The System Analyst for Windows ReadMe File

This file provides some information about SAW. Please read the ***Licence*** file which tells you the legal stuff, my copyright, your rights and your warranty. Don't forget the **Help File !**

This file is in *Windows Write* format. If you do not have Write, most word processors can convert it in their own format. Should they fail, import it as Windows text.

Using Windows Write to View This Document

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

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

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

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

Note: *Windows 95*: You are advised to use the *16bit Windows Write* or *Word for Windows* to view this document, **not** *32bit WordPad* - paradoxically some formatting attributes will be lost and it may not be displayed accordingly.

Note: This is in case you don't know / you've forgot. I'm not trying to treat you like a kid, even if we are all still kids, aren't we **?** *(playing with computers* **o:-)**

Foreword

If this is not the first version of SAW that you have encountered, you might think that most of the paragraphs in this file are unchanged. This *is* true most of the time, but some *have changed*, so if you have time, read *most* of this file. You never know, you might just have missed something interesting first time round... **:)**

Hope you've read the **Foreword** topic in the **Help File**...

Description

SAW is a Windows information / diagnostic utility. It provides the same information as some commercial diagnostic software, usually included with a tools / utilities package. However, this is *free*. Yeah, you'd better believe it... **:)**

SAW is **Windows 3.10+** compatible. It no longer runs on Windows 3.0.

SAW will provide information about your system's Processor, Memory, BIOS, Disks, Drives, Mouse, Joystick, Sound Card, Windows, DOS, DPMI, etc. You can create a report to be printed or saved to a text file which can be loaded into any word processor.

I wanted SAW to go beyond any other Windows information utilities which have been lacking even if Windows has appeared for a long time, or are very expensive. The chances are that the information SAW provides is shown by many other programs, but SAW gives you an *insight* in the DOS/Windows system which most information programs do not.

System Requirements

Software: Windows (for Workgroups) 3.1, 3.11 or compatible.
Hardware: Very funny. **:)** (what you *really* need to run Windows...)

Dedication

SAW is dedicated to all the *Freeware / Public Domain* software writers world-wide. If you are one of them, please receive my personal thanks even if I might not have seen your program. I'm sure it's a good one. Without you, the world would have been a *colder* place.

SAW is also dedicated to all those kind souls on the **UseNet** that help others for no charge, even if they could just as well do nothing about it. Hope you all will continue to do so...

'Hope you will enjoy SAW...

Install Addendum

It's a bit late now (you've probably installed SAW already), but it is recommended that you install a newer version of SAW over an older one. You can keep two versions, but SAW might become confused (it shouldn't, but...) and the UnInstall might (not) delete both versions...

The Install Disk

The installation disk should contain the following files:

INSTALL.EXE	SAW Installation Program
SAW.EX$	SAW Main Program File
SAW.HL$	SAW On Line Help File
CTL3D.DLL	Microsoft's Dialog Extensions File
README.WR$	Information File (the one you are reading)
LICENCE.WR$	Your License Details File

FILE_ID.DIZ   FTP / BBS Information File

If any of the above files are missing, try to download the SAW package from another FTP / BBS site. If some are corrupted - there must have been a error during transmission (check you downloaded in **binary** mode) - repeat the operation. Check that the *Integrity Check* (SAW's File menu) test is passed.

Some of these files are compressed, so you should let the installation program decompress / copy them to the Hard Disk. The Install program will also create a group in *Program Manager* (or compatible shell) and the SAW program icons.

You can do an program *UnInstall* which will delete all files installed and remove all directories (if any) created and the groups / icons installed in Program Manager (the program's shell). So don't be afraid it'll mess up your system... But you will need the original install disk (with Install.exe) to do it. See the Help File for more details.

Install Q & A

MS-Info: If you have ***Microsoft Office 4.XX+*** or any applications included with it (*Word for Windows, Excel, Powerpoint, Access, FoxPro,* etc.) installed, ***Install*** will ask you if you want to replace **MS-Info** with SAW. MS-Info is a *Windows System Information* utility too, but it does not match SAW in any way (its not designed to, anyway)... It is recommended that you answer **Yes**. You will be able to run SAW by clicking the "*System Info...*" button in the Word or Excel *"About"* box.

In any case, **MS-Info** is **not** deleted from the disk **!** You can still run it using File Manager or otherwise. It will replace SAW *automatically* if you uninstall SAW at a later date...

Windows NT and / or Windows 95: At the time of writing there is **no** 32bit version of SAW due to various reasons. However, in some months time there may be one, so check. If you can't find it - then it has not appeared yet (1996+).

OS/2: There is no OS/2 version of SAW, and not very likely that there will be one. However, you never know. Use this one for now. Has anyone got a spare copy of *Warp* **? :)**

Note: See "***How to contact Me***" for more details later in this document...

