PROJECT
“AMIGA PRO”

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DISCLAIMER

The information provided in this document is believed to be right but I take no responsibilities for whatever is wrong and the results of the bad use of this information.

I did try my best to contribute to the Amiga cause and hope this will help the Amiga reach the top of home computers again or move in that direction.

1 - Introduction

I am writing this document to Amiga International to give my contribute to the wonderful machine which is the Amiga and suggest the creation of a new Amiga called **AMIGA PRO**. This document also has several ideas of how the Amiga can reach new markets, save money in production, achieve more success, a better OS…

First, why the name Amiga Pro? Simple, PCs have the PC Pro capable of accepting two processors, so, why can't we have an Amiga Pro also capable of accepting two processors, a Motorola and a Power PC?

The Amiga is the best computer ever. Never a computer was so easy to use as the Amiga but the last years, since the downfall of Commodore, were harmful to the Amiga as many projects relating new Amigas didn't come out. The dogmatic thought of saying that "the Amiga is the best" is no longer true since all the computers have advanced a lot and Windows 95 was a huge attack from the PC.

The ideas mentioned here are many and interesting but the harder work will have to be done by you because your products need to be improved a lot to establish new standards. I am not saying that these ideas are the best but you should consider giving a look because some may complement ideas some people already told you or help having new ideas. It is also a compilation of ideas and instead of having hundreds of mails from different people this document probably covers some/most of the ideas said by the users/developers who contacted you.

Information and innovation are the key to success, use them well and results will be achieved, use them wrongly and competition will take over without any mercy. It isn't enough saying "a new Amiga should have this/that" it is needed to explain why and see the things involved in that.

A lot of effort and time (months) have been put into joining all this information so at least try to give a look in what I have written and if you consider this information useful please credit me somewhere so that I can be immortalised in the Amiga history.

I tried my best for this document to become as small as possible but there were so many things needed to be said that it got extremely big, but many of them are spent with pictures.

Marco A.G.Pinto
Radical and Amiga fanatic
3rd year University student
of "Informatic of Management"

2 - My computers specifications:

This is important so that you know in which machine I performed some of the tests I am going to mention in this document and in what I based some of my conclusions.

I have two computers:

Amiga:

Monitor 1084S

A1200
  2 Mb Chip RAM
  8 Mb Fast RAM 70 Ns
  Viper accelerator 68030 28Mhz MMU
  hard disk, 2,5'', 120 Mb
  ROM 3.0 (39.106)

PC:

Monitor SVGA 14''

Pentium
  166Mhz
  2 Mb Video RAM
  32 Mb RAM EDO
  32 bit 3D Sound Board 'Wave Rider PRO'
  850 Mb hard disk
  Windows 95 August 1996

3 - Minimum specifications of the AMIGA PRO:

- Tower Amiga
- AAA-3D 64 bit graphic chip set
- 32 bit sound board
- High density internal floppy drive 1,76Mb
- ROM 4.0 1Mb
- 68030, 50Mhz, MMU, FPU 68882 - 68060 processor optional
- Motherboard with socket to insert a Power PC processor
  (possibility to have two processors as standard)
- 2 Mb Chip RAM EDO - 4Mb optional
- 8 Mb Fast RAM EDO
- 850 Mb hard disk - higher optional

Bundle software:

CD containing at least:

- Magic Workbench 3 (preferentially already installed)
- Personal Paint 7.1

4 - What is wrong in the Amiga market

Present Amiga problems:

- **Speed → must increase**
- **Power → must increase**
- **Price → must decrease**
- **Software quality → must increase**

4.1. Speed

Speed is very important in a computer because the more speed a computer has the more complex things and effects the programmers will be able to do.

It is not just a question of Mhz as lots of things influence speed such as the processor, its Mhz, the graphic board, the RAM speed, the way OS routines are programmed…

The present Amigas lack a lot of speed. The standard for the PC market is a 120/133Mhz Pentium with 16Mb of RAM while for the Amiga is the A1200 that comes with just 14Mhz and 2Mb of RAM, and later people have to spend a lot of money to upgrade it without much software that makes use of that.

Most emulators are terribly slow on the Amiga while on the PC things are a lot different.

PCs are getting faster and faster (and better technologically) all the time and it is very hard to match them in speed but the same cannot be said about consoles and MACs. Consoles are cheap and extremely fast for games due to the chips used. MACs are about the same thing as Amigas – expensive, slow and have a very slow evolution. That is the image I have of the Amiga presently and I am sure lots of people do to.

As I mentioned before, I have two computers but what you do not know is that every time I buy new hardware (CD-ROM, MODEM….) I buy it for/or connect it to the PC and the reason is simple: Because my PC is much faster than my Amiga and because of that the equipment in the PC has a higher performance. It is also easier to connect, as I don't have to buy extra interfaces like in the Amiga and shops sell things cheaper. I buy everything to my PC and through a parallel connection I still can benefice from the hardware from the Amiga.

4.2. Power

Power too includes speed but it is more than that as when I talk about power I talk about better graphics, sound, a new OS… things that can be used to create breathtaking software.

The OS is very important to the Amiga as it can establish a new standard of software if it can provide enough useful functions to help producers and optimised to the limits.

4.3. Price

The main factor that determines the buy of something is price. The product may be good, very good, excellent but, if the consumer can't afford it, the sells won't be high. You can offer the world but if no one can afford it, no one will buy it.

Well, that too depends on the type of the product. If it is a luxury good, the higher it costs the more attractive it will be for the consumer but computers aren't the case.

If there are substitute goods made by other companies and cheaper, the consumers will turn to that companies. This is what is happening with PCs - they are getting cheaper and cheaper and more powerful all the time and lots of new quality products are appearing which means any consumer would chose one from an Amiga or Mac.

Prices can decrease by reducing the production costs, by mass production (the more it is produced the cheaper each item will become) and by reducing the number of intermediaries between the factories and the shops.

Amiga is an overpriced computer when compared to PCs as now-a-days any PC can offer a lot more hardware and power than the one that comes with an Amiga and cheaper. For users to make their Amiga really fast it costs a lot more than the more powerful PCs. In the past Amiga magazines said the opposite but that, presently, is no longer true. Windows 95 was the beginning of a new era for the PC as it is far superior to the present Amiga Workbench.

Many software houses say their software is expensive because of piracy and so they waste lots of cash (so they say it…) in useless protections and increase prices because of that forgetting that no protection is efficient as within just a few days/weeks cracked /Installable versions will appear. Some houses move to the console market but not even that market can escape piracy - nothing can escape piracy no matter its price.

That thing of the software not being installable for protection reasons or software houses having extra costs with protection is no longer accepted…

Amiga shops are selling PC hardware which is 100% compatible with the Amiga (CD drives, RAM modules, hard disks…) for twice, or even more, the price it costs in PC shops. Shops should do like I have seen before: they should sell hardware and software for both computers instead of just selling for the Amiga like some are still doing.

How come Amiga shops are still selling hardware such as double speed CD-ROM drives which aren't manufactured anymore? Where are they getting them, in antics shops? For less than £20 anyone can buy a used 2x CD-ROM drive in Portugal IF he/she can find someone selling them which is very hard as they aren't being sold in shops around here anymore. The same can be said about 4 Mb SIMMs and 90 Mb hard disks. Is anyone producing hard disks below 540Mb now-a-days? Maybe there is and maybe that is the problem - until factories stop producing/selling antics for the price of new things, things will advance slowly. Why can't the Amiga market be in equal step to the PC market? Blame the shops for that who want to earn loads of cash selling antics to the Amiga community not realising the harm they are doing.

4.4. Software quality

There simply isn't enough software exploiting to the limit the potential of the Amiga and that happens mainly because there are lots of things that should come as standard in the Amiga (such as a 68882) which don't come. As a result, even if someone upgrades its machine to the maximum possible, there won't be much software using all that power. We should also blame programmers because they don't lose time thinking about power users. What is the point of accelerating an Amiga if software houses won't produce software for it?

I have seen AGA games in the Amiga and that same games on the PC have lots of extra stuff which doesn't come in the Amiga versions. Some of those things aren't hard to add but the fact is programmers never added them (maybe the fact that the standard Amiga has low density drives helped to that situation as adding extra features would increase the number of disks used increasing the costs of production which would increase the sell prices and if no hard disk installer was added it would increase too the number of times people would have to swap disks).

Other thing that affected games quality was the fact that higher screen resolutions allied to lots of colours are extremely slow what caused games not to use such power that could make them a lot better.

Some magazines (eg: porno, erotic) release CDs with their magazines but they are all for PCs and the same about the porno market in CD. A long time ago I read that Commodore didn't let erotic/porno software be produced to the CDTV and that was a big mistake as the PC took all that market which is huge and getting bigger.

Many software houses ran to the PC when the Amiga went down and never returned because the PC market is huge and it is getting bigger all the time as there are more and more people buying computers everyday and most of them buy PCs .

