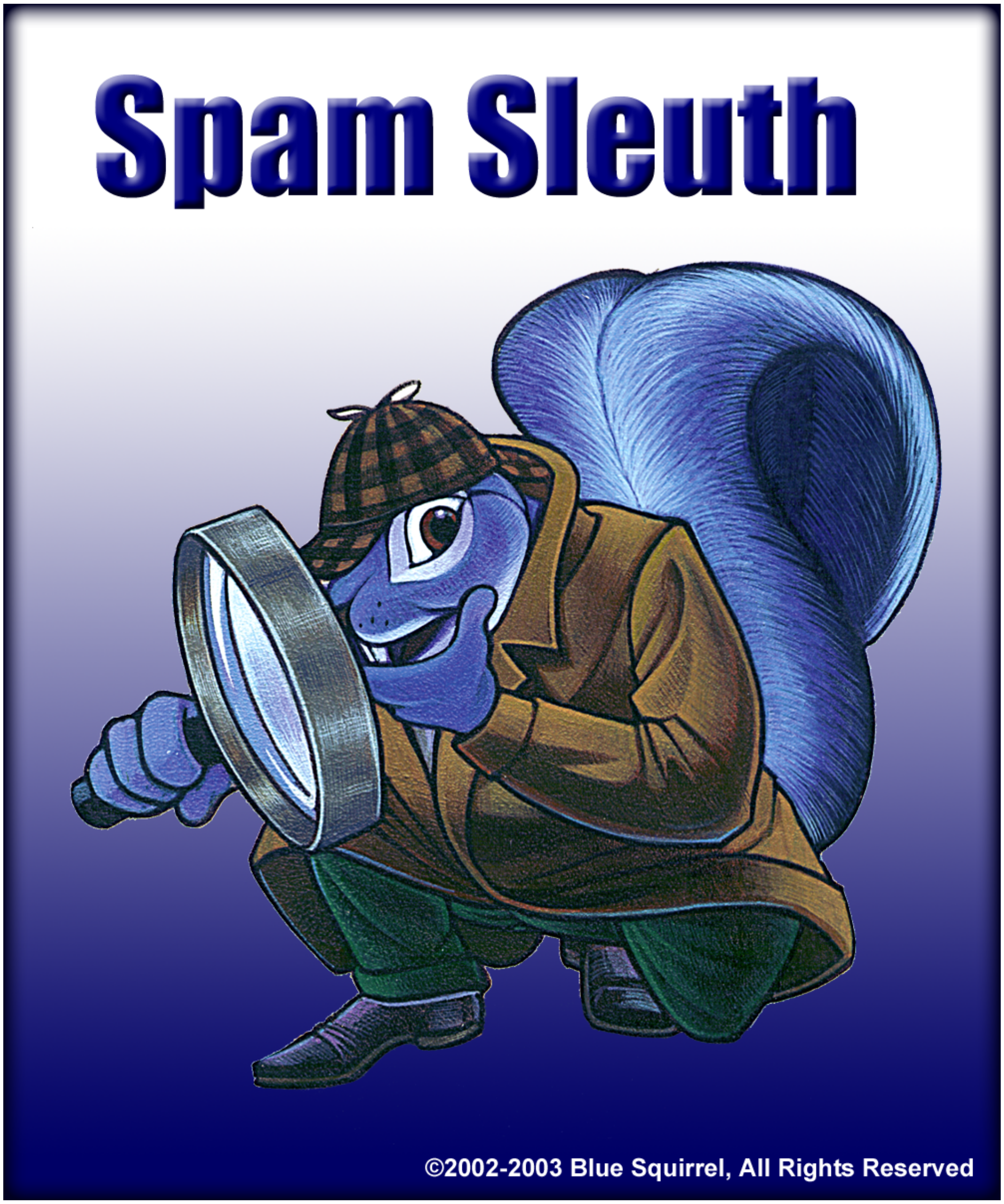

Spam Sleuth Enterprise

User's Guide

Spam Sleuth User's Guide

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Special thanks to:

All the people that contributed to the development of Spam Sleuth,
including the developers, copywriters, web site developers,
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1 Introduction and Getting Started

Welcome, and thank you for choosing the best anti-spam program available.

Spam Sleuth Enterprise has been chosen by your organization to help you win back your e-mail accounts from the scourge of spam (unwanted junk e-mail).

When your e-mail program gets your e-mail, the spam has already been removed and you can read your e-mail the same way you always have, but without sorting through the junk e-mail to find the gems. Spam Sleuth Enterprise removes the junk for you.

Your computer administrator will let you know how to run the Spam Sleuth Client program so that you can tune Spam Sleuth for your type of e-mail. With just a little bit of tuning such as adding your Friends and GoodWords, you can help Spam Sleuth do a better job of cleaning up your e-mail.

By changing your spam threshold score, you can make Spam Sleuth more aggressive at eliminating the junk. But don't worrry -- Spam Sleuth lets you recover (for 30 days) any e-mail it incorrectly detected with the Spam Viewer.

1.1 Starting Spam Sleuth

The Spam Sleuth Server runs in the background detecting spam and eliminating it before it reaches you.

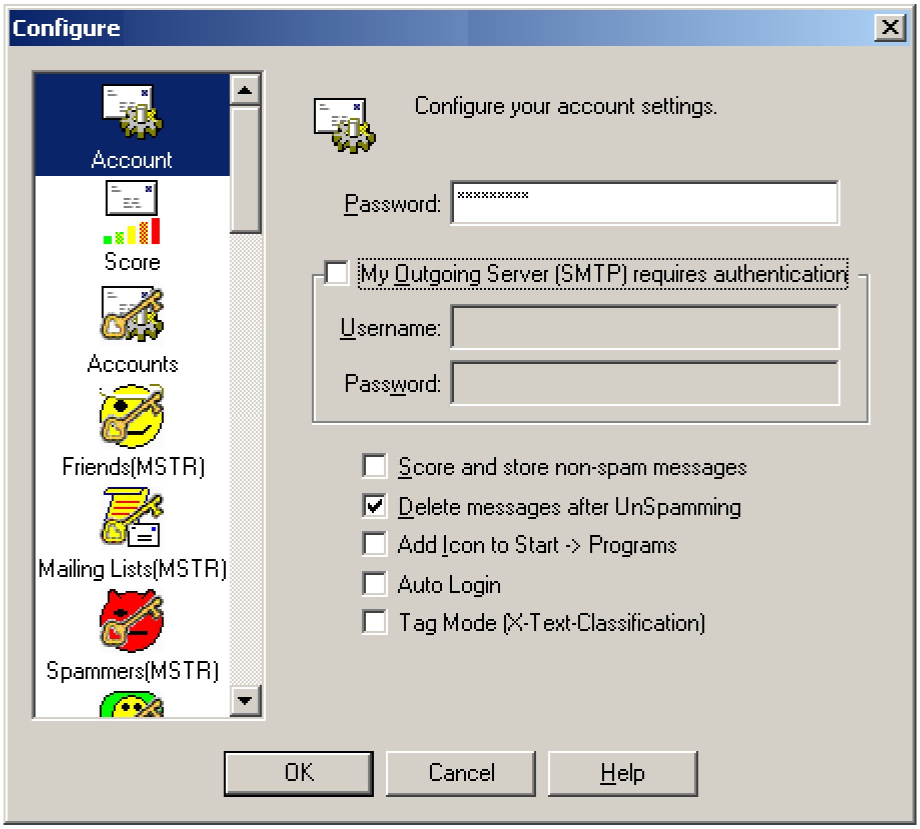
If you have been given access, you can run Spam Sleuth on your computer to view the messages that were detected as spam, and if you have been given permission, you may also configure Spam Sleuth to do an even better job at detecting unwanted junk e-mail.

To run Spam Sleuth, you just need to launch `SpamSleuth.exe` from the server location. You may have been sent a welcome e-mail with the location of `SpamSleuth.exe`. If you have, you can run it by going to Start->Run and entering the full path to `SpamSleuth.exe`. It will look something like this `\\SERVER\SLEUTH\SpamSleuth.exe.`

The first time your run Spam Sleuth it will ask for a password. There is a pretty good chance that you don't have a password yet. Just leave it blank and it will take you to Configure Your Account and prompt you to create a new password.

Since you probably don't want to run it that way every time, we have added a check box that lets you put Spam Sleuth right in your Start➔Programs.

1.2 Configure Your Account



Configure your account settings.

Password: **********

□ My Outgoing Server (SMTP) requires authentication

Username:

Password:

□ Score and store non-spam messages

☑ Delete messages after UnSpamming

□ Add Icon to Start -> Programs

□ Auto Login

□ Tag Mode (X-Text-Classification)

Password - The first time you use Spam Sleuth, you will be prompted to add a password. The password you use does not have to be the same as the password you use for your e-mail. The password is just for the Spam Sleuth viewer and configurating your settings.

My Outgoing Server (SMTP) requires authentication - Set your name/pwd if your company's e-mail server requires a password. Most users will not need to set anything here.

Score and store non-spam messages - Selecting this option will cause Spam Sleuth to keep all of your messages, including ones that were not deemed to be spam. This is useful for tuning, as every message will have a report.

Delete messages after UnSpamming - This causes Spam Sleuth to delete messages from the viewer when you UnSpam and send them back to your InBox. This option is selected by default so that you don't see two messages (one in spam viewer and one in your InBox).

Add Icons to Start->Programs - Adds an icon to the Start menu for conveniently launching Spam Sleuth.

Auto Login - Stores the password and logs in automatically. This option may not be available if your Administrator has disabled the option for security reasons.

Tag Mode (X-Text-Classification) - Adds 'X-Text-Classification: spam' to the header of every spam message so messages can be sorted by your e-mail program. In this mode, all messages are passed through with one of these headers added if the message has been determined to be spam, or has been modified (for script, viruses, etc).

- X-Text-Classification: spam
- X-Text-Classification: modified

2 Spam Detection Basics

The problem of spam is getting worse. Internet researcher Jupiter Media Metrix estimates that consumers will receive about 206 billion junk e-mailings in 2006--an average of 1,400 per person, compared with about 700 per person this year. (Source news.com article March 21, 2002) The same article stated that spam costs "… an estimated $1 per piece in lost productivity." Although this estimate seems high, spam certainly does waste time and money. Spam Sleuth™ will recover that time and money for you.

The goal is to eliminate spam (or unwanted e-mail) while retaining all the e-mail that you want. Spam Sleuth™ gives you the tools to make this happen. Spam Sleuth does a great job without any configuration except for your e-mail account. It performs even better if you provide it with additional information about what you consider valuable e-mail.

Most friends and business associates that write you letters are not going to have their messages flagged as spam. You may, however, be on some interesting and informative mailing lists that have some spam characteristics. If you let Spam Sleuth know what these are, it will let them right through. Once you've added your mailing lists and most of your friends, you can really crack down on the spam.

Because an occasional desirable message gets marked as spam, Spam Sleuth™ will keep messages so that you can recover them. The default is to keep them for thirty days, but if you're a pack-rat you can keep them longer. Or, you may figure if it is important enough, they'll send it again, and you can have Spam Sleuth™ trash the messages immediately. Spam Sleuth™ will even let you do both, if a message is 'bad enough,' you can have Spam Sleuth™ dispose of it immediately and permanently. But if a message is questionable, you can have it held for you in the Mail Jail.

Each person has their own individual spam tolerance. Some like all real messages to make it into their InBox even if it means some spam may make it in. Some like all spam removed even if it means a few real messages get flagged as spam (as long as they can get those real messages back). We have configured Spam Sleuth somewhere in the middle. It will eliminate 95% of spam, and occasionally a real message will be flagged as spam.

If a message that you really wanted is tagged as spam, you can go to the Mail Jail and read it there in the spam viewer, or you can just "UnSpam" it and it goes right back into your e-mail program.

Spam Sleuth™ goes much further than its "competition" (and we use that term loosely). Spam Sleuth can also remove dangerous attachments, strip out potentially harmful Java™ script, eliminate image links that send your information, and more. Spam Sleuth is pre-configured to remove attachments that can be executed on your computer. All e-mail viruses are spread by sending executable attachments, which Spam Sleuth™ can remove. If you know the attachment is not dangerous, just go to the Mail Jail and "UnSpam" it. Be careful, though, many times the attachments are sent from somebody you know, but are still dangerous, because your friend didn't send you the dangerous attachment, the virus on their computer sent the attachment.

The folks who send these unwanted e-mails are using tricks to defeat spam programs. Some have even gone as far as encoding the message so that spam programs can't detect key words. Spam Sleuth decodes the messages before analyzing them to counter this underhanded tactic. As new tricks are devised by the spammers, Spam Sleuth will counter them. Spam Sleuth is designed so that new modules can be dropped in and immediately recognized by Spam Sleuth.

Spam Sleuth also uses InstantX™ and Intellimingle™ technology so that it can be updated over the Internet and yet keep all of your settings. You can add your own "BadWords" and the automatic update can update the master list of BadWords also. If you remove one of the words we consider a spam indicator, our updated list will not put it back. Feel free to tailor Spam Sleuth™ to your needs, and allow updates, which keep spam in check.

If an e-mail from a friend or business associate is mistaken for spam, just go to the Mail Jail, right-click and say 'Add to Friends' so that you'll always get their messages in the future and then hit 'UnSpam' to get the message back to your InBox.

More helpful hints for eliminating spam:

- Don't reply to spam messages – then they know you look at your junk e-mail – just add them to Spammers so you don't see their messages.
- Assume that many of the free Internet giveaways are to get your e-mail address. Decide if it is worth it.
- Don't buy anything from spammers – just live without the Flat-Hoses, Viagra, $50 University Diplomas, and becoming a millionaire this month.

2.1 How Spam Sleuth Eliminates Spam

Spam Sleuth Enterprise acts as an e-mail server to the outside world. When an e-mail comes in, the message is analyzed with the Analyzers and a report is created for the e-mail. If the e-mail exceeds the user's spam threshold, it is compressed and stored instead of being passed along to the organization's internal e-mail server.

2.2 Techniques for Eliminating Spam

Fighting spam is a little bit like fighting computer viruses. It is a constant battle between the Spam detection programs like Spam Sleuth and spammers. We know what some of the spam looks like because we've seen it before, but unfortunately, there will be new things to sell and unscrupulous companies out there that will try to hawk their wares using spam.

Spam Sleuth uses a collection of Analyzers, including: Friends, Spammers, To, Goodwords, Badwords, Profanity, Subject, Attachments, Charsets, HTML Volume, Bouncer, and others to detect and eliminate spam e-mail before you even see the messages. This section of the manual will briefly cover the Analyzers that you have at your disposal, and how to configure them for your needs. For more information about configuring Spam Sleuth's Analyzers refer to the Interface section.

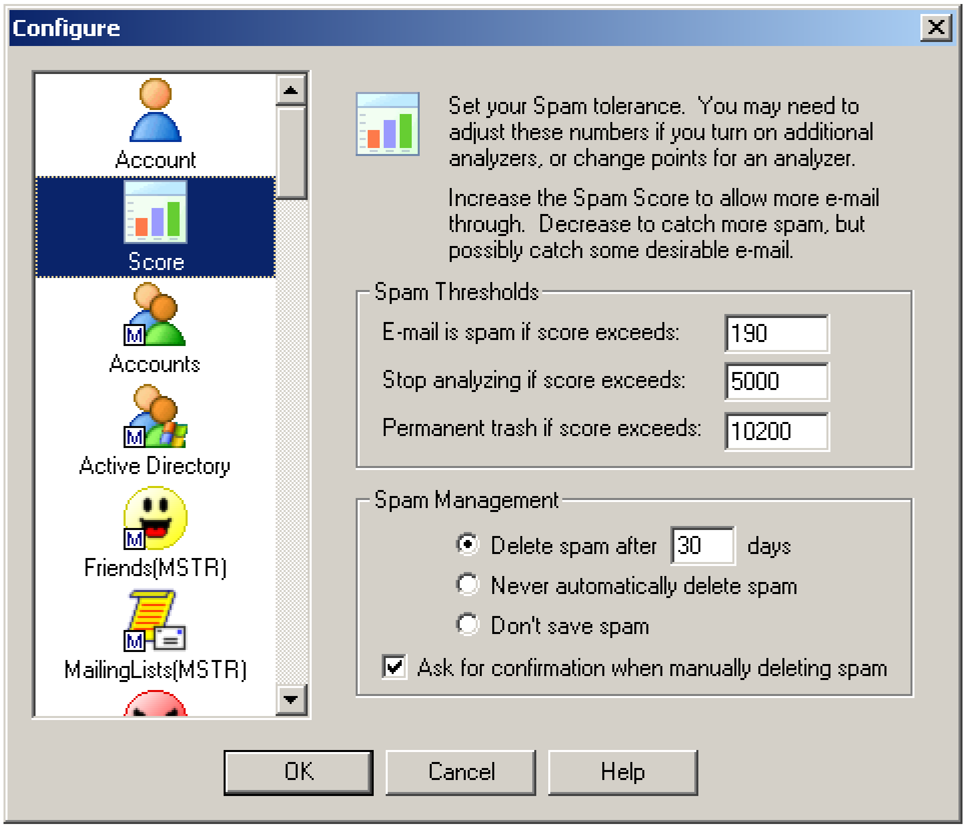
What makes an e-mail spam? Technically, spam is an e-mail that you didn't request, that is commercial in nature and is trying to sell you something or get you to do something. If you signed up for a newsletter, and that newsletter has a sales pitch for the company's product, it isn't technically spam. If you forgot that you signed up, then it sure seems like spam when it arrives.

How does Spam Sleuth distinguish between spam and a legitimate newsletter? That is very hard to do, because the spammers try to convince you that you did sign up with them, or their "marketing partner." Since there isn't currently a way to distinguish the two, we simply define spam as e-mail that you don't want.

2.2.1 Points System

How does Spam Sleuth defeat spam? Each Spam Sleuth Analyzer: Friends, Spammers, To, Goodwords, Badwords, Profanity, Subject, Attachments, Charsets, HTML Volume, etc. looks at your e-mail a different way and can assign points. The more points an e-mail message receives the more likely it is to be deemed as spam. The less points an e-mail message receives the more likely it is a real gem.

Think of it as though it was a contest, and each Analyzer is a different judge, and the messages are the contestants, and Spam Sleuth is the scorekeeper. Every judge looks at the e-mail message and assigns points based on specific criteria. Then all of the points are added together to create an overall total. More points is bad, and less points is good. In the first alpha version of the program, Spam Sleuth sent all the votes to Florida to get a decision, but it always came back a tie and nothing ever happened (only kidding). The number of accumulated points determines if the e-mail message is real, or spam. If the overall total is less than the threshold Spam Sleuth classifies this message as a real gem, and it will be passed through to your e-mail program for viewing. If the overall total exceeds the threshold settings in Spam Sleuth the message is deemed as spam and it will either be placed in the Mail Jail for 30 days, or it will be deleted immediately. Spam Sleuth has 3 different threshold settings that you can adjust to your liking. To configure the threshold settings right click on the Spam Sleuth icon in your Windows System tray > Configure... > Score tab.



Set your Spam tolerance. You may need to adjust these numbers if you turn on additional analyzers, or change points for an analyzer.

Increase the Spam Score to allow more e-mail through. Decrease to catch more spam, but possibly catch some desirable e-mail.

Spam Thresholds

E-mail is spam if score exceeds: 190

Stop analyzing if score exceeds: 5000

Permanent trash if score exceeds: 10200

Spam Management

● Delete spam after 30 days

○ Never automatically delete spam

○ Don't save spam

☑ Ask for confirmation when manually deleting spam

- **E-mail is spam if score exceeds: -** If the total amount of points accumulated by all of the analyzers exceeds this number then Spam Sleuth classifies the e-mail as spam, and the e-mail is sent to the Mail Jail. If you want to see the contents in the Mail Jail simply double-click on the Spam Sleuth icon. If you don't want to ever see the messages, just wait 30 days and they will be deleted. If the total amount of points is less than this number then this number the e-mail is classified as a real gem and Spam Sleuth will pass the e-mail along to your e-mail program. By default the threshold is set at 190.