The FILE_ID.DIZ original file

Now, some SysOps asked me for to put a copy of the original ***FILE_ID.DIZ*** here just in case it gets modified or otherwise. Here it is:

```
The System Analyst for Windows (SAW) Ver 1.10
---------------------------------------------
 SAW is a Windows 3.10+ diagnostic utility
along the lines of Norton SI, Q&A Win, etc.
However, it goes beyond most of them. Shows
```

```
pages of system info. Help file explains most
of the terms used. Display/save/print report.
 Monitors system resources/events/errors in
the background. Transparent in use.
 Automatic install/uninstall. Full info
given before installation. FREEWARE !
-------------------------------------------
Suggested Dir: /windows3/(sys)util
```

Width 45 characters, length 12 lines. Hope this helps any FTP / BBS SysOps. OK **?**

CD-ROM Installations (for distributors)

If all the SAW program files are expanded, SAW will work straight out of a CD-ROM or a write-protected diskette. It creates no temporary files (except SAW.INI which is not really needed), but, of course, reports cannot be saved on a CD-ROM **!**

You can include the SAW.INI as well - SAW will **not** write to it unless told to do so; even in this situation it will not crash, but ignore the request. SAW validates *every entry* in its SAW.INI file - so no errors will appear even if it gets corrupted.

You should keep the compressed files too (as mentioned above) and use *my Install* program to install SAW to the user's machine (after evaluation) as mine provides an *easy* uninstall procedure as well. However, (see the ***Licence*** file) you can use your own Install program if it does the same thing.

Important Reminder !

Again, I want to remind you that SAW is **copyrighted** and the SAW package must not be modified in any way. While it is *freeware* it is **not** public domain **!**

Please respect my long hours of work that went into SAW and don't break the rules.

☠ WARNING !!! ☠

I STRONGLY RECOMMEND THAT YOU SAVE / CLOSE EVERYTHING YOU ARE WORKING AT (open documents, files, etc.) BEFORE RUNNING SAW FOR THE FIRST TIME. SAW WAS TESTED FOR INCOMPATIBILITIES BUT YOU JUST NEVER KNOW !

I'm not (really) trying to make an excuse but even commercial programs (may) lock your machine so you should always take precautions.

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

Note: Be wary of running SAW on non-DOS configurations. DOS/Windows applications may run on your system, but SAW may not, as it delves inside it - it doesn't just beep the PC's speaker **!**

Acknowledgments

I acknowledge the help from the sources listed below. Thanks to all of you who helped me in the past and (I hope) in the future after I release this version... **:)**

UseNet - Groups *comp.lang.pascal, comp.lang.pascal.borland, comp.lang.c, comp.lang.c++* and *comp.os.ms-windows.programmer.misc* (+ all other *comp.os.ms-windows.programmer.___* ones) for tips & techniques discussed though I have not received any replies to some complicated questions... **:(** Also *alt.games.action* and *rec.games.doom.___* for keeping me "*(in)sane*" **:)**...

*** A big **THANKS** to **ALL** who replied to my questions ***

PC PLUS Magazine (UK) - through the *HELP Screen* and some other tips & techniques. Keep up the good work. Hey, when are you going to review SAW **??? :)**

BORLAND's BP/TP/TPW/BPW Examples - (**ftp.borland.com** - Borland International Inc. USA) I was really surprised, but I think they are quite good. SAW is based on some of them.

ftp.microsoft.com - (& www.microsoft.com) (Microsoft Corp. USA) I did get some very, very interesting stuff from there, but everything is in C/C++ - bloody hell **!** It gives me the creeps... Well, if Microsoft doesn't have it - nobody does...

MS-Windows-Journal - (Microsoft Corp. USA) excellent - but C/C++ as well... (the source code). One of the best Windows programming magazines...

ftp.intel.com (& www.intel.com) - (Intel Corp. USA) great site where you can find quite a few white papers. Not bad to get an answer from Intel when I could not find a document (seriously **!**)...

ftp.american.megatrends.com (& www.american.megatrends.com) - (American Megatrends Inc. USA) Great for documents, specs., vital if you need to tweak your motherboard / BIOS. But why in WordPerfect **?** (the files)

src.doc.ic.ac.uk - (Imperial College, London, UK) For their great mirror FTP site to which I still have access even though I may have downloaded 100's of Mb. **:)** Hell of a site.

The PD Pascal Source Code Writers - All kinds of programs, the small ones really were a gold mine to me. Keep writing guys (and girls)... Unfortunately, most routines are for Real Mode DOS, which do not work in Protected Mode with Virtualised hardware, so most were re-written from scratch.

Ralph Brown's Interrupt List - 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.

CITY University, London, UK - For allowing me to test SAW on their computers and for all the programs that I used to make SAW possible. I couldn't have done it without *you*...

David Vinograd (**UK**) - Resource warning selection; Base Memory, GDI & USER heaps plus various advice. Also, helped me with various programming utilities & various SDKs. He's the *Computing Systems Director* at our University **!** Thanks Mr. Vinograd.

Azman Sahari (**UK**) - My main Beta tester and university colleague. Where's my report **!?!** (Ed: Now he sold his *bloody* computer - oh, oh, oh...)

Joe Strzemp (**USA**) - My *far* contributor. He requested most of the new things since 1.01 and found "*a lot*" of bugs which I did not notice. Well, as you're reading this, Joe, hope you'll not going to find too many bugs - anyway, I can't wait to hear your opinion about this version...

Stephan Helma (**Austria**) - Found quite a lot of obscure things. Various advice.

Keith Petersen (**SimTel, USA**) - Thanks to him you are reading this (he manages uploads at SimTel, The Coast-to-Coast Software Repository™).