5 - Ways of reaching new markets

For the Amiga to become more popular and sell better it is needed for it to reach new markets. Also, remember that the Amiga has 3 "enemies": PCs, Consoles, MACs. You must learn with the "enemy" so that, when the time comes, you will be superior to him.

Some ideas concerning the reaching of new markets:

- You can give a lot of publicity to the Amiga being a computer capable of emulating other computers which means that by having an Amiga it is almost the same thing as investing in lots of other computers and platforms and that almost for free as most emulators are PD/Shareware.

  Maybe a new publicity approach showing that the Amiga not only can run Amiga games but can also console games (of course it would have to gain a great speed for that). Imagine: “A machine that can emulate/run other machines”.

  A big problem about this is the fact that the present standard Amiga is too slow which causes emulation to be too slow (while it is extremely fast on PCs) but the creation of the Amiga PRO would change that.

  Just don’t say that no computer can emulate an Amiga because that is not true. A German created UAE (U*ix Amiga Emulator) which is slow because it is written in C but it is a fantastic piece of work and the fact it was written in C makes it portable to all platforms which means anyone can emulate an Amiga being the major problem the speed. Even the fact that the PC can’t read Amiga disks was solved in UAE by accepting file images of the disks. The truth will always be: No computer can STILL emulate an Amiga as fast as an Amiga.

  I’ve been told that the Amiga emulating a MAC can be faster than a real MAC, if that is true (I don’t know) and is known to the market people would prefer buying Amigas because they are cheaper.

  Adding a high density floppy drive as standard would also improve PC/MAC emulation and would end the fact of the Amiga being probably the only “real” computer which still doesn’t have a high density drive as standard.

- Internet and HTML support must come as standard in the computer. Multiview must be capable of accepting HTML pages. A computer that is not turned to the Internet reality (which is the future) is a bad bet. Windows 95 did that too.

- All the Amigas below the 1200 must (start) disappear from the market in order to software houses stop definitely producing software for them. PCs standards for software have increased a lot since Windows 95 appeared.

- Microsoft Office 97 must be ported to the Amiga as it is the best and the most used in the World. Now-a-days everyone uses Microsoft products but the guys only develop things for the PC and MAC, never to the Amiga.

  Maybe they aren't taking the Amiga very seriously and if that changed, the image people have of the Amiga would change too, getting better. Why don't Amiga International have a word with Microsoft and asks them to release for the Amiga all the things they release for Mac? The processors are the same, only the OS and the chip set are different but I am sure it wouldn't be that hard.

  People want a computer that can be used in their future job. They don't want to have to spend money buying a computer now and later have to buy a new one like I had to. **If Microsoft products appeared for the Amiga it would be a great step.**

- The guys who produced Final Writer also produced other software like the ones that come in Microsoft Office. If they could join that products in a CD and sell it as being "Amiga Office Pro" I am sure that would improve the image of the Amiga. All their products should be compatible with the formats available in Microsoft Office.

  The Thesaurus used in the Amiga is much better than the one which comes with Winword for the PC but Final Writer needs more languages.

- Software Houses could re-release old software making use of the new Amiga PRO power without having to start from the beginning – they would just have to rewrite part of the code, the graphics (using AAA-3D), the sound (using 32 bit sound with more sound channels than just four) and make the games installable.

  Games that caused a great success in the "old days" can still cause the same success if they appeared exactly like they were but with better sound, graphics and hard disk installable. Games such as: **a)** Shadow of the Beast, **b)** Sword of Sodden **c)** Unreal

  The costs of Software Houses re-releasing them won't be the same as starting all over from zero. Lucas did this with the film "Star Wars" and look at the big success it was selling old stuff as new stuff.

- Make the Amiga more compatible with PC hardware such as Sound Boards and Graphic boards by adding PCI slots. I found two files on Aminet (waveblaster.lha and waveblast2midi.lha) which explain how to connect PC sound boards to the A1200. PC Sound Boards would bring at least the following advantages:
  - PC Sound Boards are cheaper
  - PC Sound Boards are 16 bits as standard with 32 bits becoming standard and are a lot more powerful than the standard 8 bit Amiga sound.
  - Because there would appear lots of people in the Market with different boards, several software would appear that, according to the board, would produce better or worse sound – which would incentive people to go for better boards.

  Remember to create generic/specific code to deal with that boards. An example of generic code is a driver for a Sound Blaster board which would be compatible with lots of other boards because most of them are Sound Blaster compatible.

- Amiga must bet in creating things which are multi-platform. The idea is simple: Instead of software houses releasing a disk/CD for each computer which would cost them a lot more money, imagine now that programming for one computer would be enough and that, all the programmers had to do, was to create a disk/CD and put there an executable for each computer being the rest of the data files on the disk/CD the same. Wouldn't this increase the profits of companies and increase the number and quality of the software for the computer platforms supporting this without any additional efforts? I don't consider this a dream, I truly believe it is possible. Maybe hard but not impossible…

How to make software houses develop to the Amiga at the same time they develop for the PC and with the same quality: (who says PCs can also say MACs):

Maybe an agreement with a software house to create a language that works in both Computers without any need to make changes and extremely fast. Maybe a new C language called "Multi-platform C++" making use of all ROM 4.0 and Windows 97 (Memphis) will have to offer being 100% compatible with both computers and with an option of generating an executable either in Amiga or PC code. Programs created using Windows 95 functions don't have to know the sound board attached to the computer because if it is accepted by Windows it is accepted by all its programs. This only makes easier the creation of such language. Maybe some external programs would also have to be slightly changed (Eg: Multiview) to support more this because imagine the PC program called a specific Windows utility (Eg: an AVI viewer), there would also have to be a Workbench utility supporting the things that utility would do. A software house could grab an existing C++ compiler and just make changes in order for this to become true (no need to start a language from zero). – use of a multiplatform.library" for each computer.

MULTIPLATFORM.LIBRARY: An external library, that the compiled programs call that could come with the OS of each computer "emulating" Windows and Workbench. This way, compiled programs become smaller and problems or speed gains could be solved/achieved just by updating the library instead of recompiling the program. Eg: Every time a program called a function to open a window, the library would call Amiga code to do that if it was the Amiga version of the library and PC code (functions) if it was the PC version of the library.

There could be two versions of the library for the Amiga, one in 030 and other in 060.

THIS COULD BE THE LANGUAGE OF THE FUTURE and later (or at that time) could appear an object oriented version of it for more power.

Eg: A software house was developing a game in CD for the PC. Instead of creating a version for the Amiga in a new CD, all they had to do was to select the target machine(s) and an executable would be produced for that machine being the rest of the data files 100% equal.

Now, the PC software house only needed to put in the CD the Amiga executable created and PC users would select the PC executable and AMIGA users would select the AMIGA executable being the rest of the files the same.

Software houses, for no extra work/cost would be developing software with the same quality for the Amiga & PC making no difference in people buying an Amiga or PC because the quality would be the same. One more reason why Amiga should accept more resolutions: 800x600 and 1024x768 at least, to make it more compatible with the PC, and also needs to become a lot faster.

Amigas can do some things PCs can't such as having more than one screen opened at a time containing different resolutions and palette but that could be solved by not allowing that or check if is a PC executable and, in that case, only one screen is opened with at least the sum of the number of colours of the two screens and simulate two Amiga screens in it. PCs are fast enough to handle this.

If, for the consumer, there is no difference in the software, he will buy the computer that costs less.

The next points in this part of the document are about multi-platform support:

- Languages such as HTML are multi-platform and could be used to create software such as interactive books, encyclopaedias…, compatible with all existing computer platforms.

  Software Houses must be informed of this as it can save them lots of money because they don't need to sell a disk/CD for each computer – all they have to add to the disk/CD is "Compatible with PC/MAC/AMIGA" or "Compatible with ALL computers.".

- Port Visual Basic to the Amiga or create a compiler that lets things created in Visual Basic to be compiled into Amiga executable and ran in Workbench the same way they run in Windows 95 using "multiplatform.library" too.

6 - Reducing production costs

Prices can decrease by reducing the production costs, by mass production (the more it is produced the cheaper each item will become), by reducing the number of intermediaries between the factories and the shops or by eliminating useless costs.

When I suggested the creation of a new Amiga I knew it had some costs because everything costs money, so I had also to suggest ways of decreasing production costs so that it could be possible to take such a great step ahead more easily.

Some things that may reduce costs:

- Instead of 6 low density Workbench disks, Workbench could come in just one high density disk being all the other disks compressed inside it using LZX. It is about time the Amiga has a high density drive as default and here not only would be easier to install WB but would also save the cost of 5 extra (6 with the installer!) low density disks and their labels but has the cost of paying a fee to Data Compression Technologies. The question is: what is less expensive?

  By just having one high density disk and things compressed, the only way of using everything is to have a hard disk. So, every time someone boots from the disk he will see the utilities that come with Workbench Install disk and can only make use of the full Workbench after installing it (who doesn't have a hard disk now-a-days?). Besides, people without hard disks could never take full advantage of all WB had to offer anyway.