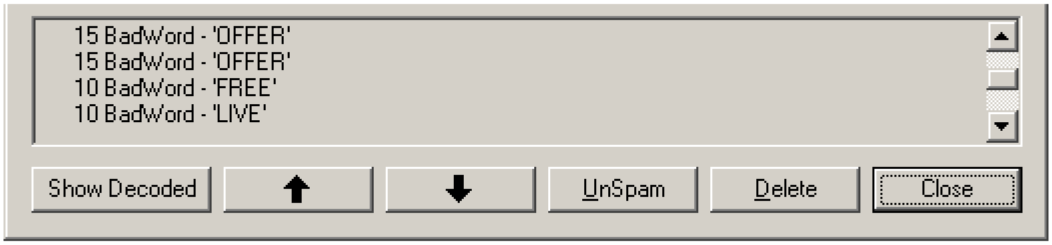
- **Stop analyzing if score exceeds: -** The second Spam Sleuth receives e-mail messages the Analyzers begin adding points. If the points begin to exceed 1,000 Spam Sleuth, the scorekeeper, tells all of the analyzers to stop giving points because it is clear that the e-mail message is spam. These types of messages are sent to the Mail Jail, and will be deleted after 30 days.
- **Permanent trash if score exceeds: -** If the overall total of points from all of the Analyzers is more than 10,200 Spam Sleuth immediately deletes the message. These types of messages usually contain adult content/pornography.

2.2.2 Spam Management

Why keep spam for any length of time? Well, there is a chance that a good e-mail will get tagged as spam. Spam Sleuth makes it convenient for you to retrieve good e-mail messages that may have been classified as spam. In the Spam Management section of the Score tab you can tell Spam Sleuth how often to delete messages from the Spam Sleuth Mail Jail. By default Spam Sleuth will delete messages classified as spam after 30 days. As you're looking through the Spam Sleuth Mail Jail you can delete messages at your leisure. By default Spam Sleuth will present you with a dialog to ensure that you want to delete the message. If you prefer not to receive the confirmation message uncheck the **Ask for confirmation when manually deleting spam** check box.

2.2.3 Spam Report

Each message gets a spam report. You can see this report by going to the Mail Jail and double-click on a message. You will see a spam report at the bottom.



```
15 BadWord - 'OFFER'
15 BadWord - 'OFFER'
10 BadWord - 'FREE'
10 BadWord - 'LIVE'
```

Each Analyzer adds its information to the report. The bottom will have a total score for the message.

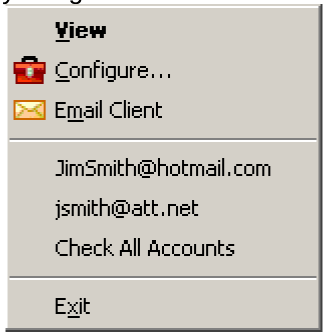
Show Decoded will show the message after decoding characters and Base64 encoded text. It will not decode attachments.

If you want to see the reports for messages that aren't flagged as spam, you'll need to turn on Score and store non-spam messages in Miscellaneous.

3 Configuration

Most of the time the only thing you'll see is a small icon that sits in your Windows system tray . Once configured, Spam Sleuth™ monitors your e-mail accounts and removes spam before you or your e-mail program sees it.

If you right-click on this icon , you get a menu.



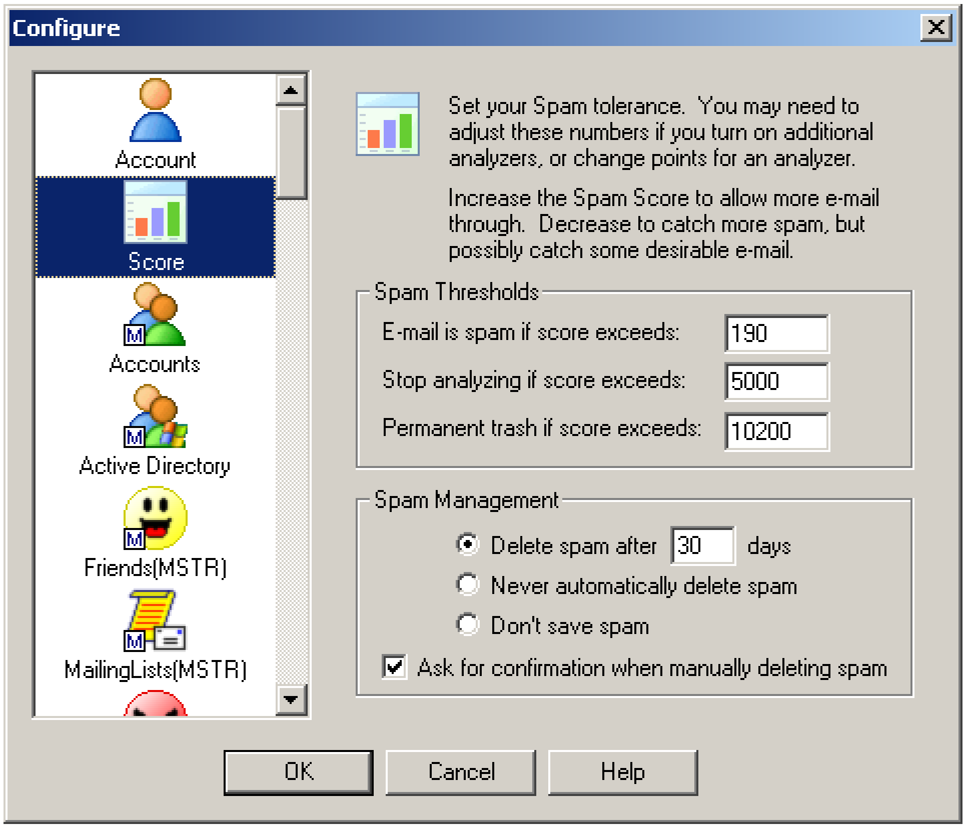
View – Lets you view spam messages in the Mail Jail with a safe Spam Viewer.
Configure… - Brings up the configuration dialog so you can tailor Spam Sleuth™ to meet your needs.
E-mail account list – Choosing an e-mail account will cause Spam Sleuth™ to scan that account for spam.
Email Client – Launches your default e-mail program.
<e-mail address> - Check that account only.
Check All Accounts – Scans all active e-mail accounts for spam.
Exit – Exits the program. Using this Exit will completely shut down the program and Spam Sleuth™ will not be able to prevent spam from getting into your e-mail program unless it is running.

3.1 Configuration of Analyzers

Each Spam Sleuth analyzer has a different task, and analyzes the e-mail using different criteria. To configure each analyzer right-click on the Spam Sleuth icon and scroll down to the configuration dialog for each analyzer.

The Analyzers are plug-in modules that can analyze an e-mail, assign points, contribute to the spam report, and act on the e-mail if necessary.

3.1.1 Score



Configure

Set your Spam tolerance. You may need to adjust these numbers if you turn on additional analyzers, or change points for an analyzer.

Increase the Spam Score to allow more e-mail through. Decrease to catch more spam, but possibly catch some desirable e-mail.

Spam Thresholds

E-mail is spam if score exceeds: 190

Stop analyzing if score exceeds: 5000

Permanent trash if score exceeds: 10200

Spam Management

● Delete spam after 30 days

○ Never automatically delete spam

○ Don't save spam

☑ Ask for confirmation when manually deleting spam

Spam Threshold

The Score dialog lets you set your personal spam tolerance threshold. Start with the default settings. Then look at the spam that was caught and the spam that wasn't in the Mail Jail. If you are getting too much spam in your InBox, decrease the spam threshold. If you are losing too many real messages, increase the spam threshold.

Stop Threshold

To be more efficient, Spam Sleuth™ can stop analyzing if the Spam Score exceeds a certain level. If you don't have any *GoodWords* or *Bayesian* then you can set this to the same value as the Spam Score. *Good Words* and *Bayesian* can deduct points from the spam score to allow an e-mail through which may pertain to something you want. If the spam score gets too high, then the *GoodWords* aren't going to help, you may as well let Spam Sleuth™ quit analyzing.

Trash Threshold

If the Spam Score gets too high, there may be no reason to even keep the message in the Mail Jail. If it is such blatant junk spam, let Spam Sleuth permanently delete it. If you don't like storing any spam, just set the Permanent Trash Score lower than the Spam Score. If you never want to permanently trash e-mail, set this to the highest level of 999,999.

Spam Management

The spam will keep on coming, but you probably don't want to keep it forever. Spam Sleuth does compress the messages so they take less room on your computer. Spam Sleuth will permanently delete spam after so many days. You decide how long to keep it in storage. We've set the default to 30 days, but you might only want to keep it for 5 days. Once a day, Spam Sleuth will clear out messages that are too old to keep. If you lower this number and the spam doesn't immediately disappear, don't worry, wait a day and Spam Sleuth will clean out the old spam.

You also have a choice to never delete spam. We don't recommend this option because spam will just take up your computer's resources.

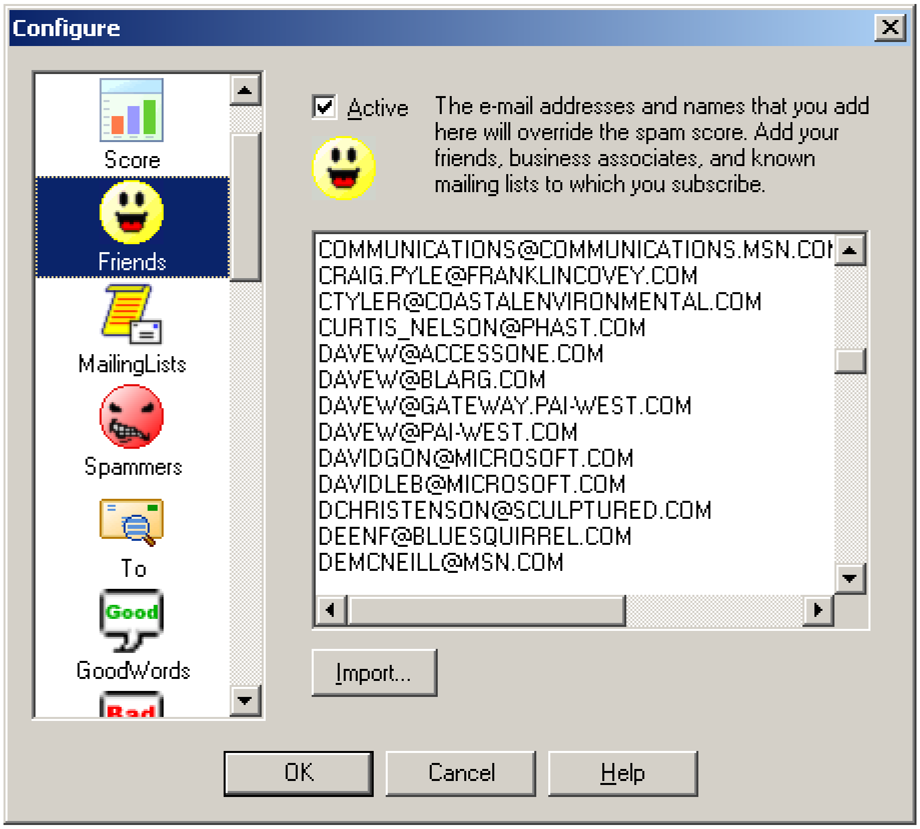
You can choose to never keep spam. We don't recommend this option because if Spam Sleuth mistakenly flags a good message as spam, you will not be able to recover it. If you don't keep spam for some short period of time, you cannot train *Bayesian*, use *Turing*, or *EMail Stamps*.

Spam Sleuth will ask for confirmation when deleting spam, unless you uncheck *Ask for confirmation when manually deleting spam*.

3.1.2 Friends

How can you make sure a message from a friend, relative, or co-worker is not tagged as spam? Spam Sleuth has an analyzer called Friends, which overrides all of the other analyzers. If the e-mail address of your friend is listed in the Friends Analyzer, it will let messages right through to your e-mail program.

What if I don't want to add everyone in my whole company to my friends list, but I want to get their e-mails? That is easy, simply add a wildcard friend to the Friends Analyzer. Use the * to represent any number of characters. Adding *@mycompany.com will let e-mail messages from joe_shmoe@mycompany.com and jane.doe@mycompany.com right through to your e-mail program.



☑ Active

The e-mail addresses and names that you add here will override the spam score. Add your friends, business associates, and known mailing lists to which you subscribe.

```
COMMUNICATIONS@COMMUNICATIONS.MSN.COI
CRAIG.PYLE@FRANKLINCOVEY.COM
CTYLER@COASTALENVIRONMENTAL.COM
CURTIS_NELSON@PHAST.COM
DAVEW@ACCESSONE.COM
DAVEW@BLARG.COM
DAVEW@GATEWAY.PAI-WEST.COM
DAVEW@PAI-WEST.COM
DAVIDGON@MICROSOFT.COM
DAVIDLEB@MICROSOFT.COM
DCHRISTENSON@SCULPTURED.COM
DEENF@BLUESQUIRREL.COM
DEMCNEILL@MSN.COM
```

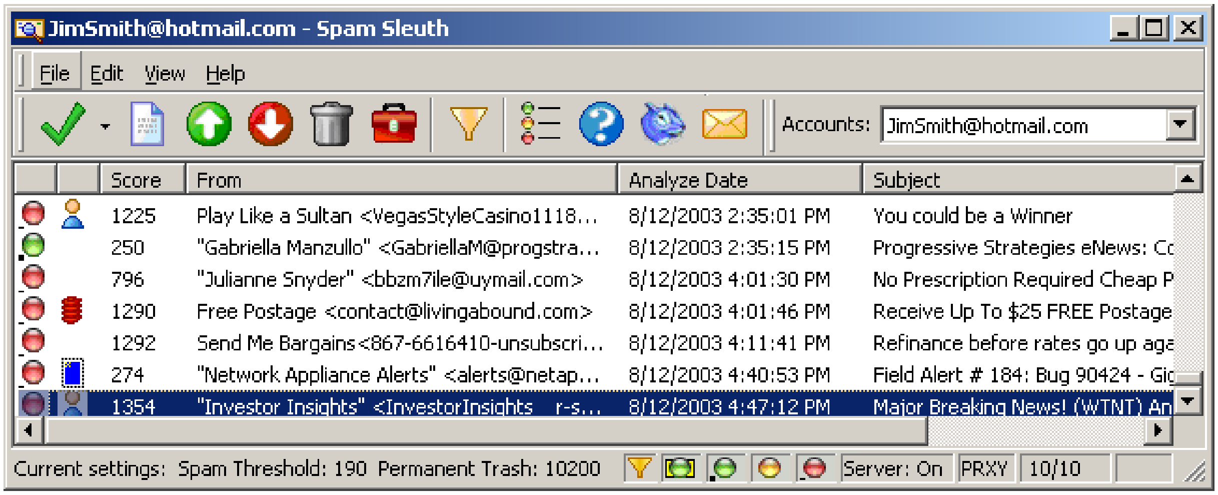
The Friends dialog lets you add e-mail addresses for your family, friends, co-workers and mailing lists. If someone in this list sends you an e-mail, Spam Sleuth will route the message directly to your e-mail program. Spam Sleuth will still strip off dangerous attachments, but you will get the e-mail.

Add as many e-mail addresses as you'd like. E-mails are not case-sensitive, so don't worry if the letters are all capitalized.

Friends supports limited wildcards. You can put a * at the beginning or end of a word. Example: *@BLUESQUIRREL.COM would allow all Blue Squirrel addresses that end in @BLUESQUIRREL.COM. You cannot add *@*.DOMAIN.COM.

3.1.3 Mailing Lists

How can you ensure that you get e-mail from certain mailing lists while rejecting ones for which you aren't subscribed?



Accounts: JimSmith@hotmail.com

		Score	From	Analyze Date	Subject
🔴	👤	1225	Play Like a Sultan <VegasStyleCasino1118...	8/12/2003 2:35:01 PM	You could be a Winner
🟢		250	"Gabriella Manzullo" <GabriellaM@progstra...	8/12/2003 2:35:15 PM	Progressive Strategies eNews: Cc
🔴		796	"Julianne Snyder" <bbzm7ile@uymail.com>	8/12/2003 4:01:30 PM	No Prescription Required Cheap P
🔴	▤	1290	Free Postage <contact@livingabound.com>	8/12/2003 4:01:46 PM	Receive Up To $25 FREE Postage
🔴		1292	Send Me Bargains <867-6616410-unsubscri...	8/12/2003 4:11:41 PM	Refinance before rates go up aga
🔴	■	274	"Network Appliance Alerts" <alerts@netap...	8/12/2003 4:40:53 PM	Field Alert # 184: Bug 90424 - Gi
🔴	👤	1354	"Investor Insights" <InvestorInsights r-s...	8/12/2003 4:47:12 PM	Major Breaking News! (WTNT) An

Current settings: Spam Threshold: 190 Permanent Trash: 10200 Server: On PRXY 10/10

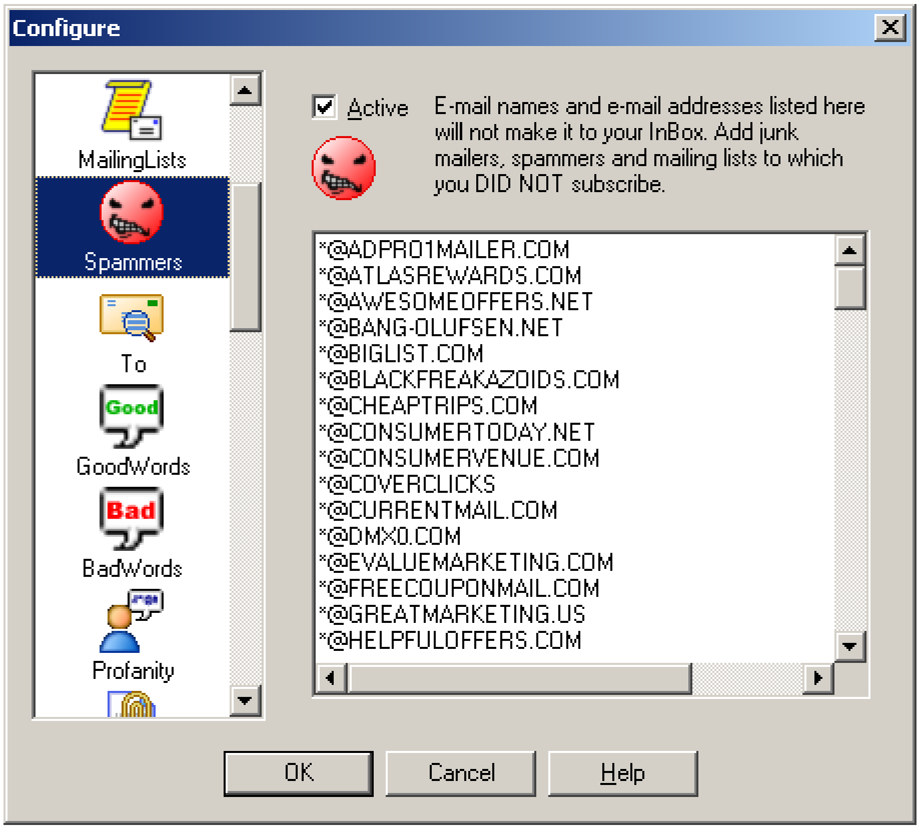
Mailing Lists lets you by-pass the analysis for the mailing lists for which you have subscribed. It is very similar to Friends, but will also check if the To: matches the mailing list name.

Often times, the From: is someone you've never heard of, but they're sending to you by sending to the mailing list distribution system. The To: is usually the e-mail address of the mailing list.

Add your mailing lists here.

3.1.4 Spammers

What if I keep getting e-mails from the same person or company and I don't want them anymore? Just add them to the Spammers Analyzer. This analyzer overrides all analyzers except for the Friends Analyzer. Just add the e-mail address of the person or company and they go straight to the Mail Jail. Use wildcards to eliminate all e-mail from a company.