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 (what reports **!?! :-)**. If you want to contribute with something, as I said, send it in. I don't flame anybody... *Thanks for your support* **!**

The ones I forgot - Well, remind me...

New in this version

Well, I don't want to spoil your fun... Check out and see... It's not that much, but if you look carefully, you may *just* spot some new features...

Why are the *Licence* & *ReadMe* files in Write format **?** That's because, unfortunately, this file has grown too big for Notepad to handle (or too hot **:)**...

Forgotten Functions

- The *Help File*.
- SAW supports the ***Shift-F1*** on line help system (like *Word*, *Excel, etc.*).
- *Right Mouse* button click brings Help without firing up the respective window.
- Use the ***Browse*** buttons to go through all the screens.

Known (already!) BUGS or Incompatibilities

1. Detection Bugs - (-:o they are NOT bugs ! o:-)

486 - SAW does not differentiate between 486DX, 486DX2, 486DX4 *clones* (i.e. Non-Intel), Blue Lightning DX3, 486DLC - all will be classified as 486DX. Similarly for 486SX, 486SL, 486SLC, etc. I do not use the clock frequency to do a determination as some may overdrive it, *Turbo* may be off, etc. The clock frequency is all that matters usually, not that you have a 486DX-50 or 486DX2-50. (I said *usually* **:)** **All** new Intel CPUs are detected **!**

CPU Clock - This is usually accurate to ±4%. Note that I round up the value, so a 66.667MHz becomes a 67MHz **!** If *Turbo* is off or the Internal and / or External Caches are disabled expect a silly value - put your system right **!**

Note: Do not play music (MIDI, etc.) in the background while SAW measures the clock speed **!** (System / Computer Info) The value will be useless **!** Also, DOS sessions seem to influence the result **!**

Buses - Only the ISA, MCA, PCI and EISA buses are detected by this version of SAW. The VESA VLB bus is transparent, so it might not be detected in all cases - or detected when there is **no** VESA VLB at all...

BIOS Version - If the version is "Unknown", the BIOS might have no version information like my AMI BIOS - no other detection programs managed to find it either **!** On well behaved BIOSes, SAW *will* find it.

Video Card Name - As there is no standard place that I know of for the name, SAW might display some rubbish or the manufacturer's name. Some cards (like Tseng) use a number (e.g. 2848) as model not a name **!**

Video Card BIOS Version - If the version is *unknown*, the BIOS might have no *visible* version in the *known* places. On well behaved BIOSes, SAW *will* find it.

Video Card BIOS Data - As there is no standard place that I know of for the date, the search is a hit and miss affair - but in 90% of cases SAW should find it. Its really manufacturer's fault **!**

ATI (Taxan) Video Cards - Don't tell me about them **!** It's ATI's fault - unless I code especially for ATI, there is no way to get information as they do not conform to the standard - don't ask me why. Anyway, MSD doesn't do better...

Max. Resolution - If you have a fancy card this might be incorrect especially if it is a multiprocessor design. Some custom cards for portables might be over-rated as well.

Logical Drives - Virtual / Memory Drives will be detected as *Fixed* if they are not standard. (RAMDrive and VDisk are supported).

Floptical Disks / Other Fancy Ones - SAW will detect them as whatever Windows likes to think they are. SAW is not doing any checking.

Windows Version - As I said, there are a few exceptions too:

- Windows for Workgroups 3.11 reports Windows 3.1.
- Windows 95 (Chicago, Win 4.0) reports Windows 3.95. Build version should be 4.0 though, to

keep your mind at rest...

DOS Version - There are a lot of problems with this, as there were quite a lot of DOS versions around here - fortunately not too many at present. The version shown by SAW may differ from the one reported by **ver** and the one written on the box. See below:

- SAW does detect OS/2 and OS/2 Warp but IBM might be shifting the goal posts...
- Windows NT 3.1 might report that it emulates MS-DOS 5.0
- Windows NT 3.5 might report that it emulates MS-DOS 6.0
- Windows NT 4.0 (Cairo) might report that it emulates MS-DOS 7.0
- DOS 4.01 and 4.02 (bug fixes) report DOS 4.0. Upgrade to DOS 5.0 or 6.XX
- IBM PC-DOS 6.1 reports PC-DOS 6.0 which never existed **!**
- MS-DOS 6.21 reports 6.20 (for compatibility - sic) - nice one Microsoft **!**
- Windows 95 (Chicago, Win 4.0) reports MS-DOS 7.0
- DR-DOS 5.0 and 6.0 report DOS 3.31
- Novell DOS 7 reports DOS 6.0 for compatibility
- Some custom DOS versions may be identified as PC-DOS
- Type **ver /r** for more info.

COM Ports Address - If it is **0000h** then the port could be used by the mouse (quite frequently - check mouse details) or some other peripheral (modem, etc.). Remember, this is Window's view - that's why it's like that **!**

Total Base DOS Memory - This is the amount of memory available to DOS/Windows. If you put your hard disk information in the last 1KB then you have only **639KB**.

Mouse Buttons - Even if your mouse has 3 buttons, in Microsoft Mode only 2 can be used (nowadays), so 2 will be displayed.

