



Vince Pfeifer : Doing Business Amiga Style

A discussion with Vince Pfeifer, Vice President of Operations, Amiga, Inc.

Vince Pfeifer saw a problem.

"The software industry would hire MBAs and put them in charge of products. Those people would make really poor decisions without truly understanding how users use products." It's an observation that would shape his career.

Pfeifer considers a position as Senior Product Manager with Symantec around 1990 as the start of the bulk of his computer software experience. After a stint with Fifth Generation Systems, a company acquired by Semantec, Pfeifer switched to ConnectSoft Corporation, then to Exodus, Inc., a spin-off from ConnectSoft.

Confused? Don't be. Though companies and people move quickly in the software business, Pfeifer's focus has remained stable throughout. "I have a history of being able to step into companies where they have problems releasing products and getting them released," he says. And his record attests that claim: From the Product Management position with Exodus, Pfeifer moved to Engineering and then to Vice President of Product Development. Then he moved on again.

"I joined a company called GraphOn Corporation, which was privately held and went public while I was there. We quadrupled sales in the year and a half I was there and I moved into VP of Product Development and was the person responsible for overseeing Engineering, Quality Assurance, and Tech Support for all products created by GraphOn." So why to Amiga?

Besides Bill McEwen's ability to sell ice to Eskimos, he says, "I'm at Amiga because it's an opportunity to build not just a single portion, but rather the entire company, into something that I believe with a method I believe." And as Vice President of Operations, he's finding that opportunity, though building a company from the ground up requires some role-changing to keep things moving.

"I stepped originally into Product Management on the Software Developer's Kit, or SDK. I then turned that over as I hired a Product Manager to do that, and then I ran engineering on the SDK. As the SDK and the hardware



reference specification came to fruition, I stepped aside from that." More recently, he's been working heavily with Gary Peake to build the development support organization, and taken on building a merchandising group "which I've had to step heavily into just because it's a brand new organization," he says.

"What's keeping us busy now is planning for two years out." Which is more in line with Pfeifer's core strengths and goals. "It was agreed when I came on that my influence would be company wide." And he's been able to foster the attitude he feels is so critical to success: The user experience as paramount. "We've begun building a mindset where the employees feel they can trust each other implicitly. It's our second family and I want to continue to create that feeling. I've been able to stress the importance of the user experience; the company has bought into that. As we move forward, the paradigm for computing is going to change because we're going to change it."

That user experience is what the new Amiga is all about. Pfeifer describes a scenario: "I'm reading an article in the Times about humpback whales," he says, "and I can switch to an encyclopedia on line and look up humpback whales. It's that kind of concept, where you can go from one information source to another."

The key here is what conveys the experience. When the devices are simple enough, portable enough, cheap enough and ubiquitous enough, then you really have





Vince Pfeifer at a Glance

First computer? Age?

VIC 20 when I was 13 or so.

Technology to live without?

Microwave

Best technological advance of the 20th century?

Cable TV

Late-night computing snack?

Donuts

How fast can you type?

40 wpm

What kind of program do you wish someone would write?

Ultimate baseball management simulator

Most-used computing application/activity?

Web Browser

Supermodel least want to date? Why?

Christie Brinkley because she totally screwed up Billy Joel's music.

How many computers do you own? Platforms?

Four. 2 Windows, 2 Linux

Describe yourself in one word.

Large

Favorite cancelled TV show?

Beavis and Butthead

Favorite current TV show?

ESPN Sportscenter

On the bookshelf?

Zimmerman's Algorithm

Anti-geek, not-a-geek, normal geek, super-geek or an uber-geek?

Tarah (Amiga's receptionist) says I am either anti-geek or normal-geek.

Favorite computer game?

Used to play Tron for over an hour on one quarter.

Shaken or stirred?

Shaken

something--something that's redefining computing as a user-based, rather than hardware-based, experience.

Pfeifer describes how this can go wrong, like his experience when Engineering had free reign over a product: "They took something that was very successful and very easy to use, added functionality to it and made it functionally a better product, but the way they displayed it to the end user was such that the end user couldn't find that functionality." And if users can't find it, it might as well not be there. "So that was a lesson learned company-wide. We learned that you have to take very careful measure of who your customer is, how they behave and what they understand. Because if you don't you'll end up with a product that ends up losing its customer base."

And the Amiga can't afford to *lose* any more customer base. In fact, Pfeifer says, *building* on the existing Amiga user base is a key part of Amiga's plans. "They are our target user base, of course, and they are an asset." But dealing to just a fixed market is not a recipe for growth. Amiga recognizes the importance of the community as a base, a starting point, a launch pad. "The people who have used Amigas in the past seem to really have a passion for them. They left not because the computer was a piece of junk, but because there was simply no more innovation going on. Those people still have a very good feeling for the Amiga."

Starting a new company based on new technology with a known, pre-existing customer base is something a little different. It presents Amiga with a unique opportunity in the marketplace of the new decade--An opportunity they plan to maximize as a bargaining chip in negotiating with potential business and technology partners.

And that community will develop software for the new platform, which has presented a unique challenge, according to Vince. "With the development community scattered so far world wide, we got more done in a three-day week-end developer conference than in a one week period of time." That's changed as Amiga has actively recruited and hired and moved people into the fold, to the tune of 21 people in-house right now. "And that doesn't include people outside of the building—we have contractors all over the world," he says.

Amiga has received a tremendous response from current and former 3rd-party Amiga developers eager to see the platform revitalized, and recognizes



Continued



their importance. "The Amiga development community is a vital piece right now to our future," he says. "Getting them to write for the platform is what will make it a success or a failure."

"The first SDK isn't really strong in the area of sound or 3D video, stuff like that," Pfeifer observes. "It's more focused on the guy who is going to create the tools to do those things." It's a critical transition phase, as those tools have to be in place to draw mass-market developers to port their applications to this new, essentially untried platform.

The pace of change will be rapid, but it has to be in this business. "We've already released the first phase of the developer box and the SDK. Our goal, and it's a very aggressive goal, is to have the next Amiga box [with the Amiga user experience running natively] by the end of this year." In the mean time, before it stands on its own, the Amiga experience runs on top of suitably powerful Linux boxes.

Doesn't a stated plan to do away with the need for current business partners produce some strange business practices? "By no means is our first iteration going to wipe out the big players," Pfeifer points out. "The reality is that future devices won't need full computing power." And that's the key. You build computing environments with components of limited computing power that work together to provide the Amiga user experience—an experience something more than the sum of its parts, something the marketplace as a whole, beyond just the Amiga community, has never seen before.

It's a process and goal Pfeifer is passionate about. "Phase I," he says, "is removing all the extraneous computing knowledge necessary to work with a PC successfully. What's easier than a Playstation? Throw a disc in, turn it on, boom, it's there. Fifty percent of people right now don't have PCs either because they're cost-prohibitive or they're difficult to use. You've got a very large market you can go after. And that's not even counting the people who use Windows now because they don't have a better choice."

Phase II is the presentation of applications and data, another case where people are forced to adapt to the PC's interface. Pfeifer sees that going away in favor of user-defined *paradigms*, for lack of a better word. "You still have the common methods for interfacing with your applications," he says, "but if you understand what actions are used up front and you're involved in the creation and placement of your paradigm, you're more comfortable with it." And comfort leads to productivity and fun. Exactly the user-experience Amiga is shooting for.

Pfeifer knows it won't happen without a struggle. "We're working toward a moving target. This is my first experience in the area of creating an operating system (which is essentially what we're doing). There are a wider range of issues [than in developing applications] and it's a larger development process for a single piece."

By keeping true to the philosophies Amiga is putting forward—the user-experience, small independent yet interconnected devices—Pfeifer believes they'll be successful. In his words, "This box is going to be a good box."

The philosophy makes sense: Sell to your existing customers and work with technology partners, then use their help to expand beyond them. Stay focused on the customers to determine what they really need a product to do. Shift from brand loyalty to *experience* loyalty. It's all part of doing business in the new decade. Business Amiga style.





Amiga Optimists

It is a commonly accepted truth among Amigans that in the wake of the Commodore bankruptcy and all of the Amiga's ups and downs since that time, the thing that has most kept the Amiga platform alive is the Amiga Community. That community includes dealers, commercial developers, Amiga owners and advocates and shareware authors. It also includes the intrepid souls who have continued, sometimes in the face of considerable adversity, to publish Amiga print magazines and produce Amiga Web sites, such as those we've been covering in the Resources section of Amiga World. We thought it would be fascinating to hear what some of these die-hard Amiga supporters had to say about the past and future of the Amiga, and about their own important role in keeping the community alive. Our twelve participants were:

Bruno de Klerk (*AmigaScene* magazine, Netherlands)
Olivier Ferrer (*aMiGa=PoWeR* magazine, France)
Daniele Franza (*Amiga Enigma Life* magazine, Italy)
Peter Horvath (*Amiga Villag* magazine, Hungary)
Wayne Hunt (Amiga.org Web portal, USA)
Grzegorz Juraszek (*eXec Magazine*, Poland)
Christian Kemp (Amiga Network News portal, Luxembourg)
Andrew Korn (*Amiga Active* Magazine, UK)
Andreas Magerl (*Amiga Future* magazine, Germany)
Thomas Raukamp (*Amiga Plus* magazine, Germany)
Giorgio Signori (*Amiga.it* CD magazine, Italy)
Brad Webb (*Amiga Update* e-mail newsletter, USA)

Please note that all responses to Amiga World questions are the opinions of each magazines representative and do not necessarily represent the opinions of Amiga, Inc.

Why, originally, did you create your magazine or Web site?

ANDREAS MAGERL: Because we are Amiga users!

ANDREW KORN: I got suckered in by those villains at *CU Amiga* magazine. They gave me a job, the swines! *Amiga Active* came about because there was a gap in the market when *CU* closed, and Pinprint publishing wanted to fill it. They contacted me about a year before the magazine actually launched - it's a long process getting a magazine together.



Brad Webb

BRAD WEBB: I was writing for the old "*Jumpdisk*" disk-based publication at the time Commodore went bankrupt. I found myself getting e-mail questions from fellow employees of the company where I worked, asking what I knew of the situation. I started sending group e-mails of information as I got it to those people. Pretty soon, I realized I had an e-mail magazine started, and there was a real need for it. I added a masthead -- *Amiga Update* -- and away we went.

CHRISTIAN KEMP: Back in 1996, when *Amiga News Network* was founded, a lot of news and rumors were posted on Usenet, and many Amiga celebrities (Dr. Peter Kittel, Dave Haynie, Olaf Barthel, etc.) were participating in many interesting discussions. Seeing how no Web site covered the newsgroups, I decided that this was a niche that was worthwhile exploring. That, and the fact that I wanted to actively contribute to the Amiga scene; but had discovered that my programming skills were not sufficient to write any really useful applications. :)

THOMAS RAUKAMP: We started *Amiga Plus* magazine in 1998, because we felt that no other





German Amiga-magazine highlighted the kinds of things users could create and do with this machine. We also wanted to give the market a magazine that combined serious journalism with an attractive design—to be a window for this platform to the outside world in order to gain respect and acceptance for the Amiga.