☑ Active

E-mail names and e-mail addresses listed here will not make it to your InBox. Add junk mailers, spammers and mailing lists to which you DID NOT subscribe.

```
*@ADPRO1MAILER.COM
*@ATLASREWARDS.COM
*@AWESOMEOFFERS.NET
*@BANG-OLUFSEN.NET
*@BIGLIST.COM
*@BLACKFREAKAZOIDS.COM
*@CHEAPTRIPS.COM
*@CONSUMERTODAY.NET
*@CONSUMERVENUE.COM
*@COVERCLICKS
*@CURRENTMAIL.COM
*@DMX0.COM
*@EVALUEMARKETING.COM
*@FREECOUPONMAIL.COM
*@GREATMARKETING.US
*@HELPFULOFFERS.COM
```

List all the e-mail address of known spammers. If you don't want to see another e-mail from someone, just add their address to this list. Use the '*' to remove an entire range of e-mail addresses. Put in '*@BADCOMPANY.COM' to block all e-mail addresses with @BADCOMPANY.COM in them. E-mails are not case-sensitive, so don't worry if the letters are all capitalized.

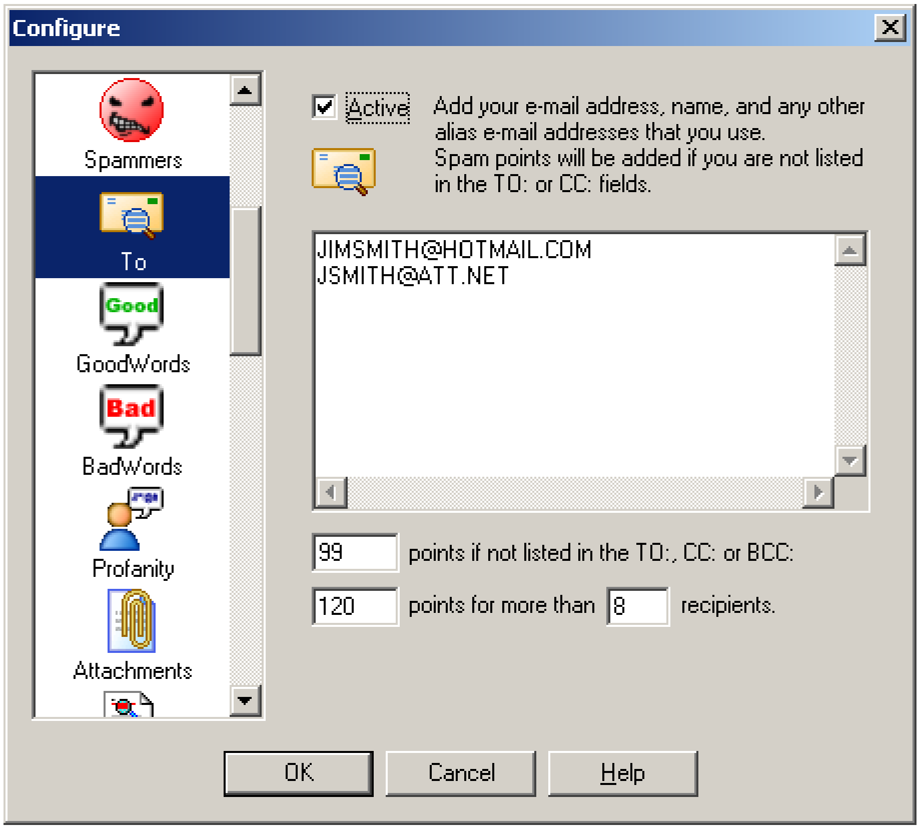
Spammers supports limited wildcards. You can put a * at the beginning or end of a word. Example: *@BLASTMAIL.COM would block all e-mail addresses that end in @BLASTMAIL.COM.

To block e-mails that use various subdomains, like out@mailout.blastmail.com, or out@outgoing.blastmail.com, etc., then you can add *BLASTMAIL.COM to the Spammers list to catch all of them.

3.1.5 To

What if you want to make sure that the sender really knows who you are? Use the **To Analyzer** to filter out e-mail that is sent to "Homeowner", "Resident", or "Potential Customer." Just list all of your real e-mail addresses. Sometimes you have aliases – add 'em to the **To Analyzer** list. For example, if you have multiple e-mail addresses such as bob_jones@mycompany.com and support@mycompany.com that you receive e-mail from then add them to the list.

Have you ever gotten an e-mail with a truck-load of e-mail addresses listed in the *To:* section? Sometimes these are jokes that people are sending to everyone on their address list. Unfortunately, most of the time you are just one of the millions that have been spammed. The **To Analyzer** will count up how many people got the same message. If there are too many then Spam Sleuth will assign some points. You can decide how many people is too many, and you can decide how many points to assign to the message.



☑ Active Add your e-mail address, name, and any other alias e-mail addresses that you use. Spam points will be added if you are not listed in the TO: or CC: fields.

JIMSMITH@HOTMAIL.COM
JSMITH@ATT.NET

99 points if not listed in the TO:, CC: or BCC:

120 points for more than 8 recipients.

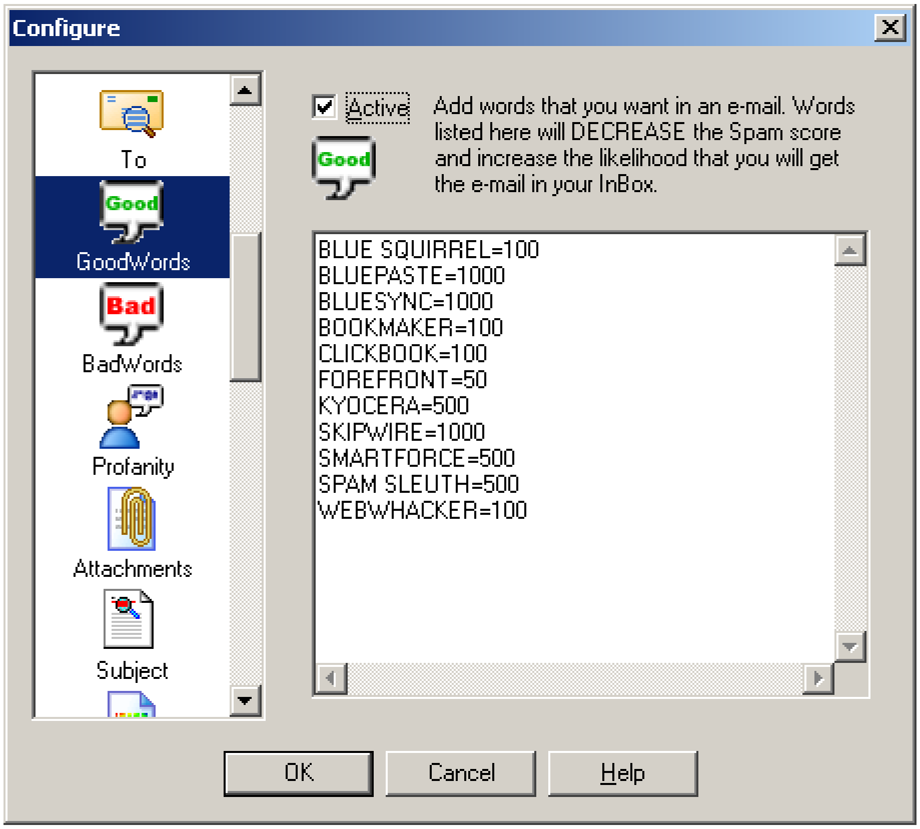
The To list should contain all the valid e-mail addresses for you. If the message is not addressed to one of your e-mail addresses, then it will get spam points. Often unwanted e-mail has ten or more people listed in the To: or CC:. Spam Sleuth™ can assign points for this. You decide how many people is too many, and how many points.

You may be wondering how the message could get to you without your e-mail address being listed. The server that sent it specified that it was for you, but the text of the message which you see (To: joe@xyz.com) can be anything and does not have to list your name. Often times it is more efficient for a spammer (who may be sending millions of message) to make one message and blast it out and have other servers deliver them. Just like when you get junk regular mail at home addressed to "Resident", the To: address might contain something generic like "Homeowner."

The *To Analyzer* supports limited wildcards. You can put a * at the beginning or end of a word. Example: *@MYCOMPANY.COM would accept all e-mail addresses that end in @MYCOMPANY.COM.

3.1.6 GoodWords

Do you sometimes get e-mail that looks like junk, but it really is a good e-mail because it is about something you care about? Maybe you care about basketball, or basket weaving. Everyone has his or her own hobbies and interests. If you put those words in the **GoodWords Analyzer**, it will deduct points when it finds your interests. If you want to see all e-mails about racing, you may want to add "FINISH LINE=1000", "RACING=1000", and "RACE*=1000", remember the * acts like any number of characters. Adding these to the **GoodWords Analyzer** will deduct 1000 points when it finds these words. Don't forget to add words that pertain to your job.



☑ Active

Add words that you want in an e-mail. Words listed here will DECREASE the Spam score and increase the likelihood that you will get the e-mail in your InBox.

```
BLUE SQUIRREL=100
BLUEPASTE=1000
BLUESYNC=1000
BOOKMAKER=100
CLICKBOOK=100
FOREFRONT=50
KYOCERA=500
SKIPWIRE=1000
SMARTFORCE=500
SPAM SLEUTH=500
WEBWHACKER=100
```

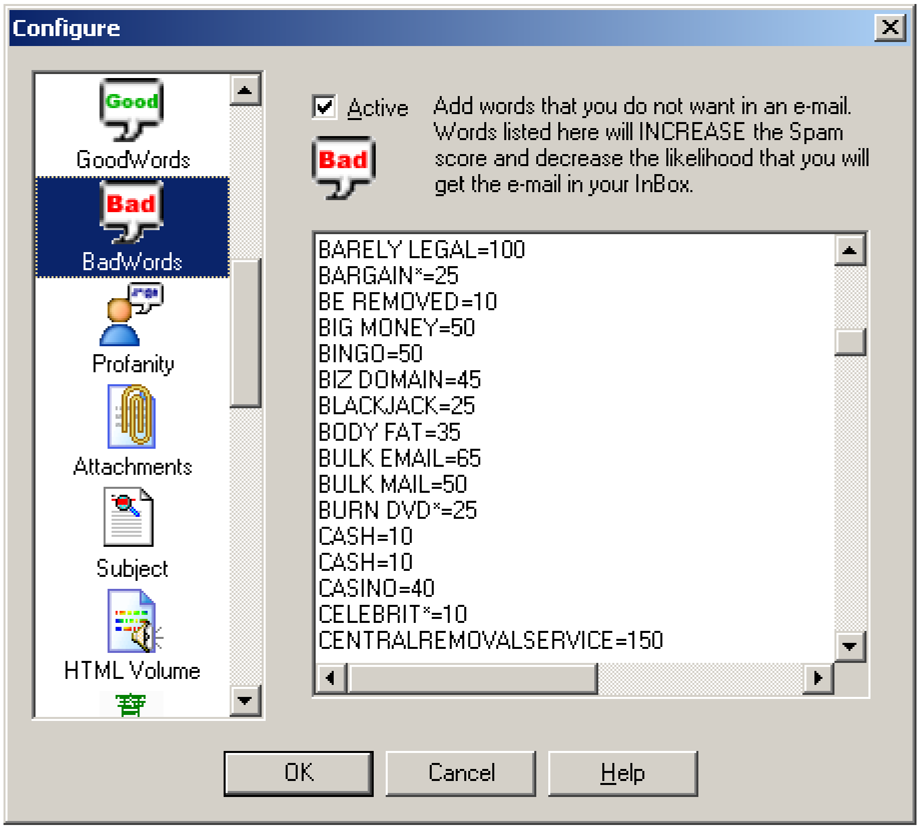
GoodWords let you catch e-mails that may interest you. At Blue Squirrel we have a number of products. If our product names are in the e-mail, we probably want the e-mail even if it has some spam characteristics. The GoodWords will be different for everybody. You might put in sports, or hobbies that interest you, so that you don't miss a good e-mail. You put in the number of points to SUBTRACT from the Spam Score. A high number will ensure that you get e-mails about that subject.

GoodWords will search the entire message, including the header (with the subject).

GoodWords supports limited wildcards. You can put a * at the beginning or end of a word. Example: MINI CAR* would match all words like "Mini Car", "MINI Cars", "mini CART"

3.1.7 BadWords

Do you get e-mails about flat hoses, $50 University Diplomas and other useless junk? Well we've added a list of words and points to the **BadWords Analyzer**. The **BadWords Analyzer** will catch a lot of junk e-mail. Feel free to add your own words, and remove some of ours. Change the points if you'd like.



☑ Active

Add words that you do not want in an e-mail. Words listed here will INCREASE the Spam score and decrease the likelihood that you will get the e-mail in your InBox.

```
BARELY LEGAL=100
BARGAIN*=25
BE REMOVED=10
BIG MONEY=50
BINGO=50
BIZ DOMAIN=45
BLACKJACK=25
BODY FAT=35
BULK EMAIL=65
BULK MAIL=50
BURN DVD*=25
CASH=10
CASH=10
CASINO=40
CELEBRIT*=10
CENTRALREMOVALSERVICE=150
```

BadWords are words that are likely to appear in unwanted e-mail. To add to the list, just enter your word followed by '=', followed by the number of points to assign for that word. Spam Sleuth comes with a list of words that is periodically updated. You can remove words, or add words to this list. Intellimingle™ will automatically add your words to the Spam Sleuth master list of words. If you remove a word, Intellimingle™ will remember that you've removed that word so that when we update the master BadWord list, Spam Sleuth™ won't analyze for the removed word. Feel free to customize this list. If you feel that you will never get a real e-mail about "SuperBiz" then feel free to boost the points for that word to 1000.

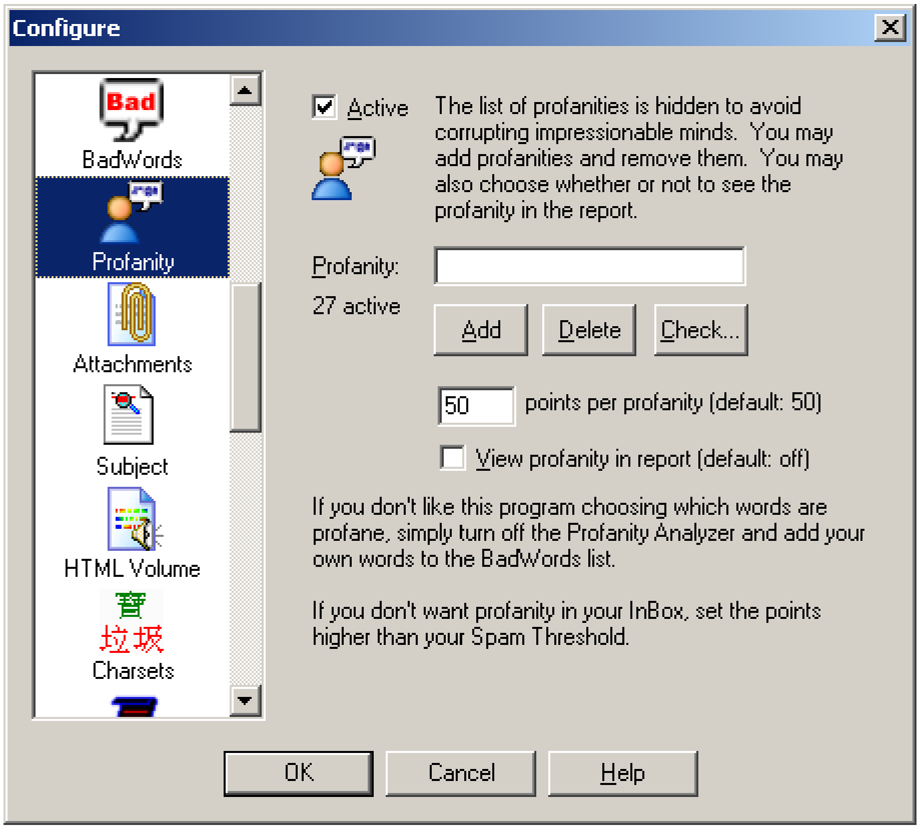
BadWords will search the entire message, including the header (with the subject).

The really profane words are in the Profanity Analyzer.

BadWords supports limited wildcards. You can put a * at the beginning or end of a word. Example: MINI CAR* would match all words like "Mini Car", "MINI Cars", "mini CART"

3.1.8 Profanity

Are you afraid that some really profane e-mails will be seen by your kids? If you have kids you may want to really increase the points in the **Profanity Analyzer**. We have added several words for you, and you can add your own words as well. No worries, the Profanity Analyzer doesn't list the words so you don't have to worry about them being seen by innocent young eyes.



☑ Active

The list of profanities is hidden to avoid corrupting impressionable minds. You may add profanities and remove them. You may also choose whether or not to see the profanity in the report.

Profanity:

27 active

50 points per profanity (default: 50)

□ View profanity in report (default: off)

If you don't like this program choosing which words are profane, simply turn off the Profanity Analyzer and add your own words to the BadWords list.

If you don't want profanity in your InBox, set the points higher than your Spam Threshold.

The profanity analyzer looks for the really profane words. We chose not to let you see the list of profanities. If you want to know whether one is in there, you can type it in and hit the Check… button. It will tell you if it is in the list. The data file is encoded, so don't bother looking in there either.

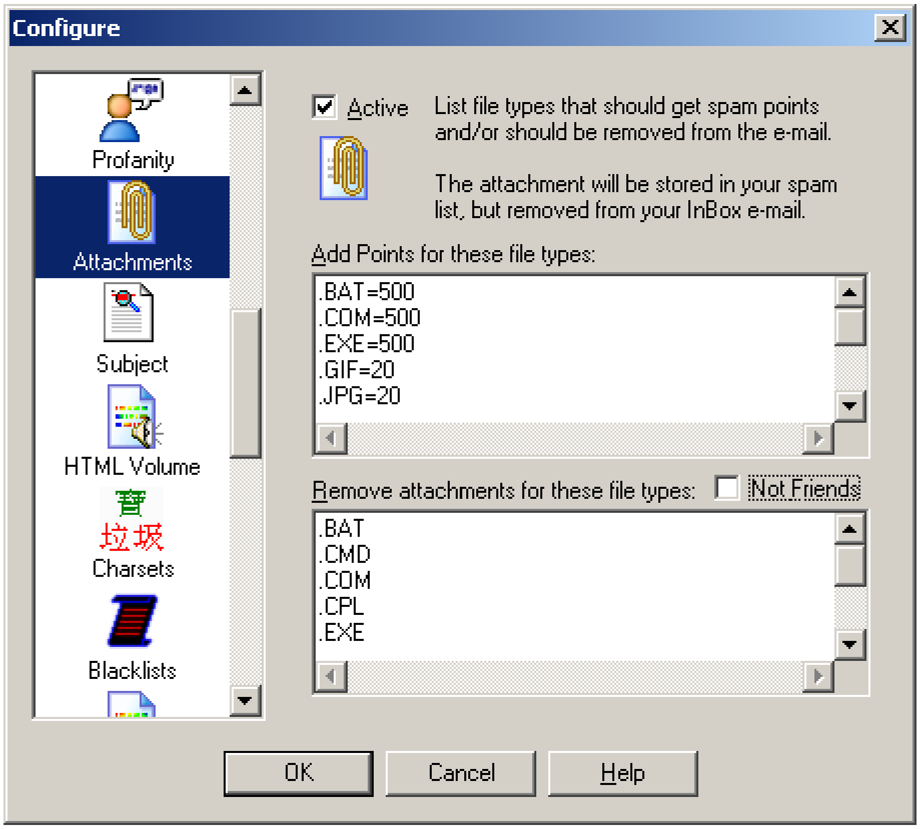
You can add profanities to the list, and you can delete them from the list if you know what they are.

If you want to see the profanity in the Sleuth's report, just check View profanity in report. If you leave it unchecked, you will just see `10 Profanity – '----'` The number of dashes represent the number of characters in the profanity. The rest is left to your imagination.

When you set the points, you are setting the points for all the profanities. If you are using Spam Sleuth™ to protect children, you may wish to set this number very high to make sure profane e-mails are relegated to the Mail Jail.

3.1.9 Attachments

Did you know that all e-mail viruses are spread by sending attachments that can be executed? The **Attachments Analyzer** removes dangerous attachments, such as .exe files. Don't worry it stores the entire e-mail along with the attachment in the Mail Jail if you need it back. Be very careful. Most e-mail viruses are accidentally sent by friends or associates that have you in their e-mail address book. The virus spreads itself by sending an e-mail to everyone in the address book. If you get e-mails with .JPG attachments that are often spam, you can assign 50 points by just adding the line ".JPG=50" to the top box in the **Attachments Analyzer**.