Joystick Installed - If it says "*Installed - not standard*" it is usually because you have a sound card as well as a game card (or Multi I/O card) and you may have more than 2 game ports **!** The BIOS has not detected a joystick although other methods have...

IRQs Address / Owner Real Mode - The Real Mode addresses / owners as shown by SAW may differ from the ones shown by a DOS snooper in a DOS Box **!** This is because when you invoke COMMAND.COM to go to a DOS Shell, COMMAND will hook some IRQs itself; also TSRs present only in a DOS virtual machine hook other IRQs too **!** Remember, this is a Window's application's view of Real Mode **!**

IRQs Address / Owner Protected Mode - Windows hooks most of them in this mode. Some are taken by Ring 0 handlers which cannot be queried by SAW - so no info. Others are just reflected to Virtual mode. I'm waiting for a VxD to get far more detailed info.

Boot / Partition Sectors - If you use a fancy Device Driver or OS/2, NT, Windows 95, the info given *might* be rubbish. But then again, you do have the system tools to obtain it...

Disk Cache Info - SAW detects only the following Software caches: Microsoft SmartDrive, Norton N-Cache 1 & 2, Norton SpeedDisk, HyperDisk, Super PK-Kwik (QEMM Q-Cache, PC Tools Cache v6). Not all give the same info so some fields will be unavailable. Only Promise

Technologies cache controllers are detected.

Disk Compressors - SAW detects only DoubleSpace / DriveSpace and Stacker. As Windows 95 has it built in, DriveSpace will show up even if no drives in your system are compressed. As DriveSpace *looks* very much like DoubleSpace, they may be wrongly detected.

Sound Card Info - SAW might not detect the Irq / Address / DMA channel even if the Windows drivers for the card are installed. This is in fact the driver's fault which does not provide the information as it should...

2. Interface Bugs

"N/A" on hint bar - You made the application's window way too small and the info text is too long to be displayed. Re-size or maximize the window.

SAW on top - By default, SAW pops over the active application when an event occurs. To eliminate this, set "*File-Options-Alarm Options-Video Alarm*" to "Normal" rather than "On Top". You can turn the sound off too in the same dialog box - "Audio Alarm" to "No Beep".

3. Program Bugs (Crashes !)

System / Computer Info Crash - Disable the "*File-Options-General Options-Determine Clock*" if your machine locks up when you perform the above tests. This should solve the problem. (*No reports since 1.03*)

Non-Intel CPUs, Emulators, System / Computer Info Crash - Disable the "*File-Options-General Options-CpuID Check*" if you run SAW on a non-Intel compatible (MIPS, Alpha, Macintosh, etc.) machine, otherwise it may crash if the emulator is not 100% compatible... Same for old CPUs, or other CPU related trouble. (*No reports*)

Video Detection Test - If you have a *VESA TSR BIOS* extension, running this test may lock your mouse (in a cage **:)** and mess up the display. (*Happens only on my machine !!!*)

- This can be solved (in Windows 3.1 & 3.11) by pressing **CTRL-ALT-DEL** (*only in Enhanced Mode and only once !*) and then by pressing ESC (don't close down anything) - the mouse should be OK now...
- If you are running Windows 95 then you're in big trouble - the display could be very messed up and the above procedure will not help. You have to *re-start* it (shut down)...
- Disable "*File-Options-General Options-VESA Detect*" to skip this test.

NetBIOS Network Test - If you are running WFWG 3.11+ the *Network Info* test may crash **together with** the Windows system - KERNEL runs out of stack space. This happens if you have *stacks=0,0* in Config.sys. If you change it to **stacks=9,256** (default) this should not happen. (*No reports*)

Note: Most of this bugs have never appeared in the "*wild*" or only in beta testing. The options are used as a safeguard.

4. Limitations

Install / UnInstall - The icons can only be deleted if you run Windows 3.1+ Program Manager or a shell which supports the new commands. If the icons are not deleted this may be due to a shell bug **o:-)**...

Tasks Info - SAW has a limitation of **50** modules, therefore only the first ones used will be shown. In the unlikely event that you want to check on a program which uses more than this, contact me... **:)**

Module Usage Info - SAW has a limitation of **200** modules. Now, why should you have so many, I don't know - you should not have more than 100 anyway...

Base Memory Heap Info - SAW has a limitation of **100** modules, therefore only the first will be shown. If *Total Modules* number equal to the above then you know that some information might be missing. In the unlikely event that you want to check on a system which uses more than this, contact me...

GDI / USER Heaps Info - There is a **80** module limitation, only the first will be shown. If *Total Modules* number is that, then you know that some information might be missing. In the unlikely event that you want to check on a system which uses more than this, contact me...

USER Heap Info - I'm afraid you need the ***Debug*** version of Windows to get accurate information - Windows does not provide anything interesting and SAW guesses 99% of the time so its a good bet that something is wrong... Nothing I can do - tell Microsoft, maybe it changes its mind with Windows 9X...

