SiSoft Sandra - The Diagnostic Tool, Read Me Document

This document provides some information about *SiSoft Sandra*. Please read the **Sandra Licence** document which tells you the legal stuff, my copyright, your rights and your warranty. Please also read the **Ordering Information** document which tells you how to get the registered version of SiSoft Sandra. Don't forget the **Help File!**

This file is in *Microsoft Word* format. If you do not have *Word for Windows*, *WordPad* or *Word for Windows Viewer* most word processors can convert it into their own format. Should they fail, import it as Windows text.

Using Windows Word/WordPad to View This Document

If you enlarge the WordPad window to its maximum size, this document will be easier to read. To do so, click the **Maximise** button in the upper-right corner of the window. Or open the **Control** menu in the upper-left corner of the WordPad window (press **ALT+SPACE**), and then choose the **Maximise** command.

To move through the document, press **PAGE UP** or **PAGE DOWN** or click the arrows at the top and bottom of the scroll bar along the right side of the WordPad window.

To print the document, choose the **Print** command from the *File* menu.

For **Help** on using WordPad, press **F1**.

To read other on-line documents, choose the **Open** command from the *File* menu.

Description

SiSoft Sandra (The "*System Analyser, Diagnostic and Reporting Assistant*") is a Windows 95 information/diagnostic utility. It provides more information (including undocumented) than some commercial diagnostic software, usually included with a tools/utilities package.

SiSoft Sandra was designed to run on **Windows 95**. It is a 32-bit native application which takes advantage of all the improvements made to the operating system. It should run on **Windows NT** on **Intel** (x86) platforms with slightly less features. This is module dependant. Incompatible modules will not appear in the listing or will shut-down automatically depending on system characteristics.

The Install Disk

The installation disk should contain the following files:

file_id.diz	FTP/BBS Program Information File
setup.exe	InstallShield Install Wizard SDK Edition
inst32i.ex	Install Component, 32-bit
_isdel.exe	Install Component, abort
_setup.dll	Install Component, library
_setup.lib	Install Component, library
data.z	Compressed Program Package (Sandra herself)
setup.ins	Install Script, main
setup.pkg	Install Script, package
setup.iss	Install Script, silent install
uninst.exe	InstallShield De-Install Wizard SDK Edition

If any of the above files are missing, try to download the package from another site. If some are corrupted - there must have been an error during transmission (check that you downloaded in **binary** mode) - repeat the operation.

All program files are compressed, so you should let the *Install Wizard* decompress & copy them to the hard disk. The Install program will also create a program group and add the program items. The *InstallShield* is **the** installer for Windows applications and is used by most commercial and shareware applications. It is arguably the best so you are very likely to have it already installed on your machine.

After installation, this is what you should have in the **Sandra**'s folder:

Compatibility.doc	List of devices that have been tested with Sandra
Ordering Information.doc	How to order the other versions of Sandra
Read Me!.doc	What you're reading now… I hope… ☺
Sandra Licence.doc	Licensing information
Sandra vs. SAW.doc	Sandra & SAW go head to head…
sandra.exe	Main program file
sandra.hlp	Program help file
sandra.cnt	Program help file index
san16.dll	Helper library
script.ini	Sample batch-mode report generation script
sandra.str	'Tip of The Day' document
sandra.inf	Devices listings data file
*.url	Some Internet shortcuts

And in the **Windows\System** folder:

mfc40.dll	Microsoft VC++ MFC library
msvcrt40.dll	Microsoft VC++ MFC library

These files are used by most MFC applications written in Microsoft Visual C++ 4.X, i.e. most modern Windows applications, so it's likely that you have them already on your system in which case they will not be copied.

You can, of-course, do an *UnInstall* from **Control Panel** which will delete all files installed, remove all directories created and the groups/icons installed and clean up the registry. So don't be afraid it'll mess up your system...