☑ Active

List file types that should get spam points and/or should be removed from the e-mail.

The attachment will be stored in your spam list, but removed from your InBox e-mail.

Add Points for these file types:

```
.BAT=500
.COM=500
.EXE=500
.GIF=20
.JPG=20
```

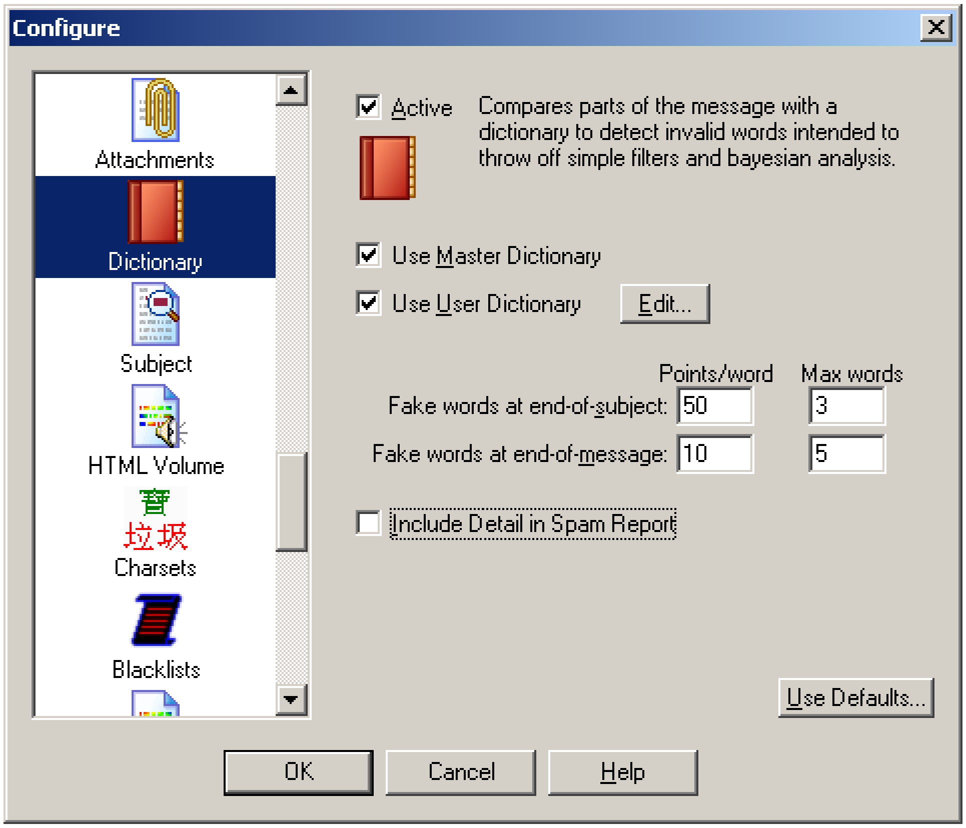
Remove attachments for these file types: ☐ Not Friends

```
.BAT
.CMD
.COM
.CPL
.EXE
```

The Attachments analyzer has the ability to assign points, and it also has the ability to remove the attachment. Attachments are dangerous when they are programs that can do anything to your computer. Executable files (.EXE, .VBS, .CMD and others) attached to e-mails are very often viruses. By default Spam Sleuth™ is configured to remove executable files. You can always get the original file back (with attachment) by going to the Mail Jail and hitting "UnSpam." Be careful, often times an executable file that looks like it came from a friend was actually sent by a virus reading your friend's e-mail address book and sending everyone a copy of itself. Unless you've spoken with someone about a file they are sending you, we recommend that you don't run any e-mailed executable attachment.

Checking *Not Friends* will keep Spam Sleuth from removing attachments from e-mails sent from your list of Friends and your Mailing Lists. Before choosing this option, please be aware that viruses are sometimes sent by friends unintentionally if their computer has been infected with a virus.

3.1.10 Dictionary



☑ Active

Compares parts of the message with a dictionary to detect invalid words intended to throw off simple filters and bayesian analysis.

☑ Use Master Dictionary

☑ Use User Dictionary

	Points/word	Max words
Fake words at end-of-subject:	50	3
Fake words at end-of-message:	10	5

☐ Include Detail in Spam Report

The Dictionary analyzer uses an English dictionary to determine whether the words at the end of the subject and the end of the message are real. Many spam messages use random letters at the end of the message or the subject to throw off simple filters and Bayesian analyzers. The Dictionary analyzer detects these random letter sequences and assigns them points. You may wish to turn this off this analyzer if your primary language is not English.

Use Master Dictionary - Use the Master dictionary. You should leave this checked unless you are in a non-English speaking country.

Use User Dictionary - Also checks for words in the user's custom dictionary. Use this to add words that are not in the Master Dictionary. [Edit...] lets you create/edit a personalized dictionary file. If you expect e-mails to have certain words at the end, you should add those words to your own personal User Dictionary.

Fake words at the end of subject - By default, the last three words of a subject are analyzed and 50 points per non-word is added to the total score.

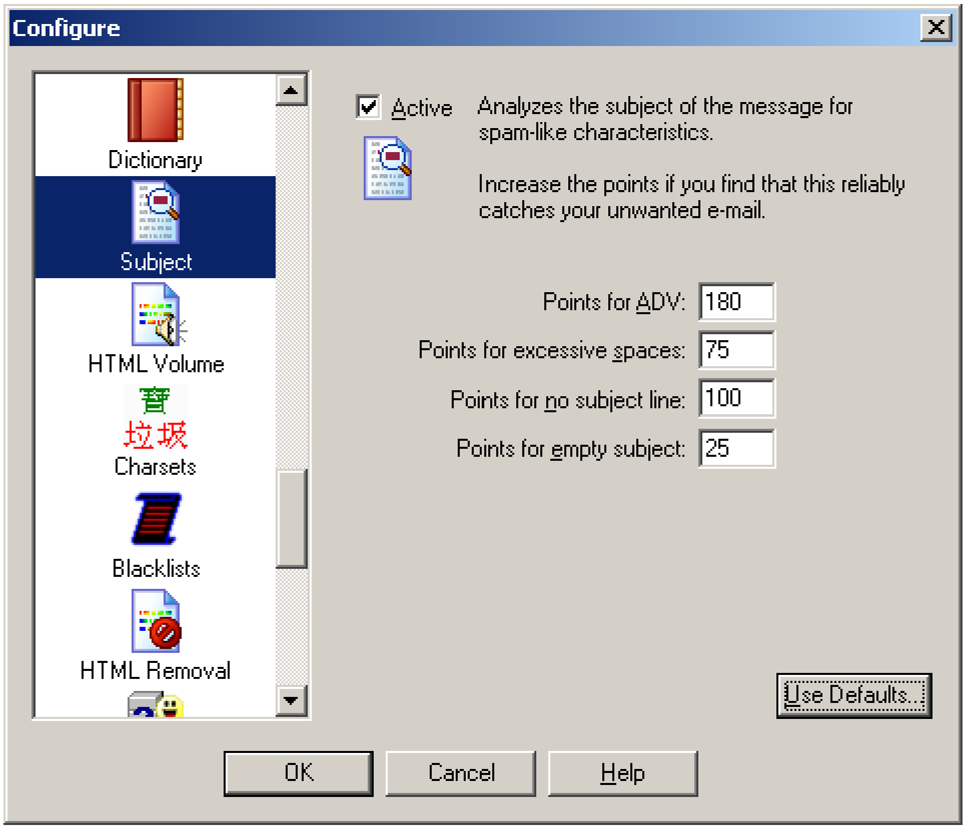
Fake words at the end of message - By default, the last two words of the message are analyzed and 10 points per non-word is added to the total score.

Include Detail in Spam Report - Selecting this option will add additional lines to the spam report that show you which words were analyzed and whether or not they were in the dictionary.

Use Defaults... - Sets Dictionary settings to the defaults.

3.1.11 Subject

Can you identify spam with a single glance at the e-mail's subject? The **Subject Analyzer** looks at the spacing, capitalization, and looks for the legally required, but rarely used "ADV" (Advertisement) to determine whether a message is spam. Spammers also use tricks so that it is more difficult for large ISPs to screen out spam by just the subject. They tack on a unique sequence of letters or numbers to the end of the subject so the subject is always different for each message. The **Subject Analyzer** also looks for that little trick.



☑ Active

Analyzes the subject of the message for spam-like characteristics.

Increase the points if you find that this reliably catches your unwanted e-mail.

Points for ADV: 180

Points for excessive spaces: 75

Points for no subject line: 100

Points for empty subject: 25

The Subject analyzer looks at spam-like characteristics of the subject of a message. You can change the maximum number of points that this analyzer can contribute to the total score. Very seldom will a subject be blatant enough to warrant the maximum score.

Points for ADV - The text 'ADV:' is supposed to appear on advertising e-mails. If everyone did this like they are supposed to, there would be no need for Spam Sleuth. For the few that do, this quickly catches them as spam.

Points for excessive spaces - This catches e-mails with a 'trick' subject. The spammers will tack on some random letters at the end of a subject to keep simple subject filters from filtering them out. Since they put these letters at the end of the subject, there is an excessive number of spaces between the real subject and their little 'trick." This assigns points for that trick.

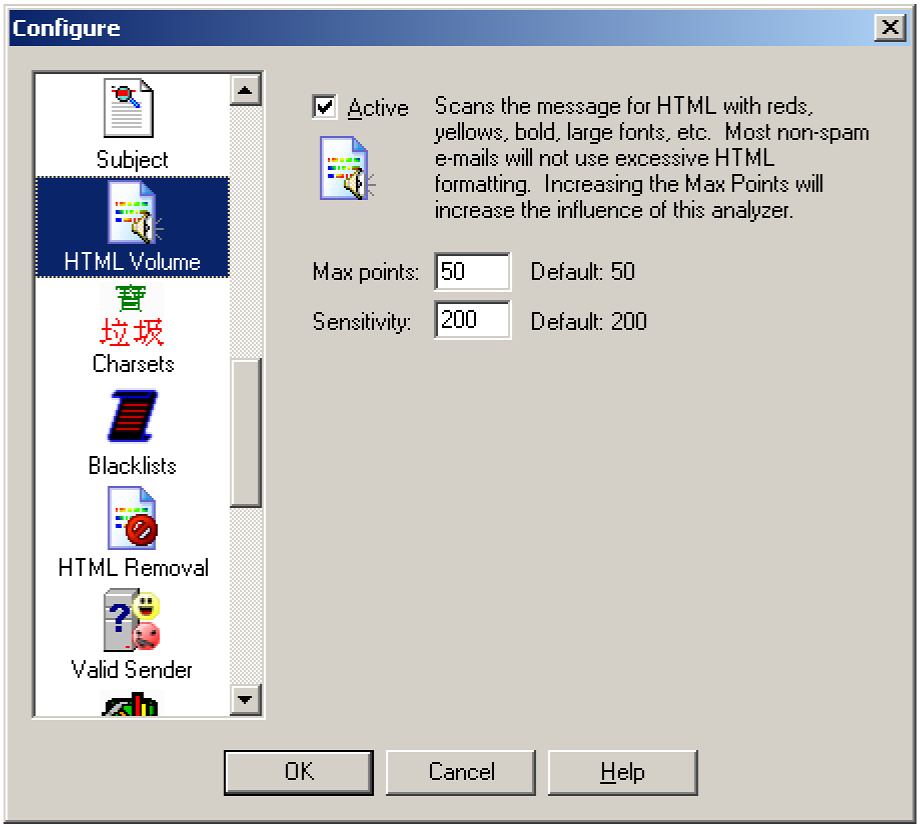
Points for no subject line - Set the points that will be assigned when a message has no subject line in the header. This is rare, but does happen with some spam.

Points for empty subject - Set the points that will be assigned when a message has an empty or blank subject. This is common with spam, but may also occur when a friend sends you a message and forgets to fill in the subject.

Use Defaults... - Sets Dictionary settings to the defaults.

3.1.12 HTML Volume

Do some of your e-mails just scream at you? The spammers want your attention. They use reds, yellows, bright blues, big fonts, embedded pictures, and other techniques not usually employed by your friends, relatives, and co-workers. The **HTML Volume Analyzer** looks for these elements in your e-mail and assigns points when it finds them. You can change how sensitive the **HTML Volume Analyzer** is, and the maximum number of points each e-mail message is allowed to contribute to the total.



☑ Active

Scans the message for HTML with reds, yellows, bold, large fonts, etc. Most non-spam e-mails will not use excessive HTML formatting. Increasing the Max Points will increase the influence of this analyzer.

Max points: 50 Default: 50

Sensitivity: 200 Default: 200

The HTML Volume Analyzer looks at the "loudness" of the message. Most regular folks don't scream their message in bright reds and yellows in large fonts. Many spammers use these attention getting techniques. This analyzer assigns points for large fonts and bright colors.

You can control the maximum number of points that this analyzer contributes to the total report. If you feel it does a good job at distinguishing good e-mail from spam, you may want to increase the Max points.

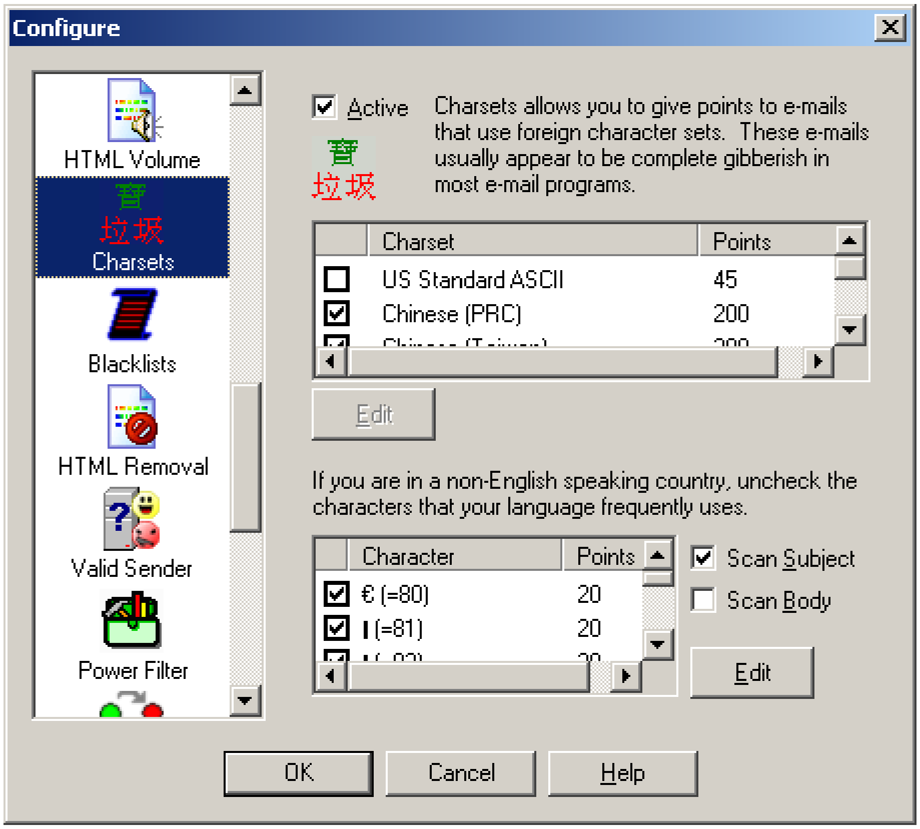
If you have "loud" friends that e-mail you in big bold, red letters, then you may want to either turn this analyzer off, decrease its influence on the total score by lowering the Max points, or pick new friends.

The sensitivity lets you set how "picky" this analyzer is. If you set it very high, it will give the max points for one large font. If you set it very low, then it will take lots of large font changes and color **changes** to add points.

3.1.13 Charsets

Do you get e-mails where the subject looks like this -- ýÃûÔÚÂüÑÓ?

These are usually spam from China or Korea where they've specified a Chinese or Korean character set and your e-mail program won't display the characters. Spam Sleuth lets you detect and eliminate these e-mails with the **Charsets Analyzer**. By default the program will eliminate Chinese and Korean character sets.



☑ Active

Charsets allows you to give points to e-mails that use foreign character sets. These e-mails usually appear to be complete gibberish in most e-mail programs.

	Charset	Points
□	US Standard ASCII	45
☑	Chinese (PRC)	200

If you are in a non-English speaking country, uncheck the characters that your language frequently uses.

	Character	Points
☑	€ (=80)	20
☑	ı (=81)	20

☑ Scan Subject

□ Scan Body

The Charsets Analyzer lets you get rid of that annoying Chinese and Korean spam. Since most e-mail viewers don't show characters in the Chinese character set, these e-mails look like a string of gibberish like this - ÞÕýÔÚÂüÑÓ¡¢ºþ±±Ò»Ãû¹¤ÈË¾ÍÕâÑù.

Unless you read Chinese or Korean, we recommend that you leave the default characters sets checked. The Latin character sets are used by many regular e-mails, so we recommend that you leave it unchecked.

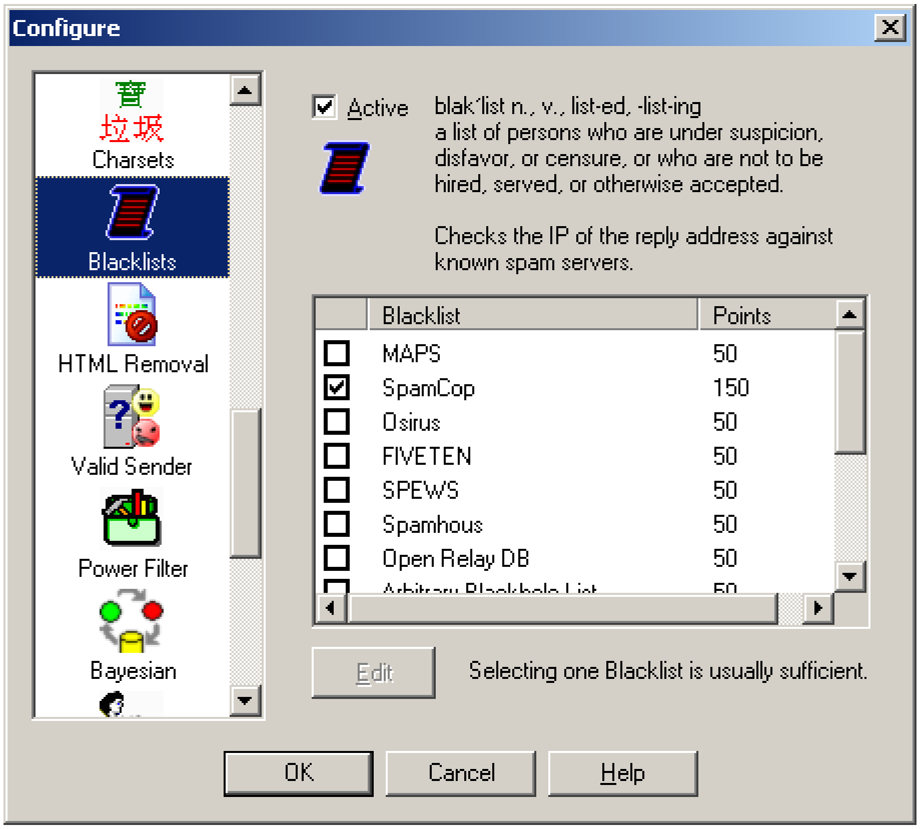
Spam Sleuth can also check for any high-bit characters. These are characters that are above the 127 in the ASCII set. All high-bit characters are selected by default. They are usually only used by non-English speaking countries. If you are in Germany, we recommend that you uncheck characters in your character set such as (Ä and ä). If you are in Mexico, we recommend that you uncheck your characters such as (Ã and ã). If your country uses other characters, we recommend that you uncheck them so that they aren't assigned points.

You can increase the points given for any particular character.

You can have Spam Sleuth scan the Subject of the message, and the Body of the message. By default, Spam Sleuth only checks the Subject.

