The bungalow looks just like any of the others around it until you approach the front door. What from the street appears to be a large woodpile tucked under a tarp along the front of the house turns out to be a stack of monitors huddling for protection from the winter cold. Inside the cramped, single-car garage are eight packed shelving units of aging and antiquated electronics. In all, about 125 machines have discreetly taken up residence outside Mike Kenzie’s Parkwood Hills home.
Despite its appearance, Kenzie’s house is not a hospice for the terminally obsolete. Kenzie, a 43-year-old Ottawa mainframe developer and quite likely the city’s most serious, well-stocked computer collector, has brought these machines here, in fact, to save them. Those that can be restored will be. Those that can’t be fixed will donate their electronic organs so that other machines live on. Some will be traded, others given away. But Kenzie is determined that as many as possible will find a good home.

Kenzie is a computer collector, a breed for whom smaller and faster is not always better. About 95 per cent of his machines don’t have as much power as the average palmtop. If you added up the manufacturers’ prices when the machines were shipped new, the collection would likely be valued at hundreds of thousands of dollars. But today, they are junk. Kenzie would have to pay someone to haul them away. Still, he has far too much respect for the history of computing to trade any of this heritage hardware for a modern PC. Once these machines disappear, they are gone forever, and Kenzie’s mission -- especially important in Canada, where "official" museums of computing technology are few -- is to help prevent that from happening.

"It’s better on my doorstep than going out to the trash can,” says Kenzie. "At least then I can either store it for another collector who is looking for one. Or if I can’t, either salvage parts from it to get another and restore it or send it to the recyclers.

"My concern is that it goes to a good home and is preserved."

Home Improvement

In fact, Kenzie recently had to improve his own home to house his prized possessions. Half the collection spent the early part of the winter outside while his basement was renovated. The shelving units filling three of four walls in the expanded 12- by 15-foot room that now showcases the collection are already stacked floor-to-ceiling with computers, monitors, keyboards and all the paraphernalia needed to bring his mass of obsolete electronics to life. A gleaming four-shelf unit on wheels is also full. A large table sits along the wall by the door, providing space where Kenzie can work on, and play with, his aging toys.

Casual users of a certain age will recognize many of the computers in the showroom from their childhood or early workplaces: the TI 99/A, Commodore’s PET and Vic-20 models, a Mac Classic. Other prized exhibits will be appreciated only by hardcore computer lovers: the Commodore Kim-1, a bare motherboard the size of a sheet of paper that Kenzie stores in a plastic bag; the super-silent
Amstrad PC1640, which didn’t need a fan because the unit was powered through the monitor; boxes of three-inch and eight-inch floppies; a "luggable" Compaq that only the most muscular user would classify as portable. Kenzie generally doesn’t collect peripherals, except in cases like the Next Cube where they are part of the visual appeal of the machine.

His collection has three main themes: Apple clones; computers manufactured in Ontario; and dual-CPU machines. It is not surprising that in a tech haven such as Ottawa many of the pieces have been obtained through diligent patronage of garage sales. Some have been liberated from the dusty basements of government buildings, and one or two were even swiped off the curb on trash day. He will often pick up machines he already has, or ones he has no real interest in himself, in the hope that he can find them a home or use them as trade bait.

"My angle is preserving the history. If I get to the point where I can’t keep them safe anymore, where can they go to?" he asks.

Kenzie’s light brown hair is streaked with grey and his round glasses are not particularly thick, but traces of a high-school computer geek remain. The former biology major knows a lot about the history of computing. He spits out the names and specifications of models with dizzying speed and accuracy. Sadness creeps into his voice when he talks about the disappearance of these older machines, and the disdain he harbours for the latest technology frequently bubbles to the surface.

Newer Isn’t Always Better

"The first two years you use the machine, the next year you sell it to a refurb place or resell it to somebody else as a used machine, the fourth year you pay somebody to haul it away -- that’s the business rule right now," he complains. Anything from the 486 models forward is not worth collecting, in his opinion, because production values have declined and the machines are "a dime a dozen." (The amount of plastic and cheap components in them has also made them worthless to recyclers.) Laptops are not that interesting to him as collectibles. "They’re too new and I don’t see that much innovation in them," he says. Most software upgrades even fail to impress him. He still uses a version of Lotus from 1985. "It does everything I need. None of the new features have added any value for me."

