of universities and military sites, none of which the average person, or even the average power user, had access to.

> Well, "what Internet?" Back then, it was bulletin boards, commercial online services, and UNIX hosts connected via UUCP!

But from the early positive feedback, it quickly became clear that there was definitely an audience amongst the online user community.

AW: How does it feel to be the creator of one of the most widely used and commended pieces of software for the Macintosh?

RL: I am quite flattered. Of course, there were design decisions that I wouldn't have made if I can turn back the clock, but overall, it has endured. I am quite amazed. I believe that .sit is even older than .zip, the current dominant PC compression format. Of course, UNIX .tar outlives them all, but .tar does not compress. And I would argue that UNIX .Z has been displaced by .gz, so in terms of longevity, .sit has outlived quite a few of its peers! StuffIt's won some awards, and you can find some of this information at http://www.raylau.com/StuffIt.html .

AW: How did you and StuffIt eventually end up with Aladdin Systems?

RL: By my senior year at Stuyvesant HS, it became clear that I needed someone else to take things over. I had discussions with a few publishers, including Software Ventures (terminal emulation) and Fifth Generation (disk backup). But as it turns out, Leonard Rosenthol, an early friend and still one today, eventually put me in touch with David Schargel, then exec-VP at Olduvai.

One evening, I received a phone call from Dave. He spoke in a somewhat melodramatic manner, saying how the ship was sinking at Olduvai and how he and several others have resigned. Those who know Dave will know exactly what I mean by melodramatic!

Anyway, he was starting a new company, Aladdin.

One thing led to another... In retrospect, it seemed quite a risky move going with a startup, but they were willing to let StuffIt be their flagship product, support my registered users, etc. So I took the plunge. It was at least another year after signing that the royalties matched the rate of registrations at the time of signing.

AW: What was it like being a teenager entering the big leagues of software development? Was it intimidating to go from lowly shareware developer to commercial software, project leader?

RL: Sometimes it works out being young, naive, and innocent.

AW: What is it that you do for a living? What college did you attend?

RL: Well, this wasn't that long ago! I am still pursuing a Ph.D. in computer science. Completion likely by May '98. All my degrees were from MIT, as my doctorate will be.

AW: What ever happened to your first Aladdin product, Shortcut? What exactly was Shortcut? Is it still around and updated?

RL: It still lives as part of Aladdin Desktop Tools. It started as a utility which allows you to have a list of favorite folders and go to them instantly within the Open and Save As dialogs. It also let you jump quickly from volume to volume. Back then, there was no Desktop in the dialog. If you needed to go between different hard disk partitions, and had to pass an in-between volume, you had to wait for the directory of the in-between volume to load. Worse yet, if a floppy were in the loop...

In all honesty, I didn't have the manpower to focus on the product, and as a startup, neither did Aladdin. So we allowed Boomerang to catch up and pass us. You can't win them all!

AW: During your time with Aladdin, were you instrumental in other StuffIt-named products such as InstallerMaker and DropStuff.

RL: DropStuff was Leonard's idea, but InstallerMaker was my baby. If you go back and look up some of the old MacTech ads, you can find a direct attribution in one of them. InstallerMaker was hashed out during one of my trips to MacWorld San Francisco. With the initial blueprint, Darryl Lovato and I fleshed out the details for v1. 0 on his white board. To this day, I believe that it's a great concept. You have to remember that this was before there was InstallShield or even configure on UNIX. StuffIt was not first (timewise) in its class, but InstallerMaker was. There were various issues which prevented InstallerMaker from maintaining its initial leadership position, but I will leave it to others to analyze and comment.

AW: Why are you now apparently unaffiliated with Aladdin Systems completely?

RL: I am unaffiliated in terms of "active" participation. I remain a passive stakeholder.

AW: Though you are no longer an "active" participant, do you offer product suggestions, or test beta versions of StuffIt products? Are you in fact solely a passive stockholder?

RL: Of course, we chat. It's always best to keep one's ears to the ground, on both sides. But, I'm realizing that it is someone else's baby now.

AW: Did you just decide to move on or was there a falling out?

RL: At the time, I had just completed my Master's and was starting my doctoral dissertation. More and more of the engineering was shifting to Watsonville and it was becoming more of their game. I was also becoming more wary of where Apple was going. I may have been a year early at the time, I guess. Finally, there was value to be realized in the separation transaction. The hobbyist economist in me viewed the situation as follows:
Aladdin having to pay royalties faced distorted incentives which hindered maximizing the potential of the product. However, if for a sunk cost, the royalties could be eliminated, then the promise of undistorted incentives going forward will actually result in a higher value attributable to the product. This difference in value opened up the opportunity for a transaction to be structured. I think both Aladdin and I realized this. Not only that, our different views on the future of Apple resulted in different perceived values, which further fostered deal making.

Maybe this is all too much analysis and maybe your characterization is better. It was time to move on! Had to start on my Ph.D. dissertation! But I've not been known to give simple answers.

AW: Do you resent Aladdin Systems at all for becoming so successful through products you created?

RL: Not at all. I wish that they will be even more successful! OK, this is not a completely disinterested statement since I do have an equity interest. But in all

honesty, the battle for an entrepreneur should not be over slicing the pie an extra 5% or 10% one way or another. Rather, it should be on making the pie 100% or 500% larger!

AW: Do you miss being known as the man who created StuffIt? You could be a software legend, but yet you are sort of stuck in the background now. Does this bother you?

RL: The thing I miss, espeically when I look around at the young Turks of 1998, is the energy, vitality, and naivete, which can be quite empowering, of youth. Inevitably, as we age, we develop a little bit of the "been there, done that" mentality and also a bit of cynicism. I guess by saying "cynicism," that is self- exposing, for I could've as easily chosen the term "realism!" Inevitably, there is some of what I call the Barry Diller syndrome. Face it. If you were in media, and you created the fourth national network, what do you do for an encore? For some reason, I don't think a shopping channel makes the grade. Fortunately, I have another 95% to go before getting to such a milestone!