3.1.14 BlackLists

Ever wish there was a comprehensive list of spammers? Well so do we, but unfortunately the closest thing is the blacklists. The blacklists contain the IP addresses of all the known spam servers and open relay servers (used by spammers). These lists of spam servers are built different ways. Some of them set spam traps where they put an e-mail address out on web pages and other public places so that it gets on the big lists of e-mails. Then they blacklist anybody who sends to that e-mail address. Others collect the spam e-mail from lots of people and if there are enough of the same message they assume it is spam and blacklist the server. The **Blacklist Analyzer** lets you check the list to see if the e-mail was sent from a blacklisted server. There are lots of blacklists and Spam Sleuth includes most of them. You should only use one at a time because they can take several seconds per message to check.



☑ Active

blak´list n., v., list-ed, -list-ing
a list of persons who are under suspicion, disfavor, or censure, or who are not to be hired, served, or otherwise accepted.

Checks the IP of the reply address against known spam servers.

	Blacklist	Points
□	MAPS	50
☑	SpamCop	150
□	Osirus	50
□	FIVETEN	50
□	SPEWS	50
□	Spamhous	50
□	Open Relay DB	50
□	Arbitrary Blackhole List	50

Edit

Selecting one Blacklist is usually sufficient.

The BlackList Analyzer uses free blacklist databases to check whether the e-mail in question was sent by a known spam server. These databases allow Spam Sleuth™ to look up an IP address and determine whether it came from a known spam sending machine.

blak'list n., v., list-ed, -list-ing - a list of persons who are under suspicion, disfavor, or censure, or who are not to be hired, served, or otherwise accepted.

You may be tempted to turn on all of the black lists, but it really isn't necessary. Most of them contain the same or at least similar information. Some of them are subsets of the others. It would be better to increase the number of points assigned when the one blacklist reports that the e-mail was sent by a known spam server. By default, Spam Sleuth™ uses SpamCop, which seems to be one of the more accurate lists

These lists are built in different ways. Some of them use spam traps where they put a brand new e-mail address out on a web page and then "trap" everybody who sends to that e-mail. Some are built by taking a weighted average based on how many people send them copies of the same spam message from the same server.

Each list that you check will take 3 to 5 seconds to check if the e-mail is not from a spammer (negative response). It takes about 1 second to check if the e-mail is from a known spammer (positive response).

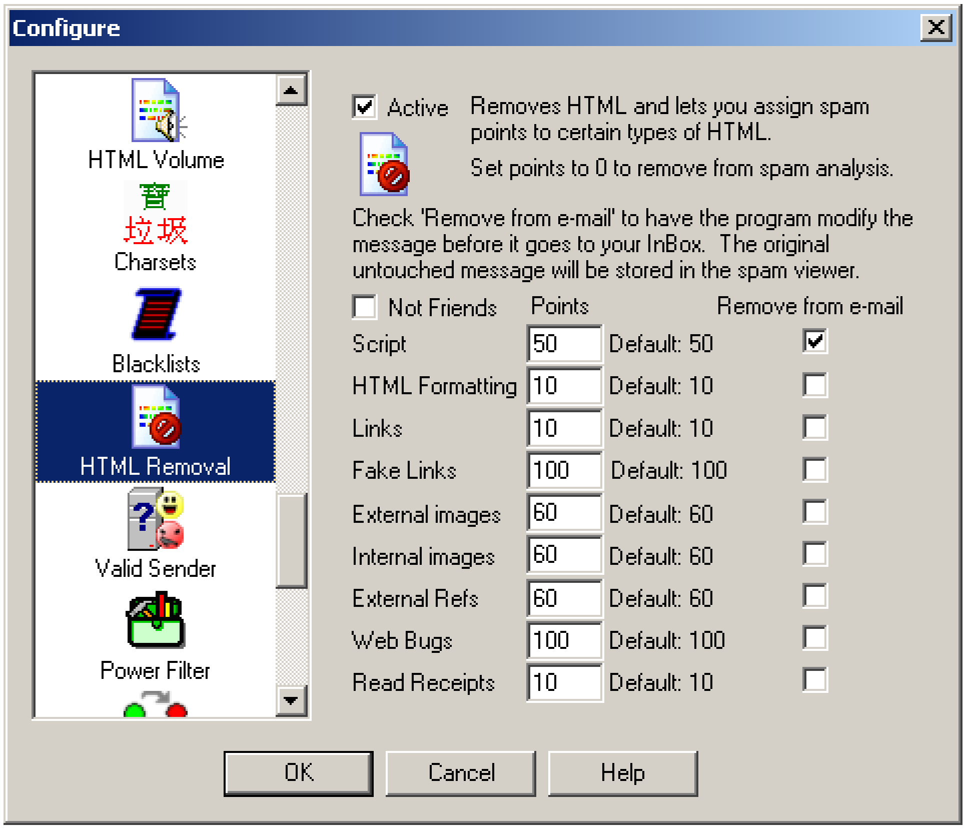
You can edit the number of points assigned when a blacklist reports that the IP is a known spammer.

3.1.15 HTML Removal

Are HTML e-mail messages dangerous? I guess it depends on how you define dangerous. HTML e-mail can run scripts, redirect to other web pages which may be pornographic, and even send information back to the sender that says you looked at the e-mail. The **HTML Removal Analyzer** is one of the more unique features of Spam Sleuth. It can selectively remove dangerous HTML from your e-mails. By removing script, you don't have to worry about being redirected to another web page. By default, Spam Sleuth will remove HTML script. You may lose some flying logos, but your computer will be safer. Some folks would prefer to get just the text without the colors, fonts, backgrounds, etc. If you just like the plain text without the frilly icing, then let the **HTML Removal Analyzer** take out the extraneous text formatting. The **HTML Removal Analyzer** can also remove links. Links are usually pretty safe because you have to click on them to go to a web page. For kids, however, you might consider removing links.

There are two kinds of images that can appear in an e-mail. There are embedded (internal) images, which use up your computer connection when the e-mail is sent, and the more dangerous kind – external images. The external images are stored on a web server. When the e-mail is viewed, you computer goes and gets the external images. Often times it also sends information to the spammer that you looked at the e-mail. This increases the chances of you getting more spam from that spammer in the future. If you choose to Remove images (External) in the **HTML Removal Analyzer** you will not see the pretty pictures in your spam or in your valid newsletters.

If you don't want spammers to know that you've read your e-mail, you may need to take out Web Bugs, External References and Read Receipt Requested header tags out of your e-mail. The **HTML Removal Analyzer** handles all of these.



☑ Active

Removes HTML and lets you assign spam points to certain types of HTML.

Set points to 0 to remove from spam analysis.

Check 'Remove from e-mail' to have the program modify the message before it goes to your InBox. The original untouched message will be stored in the spam viewer.

□ Not Friends	Points		Remove from e-mail
Script	50	Default: 50	☑
HTML Formatting	10	Default: 10	□
Links	10	Default: 10	□
Fake Links	100	Default: 100	□
External images	60	Default: 60	□
Internal images	60	Default: 60	□
External Refs	60	Default: 60	□
Web Bugs	100	Default: 100	□
Read Receipts	10	Default: 10	□

The HTML Removal Analyzer is one of the most unique features in Spam Sleuth™. This analyzer can add points for certain types of HTML, but more impressive is its ability to remove certain types of HTML.

Script - Java Script and other scripting languages are programming languages, and have been known to have some security holes. Since many of the e-mail clients are using the browser, or browser component to read the e-mail, your computer may be put at risk just by reading an e-mail. Turning on Remove Script can remove the script (program) from the e-mail. Sometimes this means an ad doesn't "fly", but sometimes it means that a dangerous script virus has been thwarted.

HTML Formatting - HTML formatting in a message can be a good thing, but most of the time it is just used by the advertisers trying to get your attention. The meaning of the message is in the text, and conveying it in a big bright purple font isn't usually necessary.

Links - Most of the time links in a message are just fine. If you are using Spam Sleuth to protect kids, you may want to remove links that kids might click on and take them an unsavory web site. For most people, we recommend leaving this unchecked and keep the links. Beware, if you click on a link sent from an e-mail, there is a high probability that the web site owner now knows that you (as identified by your e-mail address) read their e-mail and followed their link.

Fake Links - Some e-mails are including links that are designed to deceive. The spammers use special formatting to make it appear that you are going to your own bank or secure site, when really the browser is taking you to a dangerous site that will take your personal login information and use it to empty your account. An example: http://www.ebay.com_login@200.18.11.4/ While this looks at first glance to be going to eBay, it is going to a site residing at IP 200.18.11.4.

Remove Images (External) – We recommend leaving checking this option because most regular folks (friends, family, co-workers) do not send e-mail with external links. To do so requires that you have a web server, or hosting site, and that you are sending HTML with the intent that when the message is opened, the image will be loaded from the web server. Usually this is something that marketers do.

Remove Images (Internal) – This one isn't as bad as external images. The image has already been sent to you in the e-mail message. This is often used by spammers, but can easily be used by anyone who pastes a picture of themselves into an e-mail. Opening messages with just Internal images doesn't send anything back to the sender.

External Refs - Because HTML can reference other web pages, it is very likely that just viewing an HTML e-mail will cause you computer to request web pages. The clever spammers will track those requests and know that you've viewed their message. You can add points for external references, or eliminate them altogether by checking the checkbox for Remove from e-mail.

Web Bugs - Use of Web Bugs is a common practice among spammers. They will use IMG SRC tags in their e-mails which cause your computer to request an image when the e-mail is viewed. This wouldn't be so bad, except that now they tack your e-mail address onto the image request so that they know that **you** viewed their message. This seemingly safe image request will tag your e-mail in their database as live and you will get even more spam.

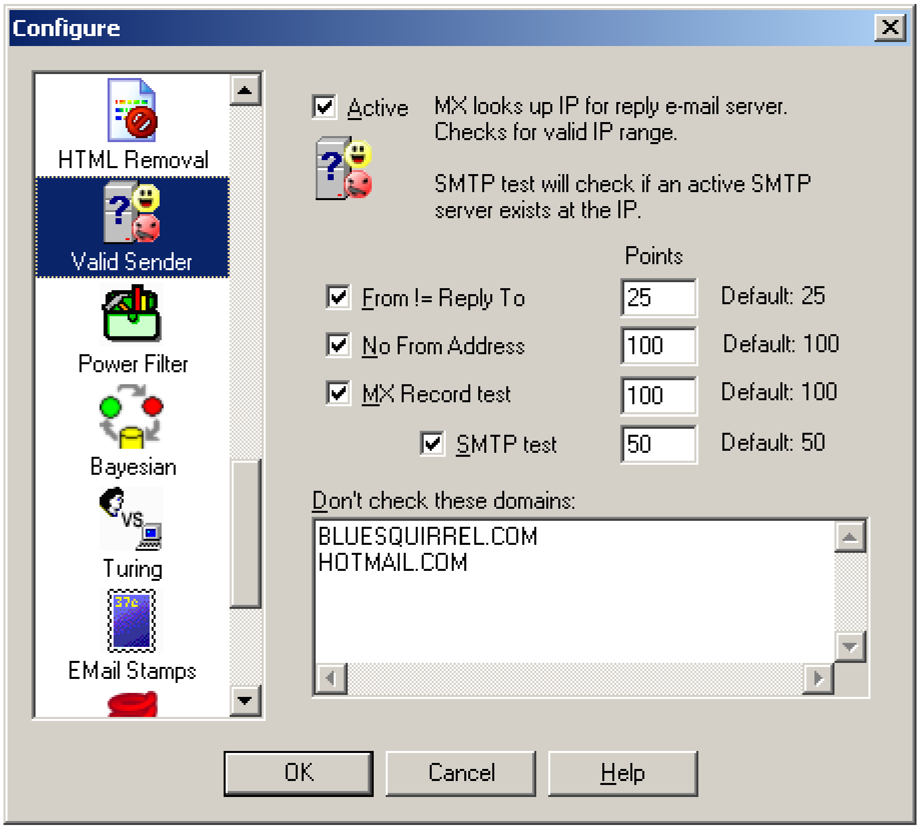
Read Receipts - This is an e-mail header tag that tells some e-mail clients to notify the sender that you've read their message. Some e-mail programs ignore it, some let you decide whether to notify the sender, and some just notify the sender automatically. Spammers don't use these very often, but you may want to remove the Read Receipt Request tags from your e-mail.

Assign points to these as you wish. Some valid newsletter use external images and some use internal images. If you don't subscribe to newsletters, you may want to increase the points.

3.1.16 Valid Sender

Have you ever wondered what would happen if you replied to spam and asked them to remove you from their list? If they aren't a reputable company (which many aren't) you will be flagged as a "live prospect" and your name will probably be sold to other spammers. By replying, you let them know that there is a real person at an active e-mail account. You may not be able to e-mail them back for a number of reasons. The **Valid Ssender Analyzer** looks for these reasons and increases the spam points if the e-mail fails the tests. If the "From" address is not the same as the "Reply To" address, it may indicate deception and some points will be added. The addresses not matching often occurs when a company hires a spam company. The "Reply To" goes back to the spam company so they can handle the backlash. The **Valid Ssender Analyzer** also looks for an empty

"From" address. If there isn't anybody to whom you can send a reply, it isn't likely that the e-mail is good. The final steps are to verify that there is an IP address to which a reply could be sent. If that works, then a quick test lets the **Valid Ssender Analyzer** know whether there is a real computer receiving e-mail on the other end.



☑ Active

MX looks up IP for reply e-mail server.
Checks for valid IP range.

SMTP test will check if an active SMTP server exists at the IP.

	Points	
☑ From != Reply To	25	Default: 25
☑ No From Address	100	Default: 100
☑ MX Record test	100	Default: 100
☑ SMTP test	50	Default: 50

Don't check these domains:

BLUESQUIRREL.COM
HOTMAIL.COM

The Valid Sender Analyzer looks at the sender of the e-mail to determine their willingness to accept a return e-mail. Usually spammers don't want to be contacted. They send out millions of e-mails and if even 1% replied to ask a question, it would be very bad for them.

The first test is whether the ***From*** is equal to the ***Reply To*** address. E-mails can have one address that specifies where it is from (often a lie), and another address for where a reply should go. If the two don't match it is a indication of spam. Sometimes a company (not very reputable) will contract with another company to handle the spam responses. In this case From might be joe@slimeycompany.com while the Reply To could be bucket@spam-handler.com.

The second test is whether there is a real e-mail address to which you could send a reply. The spammer might send no ***From*** address at all. If the ***From*** is blank, it probably means they don't want to be contacted and the probability is high that the message is spam.

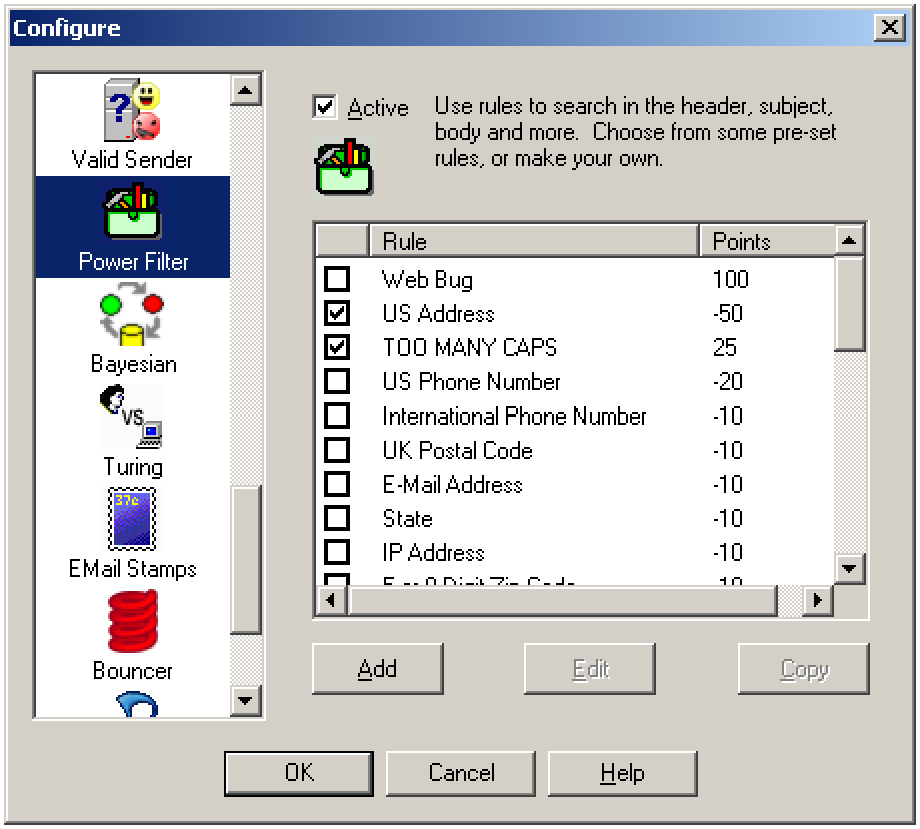
An MX Record test takes a few seconds. Your computer will look up the e-mail address and make sure there is an IP address available to send a reply if you wanted to send one. In the physical world this would be equivalent of looking up the return address on an envelope in the phone book.

If the MX Record succeeds then we can do one more test - the SMTP test. The SMTP test takes some time. We can check to see if there is a server there to accept our reply. In the physical world, this is equivalent of driving to the return address listed on the envelope and making sure there is a mailbox there.

You may not want to do an MX record check and SMTP test on every e-mail. Put those domains in the box. There are two good reasons not to do the test.

1) Some domains don't allow an SMTP test without first sending e-mail. These would fail the SMTP test every time.
2) Your business domain. There is no reason to check your own domain every time. At a company you would get lots of e-mail from that one domain.

3.1.17 Power Filter



☑ Active

Use rules to search in the header, subject, body and more. Choose from some pre-set rules, or make your own.

	Rule	Points
□	Web Bug	100
☑	US Address	-50
☑	TOO MANY CAPS	25
□	US Phone Number	-20
□	International Phone Number	-10
□	UK Postal Code	-10
□	E-Mail Address	-10
□	State	-10
□	IP Address	-10
□	5 or 9 Digit Zip Code	-10

The Power Filter Analyzer lets you set up very powerful filters that work on specific parts of messages. Set up filters that analyze just the Subject, or only the Headers.

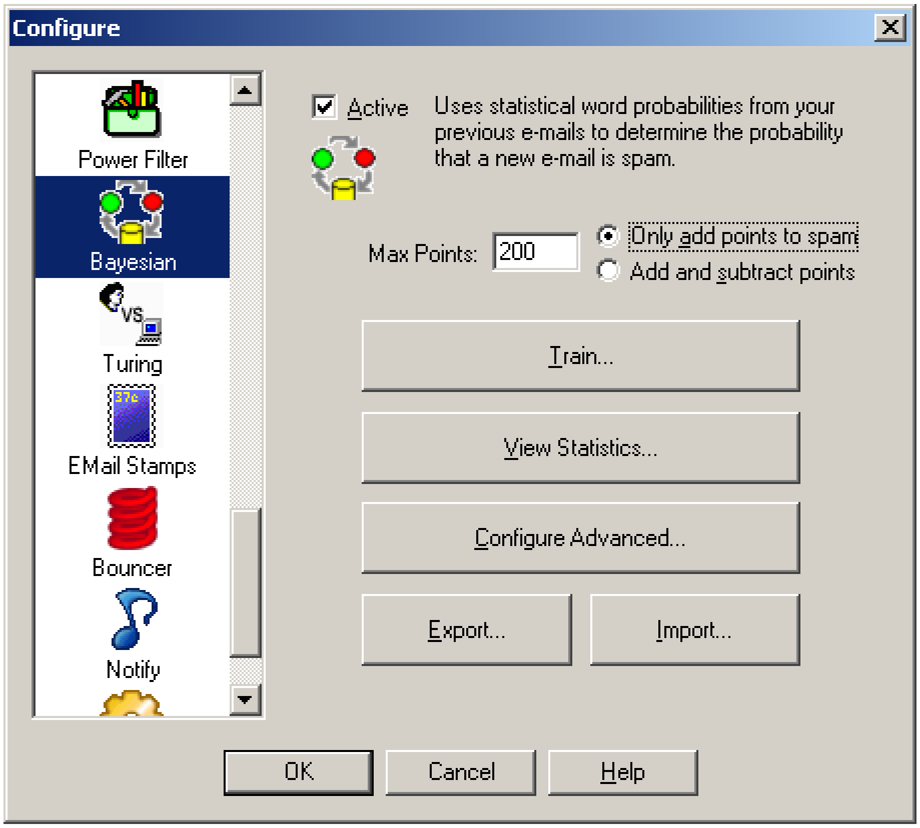
Some pre-defined filters have been set up. You cannot edit the pre-defined filters. You can turn them on or off. If you want to change them, just make a copy, by selecting one and hitting the Copy button. Then you can turn off the pre-defined filter and tailor the copy to your own liking.