LDT Info - As Windows is 16bit, at most a standard listbox can hold 64KB of information. Depending on line length, this may be around 1000-2000 lines. There may be many more descriptors in the LDT, but there's no easy way to display them all. It would take far too much time and effort - while 32bit Windows is becoming a reality... **:)**

WPS.386 - This VxD is not included in the SAW package. Yes, **it is not** a bug or error. I do not have the *Device Driver Development Kit* (DDK) to create a VxD (I cannot buy it in *1000* years **:)**, therefore, it is very difficult to get VxD info from a normal application. The WPS.386 belongs to a commercial package (*MS-Developer's Network CD - MSDN Level 2 ≥ $/£ 500 !!!*). As it is commercial software, *you* must have it because I cannot get it for you (I don't have it either). I am trying to solve this limitation fast, meanwhile, this version of SAW will remain this way... (code works **OK** though - tested with no problems)

WARNING !: *WPS.386* Ver *1.00* does **not** work on Windows 95. It locks the system **!**

5. Incompatibilities

Windows NT, OS/2 & Emulators - If you encounter any problems using SAW on these platforms drop me a line so I can fix them in the next release. For Windows NT / Win32s a *32bit*

version of SAW may appear in future - you are advised to use it instead of the 16bit *normal* SAW.

Windows 95 - SAW was tested on *Windows 95 Beta(s)*, and most of the bugs corrected (only one or two **:)** but as we test a beta on a beta, *God* knows who's to blame... I assume most bugs are / were mine as the Microsoft guys (and gals) did a great job.

Windoes NT & 95 - The 32bit system is somewhat *shielded* from 16bit applications (like SAW). Therefore, memory, modules, tasks, etc. information is incomplete or even erroneous. The Windows APIs do not work (like version info) on 32bit modules. The list is rather longer - well, this is *compatibility* for you. I know you won't like this, but use SAW on *Windows 3.1X* - not 95 **!!!** There's **no way** round this **!** You ***do not*** need SAW anyway...

32bit File Access (*Windows for Workgroups 3.11, Windows 95*) - SAW is unfortunately incompatible with the 32bit File Access (like most programs). The low-level disk information may be unavailable.

Debug Version of Windows - Ignore all the debug warnings / errors shown by ***DbgWin*** - I'm doing a bit of fancy stuff which is not really "*legal*". Anyway, it should (always) work, unless you have set some funny debug options or your output port is not really working... Make sure you send the Debug Info to a valid I/O port/terminal...

System Resources Monitors - which *keep an eye* on your system resources in real time may conflict with SAW when it tries to get certain information. You should let SAW monitor your system or the other program, but not both.

RAM Doubler for Windows - Module Info might crash (GPF) when you check *RamDoublr* module: press ***Ignore*** a couple of times - this should solve the problem. This is because the VxD behaves somewhat oddly.

Background processing - may influence SAW negatively while it is gathering data (creating a report, displaying a dialog). Timing tests could become useless in this case...

Notes

Many bugs from previous versions of SAW & Install are *fixed* in this version. They are not listed as there is *no point*. If you still get them - drop me a line...

Sorry for all these bugs...

Technical Support

Well, this is not exactly what is usually available - the program is free - but should you have problems with SAW and the bug / incompatibility is not listed, then you can contact me via E-Mail. I cannot offer you help and / or advice in other subjects though.

If the problem is known and fixed in the new version, then I *might* inform you about it (only during the discussion). I will not be able to get you a beta version of SAW - you will have to wait

for the release version...

Updates & Fixes

There are (there have been) updates every 3-4 months. Therefore, if you feel you want more information than SAW can provide, maybe there is help.

Please, **do not** nag me for releases every day **!** When something arrives, you will know.

What should you expect **?** Well, if this is not the first version of SAW, then you know what to expect. If this is your first, then...

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 (Drivers, Utilities, etc.). 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 **and** SAW's report (complete if you can). If you have another diagnostic program (MSD, SI, Q&A) you could add it's side of story (a saved report) so I know what it should be... **Thanks.**..

If a specific *Information Paragraph* causes the problem, uncheck it in the "*Include in the Report*" window and create a report without it. I don't need the full report if unavailable - send me what you can. As I said a MSD, SI, Check-It Pro, Q&A report is just as useful... **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 ***E-Mail*** address below:

Internet (October to July mostly): ce146@city.ac.uk
(: *that's CITY University, London, UK by the way...* **:)**

Note: The subject of the message **should** begin with the word "***SAW***" followed by the version, e.g. "***SAW 1.10 : Detection Errors***"; otherwise I may not know what you talking about **!** SAW **is not** always on my mind...

Warning: This is a *UNIX Sun Sparc* system, which may not understand *fancy* MS-Windows attachments, so please do not send any - include the reportsin the main message **!** If in doubt, ask **!** No OLE objects in any case **:)**... A **full** SAW report may be over *100KB*, so you may wish to compress it using ZIP or similar.

Sorry, if you need to contact me during other periods I may be very slow to *answer* as **I am away**

(on holiday - lucky me)... I will still get your message... Also, I **do not** have Internet access during weekends... Finger me to find out what I'm doing...

Don't forget to say if I should reply or not **!** If yes, then include the your *correct E-Mail address* to which I should reply to (if different from the one used to send the message). And **don't** flame me if SAW displays garbage instead of what it should...

