

The HP Calculator Future is Very Bright

The Hewlett Packard User Community, HPUC, increased its presence when The HP 65 User's Club was formed in June 1974 to support the first truly personal computer, the HP-65. These dedicated users organized local groups in many countries around the world and their work has been well documented with their publications, hardware designs, and active advocacy of HP calculators. The HP 65 User's Club eventually changed its name to PPC, and finally CHHU. The HPUC actively worked with HP all through the 70's, 80's and 90's and most years since. In addition to the many HPUC casual meetings around the world there were more formal meetings called Conferences. These HP Handheld Conferences, HHC's, have been held roughly every 14 months in the early years and every September in the later years. The primary objective of the HHC's is to have fun, provide a snapshot of HP's progress, and document the work of the HPUC. Most of this work has been preserved by the endless hours of tedious work of Jake Schwartz to digitize these newsletters, magazines, sales brochures, books, Conference Proceedings, and letters in the form of the PPC CD's

HP has actively participated in the HPUC HHC's in all of the 31 Conferences except two. HP has often provided our HHC weekend meeting rooms many times throughout the decades. One of the observations that I have made during the last 32 years of being active in the HPUC is that the users are relatively constant and it is HP that keeps changing. The users are constant in that they still have the same technical math problems to solve and they need a high quality portable, reasonable in cost, accurate, machine to solve them. HP keeps changing in order to adapt to new technologies, design and manufacturing methods, and solution algorithms. And of course there is always the competition that has a different view of how a machine should work, what it should do, and how accurate it should be. The casual new customer doesn't have the knowledge or experience to evaluate the many models available and that is why brand recognition plays such an important role in the selection of the best tool.

The very first scientific calculator, the HP-35, was very very expensive. It was a unique math tool that was unheard of in terms of speed and accuracy in 1972. The \$395 price was a financial strain for most professionals but the time it saved made it a very productive tool. Other manufacturers soon joined HP in the market place. This competition, along with the rapid advances in electronics, slowly brought the HP-35 equivalent price down by a factor of ten, and in 2006 dollars, by a factor of 100. HP addressed this price pressure by automating the assembly of its circuit boards and using computer driven video technology to inspect keys and assembly alignment. US production facilities were eventually moved to the far East in order to take advantage of lower cost labor. HP became a global calculator company reorganizing its design, parts acquisition, manufacturing, sales and distribution after making many changes. These changes challenged management thinking in terms of the traditional "small division, local community" family way of doing business to a more global view of competing world wide. Technology also provided additional challenges and new high tech products (handheld computers, PDAs, and more recently cell phones) offered new opportunities for business growth. The calculator was no longer the prime consumer product and the rising calculator star lost its glow by being dimmed by competitive technology. Corporate emphasis and resources shifted and calculator research was essentially ignored after the Corvallis Division was moved to Singapore because of a new rising star, the hand held computer. Calculator sales continued because of HP's good name and inertia, but new product development essentially stopped.

The HPUC Conference in London in 1997 witnessed a new management team to form the Australian Calculator Operation, ACO, in November of that year. HP actually interviewed and hired several members of the HPUC to provide software expertise for this rebirth during that Conference. New product development was resumed and new ideas were put into hardware. Unfortunately many of these designs

were never brought to market. Active HPUC members are well aware of these products and these have been demonstrated and documented at these conferences. ACO was short lived because it could not convince HP's management that it had the expertise to actively compete in the market place of the turn of the century, and ACO died a quiet death along with several of its creative, cutting edge products.

The most exciting ACO product for the active HPUC participant was the Xpander that was well documented and demonstrated at the 2002 and 2003 Conferences. HHC 2001 is especially memorable not only because 9-11 nearly killed it, but also because a new calculator team was being formed to revitalize the HP calculator line under the leadership of Fred Valdez. Fred really planned on attending that year but too many planes were still grounded that weekend. Fred had the global perspective that was needed to compete with TI, Casio, and Sharp who had already embraced a new form of manufacturing called outsourcing. Fred's participation in the HPUC with his remarkable presentation at the London 2002 Conference showed us that improvement and change was once again on the horizon. Tragedy then struck. The new team was told that their core component, the HP custom Saturn microprocessor, would no longer be produced by HP's IC facilities because of changing technology. Now development efforts and resources had to expended just to keep the product line alive. The calculator lineup had to be refurbished just to keep it in production. The details of all of this have been discussed at our Conferences.