The pre-defined filters use a powerful regular expression syntax that allows complex pattern matching. The details of the regular expression syntax are listed in Appendix A. Be careful, as some complex regular expressions can take a long time to match in a large e-mail message.

3.1.18 Bayesian

What if there was a way that a computer could learn what spam looks like, then detect new and novel messages without being told about specific words or phrases?

The Bayesian Analyzer does this. It looks at your previous e-mail and learns the characteristics of spam and good e-mail. Just like a baby, it needs to be taught right from wrong. By marking your messages as Good or Spam, and then Train the **Bayesian Analyzer**, you can teach it right from wrong. Then it can contribute to the decision of whether a new e-mail is spam or not.



☑ Active

Uses statistical word probabilities from your previous e-mails to determine the probability that a new e-mail is spam.

Max Points: 200

● Only add points to spam

○ Add and subtract points

The Bayesian Analyzer uses statistics to determine whether an e-mail is spam based on analysis of previous e-mails. We have included a brief description of how it works.

Max Points - sets the maximum number of points that the Bayesian Analyzer can contribute the spam score. If the Bayesian Analyzer is not certain, then only a couple of points might be added or deducted.

Only add points to spam - Setting this option will cause the Bayesian Analyzer to only add to the spam score. The number of points it adds is determined by the statistical analysis.

Add and subtract points - Setting this option will allow the Bayesian Analyzer to add points for spam and deduct points if the e-mail message is determined statistically to be a good message. With this option set, the Bayesian Analyzer can add or deduct Max Points.

You must train the Bayesian analyzer with previous e-mails. Training is not difficult, but it does require that you correct any mistakes that Spam Sleuth might have made in the past. You must also let Spam Sleuth keep your good e-mail so that it has both spam and good e-mail with which to train.

Steps:

1. Turn on 'Score and store non-spam messages'.
2. Correct any mistakes by using Mark as Good and Mark as Spam.
3. Hit the Train button

Train - Lets you train the analyzer with previous e-mails.

View Statistics - Lets you see how many e-mails have been trained and the distribution of probabilities.

Export... - Export the word probabilities to a comma separated (.CSV) file.

Import... - Import the word probabilities from a comma separated (.CSV) file.

3.1.18.1 How Bayesian Analysis Works

The Bayesian Analyzer uses Naive Bayesian statistics to calculate the probability that an unknown e-mail is spam or not. It uses the information from your previous e-mails to make its determination.

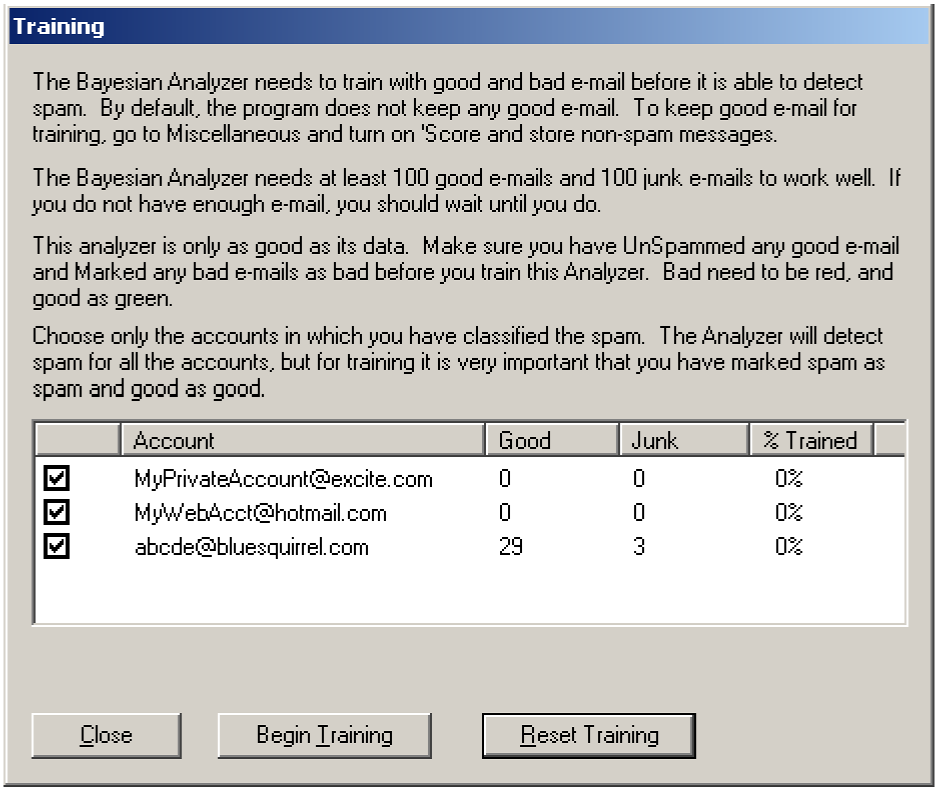
Every e-mail is broken down into words. For every word, the analyzer figures out the probability of a message being spam if that word appears in the text of the e-mail. This information is built during training. In order for the Bayesian Analyzer to figure out these probabilities, it must know in advance whether an e-mail is spam or good. Therefore, it is critical, that you correct any mistakes that Spam Sleuth may have made before training. If you don't correct the mistakes, the Bayesian Analysis will reinforce the mistakes.

Once the Bayesian Analyzer has figured out the probabilities for the words, it stores them in a dictionary file. If you want to see the word probabilities, you can Export the file in comma separated format.

When a new e-mail comes in, it is broken down into words, and the 15 most influential words are used to calculate a probability that the message is spam using formulas established by Thomas Bayes. The most influential words are those that have probabilities near 0 (absolutely a good e-mail) or near 1 (absolutely a spam e-mail). If you would like Spam Sleuth to use more or fewer words in its calculation, you can change it in the Advanced settings.

The end result from the Bayesian Analyzer is a probability that the e-mail is spam. This is converted into points using an logarithmic algorithm which adds or subtracts many points when the Bayesian Analyzer is certain of its decision. The Bayesian Analyzer adds or subtracts only a few points, or none at all, when it is not very sure whether an e-mail is good or spam.

3.1.18.2 Train



Training

The Bayesian Analyzer needs to train with good and bad e-mail before it is able to detect spam. By default, the program does not keep any good e-mail. To keep good e-mail for training, go to Miscellaneous and turn on 'Score and store non-spam messages.

The Bayesian Analyzer needs at least 100 good e-mails and 100 junk e-mails to work well. If you do not have enough e-mail, you should wait until you do.

This analyzer is only as good as its data. Make sure you have UnSpammed any good e-mail and Marked any bad e-mails as bad before you train this Analyzer. Bad need to be red, and good as green.

Choose only the accounts in which you have classified the spam. The Analyzer will detect spam for all the accounts, but for training it is very important that you have marked spam as spam and good as good.

	Account	Good	Junk	% Trained
☑	MyPrivateAccount@excite.com	0	0	0%
☑	MyWebAcct@hotmail.com	0	0	0%
☑	abcde@bluesquirrel.com	29	3	0%

To train the Bayesian analyzer, you should have good e-mail, and spam e-mail. You should have at least 100 of each. If you do not have 100 of each, we recommend that you wait until you do.

If you do not have any good mail, then make sure you have turned on 'Score and store non-spam messages'

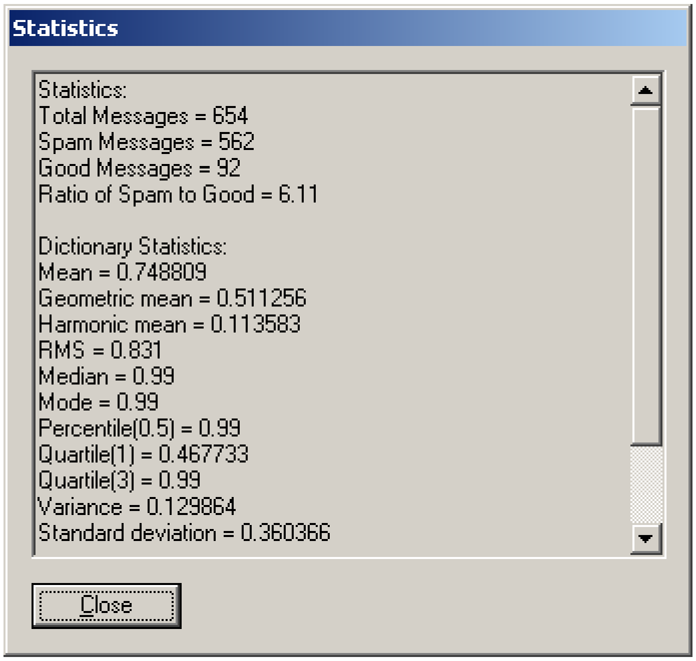
Choose only the accounts for which you have categorized the e-mail as spam and good. The spam messages should have a red dot next to them, and the good messages should have a green dot next to them. Spam Sleuth will do most of the work automatically, but you need to correct any mistakes it may have made before training.

Begin Training starts the training. If you have trained on some e-mails already, then any new e-mails will be added to the dictionary.

Reset Training will erase all the training. We recommend you do this if you have bad training.

The **% Trained** will always show 0% when you enter. The % trained will change as it trains.

3.1.18.3 View Statistics

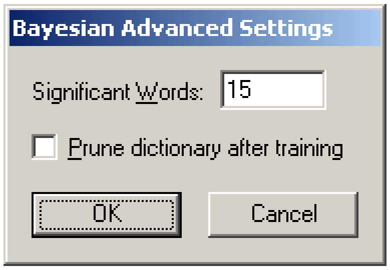


```
Statistics:
Total Messages = 654
Spam Messages = 562
Good Messages = 92
Ratio of Spam to Good = 6.11

Dictionary Statistics:
Mean = 0.748809
Geometric mean = 0.511256
Harmonic mean = 0.113583
RMS = 0.831
Median = 0.99
Mode = 0.99
Percentile(0.5) = 0.99
Quartile(1) = 0.467733
Quartile(3) = 0.99
Variance = 0.129864
Standard deviation = 0.360366
```

This shows the statistics for the Bayesian Analyzer. If you have not trained the Bayesian Analyzer, you must train it first.

3.1.18.4 Advanced



Significant Words: 15

□ Prune dictionary after training

This lets you set some advanced features and settings of the Bayesian Analyzer.

Significant Words - By default, the Bayesian Analyzer uses the 15 most significant words (by their probability) to determine whether the e-mail is spam or good.

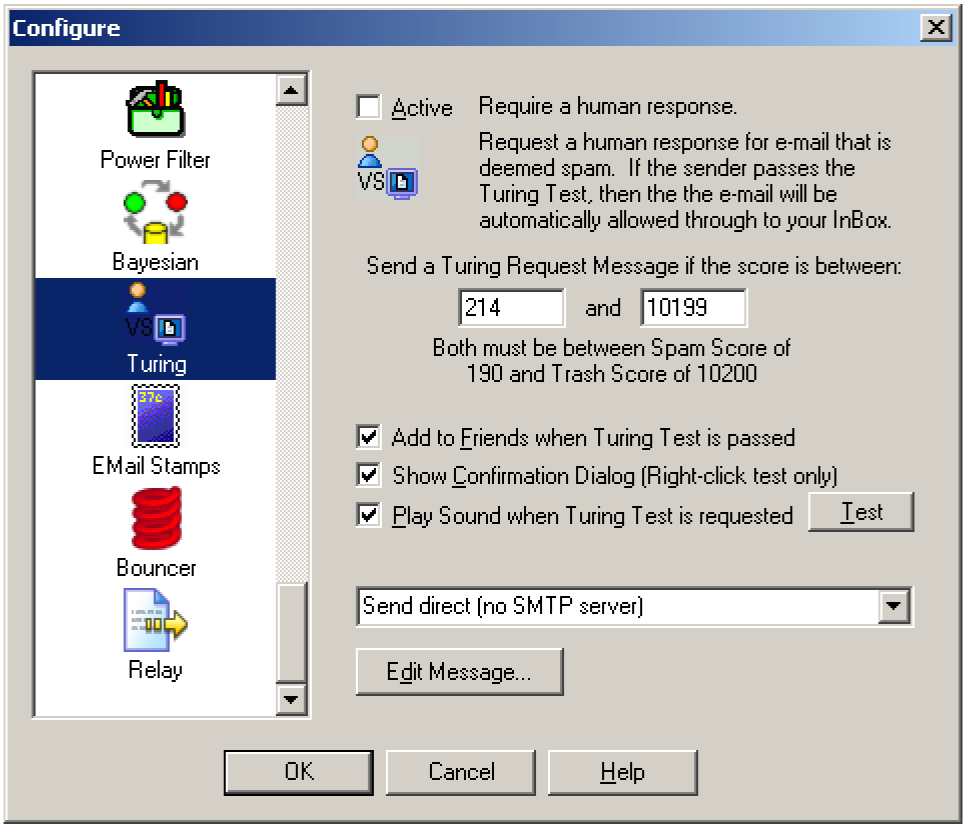
Prune dictionary after training - determines whether the dictionary will be purged of non-significant words before saving. The non-significant words are words that have not appeared enough times in your spam or good e-mails to be considered in the calculations. This is not selected by default because if you train incrementally, the word counts need to be retained because one additional e-mail might cause the word to be significant. If you Prune the dictionary after training, the dictionary file will be smaller, but the word counts for non-significant words will not be retained for future training sessions.

3.1.19 Turing

What if there were a way to **make sure** you get good e-mail even if Spam Sleuth detected it as spam for some reason?

Well there is, but you have to turn it on. We **highly recommend** that you turn this Analyzer on. The only reason it isn't on by default is that it sends out e-mail.

The Turing Analyzer will send a challenge e-mail message to any message detected as spam, and give them a chance to take a test to let their message through. The spammers won't do it, but everyone else will.



Configure

☐ Active Require a human response.

Request a human response for e-mail that is deemed spam. If the sender passes the Turing Test, then the the e-mail will be automatically allowed through to your InBox.

Send a Turing Request Message if the score is between:

214 and 10199

Both must be between Spam Score of 190 and Trash Score of 10200

☑ Add to Friends when Turing Test is passed

☑ Show Confirmation Dialog (Right-click test only)

☑ Play Sound when Turing Test is requested

Send direct (no SMTP server)

The Turing Test is a great way to make sure you get important e-mails, but still screen out the automated spam. It is not on by default, but we recommend that you turn it on.

The default is to send a Turing Test for all messages between the Spam Score and the Trash Score. You can choose a different range if you'd like.

If an e-mail is determined to be spam, you can request a Turing Test. This request will send an e-mail back to the sender requesting that they prove they are human, and not an automated spam machine. There will be a link in the e-mail that takes them to a web site where they can pass an easy (for humans) test, then the original e-mail they sent will be marked as good, and released to your InBox.

Add to Friends - Selecting this option will add everyone who passes the Turing Test to your Friends list so their future e-mails will be automatically accepted.

Show Confirmation Dialog - Decide whether to show a confirmation when using right-click to request a Turing Test.

Play Sound when Turing Test Requested - Plays a sound when requesting a Turing Test (automatically or with right-click). To change the sound, replace the `TuringReq.wav` file in the program directory.
This is a really great Analyzer to turn on if you want to make sure you get e-mails from long lost friends and people who are trying to reach you.

Edit Message... - Allows you to edit the Turing message.

The message will be available (to be released by the Turing Test) for the same number of days that you keep your spam. The default is 30 days, but you can increase or decrease it by going to the Score settings.

Important Note: You should turn on *Turing Test* **or** *EMail Stamps*, **or** *Bouncer*, but you should only turn on one of them.

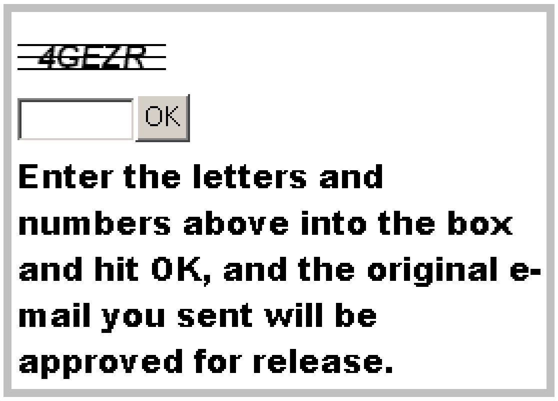
Advanced Capabilities

- **Trigger Message Absorption** - Deletes the message that triggers the release of an e-mail so the entire process is transparent to you.
- **Bounce Absorption** - Hides Turing Requests that bounce back because the spammer faked their e-mail address.
- **E-Mail Loop Detection** - Won't send another Turing Request to the same e-mail address within an hour to avoid rapid sending back and forth with a vacation auto-responder.

3.1.19.1 Turing Test

The Turing Test is named after Alan Turing. Alan proposed a test in the 1950's to distinguish a human from a machine.

The Turing Test used by Spam Sleuth is a simple test which is not easily automated by a computer. The test taker simply enters the letters shown into a box. The letters are partially obscured to make it more difficult for a computer to pass the test.



Enter the letters and numbers above into the box and hit OK, and the original e-mail you sent will be approved for release.

When a Turing Test is requested, an e-mail will be sent back to the sender, which requests that they click on a link and verify that they are human. Once they've passed this simple test, a message will be sent to your e-mail box which releases the original e-mail to your InBox.

The net effect is that you can set your spam screening even tighter (lower your spam threshold score) with assurance that if a good message is mistaken for spam, the original sender will get a chance to prove they are not a bulk spammer and their message will be delivered.

3.1.19.2 Sample Turing Message

I use Spam Sleuth to screen all my e-mail. The message you sent to me has been queued for delivery, but has not been delivered because Spam Sleuth did not recognize your From address.

If you would perform the following simple action, your message will be delivered to my InBox and your From address will be added to Spam Sleuth so that any further e-mails from you will go straight to my InBox for my prompt attention.

Go to:
http://www.spamsleuth.com/t/t.html?T=ASampleAYmx1ZXNxdWlycmVsLmNvbSx0cm9uYmxhMessageob28uY29tLDAzMDUwTjEyMTgxNjczMg==

At that site, you will be asked to type a few letters. The e-mail you sent earlier will then be automatically delivered to my InBox. You won't need to send your message again.