The original FILE_ID.DIZ file

Some sysop asked for a copy of the original **FILE_ID.DIZ** file just in case it gets modified. Here it is:

```
SiSoft SANDRA - The Diagnostic Tool, Ver 1.10
----------------------------------------------
 SANDRA is a Windows 95 diagnostic utility
along the lines of Norton/PCTOOLS SI, Q/A
Win, etc. However, it goes beyond them. Shows
undocumented system information. Help file
explains most of the terms used. Creates, e-
mails, faxes or prints system reports.
  From the writer of SAW, "The System Analyst
for Windows", Windows 3.1X system analyser.
  Shareware. Free for private/educational
users.
  Automatic install/deinstall - run setup.exe

  Can be distributed without charge or
permission by any electronic means
BBS/FTP/FSP/WWW/Usenet/Mail/etc., magazines
or CD-ROM (by archives which allow anonymous
access, e.g. WinSite, SimTel).

E-Mail: C.A.Silasi@city.ac.uk ("Adrian")
WWW: http://www.city.ac.uk/~ax515/sandra.html
----------------------------------------------
Suggested Folder: /win95/sysutil
```

☠ WARNING !!! ☠

IT IS STRONGLY RECOMMENDED THAT YOU SAVE/CLOSE EVERYTHING YOU ARE WORKING AT (open documents, files, etc.) BEFORE RUNNING THE PROGRAM FOR THE FIRST TIME. THE PROGRAM WAS TESTED FOR INCOMPATIBILITIES BUT YOU NEVER KNOW…

If you find no problems then you can cool down. But **do** save regularly.

<u>Program Requirements</u>

Software:

- Windows 95 or later or Windows NT Workstation Version 4.00 or later

Hardware:

- a computer that runs Windows 95/NT comfortably, e.g.:
- Pentium-100 or better (at least 486DX-25)
- 16MB RAM or more (at least 8MB)
- 1MB Video Card using 256 colours at 800x600 or better
- PCI Bus Version 2.00 or later
- Plug & Play BIOS 1.00a or later
- 1GB hard disk or larger. (at least 140MB)
  - Mouse & Keyboard ☺

Extra Things:

- 2MB Video Card using HiColour/TrueColour at 1024x768 or better
- VESA Video BIOS Version 2.00 or later & VBE Version 1.00 or later
- DirectX Version 3.00 video drivers or later
- CD-ROM drive (at least 2x)
- Printer
- Joystick
- Sound Card & DirectSound Drivers
- Modem (TAPI)
- Internet connection (WinSock)
- E-Mail client installed (MAPI)
- WWW browser (Microsoft Internet Explorer, Netscape Navigator)
- DMI BIOS Version 2.00 or later
- APM BIOS Version 1.00a or later
  - MS Plus! Pack

Really Extra Things:

- 3D Accelerated Video Card (Direct3D, OpenGL) ☺
- Network (Windows, NetWare)
  - Network Protocols (TCP/IP, IPX/SPX, NetBIOS, etc.)

Note: You don't have to have all that stuff. But, generally the more you have the better. Anyway, most new computers have all this stuff and you can get the software from the Internet.

www.sandpile.org and **www.x86.com** - for information on CPUs, etc. Intel's not too hot about this (it seems), though…

Ralph Brown's Interrupt List - (**ftp.garbo.fi**) The best one there is and it is *public domain*! No one should be without it - extraordinary work! Unfortunately, it is a bit lacking in Windows information, but you can still find more than almost anywhere. Can't wait for the next update. You can also buy the book.

CITY University, London, UK (**www.city.ac.uk**) - For being a student there...

Sandra Icons - Windows 95, Windows 3.1X, freeware icons @ WinSite (www.winsite.com), SimTel (www.simtel.net), Macintosh, BeBox, Copland, UNIX, etc. Do you have some good 256 colour ones?

My Beta Testers (**Various**) - Last, but not least. They suggested all kinds of things that I did not think anyone would need and spotted errors I did not see. Well, **thanks**, and keep sending in those reports. If you want to contribute with something, as I said, send it in. *Thanks for your support!*

I apologise to those who helped me with Sandra/SAW or I have spoken to (by E-Mail or otherwise) and forgot about. This course I'm doing now is quite hard and I forget people's names very easily… yes, I'm not kidding… so don't take it personally…

SiSoft Sandra Program Version Convention

The program version is in the form YY**.**MM**.**MAJOR_VER**.**MINOR_VER. Therefore, if you see SiSoft Sandra Version **97.3.1.10** it means SiSoft Sandra Version **1.10** released in **March** (3rd month) **1997**. To all intents and purposes, this can be referred to as version 1.10. The ZIP packaged should be called **san110.zip**.