  Why I said that the files should be compressed using LZX:

  Workbench 3.0 disks size:

DISK	NORMAL	LHA 1.50	LZX 1.21
Workbench	677109	402211	352109
Extras	556443	317924	237030
Fonts	487443	322389	276498
Locale	596020	256370	222924
Storage	322838	179790	107276
∑	2639853	1478684	1195837

* Installation disk not included as several of its files can be found in the 5 disks above.

To try to obtain a reduced fee you could say to Data Compression Technologies that it is for the good and future of the Amiga.

- There must be only one (tower) Amiga, just like in the PC, what changes are the specifications which are better or worse according to the customer. Stop producing A1200s, CD32s and start producing Amigas 4000s changing their name to Amiga Pro. Most people want to have tower Amigas instead of cases like in standard Amigas (A1200).

- Only two processors available (as standard) in the Amiga Pro:

  030 50Mhz FPU 68882 MMU

  or

  060 50Mhz FPU 68882 MMU

  I read that the 68040 was more expensive to produce than the 060 and had more heat problems. If this is true why are you still producing 040s and selling them cheaper than 060s? Is it just to create a bridge between 030s and 060s?

  About 040s and 020s, produce them only for stock for those people who still use them and may need to replace a damaged one for a new.

- Produce just one 1Mb ROM for all the Amigas in 68030 code and not one for CD32, other to A500, other for the A1200, other for the A4000… that thing of each ROM having specific code for a specific computer is just a waste of money and time which could be better used to improve other things. A good ROM/OS should be able to deal with whatever hardware comes with the computer.

  It must be a 1Mb ROM just like the CD 32. I don't know if it can be fit in A1200s because they come with 512k ROM but if that is not possible the answer is simple: Just create some sort of ROM sharer like the ones existing in the past but this time instead of accepting two ROMs it would just accept one. This way people before the Amiga Pro (with 030s) could upgrade their Amiga without buying a new one.

  If a ROM Sharer is not possible, the ROM image could always be read from a file using the command CPU (which should be changed to accept ROM files) and you could sell ROMs in CHIPS and ROMs in files . Many OSes come in files (eg: Windows 95).

- You don't need to create ROMs for different processors for extra speed because there is a cheaper alternative:

  Just create one ROM in 68030 and a SET PATCH to replace some more used libraries/functions with 040/060 optimised code in case such a processor is found (according to the CPU found it would replace the most used ROM routines/libraries with ones optimised for the CPU).

  Just don't forget to add a small routine written in 68000 to the ROM code to check the processor type, that is activated every time the computer is booted and if such routine detects a processor below the 68030 an error message saying that at least a 68030 is needed would appear on the screen and the computer freezes until the user turns it off.

You are probably asking: "What about people with 68000-020s? ". The answer is simple: they have to upgrade their computers to at least a 68030 and lots of people are doing that. If you continue producing things below a certain standard there will never be an end to people having low profile Amigas. **Besides, 030s are very old**.

- When I suggested the creation of the Amiga Pro I suggested the creation of a Tower Amiga. A Tower would not only make the Amiga more expandable but also cheaper because you don't have to produce the towers as the market is loaded with them and all you have to do is to buy them from enterprises that give a better price. No more costs producing cases for computers like the A1200, A600, A500… the same can be said about external keyboards.

- Easier and cheaper ROM upgrades by allowing the clients also to purchase just the ROM image (in a file) and use ROM Shadow. CPU program would have to be improved to load ROM images instead of just making use of the ROM itself. If sold at a lower price, users who already use CPU program will make no difference to them in using a ROM image and it would be cheaper. The image would come in a disk compressed and there would be a CRC checking before activating the ROM for security reasons. Allow also the user to choose to buy the manuals or not.

Advantages:

a) It would be cheaper for the consumer to get
b) You could update ROMs more frequently as is faster to copy them to a disk and sell than to copy them to a chip, and using disks you can always format disks containing older ROM and put there a new one after finished while with chips you either sell them or throw them away as you can't record there a newer ROM

Disadvantages:

a) The file system must be compatible with ROM3 because the hard disk must be recognised in order to the ROM file to be loaded from it.

Why the ROM should be compressed: because it would take less time to load/save:

a) When installing (copying) it from disk to the hard disk
b) Loading from the hard disk. Even if benchmark programs say hard disks load 2 Mb per second, when loading and writing files things are not that faster and by having the file compressed, if the disk is defragmented, the file won't be much scattered all around the disk as it would be if it was in full size also loading faster
c) Would consume less disk space.
d) Checking the CRC in a compressed image takes less time than checking it in the expanded image which is bigger.

- Amiga International could also sell things directly to people via Internet and use a PGP public key so that sells increase via email - all shops should be using a military grade PGP public key with a size of 1024 or 2048 bits.

7 - New Amiga overview

Over 90% of software producers still limit themselves to produce to the standard configurations of the machines. If you want higher standards of software you must put higher specifications which may establish a standard within 1-2 years if the new machine is well accepted by the market.

When the A1200 appeared it took some time before Software Houses started developing software for it but now things are different since almost everyone is/has upgraded and software houses start realising they must have that in consideration.

Everyone knows such a big step is expensive but, by reducing present production costs, the extra costs can be balanced a little, by finding ways of reaching new markets and consumers, sells will increase balancing costs by reducing costs and improving profits. Amiga International is an enterprise and like all the enterprises its main goal is profit, maximising it and minimising the costs to the maximum.

The problem that comes with the release of a new Amiga is always "What to do with the people who have old Amigas (A1200s, A4000s) and have them upgraded?". Many people, like me, won't sell their A1200s because they have expensive accelerator boards and the new speed gain won't be that big, so it must be possible for them to upgrade without selling their computers. ROM 3.1 did that with some 3rd parties' Graphic boards allowing people without AGA to match it just by buying the boards.

7.1. Bungle Software

New Amigas must come with a bungle package more useful and better than the ones in the past. Why not having at least:

- Personal Paint 7.1 instead of Photogenics. Photogenics, which came in a past bungle, required more than just 2Mb of RAM and a hard disk, which means almost no one was capable of using it when they bought the Amiga. I am sure Personal Paint 7.1 would be a lot more useful than Photogenics.

- Magic Workbench V3. Magic Workbench is a fantastic Shareware set of icons. Just about everyone has Magic Workbench (which doesn't mean they have registered it). This would improve a lot the look of Workbench giving it a professional touch.

7.2. Graphic chip-set

The Amiga is very slow working with high resolution graphics using 16+ colours.

It is a shame that my 166 Mhz Pentium gives me over 300 MIPS (benchmarked) and I use a resolution of 800x600x16,8 million colours on Windows 95 and my accelerated Amiga only gives me 5.64 MIPS (benchmarked) and I have to use a Workbench resolution of just 640x256x8 colours because of speed and screen flicker problems. I could upgrade my Amiga but it would cost a lot more than my Pentium.

Even as I write this document I am using my PC because to write it using a word processor in an AMIGA I would have to use at least 640x512x256 colours which would be too slow and the flicker and lack of clarity provided by the 1084S would hurt my eyes.

The new Graphic chip set must have at least the following features:

- I read a few years ago that the AAA was 98% finished. Why don't you finish it and, before releasing it, try to make it even faster and better?

  The AAA would create a new standard for Amiga software. Instead of just Releasing the AAA as it was planned years ago you could add to it some "little" things such as:

  - Some 3D functions like the consoles have. It could be called the **AAA-3D**. It would make it easier to port games from consoles and also to create games comparable to those and to the most recent ones on the PC.

  - It must too, AT LEAST, accept the resolution 640x512 (640x400 - NTSC) without flicker if a new standard of software is to be achieved, also for use with Workbench and Internet.

    Flicker has always been a problem in Laced screens which, along with the extreme lack of speed in such modes, prevented software houses from developing software using such modes. Don't expect almost any software houses to release games using interlaced screens if they flicker a lot and are extremely slow

  - Graphic memory (Chip RAM) should be EDO RAM for extra speed as EDO is getting cheaper and cheaper...

  - Maybe it could be a 64 bit board for even more speed

- Colour bleeding must be reduced in HAM and HAM8 to be more pleasant to create things using such a display mode.

- The new chip set must have some new resolutions:
  At least two new resolutions for better compatibility with PC software being ported to the Amiga: 800x600 and 1024x768 being capable of displaying 16,8 million colours at once too and, of course, the standard ones using x600 and x768 and maybe one above 1280x512 just for some extra power.

  There is no need to create a 640x480 (PC) resolution because it is already possible with the present chip set (provided the AMIGA is in PAL mode).

- CD32 had a chip called AKIKO, maybe it was not a bad idea to add it to the Amiga to make games speed even faster as this chip increases changing bit values on the screen. A cheaper alternative would be to create ROM functions emulating the chip - there are lots of software doing this.

- Allow bigger sprites with more colours and also more sprites and bobs at the same time on screen without problems.

7.3. Sound Board

Something must be made in this area as, while the Amiga is still using the old fashioned 8 bit sound, 32 bit sound is becoming standard for the PC and even 64 bit sound boards have appeared for it too.