3.1.19.3 Advanced

The Turing Analyzer gets e-mail messages that release the e-mail messages when senders pass the Turing Test. These messages are deleted unless you change this setting.
TURING.INI

```
[Settings]
RemoveTuringNotifications=1   ;Default is 1 - Set to 0 to keep those messages
```

The Turing Analyzer sends e-mail requests which may bounce if the e-mail address has been faked or is no longer valid. The Turing Analyzer can absorb those bounces so that you don't see them. To turn off this feature, set the value to 0.

```
RemoveTuringRequestBounces=1  ;Default is 1 - Set to 0 to keep the bounces
```

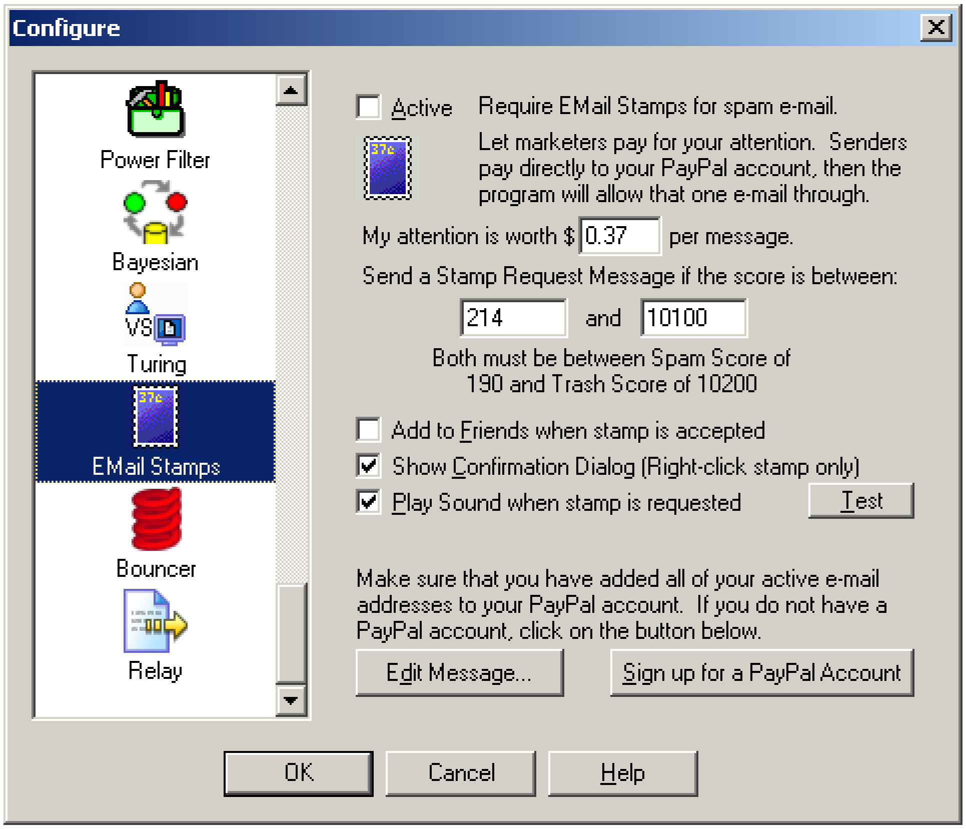
3.1.20 EMail Stamps

Have you ever said "If I had a nickel for every spam I get..." Well, now its possible.

Just turn on **EMail Stamps**, and spammers will get a request for a nickel. If they pay the nickel, you keep the nickel, and the e-mail is allowed.

If your time is worth more than a nickel a message, just change it to a dollar, or more.

We recommend turning on Turing or **EMail Stamps**, but not both.



□ Active Require EMail Stamps for spam e-mail.

Let marketers pay for your attention. Senders pay directly to your PayPal account, then the program will allow that one e-mail through.

My attention is worth $ 0.37 per message.

Send a Stamp Request Message if the score is between:

214 and 10100

Both must be between Spam Score of 190 and Trash Score of 10200

□ Add to Friends when stamp is accepted

☑ Show Confirmation Dialog (Right-click stamp only)

☑ Play Sound when stamp is requested

Make sure that you have added all of your active e-mail addresses to your PayPal account. If you do not have a PayPal account, click on the button below.

The EMail Stamps Analyzer is not active by default.

The EMail Stamps Analyzer will automatically request a payment from an unknown sender. When an e-mail reaches a certain points threshold, it will ask for an EMail Stamp. The sender (probably a spammer), will receive an e-mail requesting a payment be made to allow their e-mail to be released to your InBox.

The request e-mail is not sent unless the message reaches the points threshold that you set. Anyone listed in Friends or Mailing Lists will not get the EMail Stamp request. Most messages that do not have junk characteristics will not trigger the request (unless you set the custom points very, very low).

You set the amount requested. It can range from a penny ($0.01) to almost a thousand dollars ($999.99). Do not expect to get rich from this. Most spammers do not look at the responses to their blast e-mails. Thirty-seven cents ($0.37) is a reasonable amount. A long lost friend might pay it to get in touch with you, and you can give the money back when you go to lunch.

Spam Sleuth queues the e-mail and if/when payment is made, the e-mail is released to your InBox.

To use this Analyzer, you will need an active PayPal account. You can click on the "Sign up for a PayPal Account" if you don't already have one. It is free to sign up, but you do provide a credit card or bank account. PayPal is an independent third-party payment processor. The PayPal sign up link does send our affiliate ID to PayPal as a referrer.

For this Analyzer to work properly, your PayPal account must be linked to your e-mail address. A PayPal account can have up to seven e-mail addresses.

Edit Message... - Allows you to edit the EMail Stamp outgoing message.

If you **want** to read the message before the sender/spammer pays you, you can. The message will be in the Mail Jail marked as spam.

Click here to go online and see a sample EMail Stamp request.

Important Note: You should turn on *Turing Test* **or** *EMail Stamps*, **or** *Bouncer*, but you should only turn on one of them.

Warning: The EMail Stamp request sent to the sender/spammer will identify your PayPal account by e-mail which is linked with your name. If you are uncomfortable with this, then do not activate the EMail Stamps Analyzer.

3.1.20.1 Sample EMail Stamp Request

Subject: EMail Stamp Request for {The Original Subject}

I use EMail Stamps to curb the flow of unwanted junk e-mail. Your message has been queued for delivery. If you would like your message delivered to my InBox, it will cost you $0.37.

This modest sum is enough to keep unwanted junk e-mail from flooding my account. This e-mail was sent to you only because you contacted me by e-mail. Thank you for your understanding.

If you choose not to pay, I completely understand, and I respect your decision.

If your message is important, and you choose to pay $0.37 to allow your e-mail through, the message will be automatically sent once PayPal informs me that the payment has been made. There is no need to send the message again.

You can pay me securely by PayPal with Visa, Mastercard, Discover or American Express. If you do not have a PayPal account, you can sign up for one at no cost.

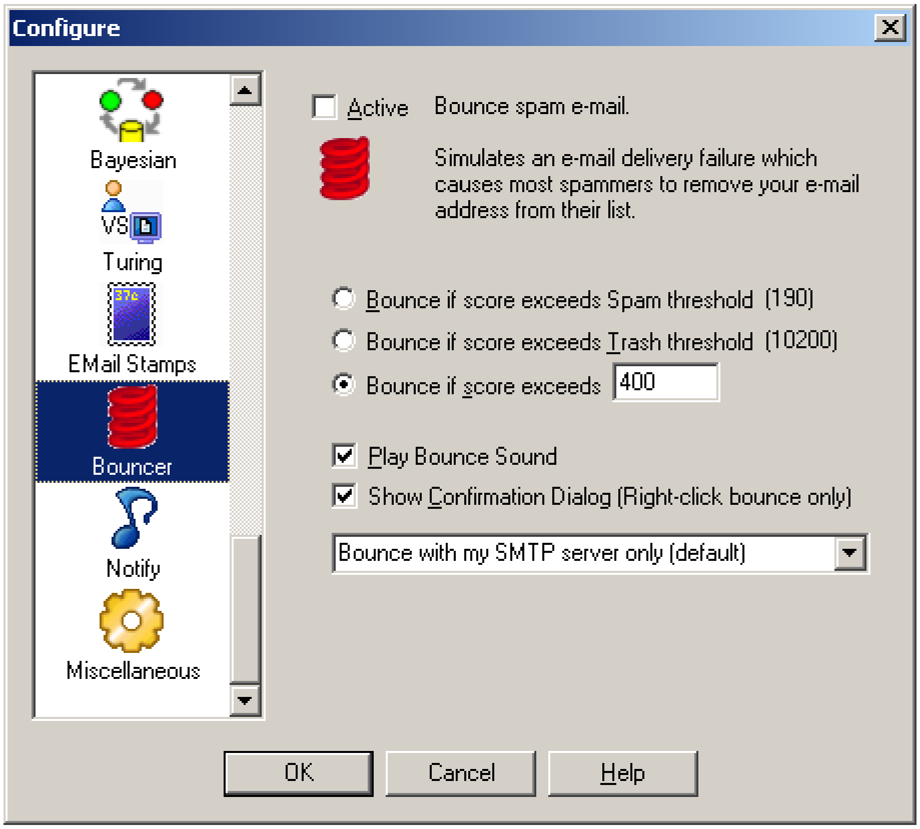
Sign up for PayPal

3.1.21 Bouncer

Ever wish you could just automatically get off the spammers lists? Well the only way they'll take you off their lists is if you don't exist. The **Bouncer Analyzer** can do just that. Or, at least make the spammers think you don't exist.

When the spammers send an e-mail to a non-existent account, they get a non-deliverable e-mail back from the last e-mail server in the chain. The **Bouncer Analyzer** can fake that non-deliverable e-mail and send it back to the spammers making them think you have dropped off the planet. They take you off their list and everybody wins (except the spammer).

If you want to make sure you get important messages, we recommend that you turn on Turing instead.



□ Active Bounce spam e-mail.

Simulates an e-mail delivery failure which causes most spammers to remove your e-mail address from their list.

○ Bounce if score exceeds Spam threshold (190)
○ Bounce if score exceeds Trash threshold (10200)
● Bounce if score exceeds 400

☑ Play Bounce Sound
☑ Show Confirmation Dialog (Right-click bounce only)

Bounce with my SMTP server only (default)

The Bouncer Analyzer is not active by default.

The Bouncer Analyzer will look at the Total Score for the message and if it exceeds the specified threshold, it will simulate an e-mail bounce. An e-mail bounce is a message usually sent by an e-mail server to let the sender know that their message was not deliverable. The simulated bounce will let the spammer know that your e-mail address doesn't exist anymore. This will cause most of the junk e-mailers to remove you from their list. They don't want to spend their resources sending e-mail to non-existent accounts.

Using this will cut down on the amount of spam that you receive in the future.

It is turned off by default because it sends out e-mail.

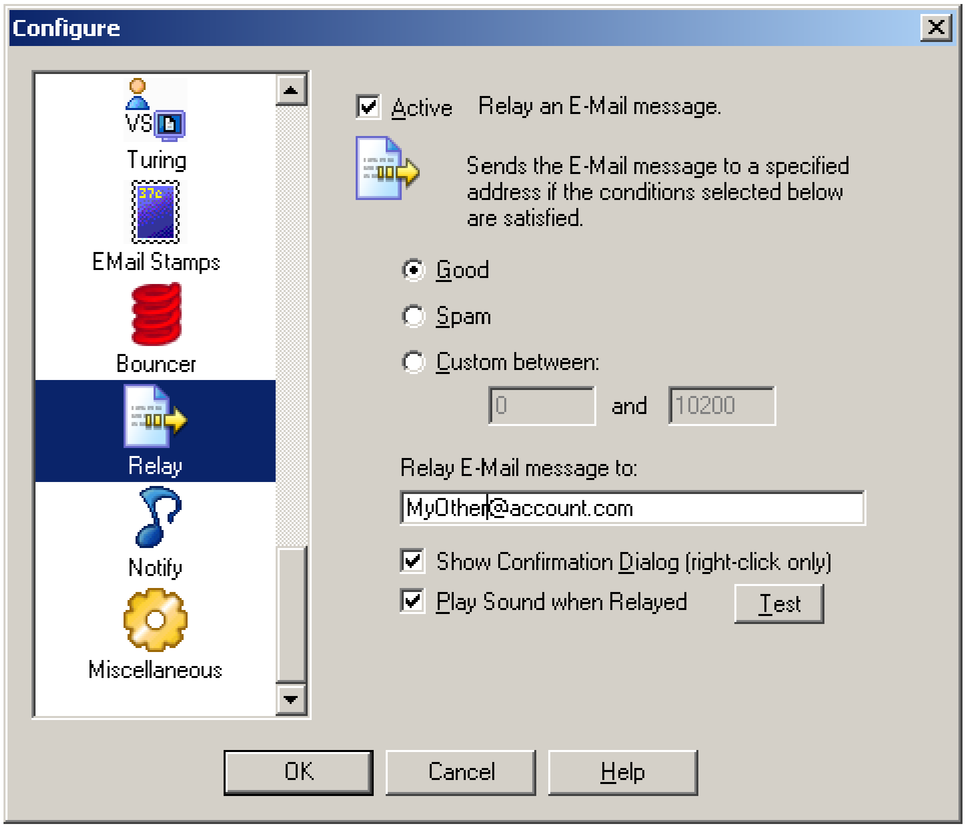
Bounce Method:

Bounce with my SMTP server only (default) - Uses the SMTP server you have set for the account to send a non-deliverable report (bounce).
Bounce direct only - Sends the non-deliverable report (bounce) directly to the SMTP server of the sender. This will usually be slower. Choose this one if the default gives you a message every time that the bounce failed.
Bounce with my SMTP server then direct - Tries to send using your SMTP server which may fail be rejected (depends on your SMTP server), and then it sends direct.

Important Note: You should turn on *Turing Test* **or** *EMail Stamps*, **or** *Bouncer*, but you should only turn on one of them.

3.1.22 Relay

Do you want to screen e-mails on a junk account and forward the good stuff to your "real" e-mail account? Or, do you have an e-mail account on your cell phone or PDA that you only want the really good e-mail from Friends, your boss, etc. Use the Relay Analyzer to automatically forward the best e-mail.



Configure

☑ Active Relay an E-Mail message.

Sends the E-Mail message to a specified address if the conditions selected below are satisfied.

● Good

○ Spam

○ Custom between:

0 and 10200

Relay E-Mail message to:

MyOther@account.com

☑ Show Confirmation Dialog (right-click only)

☑ Play Sound when Relayed

The Relay Analyzer can relay messages based on its score. It is not on by default. This is useful for sending important messages to a PDA account, a pager, etc. You can protect your PDA e-mail account by giving out your regular e-mail address and then only passing along e-mail that is from a known Friend.

Good - Only relay messages that don't reach your spam threshold.
Spam - Only relay messages that exceed your spam threshold.
Custom - Set a custom score range. Perhaps you only want to relay messages that are from Friends, set the score to -20000 to -20000

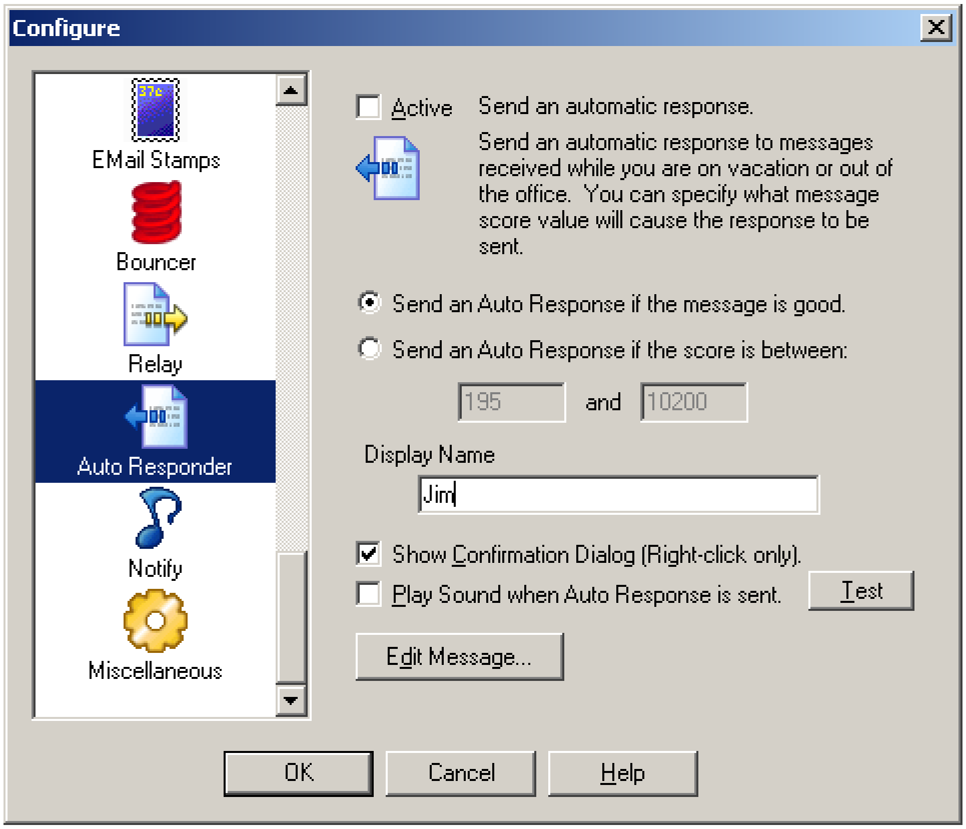
Relay E-mail message to: - Set the e-mail address of a valid e-mail account.

Show confirmation dialog (right-click only) - Check this option if you want to see a confirmation dialog when messages are relayed.

Play sound when Relayed - Check this option if you want to play a sound when messages are relayed.

3.1.23 Auto Responder

Are there times when you can't respond to your e-mail? Use the **Auto Responder** to let people know that you are away from e-mail, but you'll get back to them when you are able. Perhaps you've changed your address and you'd like to automatically let people know to use a different e-mail address in the future.



□ Active Send an automatic response.

Send an automatic response to messages received while you are on vacation or out of the office. You can specify what message score value will cause the response to be sent.

● Send an Auto Response if the message is good.

○ Send an Auto Response if the score is between:

195 and 10200

Display Name

Jim

☑ Show Confirmation Dialog (Right-click only).

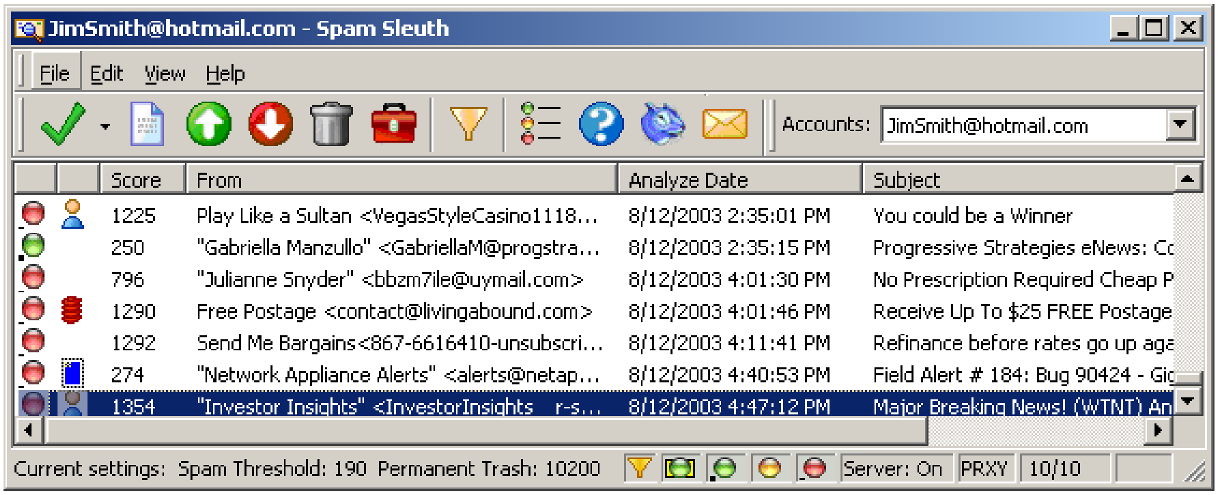
□ Play Sound when Auto Response is sent.

The Auto Responder sends an automatic message. A default message is included, but you can edit it to say whatever you'd like. The message will go back to the sender as listed in the From: or Reply To:.

This Analyzer is not on by default. You should only turn it on if you want an automatic reply.

The **Auto Responder** does influence whether the message reaches your InBox.

3.2 Mail Jail



Accounts: JimSmith@hotmail.com

		Score	From	Analyze Date	Subject
🔴		1225	Play Like a Sultan <VegasStyleCasino1118...	8/12/2003 2:35:01 PM	You could be a Winner
🟢		250	"Gabriella Manzullo" <GabriellaM@progstra...	8/12/2003 2:35:15 PM	Progressive Strategies eNews: Cc
🔴		796	"Julianne Snyder" <bbzm7ile@uymail.com>	8/12/2003 4:01:30 PM	No Prescription Required Cheap P
🔴		1290	Free Postage <contact@livingabound.com>	8/12/2003 4:01:46 PM	Receive Up To $25 FREE Postage
🔴		1292	Send Me Bargains<867-6616410-unsubscri...	8/12/2003 4:11:41 PM	Refinance before rates go up aga
🔴		274	"Network Appliance Alerts" <alerts@netap...	8/12/2003 4:40:53 PM	Field Alert # 184: Bug 90424 - Gi
🔴		1354	"Investor Insights" <InvestorInsights r-s...	8/12/2003 4:47:12 PM	Major Breaking News! (WTNT) An

Current settings: Spam Threshold: 190 Permanent Trash: 10200 Server: On PRXY 10/10

The Mail Jail stores the spam for a short period of time.