GRZEGORZ JURASZEK: "eXec" magazine was created after the closure of "Magazyn Amiga", formerly the biggest East-European paper Amiga publication. We thought our community needed a replacement as MA was just one of two regular Amiga magazines in Poland.

BRUNO DE KLERK: After the one and only Dutch 'Amiga Magazine' couldn't continue anymore, we (as an user group) decided that there had to be some kind of Dutch (+Belgium/Flemish) Amiga magazine to keep providing the Dutch Amiga scene with information/news. *AmigaScene* started as a small, photocopied club magazine...but has grown to a full-size magazine, with lots of different articles.



Bruno de Klerk

OLIVIER FERRER: aMiGa=PoWeR was created by the French Amiga users' association AFLE in order to inform and support all active French Amiga users.

DANIELE FRANZA: *Enigma Amiga Run* was the last [Amiga] magazine in Italy, but the community was still alive and we didn't want to be forced to read magazines written in other languages. This motivated me to decide to buy *EAR*, together with my publisher, and to continue publications under the name *Enigma Amiga LIFE*.

PETER HORVATH: Our magazine was the only one in Hungary at that time. I wanted to read about Amiga (and had a lot to say about it) so I decided to make a magazine! :-)

Some of you began your efforts in the years after the Commodore bankruptcy, the Escom bankruptcy, and even the broken promises by Gateway. What motivated you to commence such a task in such a difficult time for the Amiga community?



Grzegorz Juraszek

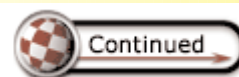
GIORGIO SIGNORI: *Amiga.it*...started when Amiga still was "in the fog:" Gateway had just totally cancelled their plans for the New Amiga, and morale was not that high. My previous magazine (*Enigma Amiga Run*) was going to close but we wanted to keep on talking about the Amiga, and to give our support to the community.

THOMAS RAUKAMP: We wanted to give the market a positive boost, and actually did. We experienced the same thing in the Atari market years ago, when establishing our magazine gave that market new life. And there were and are great chances for a strong Amiga-market again!

GRZEGORZ JURASZEK: Amiga users do not follow regular patterns of economic thinking! That is the best explanation I can give! ;-) A hobby is a hobby, and no difficult times can stop you if you really like what you do!

ANDREW KORN: As I said, *AmigActive* was inspired by the closure of *CU Amiga*, but it wouldn't have happened unless we all felt the market had potential for expansion. We feel that we are putting ourselves in a good position for the launch of the New Amiga. It was quite a blow that the whole Gateway thing collapsed a few days before our first issue went to press with the departure of Collas, but we had a hint that there was something else brewing, so we had no intention of letting it drop there!

OLIVIER FERRER: Producing aMiGa=PoWeR magazine is relatively easy, since many people freely contribute to it, and, generally speaking, we always have something to say about Amiga. There is always something new :).





When you look back, what have the major pleasures and difficulties been for you in keeping your project going?

OLIVIER FERRER: When AFLE decided to create aMiGa=PoWeR for its members, there were rather few of them. We had to persuade them that it was a good thing. By issuing a high quality magazine, at a very low annual cost, we managed to make AFLE the first French Amiga related association. With more than 250 members today, AFLE is well known on the Amiga market, connected with many manufacturers, editors and resellers.

ANDREW KORN: The pleasures: Job satisfaction. Creating something people really enjoy and which provides them with an anchor to the whole Amiga "community" is what makes it worth while. The problems: Lack of sleep, mainly.

CHRISTIAN KEMP: It was, and still is, a very special thrill to see how many people visit *Amiga News Network* daily, showing that there still is sufficient interest for the work I'm doing. The difficulties right now are in finding suitable and reliable advertisers, and finding enough spare time in which to update the site, with a full time job, sports and real life taking up a lot of my time.



Giorgio Signori

PETER HORVATH: My greatest pleasure in creating *Amiga Villag* is the feedback of the readers. A lot of e-mails ("Let's continue") and a lot of people at the Amiga demo parties asked us to continue—so we continue!

DANIELE FRANZA: The most pleasing thing is the fact that we succeeded in keeping at least one Amiga publication alive in our country. The other great thing is the acceptance from the community, which is very close to us and supports us with great passion. The difficulties come from the dimensions of the market which is getting smaller and smaller every year, consisting in Italy, as in the rest of the world, of die-hard Amiga fans. If we go forward it is only and exclusively thanks to them!

WAYNE HUNT: I know it sounds corny, but I enjoy working with the Amiga community, as well as helping to heighten the Internet presence for the Amiga. Difficulties? On that, I'd have to say "egos." There are ten or twelve great Amiga Web masters out there who are trying very hard to provide services for the community. Each of us is trying in our own way to offer pretty much the same services, yet remain distinct in our presentation. All too often, there is a tendency to work against one another rather than to work together, which distracts from the efficiency of each site.



Wayne Hunt

BRAD WEBB: The biggest problem is finding the time to do it. Since *Amiga Update* is free, there's no compensation for my time at all so I have to find ways to keep it simple. The second biggest problem is obtaining information. I need press releases when possible, as there's not enough time to write many articles myself.

BRUNO DE KLERK: One of the most fun things to do are the interviews. We interviewed lots of people who produce TV (game) shows, which are made with Amiga. But we also did an interview with someone who controlled everything (and I mean *everything!*) inside and outside his house with an Amiga. He controlled the heating (per room), TV (including teletext/CeeFax), music (per room), answering machine (including a full database of known/unknown persons with pictures), light, just about everything. The inside information you sometimes get before it's in the magazines is fun too!

GIORGIO SIGNORI: The pleasures? Apart from the initial support from Amiga Int., the feedback from Amiga users was great. They gave us the will to keep on going. The problems were mainly in the start-up phase...when you are 20 years old and have to build a little company starting from zero, you can't expect not to have problems! Also, there's been a lot of work to build the structure; our aim of publishing a magazine on a CD wasn't that simple.

THOMAS RAUKAMP: When we started, there were five competing magazines in Germany. Another difficulty was the period of time when there were such high expectations of Jim Collas and his projects, making it very hard to explain to the readers why these dreams *again* failed to material-





ize. But the latest plans give everyone a much better feeling—because finally things are beginning to happen, aren't they?

The Amiga has long been at the center of a truly international community. Tell us what's it like to be an Amigan in your home country.

THOMAS RAUKAMP: The German Amiga-market is still by far the biggest in the world. Most of the important developers of hard- and software for the current Amiga-systems come from Germany. The users are waiting for some new stuff to get their hands on. So the chances that Germany will be a big market for the New Amiga are very good.

ANDREW KORN: The UK is an odd mixture. It can be a rather cynical part of the Amiga market at times, but it's also very active. We have a (largely) great bunch of businesses. A lot of the user group meetings take place in pubs, which I particularly approve of. ;-)



Olivier Ferrer

BRUNO DE KLERK: Holland is a strange/weird country (as if you didn't know...), and you're an outsider if you use an Amiga, until those PC users see what you can create/do with an Amiga, with less stress and so little time. The Dutch Amiga community is the backbone of 'AmigaScene', they keep hoping for better times, even if they don't own an Amiga anymore! Commercially the Amiga is (secretly?) used in many TV-productions/shows, company presentations (Scala/InfoChannel), museums, zoo's and lots of local TV-stations, including the infochannels. *AmigaScene* always has an article about this subject ("Amiga works at..."). We have about three Amiga shops, and a few mail-order companies left in Holland.

BRAD WEBB: I find the Amiga's current state is all but unknown in America, its original homeland! However, as I wander about the computer industry I'm constantly surprised to run into former Amiga users just about everywhere!

WAYNE HUNT: IMHO, being an Amigan is even more cool today than in 1995. Here's this New Amiga, Inc., which has come into the community and started surprising us at every turn. Bill McEwen [and Company] buying the Amiga was a surprise to most, but even since then there's the fact that they've brought an SDK to market in six months and announced the AmigaOne [should be available] by Christmas. Sure, Commodore is gone, but in my mind and opinion, the New Amiga, Inc.'s plans and designs are far more exciting than the Commodore Amiga would have ever become.

GRZEGORZ JURASZEK: The community in Poland is one of the biggest in Europe, probably the biggest of all the former East-European countries. We have several organizations like ATO PL, AIRI and APG, numerous user clubs and shows each year. Commercially though, it is not that good—there are only a few companies left that still sell Amiga software and hardware.

DANIELE FRANZA: Nowadays many people have been forced to leave Amiga in favor of other systems (Linux, Mac, Windows) because of their school or work. I am sure that all these people can hardly wait to go back to Amiga, and they will do so as soon as new Amigas are out.

GIORGIO SIGNORI: I'd say that the community in Italy is split in two: we have an active part that usually follows the community on the Web. [These are] not many but very, very, active. And we still have a large group of "silent" users, who usually look for contact with us by snail mail or by phone (we have a hot-line). From the commercial point of view, I have to say that the network of distributors is very limited. And this, unfortunately, is even worse when you have to face piracy, which in Italy is still too popular, (sigh)!

PETER HORVATH: In Hungary there are very few users, but some of them are in the right places! Last year two satellite television stations were using Amigas (ok, Dracos) for their interactive videoclip-programs—people watched it all over the country. There are dozens of local cable TV stations where Scala Infochannel is still in use. In our town (I live at the western border in a town of 60,000 people) there is a *growing* Amiga community—there are serious companies where Amigas are used. There are still people who are more impressed of my presentation of an Amiga than they are by a 600 MHz Wintel box.





So, how do you plan to cover the New Amiga in your magazine or site?

GIORGIO SIGNORI: Actually we are planning a special section dedicated to the New Amiga, as soon as we are sure that we'll have enough to talk about every month. Also, I think that for the future, a developer section may come.

PETER HORVATH: I've decided NOT to write about it until I have got one working, really working... We introduced the Boxer, IWin's machines, Gateway's plans... I won't make this mistake once again.

ANDREW KORN: *Amiga Active* sports the cover line "The Future of Amiga Computing". The New Amiga was very much in our minds from the creation of the magazine—indeed, it's the reason for the magazine. We don't think the transition will be any problem for us. Of course at the moment most of our coverage is about the "classic" Amiga, but we will be scaling up coverage of the New Amiga as there becomes more to write about. We will, of course, continue covering the "classic" line for as long as there are things to write about and people who want to read them, but we're all champing at the bit for next generation products to review!