Use the same reasoning for other program versions.

New in this version

Changes and additions to **1.10** from **1.00**:

- You can now use command line options and scripts (**/r** command).
- You can set shortcuts (**/m** command) or run Sandra from desktop objects (My Computer, Network Neighbourhood, Printers, Drives, etc.)
- MS-Plus! Sage interface works correctly now. Script setting support, i.e. properties enabled. You can schedule regular runs.
- E-Mailing a report (especially to me ☺) should work now.
- Some report wizard modifications.

- Detects UMC & Cyrix CPUs correctly. Detects speed correctly for the new MMX CPUs, Cyrix, NexGen & AMD. Displayed speed does not vary too much between runs now…
- Benchmarks should be more consistent. CPU Benchmark is done 3/5 times. Confidence intervals are used to remove inconsistent results.
- Knows more chipsets (Intel MX, TX; Opti; SiS). Memory timing info.
- 16-bit module usage.
- 32-bit module export functions listing.
- No more crashes in various modules (Keyboard, Printers, MCI).
- More modules (Drives Info, DOS Device Drivers Info, DirectX, New Drives Benchmark, Memory Benchmark).

The three Sandra versions (stooges?)

General:
- Network compatible (Windows, NetWare, etc.)
- Internet compatible (WWW, E-Mail, FTP)
- Information modules
- Benchmarking modules
- Testing modules
- Registry/Initialisation Files listings modules
- Plug & Play compatible
- APM compatible (portable computers)
  - VESA compatible

Standard version:
- No time limit, nag screens or anything
- 20+ modules in all - information/benchmarks/listings/tests
  - 1 user licence only

Professional version:
- Registration required - see the ***Ordering Information*** document
- 40+ modules in all - extra information/benchmarks/tests for you**!**
- Extra add-ons/updates not publicly released
- Can interface with the Enterprise version
  - Variable user licences, 1 minimum

Enterprise version:
- Only available to business users - see the ***Ordering Information*** document
- 40+ modules in all - extra information/benchmarks/tests for you**!**
- Extra add-on/updates not publicly released modules
- Extra networking modules and wizards
- Variable user licences, 2 minimum
- Remote information collecting on all Windows compatible networks
  - Remote information collecting on TCP/IP networks - with the Sandra Daemon

With Sandra Enterprise when you connect to a computer on you network, the information you view on the screen refers on that computer as it were yours**!** You can get all the information you could get about your system. You can even benchmark or test the remote system. The user may not even be aware of it.

Planned features for Sandra Enterprise:
- Network auditing - number of PCs, information on each PC, etc.
- Network sweeps to detect changes in PC configuration
- Network statistics - average CPU, memory size, hard disk size, etc.
- TCP/IP support - get remote information through the Internet. Using the Sandra Daemon
- Client & Server versions as well as a multithreaded Advanced Server. It's crazy, but fun and I can learn some network message passing/interfacing as well
  - Ability to crash the remote PC - good practical joke on friends trying to meet deadlines**?** ☺ Not funny if they find out… Only joking, you can't crash the mighty NT or even 95 can you**?** Answers on a postcard at the usual address…

The User ID

If you have registered Sandra, you should have your user ID. If not, do it. To register your copy, go to **Help - About** and click the **Register** button. Follow the on-screen instructions. This will involve entering the user ID and clicking OK. That's it.

Don't forget to write it down**!** If you delete & reinstall Windows or destroy the registry, the ID will be lost and you will need another one. I don't keep copies of IDs sent so you will need to do it again… Don't say I didn't warn you…

Note: You may have to exit and re-start Sandra after registration as some features may not re-initialise properly.

Sandra's Benchmarks

The benchmarking modules in Sandra are *for information purposes only*. I am **not** trying to compete with the likes of WinTach, WinTune, WinBench or any other benchmarks. If you find them useful, that's great; if not just ignore them. I just wanted to have some fun…

The scores may be quite different from what other benchmarks show for the same system and that's normal.

Known (Already!) BUGS (Features!) or Incompatibilities

- **Sandra crashes with missing DDRAW, DSOUND, DPLAY, DDHELP or Undefined Dynalink:** Make sure you have DirectX installed, at least version 2.00. DirectX 3.00 or later is best, though, so make sure your system has it.