> Inevitably, as we age, we develop a little bit of the "been there, done that" mentality and also a bit of cynicism.

AW: What projects do you have in the works? Will we see more incredible utilities from you or are you moving on?

RL: My latest hobby is http://www.palmpilotfiles.com/ , but that's just a hobby which grew out of my fondness for the Pilot. As for software... well, believe that the value structure in the industry has changed and software has become quite commoditized. Thus, I think I would concentrate my efforts elsewhere. I am not suggesting that I am abandoning software per se, but rather that I see software more as the means to an end rather than the end itself. So, what will the end products or services for me be...? I have some ideas in the works. Whether any will succeed, only time will tell. How many programs failed before (and after) StuffIt? Countless. But as John Sculley once wrote, "The journey is the reward."

AW: What types of projects do you see taking precedence over creating software titles?

RL: PalmPilotFiles.Com is more of a hobby. It cannot become economically viable without growing by a factor of ten. However, it does point to one theme

that I believe. Whereas the core content per se, including software, is declining in value (how many free news sources are there on the net?), what is increasing in value is people's time and attention. As we suffer more and more from information overload (due in part to the declining cost of content!), our attention will be valued more and more. AOL already discovered this. Yahoo is getting there too. Meaningful aggregation, which some may insist on calling content but I feel that editorial content is not quite the same as core content, is one way to capture attention spans. When

people buy the Wall Street Journal, and I believe people will continue to for some time to come, it isn't really the news articles that are being bought. You can get the news for free from various sources, be it CNN, CNNfn, quote.yahoo.com, MSN Investor Network, etc. What you are really buying is the selection of articles and their layout. Although WSJ authors some of the articles and analyses, I think the real value is its aggregation of the information in a prioritized manner.

So, anything involving the capturing of eyeballs is interesting to me. Other areas include telecommunications, particularly wireless and also high bandwidth, natural language (after all, speech recognition is the area of my Ph.D.research, although I feel the truly useful advances here are some ways off), and small information delivery devices are areas of interest. Telecommunications is definitely a revolution worth pondering. In my computing lifetime, I have witnessed a 5000 fold increase in bandwidth coming into my computer. Back in 1984, it was 300 bps modems. In January, 1997, I signed up for MediaOne Express, which delivers 1. 5 Mbps downstream. That outstrips the growth curves for anything else, including silicon! Today, a single strand of fiber can deliver 40 Gbps with off-the-shelf gear, some expensive gear but off-the-shelf, and I believe, 3 Terabits per second in the laboratory. Silicon can switch around 2. 5 Gbps off the shelf and maybe 10 Gbps in the lab. So, by one measure, telecomm has already surpassed silicon. We may be complaining about 56kbps modems, or even several Mbps cable modems today, but I predict that within my expected life time, bandwidth demands by end users will become completely satiated. Think about electrical power. Unless you are in the wilderness, you have as much electrical capacity as you can possibly consume. Same will be true for telecomm.

I digress, but the point is, telecomm is quite exciting. Fiber is becoming solved (most metropolitan areas have fiber to the pole now), but wireless still has some exciting possibilities. I won't even get into natural language because of its very early stage status.

AW: Do you stay informed regarding Apple and its progress? If so, what do you feel about recent developments at Apple Computer, Inc., such as the work done by Steve Jobs and the new Apple Store website?

RL: I keep up casually, but not religiously. I am not convinced that ending PowerComputing and the clones was a good idea. On the website concept, well, didn't Dell do that several years back? The one positive news I hear is sealing Office98, and from the more recent news, Oracle. Not being able to open Word97 docs is really depressing. Ensuring the availability of key software will buy some time.

AW: If you were CEO of Apple, how would you run the company?

RL: If I only knew!

A confession: I like the Mac OS much more for many things, such as day-to-day user computing. Show me a better editor on any platform than BBEdit! Please, emacs fans need not apply. Or a better ftp client than Anarchie. Little things like that make the Mac pleasant. Of course, for server tasks, I wouldn't consider it. e. g., WebSTAR is no comparison to running, say, Apache under Solaris 2.6.

But, I may be willing to make a departure when I next switch my personal computer. The key reason is: many newer software & hardware are just plain not available for the Mac. It's not even a matter of paying a few extra dollars. This is particularly true with mobile platforms. Find me a CDPD wireless data solution for a PowerBook. Or a wireless LAN product as elegant as NetWave's? Remember, we are talking Jan '98 here. Actually, I've had both on one of my office PC laptops since Aug '97, so I am already giving the Powerbook a five month cushion to catch up.

Apple needs to do something to allow users to come back! Having more elegant tools is not enough if those tools only cover 80% of what I want to do, as opposed to a less elegant set of tools which cover 100% of what I want to do.

I hope someone in Cupertino can find a way out of the death spiral. Apple's demise would be quite tragic given its contributions to computing.

The End

I would like to thank Raymond immensly for taking the time to answer my questions. I also thank him for creating one of the most useful pieces of software on my computer! He deserves much more credit than he receives!

For More information about StuffIt products, visit Aladdin Systems' site at http://www.aladdinsys.com .

For More information about Raymond Lau, visit his new homepage at http://www.raylau.com/ .

If there is a well-known person in the Mac community that you are dying to learn more about, please let me know. I would love to hear your suggestions and your comments about my column. You can reach me at macintalk@applewizards.net . Thanks!

Alex Kushner
macintalk@applewizards.net
http://applewizards.net/staff/alexkushner.html