A few years ago was being discussed if the Amiga should have a DSP chip which would provide 16 bit sound. Some factories even produced 16 bit samplers for the Amiga but I think they are considered obsolete by now-a-days standards and a new Amiga should have at least 32 bit sound with audio recording incorporated just like the PC sound boards - no need to buy crappy 8 bit samplers any more.

Allowing people to connect PC sound boards to Amiga and have drivers capable of making use of them would be great. In a back chapter I wrote about this.

7.4. CPU, FPU

- 68030s with at least 50 Mhz must become standard. Stop producing 040s and 020s and concentrate in only producing 030s and 060s. Even 68030s are very old today, so why still produce 68020s? People could chose between a 030 50 Mhz and a 060 50 Mhz, both with MMU and 68882 at the same speed as the CPU.

- 030s with higher caches than the standard. I don't know if this is possible but some years ago I saw a shop selling hardware that would increase (double?) the caches of the 040 increasing its speed a lot. If that is possible with the 040 maybe it is also possible with 030s and any other processors.

- How come no one ever created a processor above 50Mhz for the Amiga?

- An FPU is needed for the Amiga – A 68882 not a 68881 because 68881s are outdated and the last Amiga magazines I bought, in the adds, I don't recall seeing 68881s being sold. This will increase the power of the Amiga a lot mainly in simulation games and ray-tracing/Maths software. Remember that all PCs have one.

- Create a better motherboard making possible to upgrade the CPU (also in speed) without buying a new motherboard nor any other type of board, just by replacing one chip like in the PCs. This would make upgrading cheaper for the users as it is cheaper to buy a faster CPU than buying an entire board, cheaper also for factories to produce just CPUs.

  The motherboard could come with two slots in the board, one for a Power PC CPU and other for an Amiga CPU making easier and cheaper for the user to upgrade the computer and showing Amiga International is betting in the new PPC power.

- I am a speed fanatic but even for those who aren't, people like 3 digits in the Mhz. Many people don't understand what Mhz is really for but they know that the higher the number the better. Mhz in computer terms means millions of cycles per second and each assembly instructions takes a certain number of cycles to be executed that varies with the type of the processor and its quality. This means that it is not enough to come a processor saying 50Mhz, it must too be optimised to the limits.

7.5. Memory

Amigas are a lot more efficient in terms of memory usage than Windows 95 that "eats" memory. Never-the-less having more memory is essential. More memory means more speed, more multitasking, and better games and utilities.

- 8 MB EDO Fast and 2MB EDO Chip expandable to 4Mb just by adding the chips. I read on the Internet that the only reason the present A1200s don't accept more than 2 Mb of Chip RAM was due to political reasons. Even UAE (Amiga emulator) can emulate 4 Mb of Chip RAM.

  Chip RAM is known for being slower than Fast RAM but by using EDO RAM it will be faster than it was in the past.

7.6. Slots

Some PCI slots are needed in order to connect PC PCI hardware more easily to the Amiga which means people can buy cheaper and more powerful hardware in PC shops and add it to their Amigas. Amigas must be capable of accepting PC hardware because it is a lot cheaper and most of it is more powerful than the present Amiga hardware.

7.7. Drives

It must come with an internal high density floppy drive and a hard disk too.

- The new Amiga Pro must come with a high density floppy drive which will also improve PC emulation in PC-TASK and the same about MAC emulators. The Amiga is probably the only "real" computer that still doesn't have a high density floppy drive as standard.

7.8. Other hardware

With the new Amiga must come at least:

- A RTC (Real time clock).

- A separated keyboard like the PCs which have the keys PAGE UP, PAGE DOWN, HOME and END. I noticed they exist in the A1200 keypad but are "not separated" and nothing uses them. All text readers use CAPS+ CURS UP/DOWN when they should use PAGE UP and PAGE DOWN to move a page up/down. By using separate PC keyboards (which are cheaper too because many factories produce them) these keys will appear and then people can start creating programs that make use of them.

- Must be a Tower Amiga, which is cheaper because lots of factories make towers when you had to build your own cases and it is also more expandable because there is a lot of space inside to add lots of interfaces and things.

7.9. OS/Workbench

The Workbench must be nice, friendly, fast and powerful. Amiga's Workbench was the best until Bill Gates appeared with Windows 95 which is far more superior than the present Amiga Workbench, at least until Amiga International releases a new OS.

Not only Windows 95 is extremely powerful but it also integrates the software brilliantly as you can copy/cut graphics and text and insert them in other programs.

The ideas mentioned here were based in several things, such as Windows 95 including its software and the same about the Amiga. Others were based on ideas of my own or in things I read, used or heard about and that I saw that could be useful to the Amiga.

By watching the competition it is possible to see what makes their products have success and that information can be used as a base idea to reach a more advanced idea. I sometimes show pictures making comparisons between Windows 95 and its software, Amiga and its software and also changed pictures suggesting how the new OS could do. This way you'll see how the competition does it and more.

List of suggestions that will put Amiga in front of Windows 95 or in an equal form:
(When the word OS isn't used the suggestion is to the Workbench - most of them are).

- Produce just one 1Mb ROM for all the Amigas in 68030 code and not one for CD32, other to A500, other for the A1200, other for the A4000… that thing of each ROM having specific code for a specific computer is just a waste of money and time which could be better used to improve other things. A good ROM/OS should be able to deal with whatever hardware comes with the computer.

  It must be a 1Mb ROM just like the CD 32's. I don't know if it can be fit in A1200s because they come with 512k ROM but if that is not possible the answer is simple: Just create some sort of ROM sharer like the ones existing in the past but this time instead of accepting two ROMs it would just accept one. This way people before the Amiga Pro (with 030s) could upgrade their Amiga without buying a new one.

  If a ROM Sharer is not possible the ROM image could always be read from a file using the command CPU (which should be changed to accept ROM files) and you could sell ROMs in CHIPS and ROMs in files . Many OSes come in files (eg: Windows 95).

- The ROM must be written in 68030. To make it run faster in faster CPUs just change SETPATCH so that, when it is ran, it replaces some more used ROM libraries/functions with ones in 040/060 code in case such processor is found (according to the CPU used it would replace the most used ROM routines with ones optimised for that CPU)-Cheaper than creating ROMs in 040 and in 060.

  A ROM written in 030 brings advantages even to programs written in 68000 because if they call ROM functions they will be executed in 030 which means that all the current existing programs will become faster not only because of the more powerful processor but also because of the new ROM. **It's also a 32 bit OS.**

Add a small routine written in 68000 to the ROM to check the processor type, that is ran every time the computer is booted, and if that routine detects a processor below the 68030 an error message saying that at least a 68030 is needed would appear on the screen and the computer freezes until the user turns it off.

- The ROM must contain more functions and libraries that more applications could use in order to reduce the size of the applications and make life easier for the programmers. More functions (and more complex) to deal with graphics. This would also speed the programs if well coded and optimised and get rid of lots of useless libraries and devices which fill the market making a huge confusion of files.

You must think about putting in ROM as many things (useful, good and fast) as possible knowing that, if some months later you release a new OS version, software houses will still be developing for the older one for a long time - several software houses are still developing for ROM2 when they should have ROM3 in mind…

- All the code used must always be optimised and reduced in size as much as possible not only to save space but also to fit better in the internal CPU caches when used increasing its speed.

There are lots of patches in the market to optimise ROM routines but if you speed things up to the limit all the existing patches will be useless which is good because they steal memory and may cause bugs. You must see what those patches do or how they do it and improve the OS routines.

The image people (includes me) have of OS producers is that they just put there routines not caring much about their speed. I have performed benchmark tests in my Amiga to see how slow Commodore routines were and here are the results:

I performed the tests using AIBB 6.5 (Amiga Intuition Based Benchmarks) which is a well known Benchmark program and which you should use to test the results of your optimisations. I performed the tests using 68020 code and databurst mode off (forgot to turn it on). I also used Fast ROM and a patch written in 020 to optimise ROM routines dealing with graphics.

Only the tests showing greater speed differences are shown.

AIBB Function	**SetPatch 45.6**	**SetPatch 45.6 +Fast ROM**	**SetPatch 45.6 +Fast ROM +fbl 6.6 (68020)**
Write Pixel	7091.46 pixels/sec	9003.76 pixels/sec	10588.02 pixels/sec
Ellipse Test	8.11 seconds taken	7.32 seconds taken	7.02 seconds taken
TGTest	1421.96 chrs/sec	1587.06 chrs/sec	1615.85 chrs/sec
InstTest	3203612.86 inst/sec	3204050.11 inst/sec	3204038.16 inst/sec

GREEN = big improvement over the last column.

These tests test graphic speed. The more pixels the better, the more time the worst.

RESULTS: Graphic operations got faster with the use of FAST ROM and FBL and if FBL provided more speed that means the ROM isn't optimised to the limit. However, I noticed some games got slower with FAST ROM and/or FBL.