Author Information

By the way, I'm *only a student* ('Did you know that **?**' 'Gee, no, I thought you were the Head of Department **!**' **:)** so I have many things to do, therefore, if I would try to release SAW after everything works OK - it would take **ages**. And I **don't** study computing either **!**

BTW you can call me **Adrian** as you might find the first name difficult. There was a plane in the W.W.II called Catalina though, anyone remembers it **?**

Extra Information (under construction):

- The *latest* version of SAW can be found on **SimTel** (**/win3/sysutil**) and all its mirrors. This is the main site. As **CICA** (**/utils**) is always busy, I may not even upload it there. If someone can do it for me, I will be very grateful. Different versions may be available in different places. Use whichever you like.

- If you want to "*finger*" me, try **finger ce146@city.ac.uk -l | more** - hopefully you should find the *latest news* about SAW and all the other projects I'm working on...

- A *WWW* (World Wide Web - Mosaic, Netscape, Cello, etc.) page (a bit small) is available at **http://www.city.ac.uk/~ce146/saw.html**, which contains the latest information about SAW. It contains links to download the latest version of SAW from a few sites, and you can view the *finger* information as well. This will be updated regularly, but it still has a lot to go...

Beta versions *may* be available for downloading...

- If you do not have access to E-Mail but **cannot sleep** until you told me just how *bad* SAW is, you can send me a letter at the address below:

C. A. Silasi (EEE Dept.)
City University
Northampton Square
London EC1V 0HB
UK

Heck, do not expect a reply, unless you enclose a SAE (self-addressed-envelope) too. I don't recommend it, though, as it does take a very, very, long time *to talk* using this link **:)**, but if you really don't have a Internet connection this may be the only way. **Get connected soon !!!**

Another Humble Request

If you have seen SAW reviewed somewhere (in a magazine, etc.) I would be very grateful if you could just tell me **who & when & where**. Just a little note. It doesn't matter if it says that is the worst program on Earth.

Put yourself in my place - you **would** like to know what your creation is up to. Aren't we all trying to become rich and famous **? :) :) :)**

To SAW's Regular Users

If you use SAW on a regular basis you *should* send me E-Mail to inform me about it. No, you do not have to pay (it is free) or register or something else. I just need to know what are you use it for, what features you use, which ones you like, etc. Anything will do. You could also send me a SAW report if you are kind enough...

No, this is not because I want SAW to become shareware. It *will* remain freeware. However, your message will make me continue its development (should you want it). Otherwise, I will abandon SAW in the future to focus on developing other programs much more interesting...

I know, I know. SAW *might* not be the only freeware tool which you are using and you did not even send a thank-you note (if it's any good, of course). You might say: "Well, let others do it". But what will happen if everyone does the same thing **?** It is never too late to change your way of life, you know...

I you have sent me a SAW report previously, using an older version, then you could send me a new report so that I can see what has been fixed and what it has not. If I don't know then I may take a wrong turn and modify good code for no reason. I know its a pain, but what can I do **???**

1.20 is it ! There will be no more !

Yes, there is one more scheduled release. Therefore, if you have anything to add, now is your last chance...

***   That's all you had to read, but if you can be bothered...   ***

The History of SAW

The first diagnostic program written by me was called "*The System Analyst*" (SA) which was a DOS program written in Turbo Pascal 6.0 using Turbo Vision. This program was never released as I did *not* finish it (too lazy). It was, however the base for the other programs I wrote since.

When I finally got my hands on a Windows compiler I changed from Turbo Vision to Object Windows and this was SAW **1.00**. As Windows is a *bit* different from DOS, the interface had to be updated, and this has become SAW **1.01** (16/01/95 dd/mm/yy). This was the first released version, so, expect the occasional *bug*. Compiled with TPW 1.0.

Version 1.02 - has solved some problems and added some extra functionality (Tasks info, VxD info, 486 extra info). Minor rewrite, Major Bug Fix - too many to be listed **:)**. Compiled with BPW 7.0 **!** (28/02/95 dd/mm/yy **:)**

Version 1.03 - Well, there were still some bugs in the previous one which had to be fixed; some extra functionality (Base mem, GDI / USER heaps); slightly faster. Works on *Windows 95 Beta* - Wow **!** Over 10,200 lines of packed code. (24/04/95 dd/mm/yy)

After 1.03 it was decided that it was pretty silly to increase the version number by only 0.01 when 1.03 had almost twice the number of information screens of 1.01. Also, there was no way to distinguish between *Beta*, *Preliminary* and *Final* versions.

Therefore, it was decided that each (*Final*) release will add **0.1** unless *major* changes are made when the version increases by **1**. **0.01** will be added for each new *Beta* version of the software. Therefore 1.10 is a final ver, 1.11 is *Beta 1* for 1.20, 1.19 is *Preliminary* for 1.20 **!**

Version 1.10 - Interface overhaul (slicker) and display independence. Various information screens added and decent improvements worth **+1**. No longer works on Windows 3.0. Information brush-up. Modified install program. (17/07/1995 dd/mm/yyyy)

Version 1.20 - has added even more improvements and is far more stable. A *major* rewrite. Countless improvements... Hey, not yet **!** (remember, this is 1.10 **-** have I tricked you **? :)**. As soon as it is finished...

The Technical Stuff

SAW was designed and tested on original Windows 3.1/3.11. Slight anomalies might appear under other Windows versions. 32bit operating systems keep 16bit applications in separate VMs, so there is no way to get information about 32bit applications or subsystems. I have no idea about OS/2 (Warped or not), WABI, Wine, SoftPC or other operating systems.