BRAD WEBB: We will use the same approach we are using now. News as it happens, of events, new products, shows and so forth. We also print entertaining rumors from time to time, and clearly label them as such. We expect to continue all these practices in the New Amiga era.

DANIELE FRANZA: *Amiga Enigma Life* is already writing about the New Amiga, reviewing the SDK and writing about the future of Amiga (Elate, AmigaOne, etc.). When the AmigaOne is out we'll of course review it. In the future, the space dedicated to new the Amiga will increase if our readers are interested.

THOMAS RAUKAMP: There is a vision Amiga is following and we will communicate this vision to our readers. We will try to be objective about the new path Amiga is taking. The chances for the new systems are great, if they get the attention they deserve—and that's *our* part.



If there's such a thing as "The Amiga Spirit," what is it to you?

BRAD WEBB: In short, it's the preservation of an alternative and better way to do personal computing against all odds. It's truly *the users'* computer.

OLIVIER FERRER: In my opinion, this spirit is still embodied by Aminet. It has the right idea. "Problem --> solution; broadcast, mutual help."

GRZEGORZ JURASZEK: Different people have different definitions for the Amiga Spirit. Maybe it is the community of users that "*keeps the momentum going*", as the AI slogan says.

Thomas Raukamp

DANIELE FRANZA: "The Amiga Spirit" is the union of the three virtues: Will power to exist, unity and patience. These three have connected and held together the Amiga Community so far. The Spirit exists because the Community exists.

WAYNE HUNT: It's the community. It is completely unique in the world.

THOMAS RAUKAMP: Its about wanting, deserving and choosing the best solution available—*no matter what other people do, think or choose*. It's about *individuality*.

CHRISTIAN KEMP: I suppose the most important aspects in today's mainstream world are independent thinking, the searching for alternatives and, of course, the creativity and innovation that brought so many outstanding projects to life.

GIORGIO SIGNORI: One word: Passion!

ANDREAS MAGERL: The Spirit is Amiga users helping other Amiga users.





ANDREW KORN: I know this isn't what you meant, but I'd say The Amiga Spirit is an aged Islay single malt. Microsoft's Own Label mixed scotch may get the job done quicker, but it's sure less smooth going down.

What about your publication or Web site are you most proud of?

BRAD WEBB: That we've been there when there was virtually nothing else available in the United States.

GRZEGORZ JURASZEK: That eXec was created in difficult times and did not die as yet another unfinished project!

PETER HORVATH: We offer *pure information* in our magazine. No big pictures, no empty articles, only usable information.

GIORGIO SIGNORI: I'm proud to have built something, even something little, starting from nothing. I don't think that we could have done this in another market; "only the Amiga (community) made it possible!"

ANDREW KORN: I'm proud of the desire of the *Amiga Active* team to get it done, and get it done well.



Daniele Franza

CHRISTIAN KEMP: I am proud at having managed to build a relatively popular site, but I'm especially fond of the scripts that are driving ANN, which are still unrivaled by any other Amiga news site.

DANIELE FRANZA: We are very proud *to exist*. Because of the size of Amiga market, one magazine can survive only if it meets the needs of the market. The fact that one issue of this magazine is published every month proves that the readers like it. It is they who tell us so, in the numerous letters that we receive.

Based on what's been announced by Amiga so far, what are your predictions for the New Amiga's future?

OLIVIER FERRER: Recent announcements are very promising. As I said previously, wait and see...

CHRISTIAN KEMP: I'm not really relying on announcements anymore, but prefer to see a little bit more evidence first. The fact that [Amiga] have an SDK out and that they have a number of knowledgeable persons in their team is promising, but it remains to be seen whether Amiga's plan works out in the long run.

DANIELE FRANZA I stopped making predictions back in 1995. :-) I will judge by what Amiga Inc. releases officially in Italy.

ANDREW KORN: Predictions are dangerous things. However, I certainly wouldn't be working in the Amiga market now if I didn't think there was something happening that is well worth being a part of.

THOMAS RAUKAMP: The more Amiga focuses on creating solutions to computing problems (solutions that people are *still waiting for* after more than 20 years of personal computing), then I see big chances for them. And it seems to me Amiga finally understands the technical needs, the market and the people. Their best weapon will be a small, scalable, efficient and elegant operating environment you can use on your computer and also on your phone, etc. This market needs a new standard soon.

WAYNE HUNT: I predict Amiga, Inc. will provide a strong focal point for computing in the future. Their "Write Once Run Many" (re-coined term) platform-independent concept is, in my opinion, incredibly exciting, not just for the Amiga, but also for every computer user who buys software. The strategy they've outlined, if successful, will honestly change the face of computing and (hopefully) obliterate the "my computer is better than yours" silliness between platforms. After all, if we're all able to run the same software, who cares what it runs on? Aside from that, anything that helps to kill Windows is a good thing in my book.





d'Amiga Details



The path to next generation Amiga Operating Environment took a giant step forward with the announcement of the d'Amiga Developer Workstation. Comprising a hardware and software standard, the system could be assembled and shipped by a variety of suppliers. At this point, five companies around the world have stepped forward with plans to provide d'Amiga systems to Amigans who need and want them. The companies are Wonder Computers (Canada), Software Hut (USA), KDH-Datentechnik (Germany), Unitech Electronics (Australia) and Eyetech (United Kingdom). It's apparent at once that Amiga Inc. has tapped the global Amiga market to provide around-the-world supply and support for its new development system.

Amiga World interviewed representatives of all five companies about their plans. We found enthusiasm and excitement from all who responded as they discussed their work on this stepping-stone into the Amiga future.

A brief recap of the specifications for the d'Amiga may be in order before we continue. As announced in the press release, the d'Amiga system is a "PC" with 500 MHz AMD K6-11 processor, Gigabyte GA-5AX motherboard, 128 Megabytes of RAM, 40X CD-ROM drive, high density floppy drive, 10 Gigabyte hard drive, an excellent sound system, 3D graphics and a networking card. It comes with Linux 6.1 from Redhat preinstalled (except where not available), and the Amiga Software Developer Kit. It further features the Amiga Inc. developer's support package, at Trailblazer Level, a feature worth \$1000 US if purchased separately. This is an impressive package put together from standard hardware and Amiga software. Any individual could, in theory, go out and buy the parts - or their equivalents - and build a d'Amiga. That's not necessary though, thanks to our five dedicated Amiga support companies.

We were very curious as to why the several companies assembling d'Amigas decided to get involved in this venture. The answers revealed quite a bit about the individual companies, and perhaps the current status of the developing next generation Amiga market as well.

A history of involvement with, and enthusiasm for, the Amiga and its community clearly play a part. The thoughts of Joe Muoio, President of Software Hut, are typical. "We

have distributed product from Commodore and for the Amiga computer for many years. When Commodore went out of business we were saddened, but determined to stick with Amiga. It's still one of the best platforms to do so many applications such as graphics, sounds, video, etc. at a price that cannot be beat.

"When the rights to Amiga were sold to Bill McEwen and company, we scheduled a meeting and were extremely pleased with the rapid development of their business plan," says Muoio. "We were very interested to help with this and one of the first things to be done was release developer software so that when released, the new OS will have many applications ready. At the heart of this plan was an Amiga authorized PC system with Red Hat Linux and the SDK preinstalled. We wanted to make this available to all our customers.

"We have been very pleased with the response," continues Muoio. "Many sales are going to people and developers who never owned an Amiga before as well as many of our loyal customers. This should allow for a much wider and complete line of software as soon as the new OS is ready to go."

The answer from Mark Habinski of Wonder Computers in Canada points out the wisdom of Amiga's use of common hardware components. "We were excited at the prospect of being able to integrate our PC assembly experience with our Amiga sales background," explains Habinski. "As an Amiga user myself, I am particularly happy to be able to contribute towards the creation of a new generation of Amigas."

Across the Atlantic in Germany, Günter Horbach KDH-Datentechnik put it this way. "Well, this is the first project for the new Amiga and we wanted to be part of this new beginning. We hope that the d'Amiga will attract the Amiga developers and developers from other platforms to take their chances and develop for the new machines. For the community it is the first active sign that there is something happening behind the scene and the time of announcements only is over."

From Australia, Jeffrey G. Rose of Unitech Electronics gave us this answer: "We are firmly



Continued



committed to the Future Amiga and we fully believe that the Amiga has a great future. This is why we have committed our resources to the d'Amiga project, to enable Amiga users here in Australia to...develop for this new revolutionary package..."



Since d'Amiga is in fact composed of standard "off the shelf" parts put together by its suppliers, some interesting possibilities develop. Without violating the concept of having a common Amiga platform, it's possible for differences to exist among the various units. We asked d'Amiga producers about regional variations, and determined there will be some. In part, this has to do with the vagaries of the Linux world.

"Because no retail versions of Red Hat 6.1 are available in Europe," explains Eyetech's Alan Redhouse of the UK, "we are shipping all systems with SuSE Linux 6.4 on a bootable/installable CD." Amiga Inc. has approved this idea. "We have chosen this route for several reasons. SuSE's European support is excellent. It is also the most widely installed Linux distribution in Europe. The SDK installs and runs [on SuSE] without problems. The graphic-based installer automatically detects all supported hardware components in each of our four hardware platform levels. The optional retail package from SuSE is an outstanding value, containing a full 500+ page reference manual, easy to understand beginners get-you-going guide, 60 days of support and six full CD's. This full pack retails (from us) at just \$38"

One thing to bear in mind in light of the comment about the various Linux implementations is that the new Amiga Operating Environment can run on many different host operating systems. Linux is merely the initial target operating system. Many Amigans may not yet have grasped the tremendous flexibility of the new Amiga environment: The fact that it has the potential to run on just about anything that can compute, regardless of operating system or even whether it has an operating system at all.

Once you have your d'Amiga and begin using it, you'll be in a position rare for recent Amiga owners. You'll be able to upgrade the basic platform with the wide variety of "PC" peripherals available, as well as adding other operat-

ing systems if that's necessary. In Germany, KDH is already looking at various possibilities for its customers. "We offer different upgrades to the standard machine," says Mr. Horbach. "Our customers can select different sizes of hard drives, different sizes of the graphic board, etc."

You'll want to ensure, though, that your work will run on the basic system as delivered. Mr. Rose of Unitech underscored the importance of this fact. "Our d'Amiga is kept to the standard recipe as laid down in the suggested guide-

lines by Amiga Inc. and this was done for good reason, too. For instance," continues Rose, "if everyone out there is doing their own thing then we have chaos on a large scale. If on the other hand, everyone uses the same machine to develop, there is uniformity of development. No one developer can claim his/her software runs better or more efficiently if they were using a faster CPU [for development]. This also keeps error checking and discussions at the same base level, so problems can be solved by duplicating a series of events on any one given machine anywhere around the world. Standardization of the d'Amiga has its valued merits at this point in time."