- OS should have a routine to remove the click from the internal floppy drives. There are lots of programs doing this but it should come in ROM and always active. For years that I have been using a program called toggleclick (just 444 bytes long) and it always worked perfectly.

  If this can be done from software I can't understand why Commodore never implemented something like this in the ROM code. A few years ago I saw shops selling "special" floppy drives with "special" hardware to remove the click!!!!

- CD-ROMs must be bootable from, just like any other drive.

- BUG: I have a 68030 accelerator and I noticed that databurst mode is always off and I must turn it on every boot using the program CPU. The ROM should always turn databurst on when the CPU allows such a mode.

- All the bugs fixed by the present SetPatch (and the others you know of) must be fixed in the new ROM so that using SetPatch isn't needed.

- The animation of the disk entering the floppy (that appear for people without a hard disk and without any disk in the floppy drive) should also be in 640x512x32 colours with shading effects and other good things like the use of textures.

- ROM should provide compression functions making use of the most powerful compression algorithm available on earth and optimised to the limits using 68030 code and clever programming tricks also making use of PPC if found. A program with a GUI could also be supplied to compress/decompress data files more easily.

  Even though the better the crunching algorithm is the slower the compression, what is really extremely important is the decrunching speed because a file is only compressed once and decompressed every time it is used.

  These functions would also detect if the Amiga has a PPC and in that case it would make use of it to speed up compression and decompression, which means, the more powerful the Amiga the better for the user.

  It could also have a function that would return the original size of a compressed file stored on disc without decompressing it first and one that would load a compressed file decompressing it "invisibly". This would offer a great amount of power to the computer and reduce the need of disc space considerably.

  I have noticed that several commercial software are using the technique of having all its data files compressed with a cruncher whose name I can't remember.

- More files resident in ROM. The ones more used should be placed there. Loadwb is a must but I can also suggest others such as:

  -loadwb -list -printer.device -assign
  -dir -serial.device -parallel. Device -asl.library

  Advantages:

  1) No problems of these files being missing when using floppy disks

  2) Access speed increased as loading from disc is slower

  3) Reduce space on disc (more useful in floppies)

  It is a shame that loadwb didn't come in ROM before. I don't know why because it is used almost every time a boot is made and it is very small.

- Workbench 4 must have a new default resolution of 640x512x32 standard (8 times more colours than the standard as default for professional things such as having a background and more colours in the icons) without flicker. People can later reduce the resolution and colours if they want. Everything should use more colours as colours is something it has been missing in most Amiga software, mainly utilities.

  Laced screens mean more pixels thus more quality in the pictures can be achieved.

  - 640x512x32 colours PAL
  - 640x400x32 colours NTSC

  The mouse pointer could also use a higher resolution, even if keeping the same old size, because it get more pixels that way and it can have better contours.

- Using Magic Workbench - The market is splitting into NEW ICONS (freeware) and MAGIC WORKBENCH (Shareware). In my opinion I prefer Magic Workbench since it is more popular but at least its palette should be used. Magic Workbench 3 icons that have a palette using 16 colours instead of just 8 (after it is released).

- It is needed a program to scan memory for RAM hardware errors making use of a progress bar for more professional look. I have seen some but it should come with the Amiga.

- Why is the RAM disk always full (0% free space)? Wouldn't it be better and more logical its free space to be the sum of free Chip RAM+free Fast RAM?

- A program that, by double clicking in a certain file, and according to its magic number or extension would activate an external program to use with that file.
  Eg: It would be possible to configure WB so that every time someone clicked in a GIF file, Multiview would be activated to display it.

  Maybe do also like Windows 95 when viewing all files as name and put a small picture before each file with different pictures for different type of files according to their extension or magic number (better but slower).

- BUG: If I mount RAD: and then remove it using the command remrad, the memory is returned to the system but the icon of RAD: still appears on Workbench and if I try to mount it again I get a "device RAD: is already mounted"

- The possibility of removing suspended (after a "controlled" crash) programs from RAM without rebooting the machine (just like in Win95), returning the memory locked by them back to the system.

- Gadtoolsbox.library must be improved so that, when exiting from string gadgets with a mouse click, may be possible to detect if changes have been made. It should also accept at least a progress bar, an Iconify gadget, the use of tabs, toggle buttons (buttons that clicking once they get in and clicking again they get out) and buttons like in the PCs with a border around (looks nice only on laced screens).

- BUG: I have read somewhere that Icon Editor has a bug and because of that always saves the icons using 8 bitplanes which means that even if the icons only use two colours they always get big.

- A new way of deleting icons just by selecting the icons normally and pressing delete instead of having to go to the "ICONS" menu.

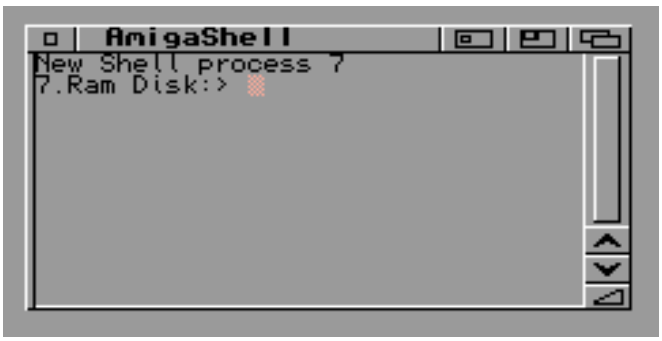
- Internet and HTML support must come as standard in the computer. Multiview must be capable of accepting HTML pages. A computer that is not turned to the Internet reality (which is the future) is a bad bet. Just create a Datatype for that.

  AmigaGuide should continue accepting AmigaGuide file format or be eliminated since Multiview can read those type of files.

  This way you would accompany present technologies and still support "old" documents in AmigaGuide. HTML is the future as it is a standard and things written in that format are multi-platform.

- Put an iconify gadget in windows and allow other software to use that gadget as well . Some PD programs like KING CON add this but it should come with Workbench as default. Also notice that KING CON also improved CLI windows by adding a scroll bar to them which would be great if it could come as default:

KING CON:



- New type of Menus (pop up) that can appear anywhere in the WB screen providing operations to deal with icons just like in Windows 95 and Directory Opus Magellan. By clicking, in Workbench, with the right mouse button above an icon the options in the pull down menu ICONS would appear there and, according to some of the icons being disks or other icons, some of the options would appear shadowed or not.

  Many software would also benefice a lot from the existence of such type of menus.

- When selecting several icons on Workbench and then, with the mouse pointer, move one of them, all the others selected should move as well without the need of holding down CAPS SHIFT.

- Being capable of selecting several files in windows and file selectors in one go, like Win95 does it. For example CTR+A which would select all files, being also possible to select files between an interval of files.

- Ask software houses to send you drivers of their hardware to come already with Workbench. This can also save costs to hardware developers (in disks) which means it is good for them to have better profits and invest on the Amiga.

- Allow the Integration of most of the software like Windows 95:
  (something that is missing a lot in the Amiga and is doing a great good in the PC).
  Copy/paste like in the PC. Mark already works but copy and paste doesn't (at least I've never found a way of doing it). There is at least one PD program that does this but it didn't work with my Amiga.

  Two types of copy/paste/cut just like in the PC:
  1st - Pictures
  2nd - Text
  Also the possibility of deleting marked text just by pressing any key.

- There should come a Cache program in order to reduce the number of reads from disc increasing the performance of CD-ROMs, Hard Disks, floppies…

  There are some programs like this in the market but if it came as default it would improve disc performance without having to buy extra software to do that.

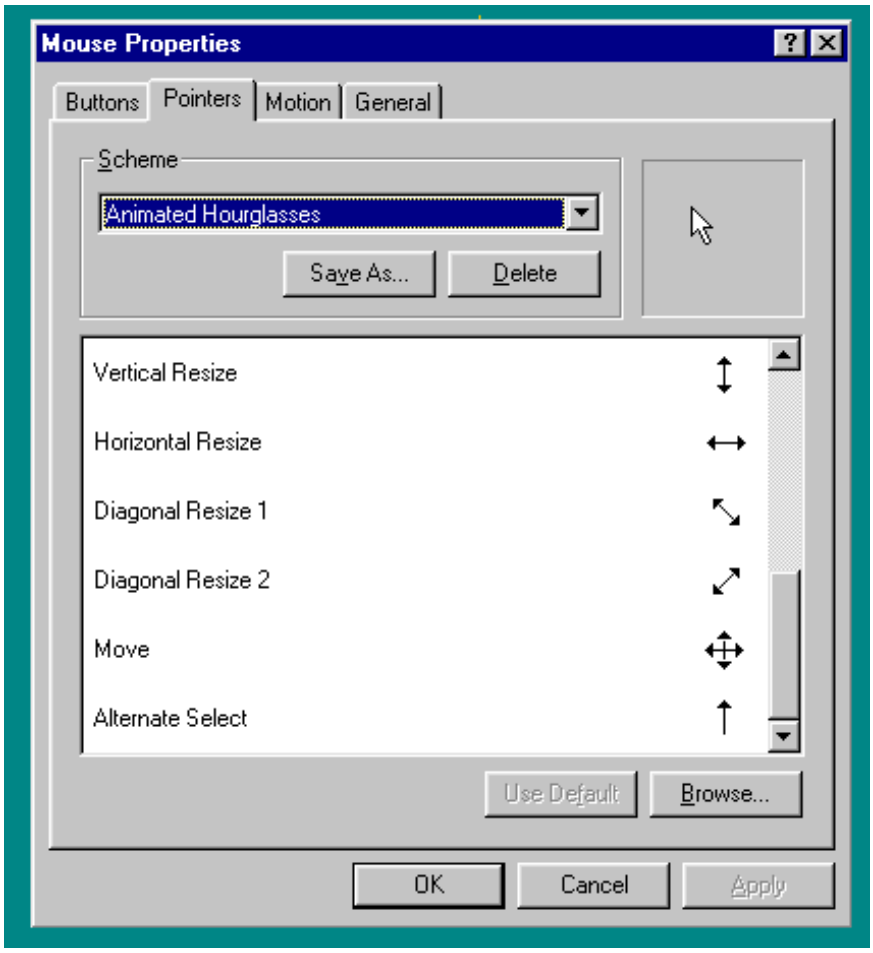
- There are some very good and used libraries which are PD or Freeware such as explode.library. Maybe if you asked the authors they would let it come with the OS itself for free. Almost everyone has such libraries but if they came in ROM and written in 030, 100% of the people could have them just by buying the ROM.