  - **Modules missing from list:** Use the *Add New Module Wizard* to add them back. You should do this after installing a newer version of SiSoft Sandra or registering. Make sure you're viewing all modules (**View** - **All Modules**).

  - **Sandra crashes with Page Faults:** Re-start Windows and move the library **san16.dll** from Sandra's folder to a temporary one. If Sandra runs OK even if it complains, then everything is fine. You'll lose some functionality though. 1.10 fix.

  - **Keyboard Info crash** - Un-Install the *Accessibility Features* from *Control Panel* if you don't use them, otherwise delete the module. 1.10 fix.

  - **Printer Info crash** - Right-click the module and choose **Options** - don't execute (i.e. double-click) it**!** Un-check *Include Printer Driver Information* and click **OK**. Now run the module, this should work. 1.10 fix.

- **Processor detected incorrectly**: Only CPUs found in publicly-available systems **before** Sandra was launched are detected. It is not feasible to "anticipate" future CPUs or even the ones at the "experimental" stage.

  - If the CPU is a new one which can identify itself, then it will be correctly detected.
  - Most older CPUs will be classified as "*Generic*" as the manufacturer cannot be determined easily. AMD, UMC 486 CPU's are identical to Intel's, so they cannot be detected accurately.
  - Some 486DX4/DX2s may be incorrectly detected as DX2/DX.
  - Cyrix has licensed its CPU designs to IBM, SGS Thompson, Texas Instruments (etc.) but the chips are virtually indistinguishable so they will be all labelled as Cyrix CPUs.
  - The IBM Blue Lighting DX3 is considered a Cyrix 486DX4.
  - Due to the huge number of Cyrix 486 CPU variations (DX, DRX, DLC, SLC, etc.) they are not differentiated, but are classified as 486DX/DX2/DX4 or SX/SX2 only**!** Also, the large number of 286-to-486 and 386-to-486 upgrade chips are classified in the same way.
    - Bug in Sandra herself**!**

- **Processor Speed Detected Incorrectly:** If the CPU is detected incorrectly, then the speed will be incorrect. However, even if the processor is detected correctly there may be a few problems:

  - Make sure that you understand the difference between the CPU P-Rating and Speed. The P-Rating is the equivalent speed at which an Intel Pentium would

have to run to match your CPU. The Speed is the true processor speed. So an AMD K5-PR133 has a P-Rating of 133MHz while running at only 100MHz.
- Unfortunately, Sandra was not tested on all available CPUs. There's no telling what the speed will be detected as on untested CPUs. See *Compatibility.doc* for more information.
- If you have background processes, play MIDI files, do network transfers, then the speed may well be 10-20% lower than normal.
- The lack of a level 2 cache may yield lower CPU speed.
  - Bug in Sandra herself**!**

- **Memory Bus Speed/Multiplier Incorrect:** Sandra does not know how to ask all Chipsets for this information; in that case it guesses. There's a fair chance that this will be wrong, so there you have it…

- **Memory Banks Incorrect Info:** While the total size of the memory may be correct you may be confused by the arrangement. This is because the slots and rows (or banks) do not have the same arrangement.

Say my computer has 4 slots and 8MB in the 1st bank (slots 0 and 1) and 16MB in the 2nd bank (slots 2 and 3), 24MB in total. Sandra shows 8MB in bank 1, 3 and 4. This is correct as it gives 24MB in total. This is the logical arrangement and not the physical one. As long as the total is correct, the information is correct.

- **Version Info of 32-bit Applications shown as 16-bit:** When Sandra uses the version checking APIs it does not check itself the type of file it is dealing with. Microsoft *forgot* to update the version info of some Windows 95 applications (mplayer, sndrec32, etc.) to say that they are now 32-bit not 16-bit. Bah**!**

- **Display Schemes using Large Fonts:** The display list may become corrupted as the lines of text from an item overlap the icon of the item below. This is similar to the problem seen in the *Control Panel*, but it is worse as the module text is longer. This is a bit hard to fix as the list-view item has constant icon separation whatever the font size.

- **CPU Benchmark:** Processor load shows 100%**!** Unlike other programs like Wintune97 which shows CPU load, Sandra shows the time allocated to herself, i.e. 100% means all CPU time is given to Sandra, which is how is should be! If this is lower then some other programs are also using the CPU and you'll get lower scores.