As the new Amiga market develops, there's nothing to prevent the basic technology from growing to provide more power and options for the "power user" down the road, all based squarely on the d'Amiga foundation. Obviously there are many tantalizing d'Amiga possibilities for the developer of all levels, and the number of possibilities is still evolving.

One of the key elements of the d'Amiga package is the emphasis Amiga Inc. is putting on support. As noted above, the system comes with Amiga's Trailblazer level developer support package. This is a great value and includes 24-hour turnaround on issues, all developer materials, the online Developer Mall and other Web accessible tools, online developer docs, and a great deal more.

We asked the several companies how they intend to support their d'Amiga models in light of this strong emphasis on support from Amiga. All plan to offer direct support of

Many sales
are going to
people and
developers
who never
owned an
Amiga
before as
well as many
of our loyal
customers.




Continued



their products, primarily through email and telephone. Software Hut and Unitech also made reference to their companies' Web pages. Most, however, were quick to point out that the most important support users will receive is the developer support from Amiga itself. This is one of the benefits of purchasing a d'Amiga from one of these authorized vendors, rather than assembling a system yourself.

Before we finished our conversations with d'Amiga producers, we tried to get some of their feelings for and philosophies about doing business in the current, changing Amiga market. We were also curious about the future they saw d'Amiga leading us toward. Joe Muoio sees the d'Amiga as a leading straight to the Amiga One computer, planned for the near future.


...I believe
the initial
demand for
d'Amiga
systems
bodes very
well for the
future of the
Amiga
market.



"The d'Amiga is the stepping stone to the future development of the Amiga One machine," mused Software Hut's Muoio. "We are focusing our efforts in selling the d'Amiga at this time in order to enable and encourage the many great developers we have in this market and beyond to create software for the next generation of Amiga computers. We are very proud to bring this system to the US market on Amiga's behalf."

"The Amiga market here in Sydney, Australia has not always been easy to deal with," explains Unitech's Jeffery

Rose "...sales are very much price driven and as such a price-point marketed New Amiga will be seen here as a bargain when compared to any alternatives."

"We hope to attract new developers, especially from the Linux market," says KDH's Mr. Horbach. "However, it's too early to say if this will happen." From what we've seen, it appears likely developers from many markets, including the Linux camp, will at least investigate the new machines, but time alone will tell where the new Amiga developers will come from.

All the companies we talked to were pleased at the opportunity to help bring to market the first new Amiga development system in a long time. Their common enthusiasm is perhaps expressed the strongest by Wonder's Mr. Habinski. "It's very early to comment, but I believe the initial demand for d'Amiga systems bodes very well for the future of the Amiga market. Keep the faith, long live the Amiga! The new machines will knock the socks off of the market. I look forward to welcoming back many former Amiga users in the months and years to come."

The very capable d'Amiga development system has an equally capable global network of companies to back it. This combination has positioned d'Amiga as both a good and readily available tool to lead the development of the new Amiga software library.


The d'Amiga
is the
stepping
stone to the
future
development
of the
AmigaOne
Machine





Developer Notes

With the release of the Linux SDK upgrade and the Windows hosted version of the SDK already announced Amiga is moving to implement some of the NDA areas of the developer website.

Much good has come from the open@amiga.com mailing list and this developer list will be continued as a part of our developer support system. We will also institute the internal support mailing lists for developers who have signed an NDA with us. If you have not yet signed an NDA with Amiga Inc. and are planning to develop for the AmigaDE, then please email gary@amiga.com now.

Beginning in January of 2001, our support structure will change slightly. We will continue FREE support for all developers who wish to help each other through FAQ's, mailing lists, message boards, and IRC. We also have developer support telephone lines at 425-396-5640.

We will also have three paid support areas: Trailblazers, Pathfinders and Premier Partners. More information on these support levels and what comes with them will be released as we get closer to the end of the year. d'Amiga owners already qualify for free Trailblazer support!! If you have not bought a developer system yet, this is an excellent choice.

We have set up an IRC channel at irc.amiga.com, which will become live during the month of November for our first online developer chat. This will be for all AmigaDE developers. Watch for Amiga Inc. press releases and our website for times and dates of this event.

Some Important Points

To date, Amiga Inc. has not released any decision on what bus architecture, CPU, or any other hardware choices will be made for our hardware reference designs.

There have been references to what some consider a mistake being made when AmigaDE is called a "Run Time" system. AmigaDE is a Real Time OS. We are also designing it to be a RUN TIME system for applications. This is NOT an error and has been discussed several times now on the Open Amiga Developer List. If you are interested in facts, not rumors, you should get on this list.

Free support for our open source freeware and shareware developers is NOT going away. We will be ADDING fee-based support and will be increasing the levels of support offered in the fee based tiers, but will continue to offer free shareware and freeware support. Nothing is being taken away.

Thanks,

Gary Peake
Director - Developer Relations & Support
Amiga Inc.

<http://www.amigadev.net>
<http://www.amiga.com>

Catch the Dream ... The AMIGA Dream Team



Contents



Amiga SDK : An Overview

It's been a long while since anything interesting relating to the Amiga has been released from Amiga, Inc., but finally, the next generation Amiga SDK is here--the first release is available for developers wanting to join the wave.

Was it worth the wait, and what have we been waiting for, exactly? That is exactly what we are going to find out through this column as we explore the various tools of the SDK and examine their strengths and features.

The new Amiga SDK is an effort to move cross platform development one step further, extending a lot of the technologies we know from Sun's Java platform. Amiga, Inc. is introducing the VP, the Virtual Processor, and an associated bytecode format that can be compared to Sun's Java bytecode. However, VP bytecode is not tied to any language, like Java bytecode is tied to Java. In fact the SDK comes with tools to compile Java source files into VP bytecode. While the virtual processor can be targeted by any conceivable language, the Amiga SDK already does a good job at supporting today's more common languages, namely C/C++, and pJava.

The Tools

The Amiga SDK contains several main tools and ships compilers for C/C++ and pJava. The C and C++ compilers are implemented based on GCC, the GNU C Compiler (www.gnu.org/software/gcc/); they fit on to the back end of the compiler to make it output VP code instead of code for an existing, physical processor. The GNU C Compiler is released under the GNU Public License, which states that modifications made to the code must be released with full source. You can download the source code to the changes made to GCC from www.amigadev.net.

The pJava development environment is a Sun-certified set of development tools. The pJava version that ships with

the Amiga SDK has proven to perform very well

in a number of independent comparisons. pJava is short for Personal Java. Personal Java has its own web resource at <http://java.sun.com/products/personaljava/>.

The SDK also supplies a broad range of interesting Application Programming Interfaces (APIs will be covered in future Amiga World articles). Interestingly enough, it ships with a POSIX (Portable Operating System Interface) API, so porting applications from UNIX and other POSIX compliant operating systems should not be too hard. In fact, looking at the submitted third party code at Amiga's www.amigadev.net, it's fair to say that the NG Amiga is already a success: Over 75 utilities are already posted there and it has the support of a lot of talented developers.

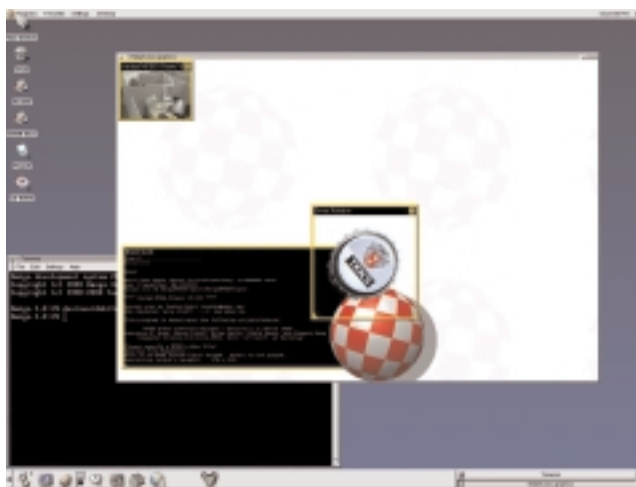
The Digital Environment

The Amiga SDK is sold as a software development kit, but also contains the Amiga runtime environment for Linux. This will soon be available for Windows. This means that you will be able to run current and future Amiga applications on your Linux or Windows box, at speeds that are likely to be quite similar to a 'Native Next Generation Amiga OS.' During this

evaluation I tested the SDK on systems ranging from a Pentium II 200MHz to an AMD K7 750MHz, and it really seemed to perform well on both systems.

Remember, while there is an "Amiga" in the pipeline—a real box with real hardware in it designed especially to run the Amiga DE-- part of the New Amiga thrill is the fact that the AmigaDE runs on a range of platforms. As a matter of fact the latest product description from Amiga, Inc. lists that the following processors are supported: x86, PowerPC, M Core, ARM, StrongARM, MIPS R3000, R4000, R5000, SH 3, SH4, and NEC V850.

The Amiga DE will also run "hosted" on Linux, Embedded Linux, Windows 95, 98,



The Amiga environment running on top of Linux. The familiar Amiga bouncing ball is partly hidden under the tek rotator demo while AmigaMPEGPlayer is displaying a small MPEG clip.



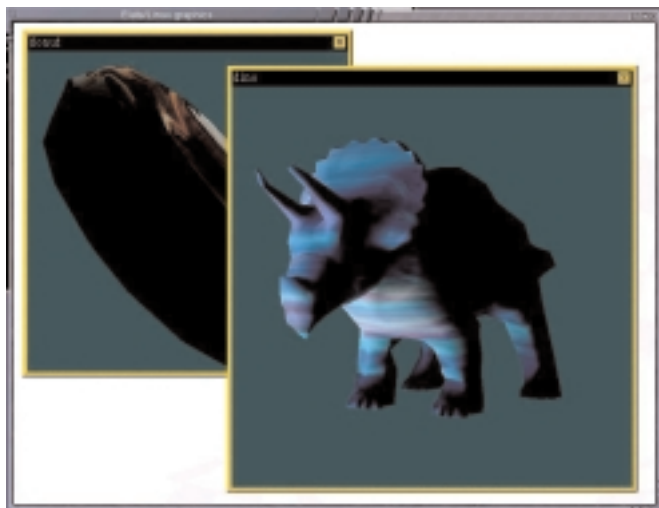


2000, NT, CE and QNX4, meaning that calls to the Amiga API are dispatched through the PII (Platform Isolation Interface) to the host OS' system functions.