The old machines, however, make him nostalgic. "People like the touch and feel of the original machines, the toggles, the blinking lights, the sound of the disk drives spinning up on the old machines,"
he says. An old IBM keyboard, for example, has a lot of steel in it, which gives it a distinctive feel. Many old machines also have an unusual sound -- silence -- when they run because there are no moving parts and, thus, no need for a fan.

Rob Krten has the same reaction to the transparency of the old machines. The Ottawa collector specializes in PDP-8 microcomputers manufactured by Digital Equipment Corporation, some of which stand as tall as a refrigerator and feature lots of toggles and things that blink. "The ones that don’t have the flashing lights, they’re kind of like, OK, you turn them on and it doesn’t do anything, whereas these ones (the PDPs) you can see almost what it is thinking and get a really good view internally of what is going on."

Krten, a 39-year-old consultant who specializes in embedded, real-time software and systems architecture, has always been interested in electronics. As a child he lived close to a strip mall that had three major repair depots and a surplus electronics place where he eventually got a job. There, he picked up his first PDP-8/I, which he traded for a TI-99/4 programmable calculator with magnetic cards, which he sold for a Commodore PET, which he turned around and sold that for a genuine IBM PC. It is a series of trades that he now regrets. He has since, however, acquired another PDP-8/I, and is three machines away from reaching his goal of owning the entire PDP-8 series of seven machines. "Partly it’s a bit of an obsession. I need to have one of every type made," he admits.

Kenzie started three or four years ago with some old 486s disposed of by the National Capital Freenet. He took them home with the idea of fixing them up and giving them to people who needed basic Internet access. In the course of that work, he stumbled across a "neat-looking" Texas Instruments 99/4A and a collector was born.

The Collectors’ Network

While Kenzie knows of only a couple of other serious collectors in the capital region (Krten being one of them), he is not alone in his quest to preserve classic machines. Fellow enthusiasts from around the globe use the Internet to make known what they need, what they’ve got, and what they’ve learned in the process of amassing and restoring their collections.

Trading is tricky business, however. Old computers are big, bulky items -- difficult to pack and usually far more expensive to ship than they are worth. Shipping costs to the southern U.S., where a large number of serious collectors live, are prohibitive. As a result, most of Kenzie’s deals are done with friends in Kitchener and Montreal.
and the equipment delivered in person. In a perverse way, machines missing a piece or two are a more valuable trading currency than fully functional machines because the pieces are easier to ship.

There is the question of how to assess value when you trade, since you may literally be comparing Apples and Oranges. For Krten and Kenzie, this is not an issue. Nor does it matter for most of their trading partners. They subscribe to a kind of trading karma, in which it’s better to make a lopsided trade or give something away in the hope of someday getting something in return than to run the risk of a rare machine being scrapped.

Not all collectors are altruistic, however. "Some people do it to make money," admits Kenzie. "You get your best price on eBay generally. Some people do it that way to make sure everyone has a chance at it, and it gives you some security for the transaction."

It is a double-edged sword for collectors. They want the world to recognize the value of the items they are preserving; yet, turning computers into a true collectible could fundamentally alter their access to equipment and put certain items beyond their financial reach. An example of the eBay effect: the same DEC PDP-8/I that Krten purchased for $300 when he was starting out now lists on eBay in the $2,000 to $3,000 U.S. range. For collectors who don’t like to spend more than they have in their pocket for a machine, it’s a whole new ballgame.

The webpage on which Krten lists the items he is seeking contains this caveat, both a warning to profiteers and a pledge to those for whom collecting is a labour of love: "I’m not out to resell this stuff on eBay, which means that I’m not able to pay eBay prices for the items. My goal is to preserve these items in a running state, and document them on this website."