These activities have been observed and documented in all of our Conferences since London in 2002. Thanks to Fred's vision and support of the HPUC we have held together with the inspiration and hope that we would once again see HP take the lead in the development of the computation tools many of us have used since the beginning of the scientific calculator 34 years ago. The refurbished models use the faster, more powerful, ARM 9 microprocessor. During this time Corporate HP installed a new president. A new "era" for HP was tried with more flash to better address the high profile competition in the consumer side of the business. Some of these ideas clashed with the more traditional values that made HP famous. All of these factors; globalization, rapid handheld technology development, HP management changes, and competition have come to play in influencing the recent progress of HP calculators.

One of the goals of the HHC's has been promoting the education of the HPUC in understanding the constraints that HP has on what it can do in the market place. The billion dollar plus market for calculators is still a strong incentive, but there are many factors that influence today's manufacturers. The idea of a global organization wherein a particular activity such as design, manufacturing, research, or marketing is best done where it makes sense economically, is one we have seen unfold at our Conferences. Some of you will remember a really great presentation by HP's Dianna Byrne before HP moved to Singapore describing the issues involved such as time zone differences, cultures, and work schedules. The Internet was still young, but she demonstrated that the electronically connected global organization can be very effective. This is even more true today as evidenced by the fact that most medium to large companies promote working at home and the sharing of "offices" in a central location. The Internet makes modern business global.

Adapting to these new technologies takes time because people don't change rapidly, especially when it involves a completely new way of doing everything. Of course we are impatient and we want the latest technology implemented in new models ASAP. Eric Smith, who demonstrated how "easy" it is to make your own calculator at last years HHC commented on this topic during a recent email exchange.

"I think it's easy to develop calculator firmware if you don't care much about the quality. And I think it's easy to develop bad calculator hardware too. That's how you end up with most of the junk on the market, cranked out by anonymous companies in China."

"What's difficult is doing a GOOD job of both. In the old days, HP did an EXCELLENT job of both."

“HP understood what it took until they transferred responsibility away from Corvallis. Having lost all of the talent and hard-gained knowledge from their first 23 years of making handheld calculators, now they're having to relearn it from scratch. The first hurdle was that they didn't even realize what they'd lost, and the need to regain it. I think they've partially figured this out now.”

I can tell you first hand that HP is figuring it out, and that they have learned some very important lessons such as keyboard color contrast, and reliability. The success requirement is clear, it takes new ideas and new methods to make it happen under a new global organization. HP has very recently made some serious changes in the “rules” that have guided them from 2001 to this point. We have had some of these “rules” explained to us at past conferences and we have questioned them, always remembering the traditional HP of the past. The past is water under the bridge and the planet is a changed environment so we all have to adjust. These changes include new rules (some of the critical and restricted ones we “complained” about are now being broken) and new people. The product line was salvaged, HP is growing, and there is great hope that new models will continue.

One measure of the financial “health” of any company is its presence at the annual January Consumer Electronics Show. As a measure of activity you might ask such questions as: Is the company exhibiting? What press activities do they sponsor? What new products do they show. What new technology are they talking about? These are the questions you may use to take the “temperature” of any consumer company. The show also brings in the representatives of the company and it is a great opportunity to “talk shop” with them. The CES is only one of many mechanisms that I use to follow what is going on. I have done this with HP and its calculators for decades and while I cannot delve into all of the details here, I am observing very good things with regards to the future of HP’s machines. For several years I have asked the question, “Is there room for one more generation of high end calculators in view of rapid changing technology?” I don’t ask or speculate on that question any longer. The answer to that question will be answered at HHC 2006.

The Internet has greatly altered the way we do things. It is a really great way of getting information, all kinds of information – biased, bad, wrong, and even evil. We all have to take what we find on the Internet and use the tools we have always had to use, consider the source, IF it is identified. You have the real and true source when the primary contributors to the calculator world meet in person and you see and hear them during the Conference. The HHC’s provide you with the most reliable information possible.

The last few HHC’s have been of exceptional quality and they have been “spot on” with regards to what is really happening. HHC 2004 was held in San Jose and it was exceptional. We will have the same venue this year, a year of investment, for HP. Come and join us as we personally watch history change – the way we like to see it. Fred made an astonishing presentation in London in 2002. Looking back we can all recognize this. HP has grown in many ways and we will have more presentations by the HP professional staff than we have had at any Conference this decade. I hope you will participate as we watch the start of a new era unfold.

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Richard