A lot of people are asking about backward compatibility to the classic Amiga operating systems, and Amiga, Inc. is promising this through software emulation. While this is valuable, it's not what's really exciting about the design that's been chosen for the NG Amiga. What is exciting is that Amiga, Inc. has around 40 platforms ready to run VP code. Given how the Amiga SDK aims at allowing you to write your code once and run it on platforms as low end as cell phones, it is likely there will be loaders for PalmPilots, WinCE-devices, games consoles such as PlayStation 2, Nintendo Gamecube, Dreamcast, Amiga Classic machines (equipped with AmigaOne hardware) and so on.

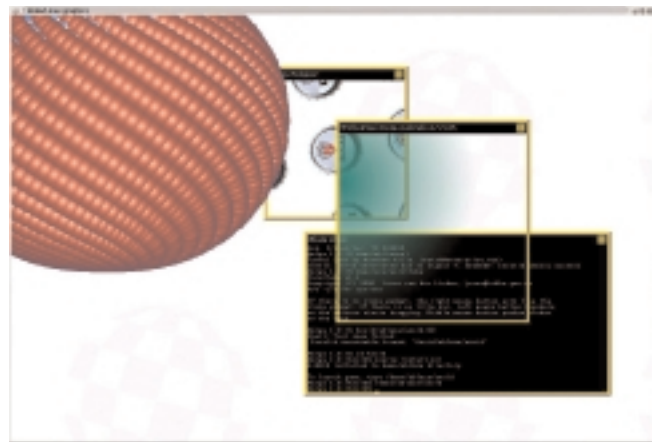
Speed

These notes on speed concerns are based on observations about the design of the Amiga Digital Environment, not of the current implementation. While the assumptions made could be true, chances are they are not implemented to their fullest extent in the current release of the SDK. As the SDK matures, more accurate and detailed speed tests will be discussed.



A couple of 3D demos downloaded from www.neo-scientists.org running happily on a Pentium 200 Mhz. The donut does ~15 fps on this machine and the dino does ~25 fps on an AMD K7 750 Mhz.

Experience in the past with bytecode-compiled formats, such as Java, raises a concern: How does the system perform? In which ways will the design and implementation restrain me as a coder when it comes to what I will be able to get out of the computer?



Windows in the new environment need not have borders. Writing applications that are partially transparent is an easy task; the alpha bits of pixmaps (A) are manipulated just the same as R, G, and B.

Modern Java environments do JIT (Just In Time) compilation of the bytecode into native code to speed up the execution, and a lot of environments do it really well; benchmarking shows they are competing with C/C++.

Because VP code is converted to native code by the loader before run, this step can be compared to the Java JIT step. But we also note that the VP code will under no circumstances be interpreted, as might be the case for archaic Java implementations.

Using VP code as the distributed binary format has a number of advantages, not only when it comes to binary portability. By choosing a loader that more closely fits the platform you're intending to run the VP code on, you'll get instant performance improvements, not only on the applications that you install after upgrading the loader, but also on applications already present on the system. Just imagine having a loader that does AMD 3DNow! optimizations, targets processors like the AltiVec, and the optimizations will apply to all VP code that you run through that specific loader.

Let's not get completely carried away. These kinds of platform specific optimizations might not ever reach the quality-level of hard-optimized code for those platforms, although they will likely come close. It will certainly be far better than no utilization of these resources, as with current binary formats.

Hand-optimizing code for specific platforms is an easy task with the Amiga SDK design. By using a postfix extension on your files, you





can give an indication that a file has been optimized for a specific platform. Files ending with a .00 are native VP-code, other platforms are allocated other two-digit numbers as extensions. The loader will know which platform it's on and automatically get optimized code portions if they are available. If not, it will use the .00 native VP-code and do its best to create the code.

Loadtimes are another thing that might worry people, but also here, the design of VP excels. Remember, the hard part of compilation has already been done at the time that the VP code is stored to disk. The compiler has already taken care of lexing, parsing, semantic analysis, translation, canonicalization, instruction selection and register allocation (even though it's targeting a virtual processor). This leaves you with the small piece of relocatable object code on the disk, which is VP code.

I haven't yet done extensive testing with this, but I did convert a supplied VP example (the bubble sort) to ANSI C. Compiling it on Linux, made the executable file 12031 bytes. After stripping the symbols, the file was 3300 bytes, still a considerable size for a 20-line long bubble-sort program. The VP code-file, which is the Amiga equivalent of an executable, is 432 bytes. As you can see, this is a substantial reduction.

So, even if there is a performance hit from the CPU having to convert the instructions from VP code to native code, the overall process could very well be one that is faster than loading and running native code, because of the reduced binary size.

Documentation

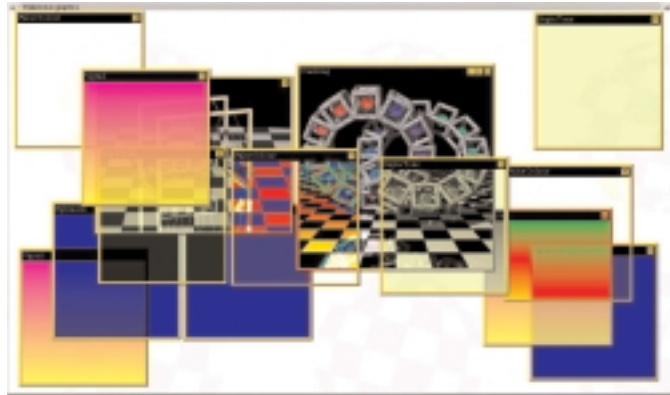
The Amiga SDK ships with a (roughly) 300 pages manual which is very informative written and fairly easy to read. The main portion of the documentation is shipped on the CD, so if the printed manual seems to only touch the surface of certain topics, chances are they will be further documented on the CD. Most of the documentation on the CD

is in HTML format. Some is PDF, Adobe's Portable Document Format, and you need Adobe's Acrobat Reader to read it. Acrobat Reader is available as a free download for many different platforms at www.adobe.com.

Conclusions

Based on these initial observations of the SDK it seems clear that the overall design of the VP is quite sound, stable and functional. While there may be per-

formance issues, it's probably not because of the overall design of the VP. The SDK represents a new approach to programming. As it grows it will certainly attract the attention of both small, "bedroom" programmers, who will appreciate its ease, and larger development companies who will recognize its great potential. Getting involved on the ground floor of the New Amiga will certainly be beneficial to hobbyists and professionals alike.



A selection of demos ship with the SDK. These windows do real-time filtering of windows that are below them.





Amiga SDK : Installation Guidelines

So you want to use the Amiga SDK? Luckily for you we at Amiga World are here to help out with tutorials, hints and tips.

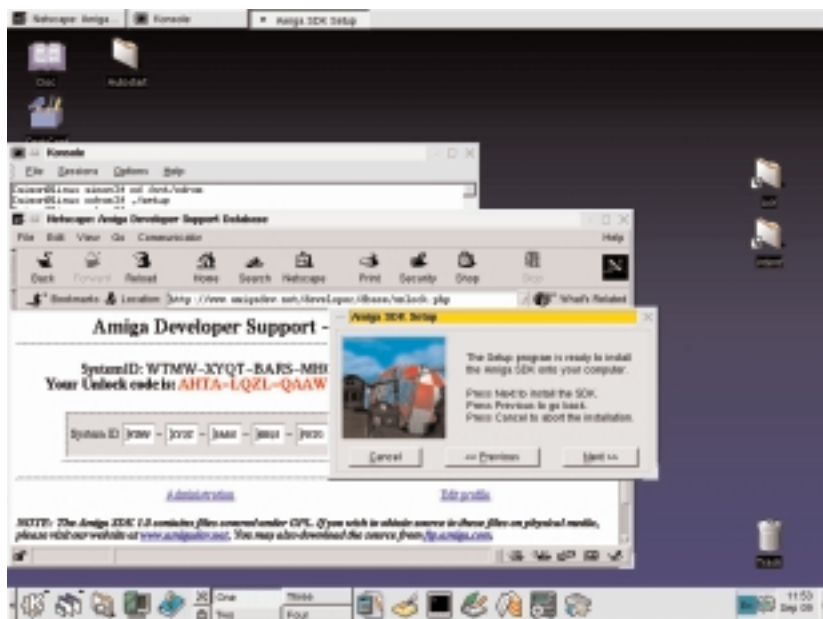
If you're among the curious that fancy a plunge into the new Amiga SDK to see what it has to offer, you may well benefit from our walkthrough. Here we will show you how to get the SDK up and running and, soon enough, writing programs. It is also advisable that you have a look at our SDK companion article, "First Impressions of the Amiga SDK" for a more technical journey through the many features of the SDK.

Initial Steps

The SDK comprises the ElateOS-based intent™ multimedia environment hosted on top of Linux. In order to install the SDK, you will need to install Linux first, which is where a lot of the trouble could start.

Recipe for Disaster

You have two choices: You could buy a ready-made system--many are being distributed around the world by authorized outlets--or concoct your own. There are many advantages to buying an authorized d'Amiga developer box—not the least of which is the excellent package of support that comes with each d'Amiga—but if you don't fancy the ready-cooked variety, then it's time to put on that apron and start creating. First, you will need a PC and one distribution of Linux for flavoring. Gently mix the PC and Linux until an OS appears.



Some lumps may appear depending on the flavor of Linux used. Any package based on RedHat 6.2 will require a fix to the ncurses part of the OS, available at www.amigadev.net in the third party download section. RedHat 6.1 (which is recommended) or packages built around it won't have this problem.

The initial Linux part of the recipe should be reasonably straightforward providing you have plenty of room to store it, typically 2Gb (even more so if you want to dual boot the machine with Windows). Without sufficient room, the installer will start omitting parts, which can lead to problems especially if you leave out the compiler and/or peripheral programs critical to using the machine in a desktop role.

So now the last thing left is a sprinkling of the SDK on the top and everything should be ready to cook.



Continued



The Proof is in the Tasting

The SDK installation is really where the headaches can start, so we'll try to ease this as much as possible, as we would hate for you to have to mix in aspirin, too!