- BUG: The keyboard has a bug that by pressing two or more keys in the same line, only one of them can be detected which is bad for some software. I am almost sure this didn't happen when I had an Amiga 500.

- Use the technique used in Doom clones for the Amiga which can double the speed of the Blitter offering some extra speed.

- Workbench lacks more types of mouse pointers such as for resizing windows, animated... Workbench always uses the same pointer (and a busy one) while Windows 95 has a lot more. There should be an animation in the busy pointer. I was thinking about a superhires pointer maybe just a little smaller than the present one or maybe with the same size. The fact of using superhires (or just interlace) is just to gain more pixels (they get smaller) which can be used to improve the quality of the pointer. Maybe pointers using more colours too.

Windows 95:



Windows shouldn't just be resizable using the bottom-right gadget but in any part and that is where comes Windows 95 resizing pointers (which are used in most DTP packages, if not in all of them). The 1st 4 pointers shown above are a must but others are needed too such as a hand pointing for use with HTML pages (in the links) just like in happens with all hypertext viewers for Windows 95.

- Make Workbench capable of accepting serial PC mice. There are PD programs that do this.

- A new library called Internet.Library providing base functions to connect to the Net. All new computers must have the Internet in mind.

- Faster Maths libraries as several have appeared as PD faster than yours. Also should be able to use FPU if found and have code to use if there isn't one (must be prepared for both situations).

- Each Workbench icon could have its own palette and best colour found, also accept compression to reduce space, load speed, and dithering if it has more colours than the screen. This way no matter what palette you have on screen because all icons would automatically adjust to it the best way possible. Newicons does all this.

  Also allow the use of HAM6/8 icons.

- Amiga International could supply a set of gadget pictures making use of lots of colours that programmers could use freely so that all programs released could have a more professional look.

- Improve the file system to make it faster and cause less fragmentation. If AFS (Ami File Safe) is extremely fast, why can't FFS+DC too become a lot faster?

  Higher buffers for discs to increase their speed. As the Amiga Pro comes with more memory it can make use of it to gain more speed, the same way Windows 95 does.

- Provide ROM functions to emulate the chunky to planner conversion if the AKIKO chip isn't found.

- PC0: must accept long file names and notice disk changes - it doesn't detect disk changes very well.

- Moving an icon on a Workbench window shouldn't refresh all the others icons (imagine you had a 1024x768 screen loaded with icons…) in that same window.

- Workbench should come with more datatypes as default, such as AVI, MPEG. Such datatypes already exist in PD but I think they should come as default.

- Serial.device must be improved in order to accept up to 115200 baud's. This means that the program Serial Prefs must also be improved as it only accepts up to 31250 bauds. There are several PD software which replace serial.device and accepts speed of 115200 bauds and they work.

- Screen savers making use of the potentialities of the new Amiga PRO. Some breathtaking ones. I don't know if many people use screen savers.

- The present resize gadget makes it impossible to see if by clicking in it the window is going to be reduced or maximised. This happens because it only has one picture. If you could change its picture according to whether it is going to maximise or minimise the window it would be great (maybe just change its colours).

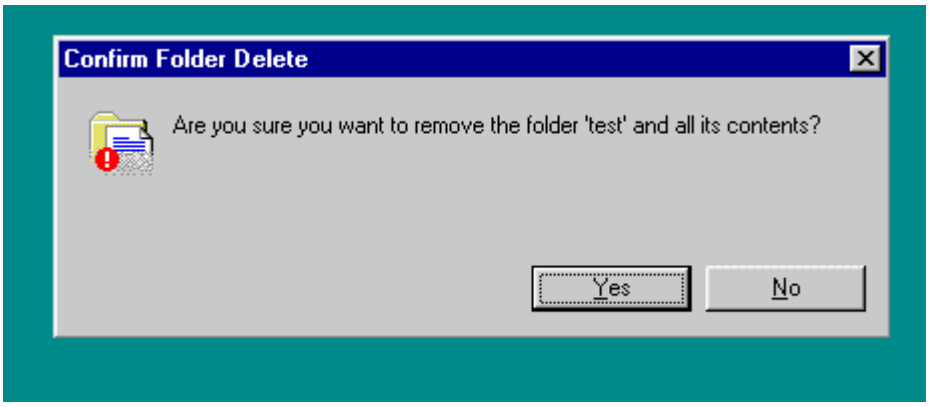
Improve requesters:

-Use of shortcut keys in requesters but underlining the character that can be pressed. Also <ESC> should select cancel and <RETURN> retry.

AMIGA PRO:

-A way of showing which gadget is selected by pressing <RETURN> in the requesters so that people know which gadget will be selected by pressing it.

WINDOWS 95:



-New requesters with animation's just like ARQ does but much better than it. ARQ was a good idea but uses only 4 colours and the graphics are poor and doesn't use dithering or better colour matching

The animations would appear in error or warning requesters and be related to the subject. ARQ shows animations in all requesters (even 'about' requesters, which is bad). But better and different animations as ARQ's aren't very good.

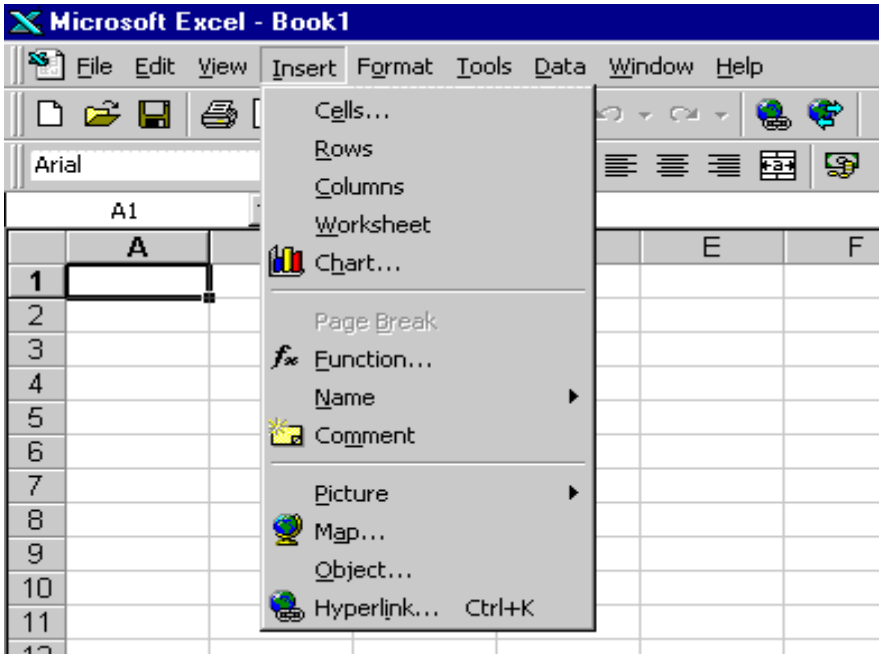
ARQ 1.83:

- Multiview must provide better functions to allow to open a control panel similar to the ones used in Windows 95' players (panel with total time, time left, play, stop, pause, bar showing where it is) so that datatypes dealing with animations, AVIs, MPEGs, MOVs could call those functions offering better control and power over them. The present panel used by Multiview is very "poor" lacking power.