- **Video Benchmark:** This may only work correctly only on a few systems now. However, the module will auto-disable itself to prevent system corruption. **This is normal.** To be fixed.

- **Windows NT:** More than likely Sandra will not run as it is. I'm thinking of releasing a NT only version which would be a bit different from the normal 95 one. To be fixed.

- **MS-Info installed but does not run:** Check that other applications like Word, Excel are able to run it. The path may be incorrect.

- **SAW installed but does not run:** SAW was **not** designed for Windows95 or later so it does not register itself as a program. Sandra has no idea where it could be. So, create a shortcut pointing to the SAW executable (name it **saw.lnk**) in Sandra's folder and all will be fine.

Technical Support

Should you have problems with the program and the bug/incompatibility is not listed, then get in touch. Technical support is free and always will be, but there are a few things to bear in mind:

Please check the World-Wide-Web page (*http://www.city.ac.uk/~ax515/sandra.html*) first**!!!** All bugs discovered and fixes are listed there**!** There is **no point** harassing me with questions already answered. I'll reply with RTFM or RTFWP (Read The Flamin' Web Page) anyway…

- Only problems concerning Sandra will be answered. Off-subject topics, unless agreed to, will be ignored. Please be considerate and make sure it is a problem with Sandra and not something else. You do understand that I **am not** working for Microsoft to solve your problems with Windows, don't you**?**

- No updates or fixes will be send. You will have to get them yourself**!** I don't have an automatic mailer to send all the people on the list new updates, and there's no way I can do it by hand.

Updates & Fixes

Sandra is regularly updated. Usually this is every **3-4** months. If you have problems or need new features, then make sure you check if a new version is available. See the paragraph below for a list of contact points. Don't check every day, though, there's no point…

Where to contact Me...

I have tried to put as much information as I could in this file and the help file. I cannot (I'm not even trying to) explain many terms or results - I do presume you are familiar

with what I'm talking about. Get some books and read some magazines if you want to know more...

If you **do** find bugs or incompatibilities (read the *Bugs* paragraph to see if it's a documented one) I would be **very, very, very happy** if you could E-Mail me with a brief description. If you have another diagnostic program (MSD, MS-Info, Norton Utilities SI/32, Q&A Win, WinTune95, Manifest, etc.) you could add a report about your system... **Thanks.**..

Please do note that I may not be able to correct it - I may not know how / what to do**!**

You can contact me at the addresses below:

University Address:	**C. A. Silasi**
	CITY University
	Computing Department
	Northampton Square
	London EC1V 0HB
	United Kingdom
E-Mail:	**C.A.Silasi@city.ac.uk**
	ax515@city.ac.uk
	BadBunny@city.ac.uk (my Quake callsign ☺)
	ce146@city.ac.uk (older, SAW)
Finger Address:	**finger ax515@city.ac.uk**
	finger ce146@city.ac.uk
UNIX Finger:	**finger ax515@city.ac.uk -l	more**
	finger ce146@city.ac.uk -l	more
Sandra WWW Pages & mirrors:	**http://www.city.ac.uk/~ax515/sandra.html**
	http://www.city.ac.uk/~ce146/sandra.html
SAW WWW Pages & mirrors:	**http://www.city.ac.uk/~ax515/saw.html**
	http://www.city.ac.uk/~ce146/saw.html
SiSoft Software Ltd. WWW Pages & mirrors:	**http://www.city.ac.uk/~ax515/**
	http://www.city.ac.uk/~ce146/
FTP (not useful):	**ftp://ftp.city.ac.uk/pub**

Very Important Notes:

- The subject of the e-mail message **should** begin with the word "*Sandra*" followed by the *type* (Standard, Professional or Enterprise) and *version*, e.g. **"Sandra Standard Version 1.10 : Program Errors"**. E-mail is sometimes re-routed via different accounts and it may get lost otherwise...

- *Don't send mail to all the IDs listed!!!* (i.e. **don't spam**). One is enough, the other are listed just in case some accounts merge or the mail bounces. Aliases may change,

etc. Also, all the web pages with the same name have the same contents so don't check them all**!**

- **No** snail mail will be answered unless a **S.S.A.E** (Stamped Self Addressed Envelope) is enclosed. Be sure that the postage is correct, I will not check it or affix the correct stamp. If you do not send an envelope or International Reply Coupons at all, do not expect a reply**!** No excuses**!** Remember I don't get paid for this.