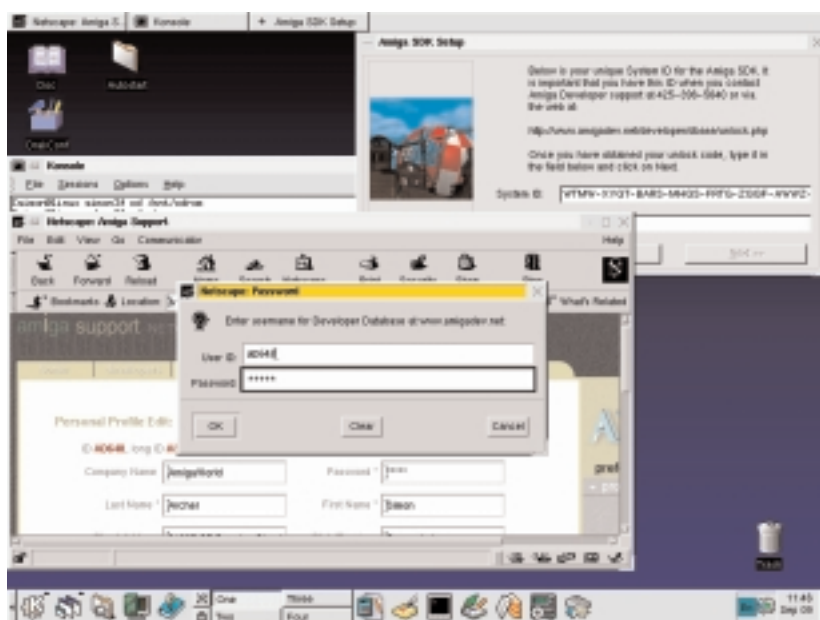
Boot up Linux and log in as **root**. You should be looking at an X Window manager of one type or another (KDE is a personal favorite here), and you should see an icon for the CDROM drive. To avoid some problems later on, we'll avoid the setup icon and start off by opening an X Terminal. If you haven't bothered running an X manager then the process is the same from the console too. Make sure you have the SDK CD in the drive and type the following:

```
cd /mnt/cdrom <return>
./setup <return>
```

This will now run the setup program to start the installation of the SDK. Click on 'Next' and you will be greeted with the license agreement screen. Keep in mind that this license agreement was not supposed to be included with the CD and should be disregarded—you won't be bound by its terms.

You will be asked for a developer ID number which you should have acquired from the Amiga Support Network Web site (www.amigadev.net, see the sidebar). Enter it and press 'Next' again.

You will now need an unlock code which is derived from the Developer ID, so you will now need to point your browser at www.amigadev.net/developer/dbase/unlock.php. You will be asked for your UserID (again it will be ADxxx) plus your password. Pressing OK moves you to another screen where you have to enter the System ID that should be displayed in the SDK setup window. Be careful here, the numbers are long and one typing mistake could lead to hair pulling! Press the 'Get Unlock Code' button to get your code, and type it in the installer window. Now the installer should be ready to start installing the SDK. After a short time the installer will announce that it has finished and the SDK is installed.



Take it out for a Thrash

The SDK comes with a veritable fistful of documents describing just about every inch of its components, as well as the developer documents (akin to AutoDocs) that describe how we can interact with the intent(TM) environment.

Most people want to first duplicate the many screenshots of the SDK in action, so we will start off by launching the AVE (Audio Visual Environment) and having a browse around. Type this into the console:

```
intent_media <return>
```

You should see a window appear with a boing ball background. This is the AVE window and from here you can check out the demos and programs available so far. Click the right mouse button in the window and a small menu should appear. By selecting ave-demos you can view all the demos available one at a time, whereas ave-avedemos launches the whole lot in one go. Check them





out carefully, as there is some nice stuff in there, especially the boing ball that you can throw around with the mouse!

Getting Under the Bonnet (that's Hood to you Yanks)

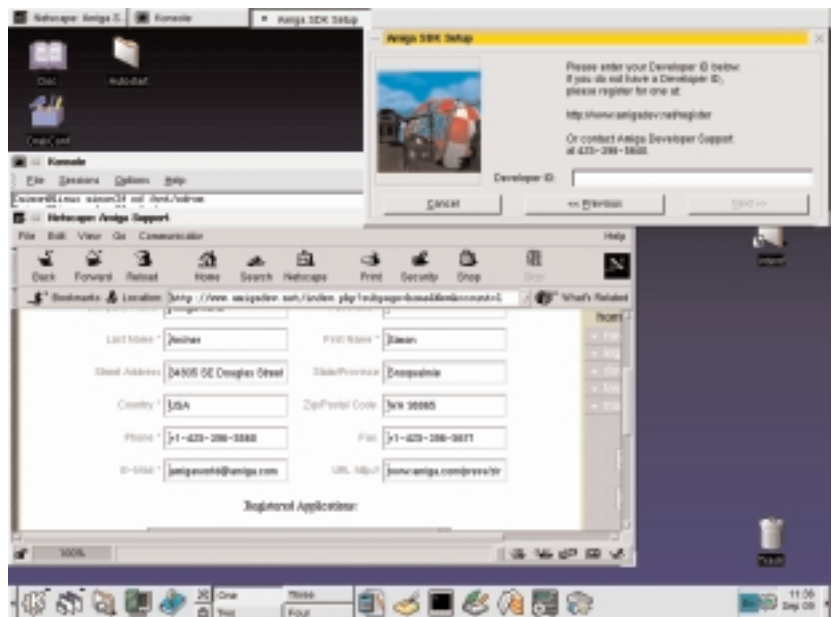
Once you get bored with that, and it doesn't take too long, you will start thinking about what the SDK is all about: Developing software. Select AVE-shutdown from the menu and you will be back to the console. Type:

```
intent_shell <return>
```

You will be thrust into an unknown world all ready for discovering. This shell works like any other shell, but the command names tend to follow the Linux convention for cryptic filenames. Luckily the manual helps here and has an overview of the Amiga shell starting on page 11.

Getting your Developer ID Number

Go to the Amiga Support Network Web site (www.amigadev.net). Click the 'Join Amiga Support Network' link toward the bottom right of the page. Enter the requested information. Write down the password you provide! Write down your ID number, which will be Adxxx and appear on the right side of the screen. Amiga will send you a confirmation email.



Be sure to have a good read of that section.

Issuing a 'dir' command will list the contents of the current directory, which when first run will be the root directory of the Amiga file system which contains the necessary files to get the system up and running. One important point to note here is that the contents of the Linux directory from which the shell was run are merged into the Amiga root to make it easy to share files between them. If you logged in as **simon**, for example, your current Linux directory would be **/home/simon**. Supposing you launched the Amiga shell from there, files in that directory would also show up in the Amiga root listing so you can create program source files from **/home/simon** with a Linux editor and compile them under Amiga without having to move files around.

The source files for all the demos you played with earlier are all supplied so you can go straight into **demo/ave/** to view these.

The files with the **.asm** extension are all Virtual Processor source code, and the **.00** are the executables which will run in the AVE environment.

Documents Abound

Also installed are heaps of documents to keep you going for ages. These are accessible from Linux, stored in **/usr/doc/intent** in HTML format with extensive links to allow easy navigation. Have a good read through some of these and familiarize yourself with some of the more useful features.

Over the coming issues we will introduce you to some of the features of the SDK, and give an insight into the AVE and its GUI by writing small programs. We'll build a foundation in the basics that will help you a lot.

See you next issue!





Making the Digital Environment Talk Sheep



Scripting is a great strength of the Classic Amiga, because it allows users to combine and automate operations from all different programs in the system, passing data automatically back and forth, using the best features of each to get results that no one program, however bloated, could match.

The new central scripting language of the Amiga Digital Environment (DE) is code-named SHEEP (This is an internal working name for this language. The final name will be different). It handles scripting, querying, Shell and inter-object communication, and general programming. It enables the user to interact with objects in the AmigaDE, and allows objects within the DE to control each other. It is the glue that holds the flexible Digital Environment together and makes everything universally scriptable, configurable and modifiable.

Having a language like SHEEP as an integral part of a system enhances its usefulness, as most applications will then be written with scriptability in mind. That integration allows users to harness the functionality available in the OS or applications and combine it with custom code to fill in what's missing. SHEEP will handle both GUI and command-line interaction and make it all as painless as possible.

Heading up the SHEEP project for Amiga is Wouter van Oortmerssen a programmer with a stellar reputation on the Classic Amiga who has jumped at the chance to help design the new one. Wouter is best known for his concise yet powerful Amiga-E language, yet this is just one of more than a dozen languages he's designed en route to his doctorate in Computer Science. He's now working full time for Amiga Inc., developing SHEEP.

Tim Sweeney, creator of the 3D shooter Unreal and programmer extraordinaire, summed up his thoughts of Wouter's talents this way: "Wouter is a brilliant programming language designer, and possibly the most prolific one on Earth—he wrote the E programming language back in the early Amiga days, and has since implemented a ton of imperative, functional, visual, reactive, linear, and other crazy languages. We email once in a while, and whenever I describe some new language idea I have, he's like: 'I implemented that 5 years ago, and here are the problems you run into...'"

Heritage

The Classic Amiga scripting language was ARexx, a standard component since release 2 a decade ago. ARexx was derived from Rexx, the original IBM mainframe version, with many Amiga-specific extensions. Versions of Rexx have since been ported to many other systems, like OS/2, Unix and Qdos. Rexx is a general-purpose high-level language, versatile yet easy to learn.

The true significance of ARexx stemmed from the way it became a standard part of the Classic Amiga. Almost every system component, from applications to the desktop, and even emulators for other systems, had an ARexx port, so any operation that could be performed manually with the mouse or keyboard could be automated under ARexx control. In some cases this allowed operations or custom configurations that were only feasible with ARexx support.

There was no need for each program to have its own arcane scripting language built-in, as

"If you want to get some job done on your computer, either it is very easy or it is extremely difficult," says Wouter van Oortmerssen. The decisive factor, he says, is whether you have an application suited to the job at hand. "And even when you have a GUI app that can do what you want to do, GUI's are traditionally very inflexible, especially for repetitive tasks. For those [times], there are very few alternatives to using a scripting language," he says.





has led to notorious compatibility and security problems in clumsier systems. While the idea was brilliant, well-executed and integrated, ARexx was not perfect—it dated back to the 1980s, and could be slow, prolix or clumsy at times. It did a lot, but could have done more.

Before ARexx became part of the system, old Amigas were shipped with an implementation of Microsoft BASIC. As on many home computers, users were encouraged to write their own programs in this dialect, extended with support for Amiga multimedia. While superior to their other offerings, Microsoft BASIC was slow, big and buggy. It was inflexible and incompatible with 32-bit systems, so third party packages like Amos, Blitz, Maxxon and HiSoft BASICs arrived in the 1990s to fill the gap between ARexx and professional programming languages like C, Oberon and hardcore assembly language.

ARexx was tightly integrated with the Amiga OS and applications and “allowed you to do the kind of programming that just isn’t possible in any other way,” says van Oortmerssen. “Besides, ARexx was also a nice design that fitted its purpose, simple and friendly so everyone could pick it up and do useful things with it quickly.”

Enter SHEEP

SHEEP fills that niche, as well as the need for a standard, powerful scripting language. It’s quite possible to write applications and utilities in SHEEP, and is in fact a very efficient approach for building prototypes or solving the sort of problems that might keep one programmer busy for anything from a few minutes to a few days. While compilers for Java, C, C++ and our ultra-efficient portable VP-code are more suitable for larger projects or routines likely to be run many times, SHEEP’s interpreted, functional design delivers results sooner, if not always more quickly. It’s ideal for interactive development and testing, an area where compiling languages cannot compete.