Windows 95:

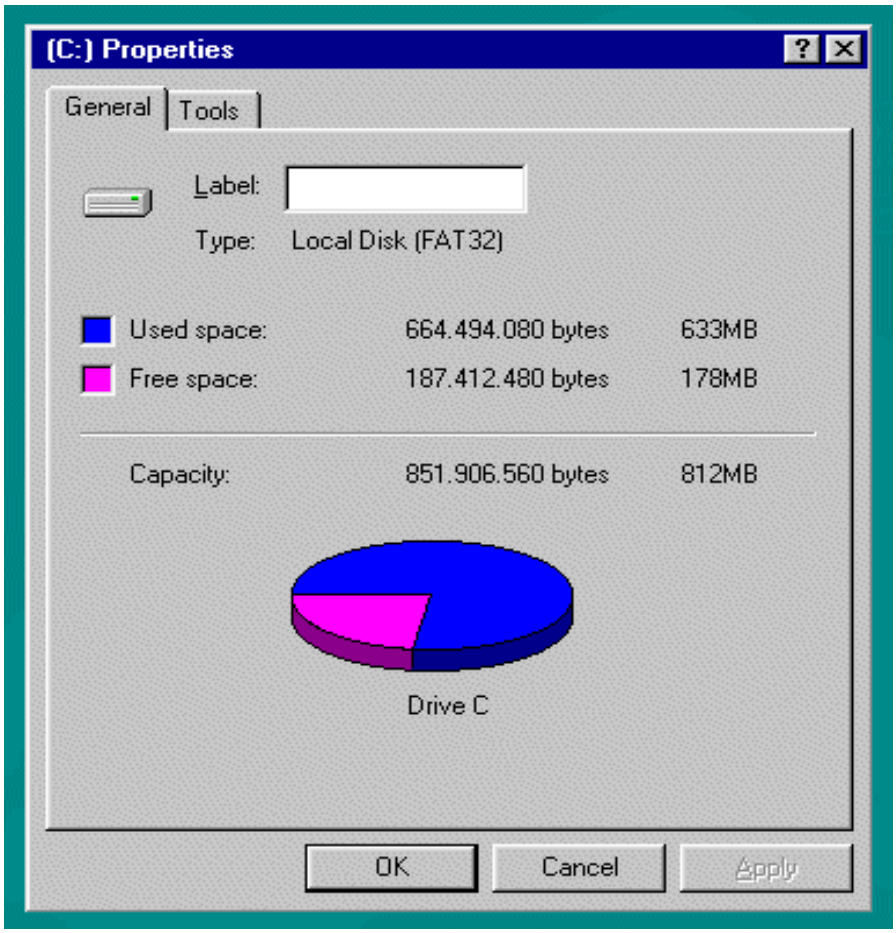
- Allow pictures to be put in intuition menus before the text like Windows 95 does:

WINDOWS 95:

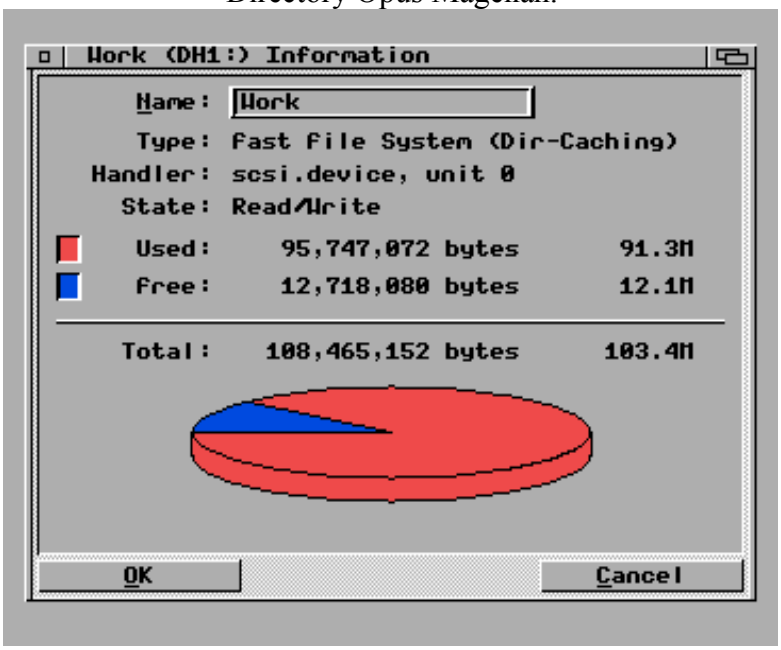


- The option Information to see information about icons should be improved when the selected icon is a disk:

Windows 95:



Directory Opus Magellan:



The Amiga should too show a pie chart for more style and say the file system used like Directory Opus Magellan does.

- CPU FASTROM shouldn't allow the copy of the ROM to be placed in Chip RAM if there isn't enough Fast RAM (or it is fragmented) because FAST ROM or ROM Shadowing means copying the OS to 32 bit Fast RAM where it is faster.

  Maybe Workbench should use ROM shadow as default and later, if the user needs more memory, he could disable it. Maybe better memory protection would have to be used.

  Also, I noticed that even though some things got faster with ROM Shadow, others get slower such as opening WB windows and I can't understand why.

- When copying files using Workbench from a place to another, if one of the files already exists in the destination directory a requester like the one which is used in the present Workbench must be shown but containing some extra things:
  - The size of the old file and the size of the new file is shown (see Windows 95)
  - The gadgets REPLACE and REPLACE ALL stay
  - The gadget CANCEL should be named SKIP
  - An extra gadget should be added named ABORT and other named SKIP ALL

  The gadgets used will be:

  REPLACE | REPLACE ALL | SKIP | SKIP ALL | ABORT

- A utility like "Tools Daemon" would be useful. It allows people to create extra pull down menus in Workbench and put there options which can be associated with files either in Workbench (simulate the press of its icon) or CLI mode. This way people can run programs from there without the need of opening lots of windows to get to them.

- Printer drivers must provide a set of functions to allow programs to show a print preview. This is missing a lot in the Amiga and most PC programs have this. To be absolutely sure this had to do with the printer drivers I wrote to Cloanto asking why Personal Paint didn't have a print preview and they told me exactly what I expected.

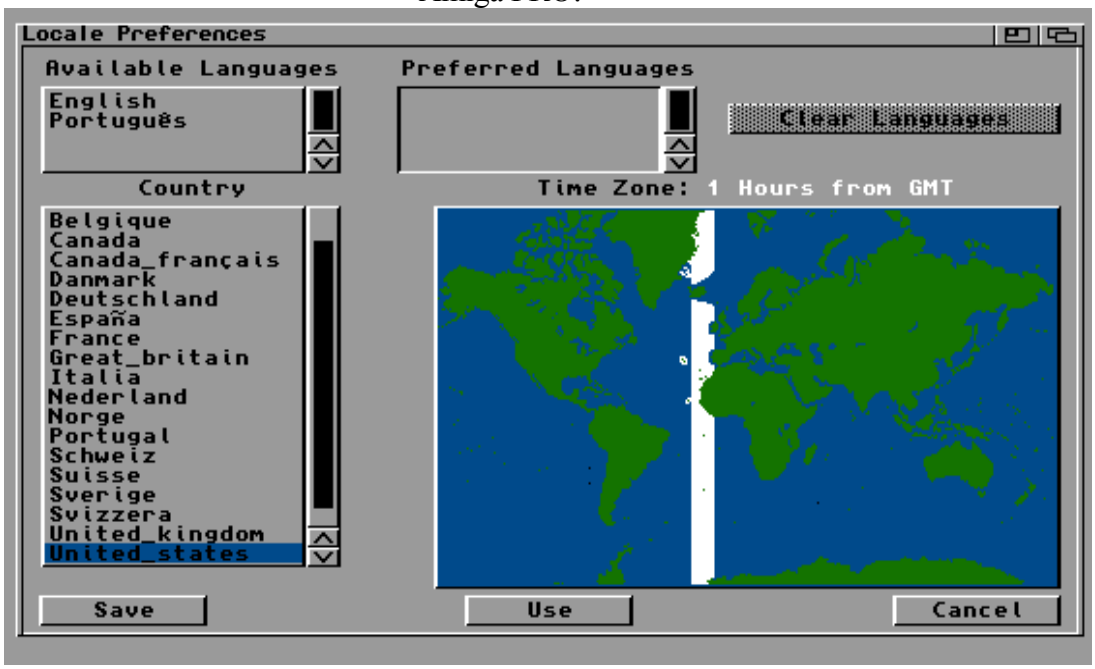
- The program Screen Mode should accept HAM6 and HAM8 modes like many hacks do (even though there would be colour bleeding problems). Workbench should even accept icons in HAM mode.

- Interlaced screens halve the vertical size of most of the icons as they were created just for high resolution screens. You could create a program to which people could drag and drop old icons and that program would double their vertical lines making them look nice on interlaced screens.