- Please write in English. I'm afraid my knowledge of foreign languages is not my strongest point. ☹ Sorry.

- If you want to call me by a first-name, as opposed to the family name, use my second name, "**Adrian**".

- In case I don't answer I may be away. I will probably be changing my address in a few months. If I get a job abroad in 1997 (we'll see) I may even leave Sandra dead in the water for a long, long time… ☹ Sorry.

- The *latest* version of SiSoft Sandra should be found on **WinSite** (old **CICA), SimTel, Windows95** and all their mirrors. This is the main site. Please *use a mirror,* if possible, to avoid overloading the main sites. Different versions of the program may be available in different places. Use whichever you like. Look for **sandra.zip** or **sanXXX.zip** (e.g. *san123.zip* for version *1.23*):

SimTel US:	**http://www.simtel.net/**
WinSite US:	**http://www.winsite.com/**
SimTel UK:	**http://src.doc.ic.ac.uk/simtel-win95/**
WinSite UK:	**http://src.doc.ic.ac.uk/packages/win95/**

  Don't forget to check the place you originally got it first.

Other Publicly Released Programs from the Same Author

- The first program I wrote and distributed was **SAW** (*The System Analyst for Windows*) which was a 16-bit system information/diagnostic program for Windows 3.1/3.11 back in 1995. It also supported Windows 95. It was *freeware* and was quite successful. You may still find it in some software archives. Look for **saw110.zip** (Last version 1.10) or **sawXXX.zip** in general at **WinSite** (www.winsite.com), **SimTel** (www.simtel.net), etc. May still be quite useful…

Sandra's Program History

Version 1.00 released on **29/01/1997 (dd/mm/yyyy)**. The very first version of this ground-breaking program. ☺ Considered a "final beta" due to various problems.

Version 1.10 released on **XX/XX/1997 (dd/mm/yyyy)**. Second version which was the 1ˢᵗ release version of Sandra. Various new improvements and more modules added. Should be more stable, many crashes and bugs fixed.

Sandra Special Licensing

See the *Sandra Licence* document in your Sandra folder. Special licensing agreements can be made by contacting the author.

Source code licenses can be bought by private individuals or companies. This may involve part(s) / all of Sandra's sub-system or the whole program itself including everything. It may cost you though, but not too much…

Sandra Source Code

Sandra is marketed as **shareware**. Therefore, the source code will not be released at all to the public, I'm afraid…

However, I do welcome questions from fellow programmers. I would love to have a talk on Windows programming/system analysis or otherwise. If you need a code snippet then ask, but don't take the whole hand**!**

See the above paragraph for code licensing.

Some Questions and Answers

This is a list of questions that have been asked by users in the past concerning SAW and Sandra. It is not supposed to be a FAQ (frequently asked questions), but I hope it answers at least some of your queries…

Q: Isn't a name like "Sandra" daft for a program? Whatever possessed you to choose such a name?
A: It's supposed to be an acronym. Well, I did "stretch" it a bit to make it sound better. This is not the first program to have a female name, remember Apple Lisa, Miranda, Microsoft Mum, Brenda, etc. I'm sure there are more, I just can't recall them now. Does it bother you**?**

Have a look at these alternative names suggested by (*Sorin.Srbu@medkem.uu.se*):

"Admin's Best Utility"
"Admin's System Analyst Program - ASAP"
"Admin's Computer Diagnostics"

"Doctor Adrian's Computer Diagnostics Tool"
"The Diagnostics Tool Without Name" ☺

Q: Does the name "Sandra" have anything to do with someone with the same name (maybe a famous person)?
A: No.

Q: Why haven't you made Sandra freeware?
A: Why, have you paid me any money for it**?**

Q: Why don't you charge for Sandra?
A: You're welcome to send donations if you want to. I'd appreciate it. The simple answer is that I would need to worry about tax and other stuff - not because I have a kind heart. Maybe in future versions…

Q: The help file is quite small. What's up?
A: I'm working on it…

Q: I have some DOS system analyser which shows way more information than Sandra. Why can't you do that?
A: Well, ask them why they haven't written a Windows version yet. Win32 programming is even harder and you can't do what you want like in DOS. Some stuff is just not relevant in Windows. Also, quite a few Windows analysers are still 16-bit, Sandra is not.