I expect SHEEP to go much further than ARexx,” says van Oortmerssen. “ARexx depended on interfaces being implemented [into applications], so if the programmer didn’t ‘expose’ certain functionality, ARexx had no way to get at it.”

You can go from editing a SHEEP program to running it, and back into the editor of your choice, immediately. Future versions will allow your SHEEP code to be compiled after it has been tested, and to make secure, stand-alone programs that outperform Java and match the speed of compiled C++ in many cases.

SHEEP is ideal for installation scripts, communication between programs—much like ARexx, including access to ARexx in emulated Classic Amiga environments—and the sort of hacks that would be written in shell script, BASIC, E, Perl or Python on old systems. However, SHEEP is far more secure than ARexx, C or BASIC. There’s no possibility of accidentally overwriting memory or clobbering some system resource unrelated to your program. SHEEP forswears the dangerous POKes and pointers that fill the gaps in other languages, yet it can manipulate complex data structures simply and efficiently.

SHEEP can be used for database queries, as SQL (Structured Query Language) is on big systems. The new Amiga boasts immensely powerful ways of storing and organizing data; SHEEP provides a clear window on the Digital Environment.

Breeds of SHEEP

SHEEP can be interpreted, for ease of maintenance, or compiled into fast VP code. SHEEP is a synthesis of several Classic Amiga concepts and good ideas from elsewhere, into a powerful yet simple language that is easy to read and write, without the arbitrary and arcane punctuation of many other languages.

SHEEP works without the ‘garbage collection’ that unpredictably wastes time and memory in most other languages that allow dynamic data-structures. It does this by using new functional programming principles and automatic memory management, without forcing the programmer to use it any differently from conventional languages.





SHEEP is polymorphic so you can write programs oblivious of the exact types of data they will manipulate, and re-use code without making type-specific versions or complicated, slow and error-prone run-time tests. SHEEP lets you specify data types when it could make programs more efficient if they were preordained, but it doesn't force you to do so in more general cases. New types can be defined, with any combination of data inside. Types can be a superset of several types. Thus a tree with any number of branches or leaves can be defined in one line:

```
type tree = branch(left:tree, right:tree) | leaf(data)
```

This defines two types, 'branch' and 'leaf,' and a supertype, 'tree,' which can be used to refer to the value of either of those types. The vertical bar indicates that a tree (or subtree, implicitly) can be either a branch made up of further (sub) trees or a leaf, with a 'data' property.

Every value has a type, but it has the most general type 'any' unless you specify otherwise. If a general type is passed into a more specific context, as when a string of characters is passed to a routine expecting an integer, SHEEP coerces the string to a number, and raises a dynamic type error if it won't fit. If both types are strictly defined, the compiler detects mismatches before the program runs.

SHEEP reports errors in context. If in doubt, it issues a warning. SHEEP has built-in error-tracking and exception handling, so if something goes wrong you can identify the problem and fix it, or alter the program so that the special case will be spotted and resolved automatically, without cluttering up the source with conditional tests. This gives beginners support and reassurance, without cramping the style of experts.

Counting SHEEP

SHEEP uses the concept of 'vectors' to express structures normally stored in static arrays or dynamic lists. SHEEP vectors combine the efficiency of arrays with the dynamism of lists. Complete or partial vectors may be compared, extended or replaced.

Functions may take any number of parameters, applying defaults or patterns if necessary, and may return any number of values. You can tag parameters when you call a function, so you need only specify the parameters you care about, and they may be in whatever order you like. Thus you could specify desired details of a new screen, letting others default, by calling an 'openscreen' function like this:

```
openscreen width: 640
           height: 480
           title: "Goats and SHEEP"
           colourdepth: 32
           foreground: 1
           background: 0
```

"SHEEP has automatic memory management that requires almost no extra memory compared to what is in use, unlike most 'garbage collected' languages (like Java)" points out van Oortmerssen. "It can therefore run small scripts in as little as 10kb (code + data), which makes it suitable for Personal Data Assistants, embedded systems, etc." And small is good.

You can define several instances of a function, depending on the type or value of parameters you want to deal with. SHEEP automatically chooses the right one to match a particular function call. Gratuitous brackets are not needed, either in the call or the function definition.

Pattern matching is a key feature of SHEEP, simplifying programs. SHEEP can search out patterns within lists, splitting them according to the position of the pattern. It can just as readily merge patterns and lists. Pattern matching also allows particular values to be extracted from user-defined data types.





There are several neat ways to test large amount of data in one step. 'Find' performs a conditional search through a vector, returning an index of the first match. 'Filter' is similar but returns a vector denoting all the matches. 'Fold' combines all the matches, accumulating a total.

Spacing

Sheep is a no-limits language, with no restriction other than available memory on the length of strings, vectors, identifiers, programs or individual lines.

SHEEP notes the indentation of the first line in a list. If a new line is indented the same amount as the previous one, it's a new statement. If it's indented more, it's taken as a continuation, allowing long statements to be presented neatly. If it's indented less, the next token implies the end of the list.

Functionality

One striking feature of SHEEP is the way that you can teach it rules in a simple format, and expect it to find and apply them in context. You can add functions, or definitions, without having to wrap them in obscure syntax. To take a very simple example, imagine you need to report the number of files a program has copied in a human-friendly way. Rather than resort to a sequence of tests, or sub-literate laziness like "n file(s) copied," you can write:

```
print (nfiles n) + " copied"
define nfiles 0 -> "no files"
define nfiles 1 -> "one file"
define nfiles n -> n + " files"
```

Strings can be built up as simply as they could be in Java. So if you want special formatting - like padding, or like this example—you insert extra functions. References to "file(s)" become a thing of the past, hurrah! The minimal Sheep program is just one line long. Here's the classic "Hello World" program, fully expressed in SHEEP:

```
print "Hello, World!\n"
```

The only complication here is the "\n" sequence, which tells the system to make a new line after printing "Hello, World!" This is the same syntax as C, VP code and other programming languages. Tabs can similarly be written \t, embedded double quotes are written \", and \\ stands for one literal backslash.

Sorting

Here's a slightly more complicated example—an implementation of the QuickSort algorithm, which requires a couple dozen lines of code in many languages. SHEEP can do it in just four (the lines starting with two dashes are comments) with no weird symbols apart from brackets, plus signs and arrows, all of which have relatively obvious meanings.

```
-- polymorphic quicksort
define qsort [] -> []
define qsort [pivot] + rest ->
  (qsort filter x in rest where before x pivot) + [pivot] +
  (qsort filter x in rest where not before x pivot)
```

While SHEEP's focus is on simplicity and small tasks—it is not meant to replace C++/Java for most professional programmers—it is designed to scale up from scripting to more complex code very effectively. This is achieved with features transparent to the beginner programmer but available (and useful) for more advanced programming. "And the language design," points out van Oortmerssen, "in general allows for faster code, all without hurting its friendliness." As such, SHEEP is aimed squarely at its target: Helping users maximize their productivity in the Digital Environment. It is a key component of the new Amiga, and its unique singularity and tremendous strengths will bring programmers flocking to the New Amiga.





You'll notice there's no need to declare the types of data items like `x`, `rest` or `pivot`. This is not sloppiness—the data type simply doesn't matter to SHEEP. The same code will happily and efficiently sort text, whole numbers, or fractions, whereas old-fashioned languages would need a separate routine for each.

In this case,

```
print qsort [5,2,6,3,8]
```

returns

```
[2,3,5,6,8]
```

You don't have to warn the program about the length of the vector or check it inside the program. One size fits all, as the program is recursive—it works by calling itself repeatedly, splitting the list into smaller parts until they're all in order, but you don't have to worry about programming or checking the stack—SHEEP looks after that for you.

The definition of what order the sorted list should be delivered in is similarly flexible. The term 'before' in the listing could have any name, and any definition associated with it which can determine the order of two items. If we want to sort a vector of whole numbers, known as `int(egers)`, we define 'before' like this:

```
define before x:int y:int = x<y
```

This says that when 'x' and 'y' are integers, 'before' is true if 'x' is less than (<) 'y'. Equivalent rules may be defined for other types of data, and you need not be limited by them—if you want punctuation at the end of a sorted list of words (rather than in ANSI or Unicode order), you may define an arbitrary function to put things the way you want them.

The 'filter' operation scans through a list, assigning each value in turn to 'x' and asking 'before x pivot?' If this is true, the value 'x' precedes the value 'pivot', so 'x' is moved to the result. Once all the 'rest' has been scanned, the list is more nearly in order, as early values have been removed. 'Quicksort' calls itself for progressively shorter lists, until every value is in its proper place.

SHEEP delivers some of the same excellent properties as ARExx: "It's simple and friendly right from the start," says van Oortmerssen. "ARExx, however, had the problem that people easily outgrew it: As soon as they mastered the language, they noticed that slightly larger scripts would run dreadfully slow and easily become messy. SHEEP is designed to last you a lot longer," he says.

Splitting and Joining SHEEP

The expression '[pivot] + rest' shows how lists of values (or 'vectors') may be split and joined in SHEEP. The expression takes a vector and assigns the first element to 'pivot' and the remainder to 'rest.' The '+' operation can both join and split patterns. It allows us to create vectors like this:

```
a = [1,2,3]
a = a+[4,5,6]
```

This leaves 'a' holding the vector [1,2,3,4,5,6]. The '+' operation constructs vectors, while pattern matching inspects and deconstructs them. Imagine a function 'chop,' which is passed a vector. The following instruction takes the vector apart:

```
define chop [1,2]+v
```

The pattern matching operation splits the parameter in one vector of length two, which must contain the integers 1 and 2, and puts the remainder of the vector into 'v,' so 'v' becomes [3,4,5,6] if 'chop' is passed the value assigned to 'a.'





Graphics

The last example shows how SHEEP can express a classic graphics algorithm. It assumes that a device with appropriate width and height is ready to accept output from the 'plot' statements.

This example shows that the functional sophistication of SHEEP is not an obstacle to conventional programming. Apart from the lack of syntactical clutter, the Mandelbrot listing could be in any block-structured language. It can be run and edited as readily as interpreted BASIC, yet has the speed and structure of a modern compiled dialect:

```
-- SHEEP Example Mandelbrot fractal generator
width = 640
height = 480
maxdepth = 128

define count x:real y:real do
  xc = x
  yc = y
  i = 0
  while i<maxdepth and x*x+y*y<4.0 -- |z| < 2
    t = x
    x = x*x-y*y+xc    -- z = z*z + c
    y = (t+t)*y+yc
    i = i+1
  end
  return i
end

w = 3.5 -- change these to zoom or move about
h = 2.8
top = -1.6
left = -2.0
for x = 0 until width do
  for y = 0 until height do
    plot w x y (count x/width*w+left y/height*h+top)
  end
end
```



Conclusion

When there are already thousands of computer languages in existence, you need special reasons to propose a new one, let alone develop something as sophisticated as SHEEP, which is simple on the surface yet built on cutting-edge Computer Science within.