- The utilities that come with Workbench and that have a GUI, their GUI should be improved using more colours and, in some cases, also pictures. See for example the program Locale, at least more colours should be added to it:

Windows 95:

Amiga PRO:



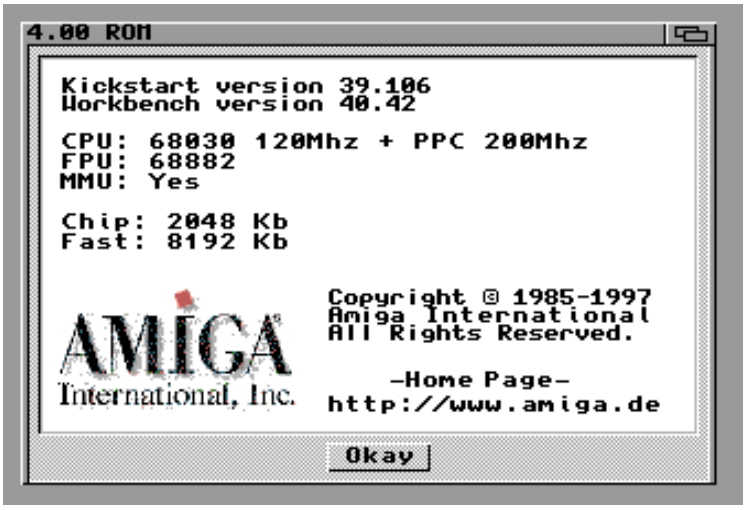
- When Commodore went down and development stopped, lots of "fake" libraries and executables, improved by Amiga users, started appearing to give answer to the needs of the "community" who couldn't wait years for Commodore to raise again.

  Maybe Amiga International should give a look at those "new" libraries to see what they did that could be used by you. Maybe you could even use those already made libraries (or part of their source code) in the next Workbench since they are your libraries modified, after all (also to get better compatibility with people already using those new libraries for a long time). You can find most of them (all?) on Aminet.

- New Workbench 'about' with AMIGA International's logo and Internet address so that all the people know there is one and the address.

The option 'About' in Workbench, which shows the current Kickstart and Workbench version and your copyright notice in a window, should be improved and show something like:

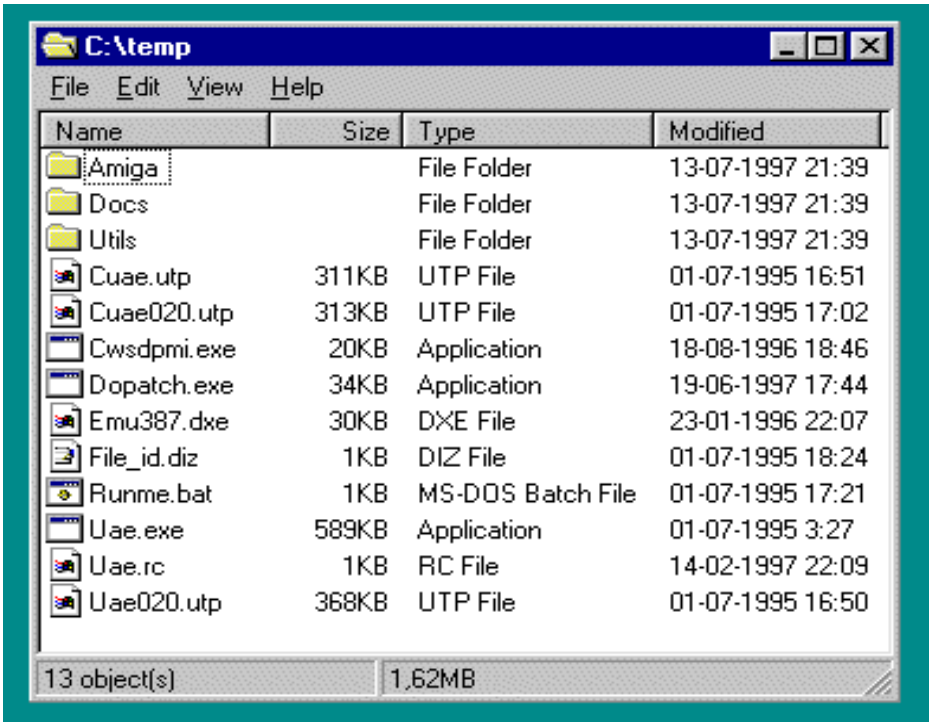
AMIGA PRO:



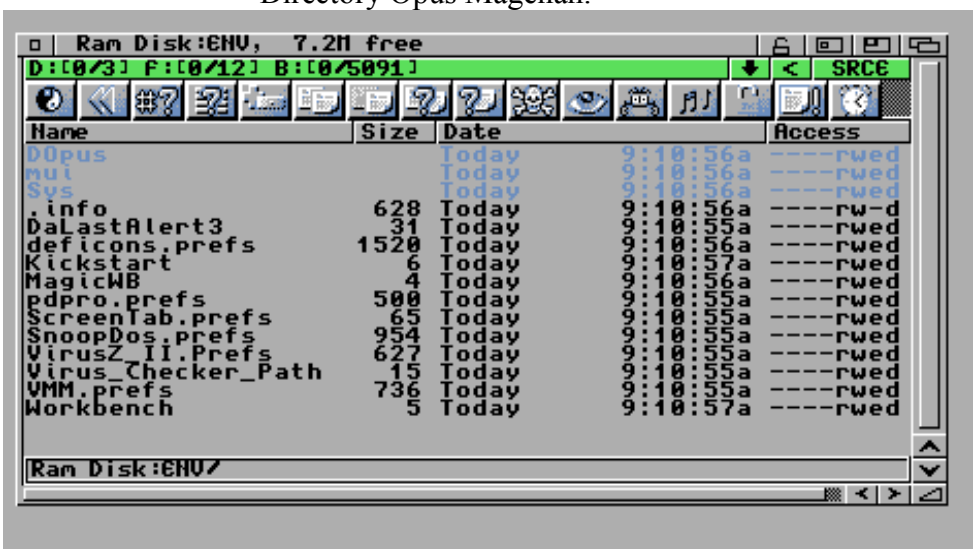
OR

- Opening a window and viewing all the files by name should be improved. See how it looks in Windows 95 and Directory Opus Magellan:

Windows 95:



Directory Opus Magellan:



The main thing to get here is the attributes above the files (name, size…) and the fact that clicking in one of those all files and directories are ordered by that and the fact that it is easier to see existing directories among the files (In the present Workbench it is a mess as files and directories are all mixed together and they can't be ordered following any special order which means there is a huge lack of power). Microsoft's Internet Explorer 4 (outlook) went farther by putting an arrow above the selected Attribute, being up or down according to sorting in ascending or descending mode.

8 - Amiga International and the Customers

When Commodore started going down the big people in Commodore started appearing in magazines always smiling, saying how good the Amiga was and having "corners" in magazines to reply to readers' letters. It took a crisis for Commodore to start communicating with the users when it should have done that from the beginning.

A long time ago it was forbidden by Commodore to send Libraries electronically and also to release porno software for the Amiga in CD-ROMs. This was not clever as CDs of that type have great sell numbers. If you visit many sites of that type you will see there that the number of visitor is half the ones that visited Amiga's page or even more than half.

I don't have many suggestions regarding this topic but here they follow:

- Amiga International should keep appearing in magazines like David Pleasance did having a corner to talk to the users directly answering some of their questions regarding the Amiga present and future. Not even Bill Gates is this nice and this is one thing you will never see in PC magazines – the big guys talking to the common people. This is something that can only be seen in the Amiga community that make all the Amiga people feel like a big family.

- A page in the Net where people could send bug reports/suggestions to and also download software such as:
  Eg: Most recent:
  - Setpatch
  - Installer
  - Libraries
    Asl, Maths
  … etc.

  Microsoft has a page where people can download software from, why can't the same happen to Amiga International? If not in your page, at least put links to some of those places, places such as the IBROWSE page.

  Also news there for Amiga users to read and the Frequently Asked Questions, bug reports and ideas about how to solve them.

- Amiga International could also sell products from its home page making some more money. Some shops are selling T-shirts with their name or the name of a particular product. To increase sales create and put there a PGP public key of 1024 or 2048 bits for security and people won't be afraid of buying things using credit cards (provided they have PGP and know how to use it).

9 - Where to get the files mentioned

In many places of this document I say “like xxxx does”. Here is where some of those files/programs can be found:

Program name	Type	Place to get it from	File name
A.I.B.B.	Freeware	www.aminet.org	Aibb_65.lha
Arq	Freeware	www.aminet.org	Arq1_83.lha
Faster Blitter	Freeware	www.aminet.org	Fbl66.lha
King Con 1.3	Freeware	www.aminet.org	Kingcon13.lha
LZX	Shareware	www.aminet.org	Lzx121r.lha
LHA	Shareware	www.aminet.org	Lha150r.run
Magic Workbench	Shareware	www.sasg.com	Magicwb21p.lha
New Icons v3	Freeware	www.aminet.org	NewIconsv3.lha
Tools Daemon	Freeware	www.aminet.org	Toolsdaemon21a.lha
Toggle Click	Freeware	? mailed it before	Toggleclick.lha
Wave Blaster	Freeware	www.aminet.org	Waveblaster.lha
Wave Blaster 2 midi	Freeware	www.aminet.org	Waveblast2midi.lha