Campus Collections

Until recently, the job of preserving Canada’s computing heritage has fallen mostly to individual collectors such Kenzie and Krten. While the United States has several major museums and institutions dedicated to the history of computers and information technology, there are almost no places in Canada where a collector can donate a particularly valuable electronic artifact. And that’s a pity, says York University computer professor Zbigniew Stachniak, because Canadians have a lot to celebrate in the field.

"Americans and Europeans are taking very good care of their computing heritage, and in Canada we can be very, very proud of many achievements, actually the Canadian contribution to
computing is enormous," says Zbigniew Stachniak, a computer professor at Toronto’s York University. "The only problem is you cannot study that in Canada."

The seeds for Stachniak’s solution to the problem were sown on a trip several years ago to Paris. Flipping through old electronics magazines, the professor came across an early 1970s advertisement for the MCM-70, a personal computer built by Toronto-based Micro Computer Machines Inc. The date didn’t quite jibe with what he knew about the development of personal computers, and he undertook intensive research into what turned out to be one of the world’s first computers manufactured for personal use. He later realized that little was being done to take care of Canada’s computer heritage, and founded the York University Computer Museum a little over a year ago. The only other dedicated museum in Canada appears to be a small operation in Annapolis Royal, N.S., that focuses on vintage computer from the 1970s to the mid-’80s.

The biggest hurdle Stachniak faces is the same one faced by all collectors -- lack of space. The machines are not small, especially the older ones. "At universities, space is everything. People are killing each other over office space," jokes Stachniak. The average-size university lab that houses the museum is not nearly big enough for its collection of roughly 200 hardware artifacts -- 90 per cent of which have been obtained by donation or trade -- and the overflow has spilled from Stachniak’s office and basement into the personal space of colleagues. The MCM, the Dynalogic and the SuperPET collections are the museum’s largest so far.

Stachniak says collectors have played an important part in saving a lot of technology from the scrap heap, and he differentiates those who collect from the larger pool of hobbyists. "My impression is that a collector is just that, he just tries to collect and accumulate and learn about as much as possible," he says. "But hobbyists are typically restricted to one or two machines and they will be devoted to a single machine," and will even write their own programs and modify the hardware.

Hardware isn’t the only thing taking up space on a collector’s shelves. Original software and documentation are just as important to preserve, and are often times more difficult to locate than the equipment itself. The York museum’s collection includes taped interviews with company executives and engineers, corporate documents, promotional materials and photographs. The shelves in the family room next to Kenzie’s showroom are crammed with manuals, software packages and books about computers.

Fun and Nostalgia
If collectors need proof that there is hope for old computers, they need look no further than the Commodore 64. One of tech history’s most popular computers, with about 30 million units sold during the 1980s, the C64 still has an active user community estimated at six million, been sustained by old machines (worth about $20 now) and emulators -- programs that mimic the C64’s performance on current operating systems. New C64 games and products are being developed to cash in on the nostalgia factor.

Kenzie hopes similar sentiments will make people more aware of the need to preserve other models of historical interest. At the very least, emulators are now available for many other machines so that former users can relive the good old days without an old pile of electronics cluttering up their house. "They’re fun machines, they’re still fun, a lot of people are quite nostalgic for a lot of the old ones," he says.

Gems of a Collection

The NeXT Cube (above): This was created by Steve Jobs when he left Apple. I have a complete setup with both printers, displays and a NeXTdimension card. This machine was ahead of its time and another example of a great machine failing in the marketplace.

Commodore Super Pet SP9000:

I lucked into this pair at a church bazaar. They are nice because they have the APL keyboard, which was at one time my favourite programming language.

IBM Display Writer: It’s treasured because of the effort it took to get. I first learned about the machine more than a year ago and after several failed attempts it finally hitched a ride to me from Estrie, Que. The machine is in good condition with all the parts and boxes of disk and manuals.

TI 99/a: I passed this machine up the first time I saw it at the Glebe Garage Sale. The next year, I had started to collect old machines and asked the owner if he still had the TI 99. It was still sitting in the garage with the expansion box and cartridges.

Compaq Contura Aero: This is a nice small laptop. I now have a pair of them. It shows the progress that has been made since Compaq first released the luggable.

-- Mike Kenzie

Ran with fact box "Gems of a Collection", which has been appended to the story.