It is a **16bit protected mode** application written in **Borland Pascal for Windows 7.0** using **Object Windows Libraries**. SAW does the detection / calculation when you open the required window, not at start-up - so do not expect *exploding* windows...

SAW uses the SAW.INI file in its own directory if found - otherwise tries to find it in \Windows directory. In this way you can have it customized on floppy when checking computers - you can save the report on floppy too. SAW validates every entry in its SAW.INI file - so no errors will appear even if it gets corrupted.

SAW **does** use a few *undocumented* API calls, but they work **OK** in Windows 3.1X, Windows NT and Windows 95. If they are not supported in other Windows, SAW uses a *workaround*, so it should not crash...

Source Code for SAW

I will **NOT** release SAW's source code as I don't think it does justice to OOP(S) (Object Oriented Programming), although it uses OWL (Object Windows Library), so I don't want to give others nasty ideas. Some protected mode hacks may not always work, and I don't want any flames...

Yes, even if you were willing to buy the source code (by absurd) I *cannot* sell it to you.

Also, I would not like to see a shareware SAW look-alike based on my code. SAW is not as important as *Linux* for example to implement the *copyleft* procedure.

Well, if you need any help ask on UseNet, get those Public Domain programs with source code, get all the examples you can find and software you can get and you're bound to get through. Do not ask me though: sorry, I am unable to help you on a direct basis. Hope you understand. I may be able to give you some pointers only. *Good luck with the programming and keep up the good work... (whoever you are)*

All SAW modules are objects which communicate with each other using special protocols. There are three main objects: *display*, *save* and *print*. They all provide an almost seamless interface to the info gathering objects. The *window* object has children which take care of SAW / Windows interfacing. Any object can be individually disabled or modified. If you are considering programming - you are advised to do the same.

Wish List

VxD Request: I need a VxD like the WPS.386 (from MS-Dev Net CD) to get info about the VxDs installed in Windows and other Ring 0 things... However, as I do not have MSDN or the DDK, I'm stuck. Should anyone be able to help me with this (for free - how could I pay you **?!?**, but you retain copyright / credit) get in touch. **Thanks !**

Tabbed Owner Draw ListBoxes - Unfortunately, I did not manage to implement tabbed listboxes yet - can't seem to give a "good" pointer to *TabbedTextOut* function (there is no *lb_GetTabStops*). As all SAW listboxes are tabbed, they had to remain as they are. Please, please, anyone done this **?** Do you have **any** ideeas **? Thanks !**

Beta Testers: Yup, you got it, I need **more** beta testers. As there are millions / billions of different configurations out there, there can never be too many beta testers for a diagnostic program. Do note that you are likely get the *pre-release version* of SAW (no time to mail betas), so I can only make a few adjustments to the code. Hey, this is **your chance to help**.

All that you are required to do is to send me a **SAW & MSD report** (your choice), and possibly point out mistakes, bugs, etc. in the program. Of course, anything else is much appreciated (comments, additions, etc.).

General Stuff: If you would like to see some other things in SAW, don't like something, want to add something of your own, help me somehow (really **?!?**), send me *E-Mail*. I will try to see

what I can do... Remember, its not what SAW can do for you, but what you can do for SAW... **:)**

Compatibility List

WARNING: While the following list of software packages / hardware items includes my system's components, more than **95%** of them **do not belong to me !** They belong to various beta testers / SAW users (/ University / etc.) which have been kind enough to send me a *SAW Report.* It would be *crazy* even to suggest that I could have them **!** Do **not** get the wrong ideea **!**

Also, this means that SAW was only *thoroughly* (i.e. by me) tested on only a fraction of the configurations listed and I cannot guarantee that this version or newer versions (if any) will run on the listed systems **!**

SAW was tested with **no** problems on the following systems:

Operating Systems:

- MS-Windows 3.10 and 3.11 (plain)
- MS-Windows for Workgroups 3.11
- MS-Windows 95 Beta (builds 306, 347, 462)
- Debug MS-Windows 3.10 (plain)
- Win32s 1.01, 1.15, 1.20, 1.25 (w/o OLE 2.0)
- WinG 1.00
- IBM PC-DOS 6.10
- MS-DOS 5.0(A), 6.00, 6.20, 6.22, 7.00 (Win 95)
- Novell Netware 3.11, 3.12, 4.00

Utilities:

- B&W WinSock 3.10 TCP/IP stack
- Trumpet WinSock 2.00B TCP/IP stack
- Novell WinSock 1.10 TCP/IP stack
- CompuServe TCP/IP stack
- Microsoft Windows Sockets 1.10 TCP/IP stack (Win 95)

- DoubleSpace 1.00
- DriveSpace 1.10, 1.12 (Win 95)
- SmartDrive 4.00, 5.00, 5.01
- MS-Mouse 1 : 6.20, 8.20, 8.30 (Win 95)
- MS-Mouse 2 : 9.00, 9.01, 9.01b
- Genius Mouse 10.20

- PC Tools for DOS 7.1, Pro 8.00
- Norton Utilities for DOS 4.50, 7.00
- QEMM386 6.??, 7.00
- 4DOS 5.??
- HyperDisk 4.65