On the other hand, a DOS analyser could be better than a Windows analyser if you check/test hardware at low-level. To check the Win16 sub-system a 16-bit analyser could do better, too. The choice is yours.

Q: I have (e.g. Norton Utilities '95) and I think that (Norton SI/32) is much better. Can't you do better than that?
A: If I could, some software company (Microsoft, Symantec) would have snapped me up a long time ago… However, I do think that Sandra does things that SI does not do, but overall it can't compete. Also remember that Nu95 is a package and not a stand-alone product. Seen anything you like**?**

Q: I think that MS-Info is better than Sandra.
A: Are you a troll**?** No way**!** ☺

Q: There was a 16-bit Windows 3.1X/95 Sandra Alpha. I would really need a Windows 3.1X version of Sandra.
A: Well, remind me. The 16-bit version is currently used only for compatibility testing and **will not** be released. It's faster to compile & run 16-bit code, and anyway, Windows 3.1X had quite a few things no-one seems to have used.

Q: That "daemon" is not working. (where is it anyway???)

A: I know. I'm trying to finish the Professional version first. Then I'll be adding the Enterprise stuff (like the warp engine…). I was thinking about a separate Client & Server versions as well. Maybe in version 2.00**!**

Q: God! When Sandra crashes it takes Win95 with it. Where's the robustness I've read/heard so much about?
A: Well, I always say that if you do something, you might as well do it properly… On a serious note, things are getting very complicated down here, so watch out…

Q: What's this about a HiColour or TrueColour support in Sandra? Not all the icons are shown in 256 colours. Why is that?
A: Most icons in Sandra contain both 16 & 256 colour bitmaps. If you have the **Plus! Pack** installed and are running in HiColour/TrueColour mode Sandra will look different. However, there are icons in 16 colours only. If you have one or have drawn a 256 colour one, please send it in. I'd appreciate it.

Q: How soon does Sandra get updated?
A: Every few months. About every 3-4 months I should say.

Q: Why do you have so many E-Mail IDs, web directories, etc. Can't you merge them?
A: That's the idea. However, I don't know which ones will be deleted so in case one does not work for you try the other. Don't use them all**!** They're just mirrors.

Q: Why is the web page so simple?
A: Well, it should be beefier now. Tried it**?** Satisfied now**?** No more fast page loading for you…

Q: What does the Java applet on the Web page do?
A: Shows some system information. Not very useful but cute. Get a Java browser and you'll see**!**

Q: I can't find anything on your damn FTP server (ftp.city.ac.uk)!
A: Well, believe it or not, the University is not very keen on allocating Sandra some FTP space. I may have to move Sandra to my account… Try other FTP servers.

Q: Fingering you does not work.
A: Again, what can I say**?** The administrator has not fixed it yet. Even the *who* command does not work properly…

Q: Do you actually reply to E-Mails?
A: Yes, to *almost* each and every one of them. At least until now…

Q: Why? Haven't you got something better to do?
A: Yes, I do actually. If you want crap technical support (as unfortunately it happens most of the time) then you got it. Just mention that in the message…

Q: Some things that you say Sandra does are not true. Why are you lying?
A: It's called "exageration". Every company does it. I do it because Sandra is still a beta, and all those features should appear as soon as possible. Don't be too hard on me.

Q: I see you're a Quake player. Can we have a deathmatch?
A: No. I don't have a PentiumPro and a 3DFx for GLQuake… yet… ☺

Q: What's this bunny thing in Sandra?
A: If you haven't found it, don't worry about it. The "bunny" existed in Windows 3.0, 3.1, 3.11 and 95. SAW also had a bunny, so Sandra needed one too…

Q: I don't like your style.
A: Don't worry about it. The feeling is mutual… ☺

The End

By the way, this document was supposed to be humorous as well - have you noticed that**?** If you do not think it is, then I'll add "*Sense of humour*" to the "*Bugs and Incompatibilities*" section in the next version... ☺

Anyway, you must be pretty bored if you have read through all this... So I'll finish now...

Well, this is it...

Still here**???**   Go away…

Enjoy!