SHEEP borrows concepts from classics like ARexx, Prolog, BASIC and Perl, and newer languages like Python and Java, and benefits from the practical experience of 15 years of Classic Amiga product development and integration. SHEEP adds significant new ideas, eliminates dangerous or over-complicated gimmicks, and has the cohesion that comes from one brilliant mind, rather than a committee of lobbyists.

SHEEP demonstrates that if a job's really worth doing, it's worth approaching afresh. SHEEP not only **is** something new and exciting—it allows and facilitates great things that would not otherwise be practical. It is a key component of the new Amiga, and nothing else can match it.





Just when you thought we'd covered all the Amiga resources in existence, Amiga World brings you another, international crop of print and Internet publications to help you get the most from your Amiga, no matter where on the planet you live. Use, subscribe to and support these magazines, newsletters and Web sites! Write to their publishers and thank them for what they're doing for the Amiga community. And if you have a listing that should appear in the Amiga World resources section, send an email to resourcecenter@amiga.com and let us know about it!

PRINT MAGAZINES:

Magazine name: **Amiga Survivor**

Editor: Ross Whiteford

Country published: UK

How often published: Bimonthly (6 per year)

Format: A4, Color Cover, B&W content

Cover disk: None

Language(s): English only

Web site: <http://welcome.to/amigasurvivor>

Email contact: editor@asurvivor.freemove.co.uk

Time published: Published for several years by Crystal Software. Now owned by CS&E and written by new team.

Subscription price: Not finalised (mail: csande@csande.com)

Distribution: UK, Europe, World Distribution under consideration.

Comments: Amiga Survivor is now under new ownership, crewed by an experienced team and ready to survive the new millennium!



Magazine name: **Magazyn AMIGA**

Country where published: Poland

Editor's name: Marek Pampuch

How often published: monthly

Format: CD ONLY (each article in HTML, AmigaGuide and ASCII). Amiga only.

Language(s): Polish

Web site URL: temporarily none

Email contact for subscriptions: mikros@ispid.com.pl

Time published: from July 1992

Subscription price: Poland: 19,50 PLN = 4,75 EU worldwide 7,50 EU (snail mail cost and VAT included)

Distribution: Worldwide

Comments: After 85 "paper" issues I was forced to cut the paper edition (financial problems). Now the "compact disk issue" has a little bit smaller circulation (8,000), and is available in subscription only.

Magazine name: **Mundo Amiga**

Editor: Eduardo García

Country published: Spain

How often published: Monthly

Format: B&W with color covers, 74 pages, Amiga only

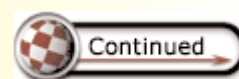
Cover disk: No

Language(s): Spanish

Web site: <http://www.saug.org/mundoamiga/>

Email contact: amigarevista@redestb.es or noticias@saug.org

Time published: 9 issues already published



Subscription price: 5.900 pesetas (six issues)

Distribution: Spain

Comments: The only printed magazine in Spanish totally devoted to the Amiga. It features news, tutorials and reviews. It is only available by subscription.

Magazine name: **Amiga Pulse Magazine**

Country where published: England

Editor's name: Steven Flowers

How often published: Every four weeks

Format: b & w with color cover

Platforms covered: AMIGA Onl

Cover disk: Cover CD

Language(s): English

Web site URL: <http://www.pulsepublishing.co.uk>

Email contact for subscriptions: subscribe@pulsepublishing.co.uk

Time published: In our second year, on issue 16 now.

Subscription price: £3.00 for uk (plus p&p for Europe & rest of world)

Distribution: We have readers from every country in the world.

Comments: We quite simply guarantee our readers more exclusive reveiws than any other magazine. We are the most supported Amiga magazine in the UK with more advertisers than any other magazine. We are 100% Amiga dedicated, run by Amiga enthusiasts, and produced entirely on Amigas.

WEB SITES AND NEWSLETTERS:

Web Site Name: **Amiga.org**

URL: <http://amiga.org>

Editor(s): Wayne Hunt, Wayne Martin, Kent Seaton, James Russell

Country of origin: US

Language(s): English (for the moment, more to come)

Philosophy or purpose of the site: Present the end-user with every resource and bit of information we can find about the Amiga computer

How long active: 1995

How often is the site updated: daily

Special features or services: Amiga.org is actually several different sites, including the main page(Amiga.org), news page (news.amiga.org), the online forums

(forums.amiga.org), and our

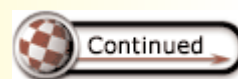
Amiga search engine

(search.amiga.org). More pages to come as soon as the other sites get stable, such as

games.amiga.org, pda.amiga.org,

video.amiga.org, and others!

Amiga World comments: A very polished and professional-looking site with fresh news content and a very lively (and large) discussion forum section.





Nameplate Competition

Web Site Name: **Czech Amiga News**

URL: <http://www.realdreams.cz/amiga>

Editor(s): Paul "ExiE" Strejcek

Country of origin: Czech Republic

Language(s): English, Czech, + translator.go.com (German, Italian, Spanish, French, Portuguese)

Philosophy or purpose: We cover news about hardware, software, games, www, newsgroups, mailing lists, very often with exclusive information.

How long active: two years.

How often updated: daily!

Special features or services: There is also big LINKS page with country and language information divided into several categories. We are also preparing several new sections and features which should be ready this autumn.

Amiga World comments: One of the truly essential Amiga news sites, and one of the most frequently updated, too. Check out the huge link section!



Web Site Name: **AmiBench**

URL: <http://www.amibench.org>

Editor(s): Mark Wilson, Tom Hurst.

Country of origin: UK (Not that it matters!)

Language(s): English (But we allow posts in any language)

Philosophy or purpose: To serve the classic and NG community with a resource that allows them to buy/ sell used amiga hardware and software without the hassle of news groups.

Time active: 3 years this September

How often updated: As often as people place adverts, as much as 20 times per day at a guess.

Special features or services: We probably have the worlds largest dealer directory, and are constantly looking to upgrade it. We also allow users from anywhere in the world to place classified Amiga adverts 24 hours a day.

Amiga World comments: A truly unique Amiga web resource, both for its free classified section and for its tremendous listing of Amiga dealers worldwide.



Web Site Name: **AmigaCentral**

URL: <http://www.amigacentral.com/>

Editor(s): Chris Korhonen - Editor, Daithi O'Cuinn - News Editor

Country of origin: UK

Language(s): English

"Philosophy" or purpose of site: To provide the community with up to date news and features.

Site active: 2 years in September.

How often updated: News is updated daily.

Special features or services: We have a comments system which ties into our news postings, and we have The Ticker, a desktop program which displays the latest news. We are also in the process of setting up a mobile edition for Palm and PocketPC users.

Amiga World comments: Amiga Central often carries exclusive interviews and stories you won't find anywhere else. And try The Ticker desktop news application; it's cool!



Continued



Magazine name: **Amiga Update**

Country published: USA

Editor's name: Brad Webb

How often published: Monthly, sometimes more often

Format: Straight text for maximum compatibility with all systems

Platforms covered: Amiga only

Cover disk or CD included? No

Language(s): English

Web site URL: <http://www.globaldialog.com/~amigaupdate/>

Email contact for subscriptions: amigaupdate@globaldialog.com

Time published: Since May, 1994

Subscription price: Free

Comments: Philosophy is to use the Internet to send information to people, not wait for them to come to us. We use text only so anyone on any computer system with some interest in the Amiga can read it.

Amiga World comments: Brad Webb lovingly provides a regular digest of Amiga news via email, for free. Every English-speaking Amigan should subscribe!

Web site name: **Amiga University**

Webmaster: Kevin Orme

Server location(s): Seattle, WA USA (soon international if all goes according to plan)

Site updated: as frequently as possible

Language(s): only English at present

Web site: <http://www.amigau.com/>

Email contact: amigau@oz.net

Address/Phone: Amiga University, 502 N 80th, Seattle WA 98103 USA;
(206) 789-3891

Date online: March 25, 2000

Comments: This site is an ongoing effort to provide an online resource for all things Amiga, old and new. Thus whether you are rendering, animating, audio sampling your cat's "meow" or making your A1000 floppy drive compatible with your A4000, this is the place to start. We are always looking for help, information and adding to our 'faculty' and over the next year will be developing an online curriculum, so if you want to get involved, we're all ears! :). This is meant to be an ecumenical effort to bring together *all* Amigans to the degree possible to provide knowledge and guidance across the world, in every form possible. Hope to see you online!





Yes, the Nameplate of each issue of Amiga World changes. What does this mean? It means that we recognize that the community is loaded with talent and we'd like to display some of that talent in each issue. What better place to display such artistic works then on the cover of Amiga World?

If you are interested in having your work considered for the Nameplate of Amiga World you should email your creation to: amigaworld@amiga.com with "Nameplate" in the subject. One winner will be chosen by a panel of Amiga VIPs to have their work displayed in a future issue of Amiga World.

The guidelines are simple. Create your nameplate using the Amiga World title and subtitle (So The World May Know). Do not include a month in the heading, but DO include the issue number (which will be #5). You can use any software you like. It should be created at 72 dpi and be between 500 to 520 pixels wide and between 155 to 165 pixels high. The size in inches should be between 7 to 7.5 inches wide and 2.25 to 2.5 inches high. In centimeters, that would be between 17.75 to 19 cm wide and 5.7 to 6.35 cm high. It can be submitted in PNG, GIF or JPEG formats and should be designed to display in HTML. You will be contacted if you are chosen as the winner. That's it!

Steve Etherington of the UK created the Nameplate used for this issue. The image was mostly created using ArtEffect on the Amiga side with a little bit of help from Photoshop on his MAC at work. You can email Steve at: reaps@free-zone.co.uk

Steve's Nameplate was just one of many submitted for this issue and it was truly a dilemma choosing a winner with such stiff competition. We don't have enough room to show you every submission we received (there were dozens),

but we can show you the two other finalists. David Gagely again placed as a finalist for this issue (top image), and Al Bauschardt of Canada (bottom image) was a strong contender, too.

Thanks for participating and don't forget to send in your Nameplate submissions for the next issue.





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Amiga SDK: Installation Guidelines

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Making the DE Talk SHEEP

Simon Goodwin and Robert Bryant

Amiga Resource Center

Steve Folberg

Mission Statement

Amiga World is here to provide readers with news, information and insights on the New Amiga Digital Environment and to chronicle the events, activities and projects of Amiga Inc.

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