Computers:

- *Big Brand Name Desktop Computers*
 - AST 486DX '93
 - IBM PS/2 Model 70 (386DX-25) '89
 - Gateway 2000 486DX/2 VLB '94

- *Big Brand Name Laptops & Notebooks*
 - IBM ThinkPad (486SX-25) '94

Computer Components:

- *Processors:*
 - Intel i486DX-33 '91
 - Intel i486DX2-50/66 '93, '94
 - Intel i486SX-25 '93
 - AMD 486DX4-100 '95
 - AMD 486DX2-66 '94
 - Cyrix 486DLC-33 '93
 - Intel 386DX-25/33 '89
 - AMD 386SX-20/25/40 '91
 - AMD 386DX-40 '91

- *Buses:*
 - ISA
 - MCA
 - VESA VL-BUS Rev 1, 2

- *Memory:*
 - 4MB, 6MB, 8MB, 12MB, 16MB, 32MB

- *BIOS:*
 - AMI BIOS Hi-Flex '91-'94
   - Chipset: ALI, OPTI, SYM, UCF, UMC
 - AMI Win-BIOS '93
 - Award BIOS '94-'95
 - IBM BIOS '89
 - IBM ThinkPad Laptop BIOS '93 (APM 1.0)
 - Phoenix BIOS '92-'94

- *Disk Interfaces:*
 - IDE & EIDE
 - ESDI
 - SCSI

- *Hard Disk Controllers:*
 - Promise Technologies DC-200 (286-12) 2MB Cache IDE/ISA '93
 - Adaptec AHA-1542B SCSI/ISA '92
 - Always Technology IN-200 SCSI/ISA '91

- Vanilla EIDE/VL-BUS
- Vanilla IDE/VL-BUS
- Vanilla IDE/ISA

- Graphic Cards:
- Tseng 2142 512KB ISA VGA '90
- Tseng ???? 1MB ISA SVGA '92
- Trident 8900 512KB ISA VGA '90
- Trident 8900C 1MB ISA SVGA '91
- Generic S3-805 1MB VL-BUS SVGA '95
- Spea-V7 Mirage S3-801C 1MB ISA SVGA '93
- Cirrus Logic CL-GD540X/542X 1MB VL-BUS SVGA '92, '93
- Diamond Stealth 1MB ISA SVGA '89
- Diamond SpeedStar Pro 1MB VL-BUS SVGA '93
- Diamond Viper 2MB VL-BUS SVGA '93

- Sound Cards:
- Pro Audio Spectrum 16 (PAS 16), 16bit, Stereo '94
- Orchid Sound Producer Pro, 8bit, Stereo '92
- Sound Blaster Pro 2, 8bit, Stereo '91
- Sound Blaster 1, 8bit, Mono '89
- PC Speaker **:)**

- Serial Port UARTs:
- 16450
- 16550A

- CD-ROMs
- MSCDEX 2.22

- Printers (save report subsystem):
- Panasonic KX-P1150 / KX-P1124, dot-matrix, 240x216 dpi
- Canon BJ-20, bubble-jet, 360x360 dpi
- Canon LBP-8 A1, laser, 300x300 dpi
- Apple LasterWriter, laser, 300x300 dpi

Note: If anyone has tested SAW with **no major** problems on his / her system and doesn't mind sharing his / her set-up with me (to be included in the list above) and has spare time, and kindness, and... I will be very grateful if they could send me their set-up, i.e. **a full SAW report** (i.e. include the system files too *if you can*).

Note: As the University buys in bulk, there's *no* variation in system characteristics; worse, students buy the same hardware from the University's shop, so there's little chance to test all the code... Many add-ons, utilities, etc. cost money, which I(/we) cannot afford, so there's really nothing more I can do... Sorry if you feel like an unwilling *beta* tester...

The SILLY STUFF - You do NOT have to read this...

SAW Install / UnInstall Program - Hey, I thought it was pretty neat (it took some time to make all that stuff work) but only one person seemed to notice it. Well, hope you like the updated version. If you don't, I'll better change to *MS-Setup* **:)**...

Pascal Blues - By the way, why are there 3+ releases of C/C++ and only one of Pascal **?** Why do Pascal programmers have to do with under-specified kit when Pascal can be just as *advanced* as C++ **?** C'mon Borland, give us a chance **!** Otherwise, we'll have to program only in Microsoft C/C++ soon...

Grammatical Mistakes - Be careful not to use "*I saw saw...*", but "*I saw SAW...*" or "I have seen SAW...". Funny, isn't it **?!? :)** OK, OK, its not a big deal (silly really), but it does make me grin...**:)**

What's this bunny thing ??? - If you haven't noticed it, then forget it. If you have, I can't tell you; why don't you ask Microsoft, they started it. Why should SAW be without any *bunnies*, after all, I like (love **?**) rabbits too **:)**.

My Grammatical, Syntax, etc. Mistakes - Well, I apologize for all of them. I know I should be ashamed... Most of the writing is done after 23 o'clock (11pm) so I become a bit *confused*... I do try to read what I've written, but you know how that works...

The End

By the way, this document was supposed to be humorous as well - did you know 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...

One more time, Enjoy SAW !

--
17/07/1995 (dd/mm/yyyy)