Here are the reasons you would store spam:

- To provide a way to get a good message back if the program incorrectly determines it to be spam.
- To provide a set of spam so the Bayesian Analyzer can train.
- To be able to see reports on how and why a messages was marked as spam.
- To provide a list of spam mail so you determine the effectiveness of the program.

The Mail Jail also provides these abilities:

- To view spam messages in a safe environment.
- To keep a report for every spam.
- To recover a message that was marked as spam.
- To keep a report for every non-spam if you choose "Score and store non-spam messages"
- To see spam for a single account or for multiple accounts in one place.
- To select and request Turing.
- To select and bounce messages.
- To select and request EMail Stamps.
- To add sender's addresses to Friends.
- To add spammer's addresses to Spammers.
- To rescore messages to assist in tuning.
- To see the results of a Bayesian test for previous messages after training.
- To see amount of spam that you receive on a daily basis.
- To view spam reports for messages.

The Mail Jail lets you view your spam. It lists the score, who it was from, an action status, the date (as reported by the e-mail message) and the subject. You can double-click to view a message in a safe viewer. The viewer will not show pictures, it will not run Java script, and it will not let you launch an attachment.

🔴 There is a red dot next to spam messages that were analyzed and found to be spam. These messages will always contain the unmodified message. The report may specify that the HTML or Attachments were removed, but if you Mark as Good (UnSpam) these messages, you will get the message as originally sent.

🟡 There is a yellow dot next to messages that are stored for your convenience because the original message was modified before being sent to your InBox. The message might be modified to remove a dangerous attachment, or potentially harmful script. Any time the original message is modified, a copy of the original is stored. If you want the original (untouched) message, just click on message and hit ⬆ "Mark as Good (UnSpam)"

🟢 There is a green dot next to messages that were not spam. You will not see any green dots unless you turn on the Score and Store non-spam messages in the Misc. section of configure.

The Spam Score column shows you how many points the e-mail received. Be aware that it may not be the total score, because there is a Stop Score that lets Spam Sleuth stop analyzing a message. If you always want a full report set the Stop Score to 0 in the Score configuration.

Sort the columns by clicking on a column header. Click it again to sort either ascending or descending.

Each e-mail account gets its own spam storage. Choose which account to view with the drop-down box of accounts in the upper right-hand corner.

You can *right-click* on an e-mail message and choose from the available options:

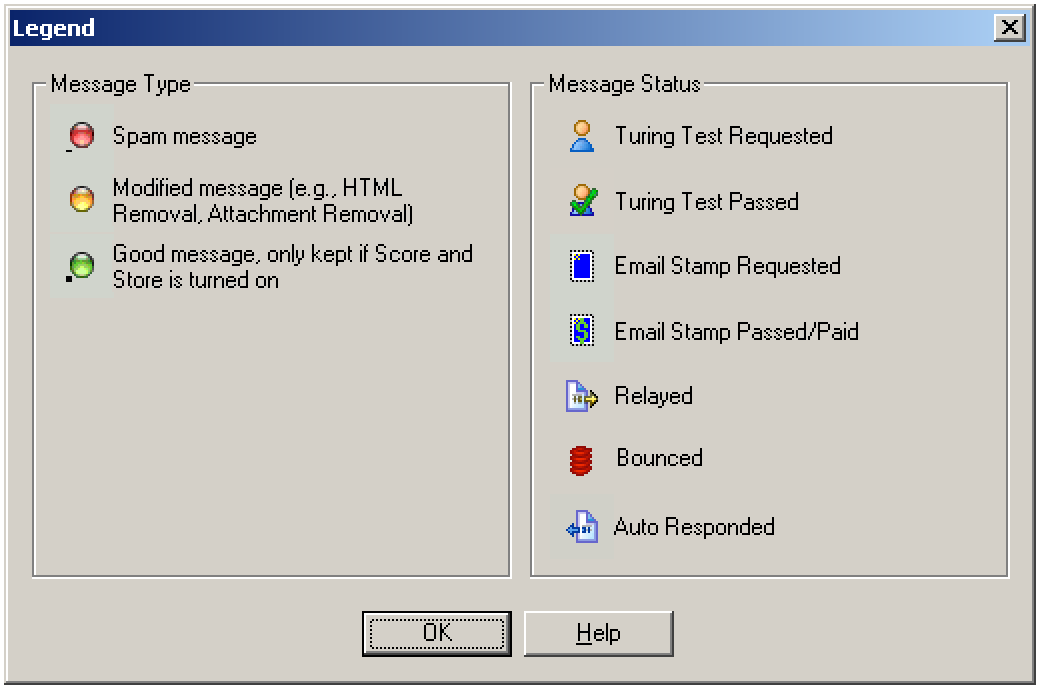
🗑 - Deletes the highlighted message(s).
📄 - Displays the current message and spam report.
⬆ - Mark as Good (UnSpam) – Sends the message back to your e-mail program.
⬇ - Mark as Spam - sets to a spam message and keeps it from being delivered to your InBox.
❓ - Displays the Program help.
▽ - Turns the Filter on and off.
☰ - Displays the legend for the color coded dots that appear next to the messages.
🐿 - Automatically opens your Web browser and launches the Blue Squirrel home page.
🧰 - Launches the Configuration dialog box.

When you double-click on a message, or choose the 📄 icon, the message will be displayed in a safe message viewer. The message viewer will not format HTML, will not run Script, and will not decode attachments. It shows you the raw message that was sent. This is sometimes very helpful to see, as you can see the tricks that spammers use to hide their message from simple filters.

3.2.1 Drag and Drop

You can 'Drag and Drop' individual messages from Outlook or Outlook Express into the Mail Jail to "Add to Friends" or "Add to Spammers". The Mail Jail must be visible and the message must have a valid From: address.

3.2.2 Legend for Spam Message Types



Message Type

- 🔴 Spam message
- 🟠 Modified message (e.g., HTML Removal, Attachment Removal)
- 🟢 Good message, only kept if Score and Store is turned on

Message Status

- Turing Test Requested
- Turing Test Passed
- Email Stamp Requested
- Email Stamp Passed/Paid
- Relayed
- Bounced
- Auto Responded

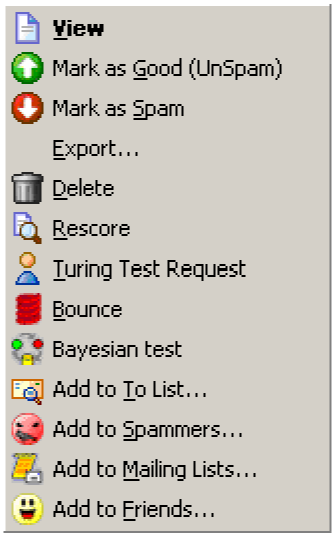
Spam message - This indicates an e-mail message was assigned points by the analyzers and the total points exceeded the spam threshold.

Modified message - This indicates an e-mail message that was modified by one or more of the Analyzers when it was being analyzed. The modified message was sent to your InBox. The original message is being held in the Mail Jail. If you need the original message, you can right-click on it and choose UnSpam.

Good message - This indicates an e-mail message that was assigned points by the analyzers and the total points did not reach the spam threshold.

It is important to note that the Good message and Spam message status is set at the time the message was analyzed, and does not change automatically when you change your spam threshold score.

3.2.3 Right Click Menu



View - Lets you view the message in the safe viewer.

Mark as Good (UnSpam) – Sends the e-mail back to your e-mail program. The message is re-mailed to your internal server.
Mark as Spam - You only need to use this if you intend to use the Bayesian Analyer. This option lets you categorize e-mail as spam.
Export – Saves a copy of the message (uncompressed) to a directory.
Delete – Deletes the message (will confirm if you have deletion confirmation turned on). Messages will be sent to the Recyle Bin unless you hold down SHIFT.
Rescore - Lets you re-score a message. This can be used for tuning. Scores may not be identical because some meta-information is not available on rescore.
Turing Test Request - Only available if the Turing Analyzer is active.
Bounce - Bounces an e-mail - See the Bouncer Analyzer for more information.
Bayesian Test - Shows you the score that the Bayesian Analyzer would give the message.
Add to To List – Adds the e-mail address in the "To:" section of the e-mail to the list of acceptable addresses. If you accept e-mail to several different e-mail addresses in the same account, you should add every one to the To Analyzer.
Add to Spammers – This will add the sender's e-mail address to the list of Spammers so you don't get a message from them again.
Add to Mailing Lists - This will add the To: field of the e-mail to the Mailing List. Use this when the From: field is always different, but the messages are sent to a list such as wine_enthusiasts@mailserv.net.
Add to Friends – This will add the sender's e-mail address to the list of Friends so you always get their e-mail in the future.

3.2.4 Menu

3.2.4.1 File

3.2.4.1.1 Configure...

Takes you to the Spam Sleuth configuration, where you can configure the Accounts and Analyzers.

3.2.4.1.2 Export...

Exports a message from its compressed format to a .MSG file which can be read by a text viewer.

3.2.4.1.3 Exit

Exits the program. This is different than hitting the X icon in the upper right-hand corner. The File->Exit will close the program completely.

3.2.4.2 Edit

3.2.4.2.1 Delete

Deletes the selected message(s) permanently and removes them from the Mail Jail. Deleting messages moves them to your Recycle Bin, so they can be recovered until you empty your Trash. If you don't want messages moved to the Recycle Bin, hold down SHIFT when you delete.

3.2.4.2.2 Delete All

Deletes all the messages from the Mail Jail after confirmation. Deleting messages moves them to your Recycle Bin, so they can be recovered until you empty your Trash. If you don't want messages moved to the Recycle Bin, hold down SHIFT when you delete.

3.2.4.2.3 Mark as Good (UnSpam)

Delivers the message to your InBox.

Sends the e-mail back to your e-mail program. The message is re-mailed to your internal server.

3.2.4.2.4 Mark as Spam

Marks the message as spam and turns the icon red. This is important for the Bayesian Analyzer for proper training.

3.2.4.2.5 Select All

Selects all the messages in the Mail Jail.

3.2.4.2.6 Refresh

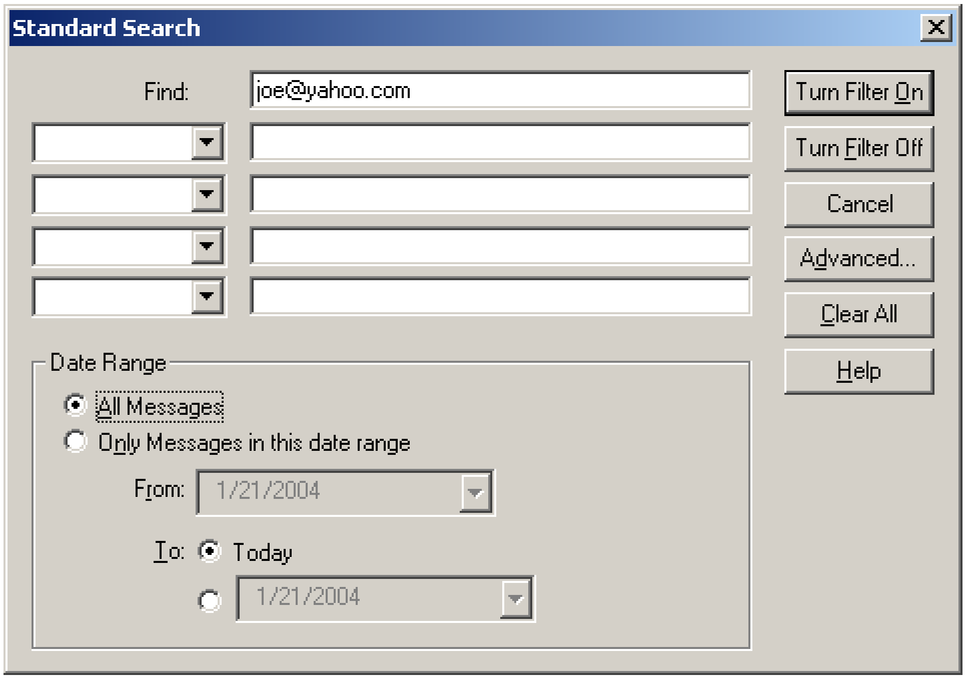
Reloads the list of spam from the server. In most cases this is automatic.

3.2.4.2.7 Filter...

This menu option turns the filter on or off. The filter indexes your messages and lets you find a message that Spam Sleuth might have missed, or that you were expecting.

Each time you use the filter, the program will index the messages that have not yet been indexed. If the index it too out-of-date, the entire set of messages will be re-indexed.

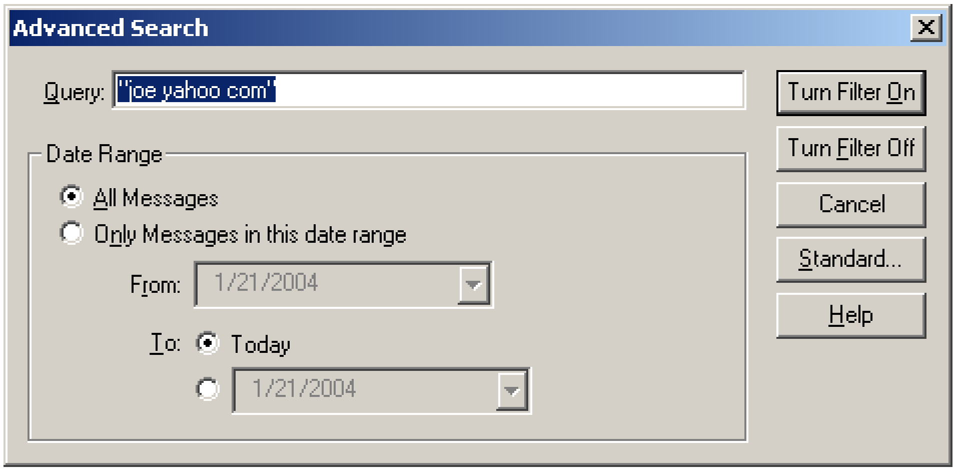
Tip: If you leave the filter on, and the Find: fields are blank, you will see all of your messages, but the messages will be indexed as they come in. This is useful if you use the Filter feature often and would like to keep the index current.


Standard Search

Find: joe@yahoo.com

Date Range
● All Messages
○ Only Messages in this date range
From: 1/21/2004
To: ● Today
○ 1/21/2004

If you want more control over the searching, you can use the Advanced Filter which gives you more control, but you need to use the syntax of the search language. See Appendix B for more information on the Advanced Filter Syntax.


Advanced Search

Query: "joe yahoo com"

Date Range
● All Messages
○ Only Messages in this date range
From: 1/21/2004
To: ● Today
○ 1/21/2004

3.2.4.3 View

3.2.4.3.1 Toolbar

Turns on/off the toolbar.

3.2.4.3.2 Status Bar

Turns on/off the status bar at the bottom.

3.2.4.3.3 Columns

Turns on/off columns in the Mail Jail

- **Icon** - Graphical indication of the type of message
- **Status** - Shows an icon for actions taken on the message. See the Legend.
- **Score** - Total spam score as assigned by the Analyzers for the message
- **Account** - The account to which the e-mail was delivered.
- **To** - The e-mail address to which the e-mail was addressed (not always the same as the account).
- **From** - The e-mail address of the sender (as reported by the e-mail message which can be faked).
- **Analyze Date** - The date and time that the message was analyzed by Spam Sleuth.
- **Email Date** - The date and time the message was sent as reported by the e-mail (can be faked).
- **Size** - The size of the message including unencoded attachments.
- **Subject** - The subject of the message as extracted from the e-mail message.

3.2.4.3.4 Display

Hides or shows the messages of certain types.

- **Still on Server** - Messages that are still on the server. This means different things depending on the mode.
- **Good** - Messages that fell below the spam score when analyzed.
- **Modified** - Messages that were modified by analyzers like HTML Removal, Attachments which can modify the message to make is safer.
- **Spam** - Messages that exceeded the spam score when analyzed.

3.2.4.3.5 View Message

Views the selected message in a safe viewer.

3.2.4.3.6 Legend

Displays the legend for the icons.

3.2.4.4 Help

3.2.4.4.1 Help Topics

Opens the help for the program.

3.2.4.4.2 About...

Shows version number and information about the program.

4 Advanced Features

4.1 Score and Store

If you turn on the Score and store non-spam in the Miscellaneous section of Configure…, Spam Sleuth will keep a record of all the green dotted messages received and you can view the score and store report in the Mail Jail. This feature comes in handy because sometimes-real messages are indeed spam, and you can view the Score and Store report to better configure Spam Sleuth so that you don't receive messages from that Spammer again. You can right-click and "Add to Spammers" to keep messages with the same From: address from making it into your InBox. For more information about the Score and Store report see the Interface section.

Spam Sleuth™ is very customizable. It has been tuned to work right out of the box. You will be able to get better performance by configuring the program for the type of e-mail that you receive.

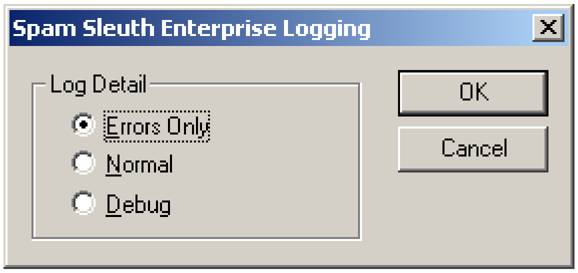
Spam Sleuth displays color coded dots next to the messages in the Mail Jail.

- Red – indicates the e-mail is spam
- Yellow – indicates the e-mail is not spam but has been modified. For example, you may have received an HTML e-mail, and Spam Sleuth stripped out all of the HTML and routed a text version of the message to your inbox.
- Green – indicates that the total amount of points the e-mail received from the Analyzers scored less than the spam threshold. For information about the threshold settings and analyzers see the Defeating Spam section in this manual.
- Green on Yellow - indicates that the message is still on the server. This has different meanings depending on the mode the account is in.

4.2 Logging

Spam Sleuth has the ability to log information which can be helpful in identifying configuration problems.

Open Spam Sleuth and hit CTRL-ALT-L to set the logging level.



Spam Sleuth Enterprise Logging

Log Detail

● Errors Only
○ Normal
○ Debug

Errors Only – Logs errors for use in tracking problems.
Normal – Logs information about start-up, accounts and shut-down.
Debug – Logs the detail of the conversations between e-mail programs and servers. Passwords are not logged even in debug level.

4.3 Tips and Tricks

4.3.1 Shortcut Keys

You can use the following shortcut keys to access features quickly without menus or using your mouse. Spam Sleuth must be active and the Mail Jail window must be open.

- **ESC** – Minimizes the Mail Jail window.
- **F5** - Refresh messages from server
- **F4** – Changes the active account in the Mail Jail.
- **CTRL-M** – Checks e-mail in the active account.
- **ALT-U** - 'U'nSpam a message
- **ALT-G** - Mark a message as 'G'ood
- **CTRL-ALT-L** – Set the logging level. The log is stored in the same directory as the program, and is named SpamSleuth.LOG. For efficiency, a new log file will be created when log becomes too large. The old log file will be named SpamSleuth.1.LOG.

4.3.2 Positive Tuning

Positive Tuning is making sure that the e-mail you want to receive is able to make it through to your InBox and will not be tagged as spam. Here are some recommendations.

- Add all your friends and co-workers to the Friends list.
- Add any mailing lists to which you subscribe to the Friends list.
- Add any topic that you are interested in to the GoodWords list. This may include sports, hobbies, services, product names, people's names, etc.

Once you've done this, then you can go to the Score analyzer configuration and lower the spam score. This will catch more spam. If you've done a good job with the positive tuning, your desirable e-mail will be getting through and the spam will be kept out.

Twice a week, or at your leisure, open the Mail Jail and sort by Score. Quickly scan for e-mails that are not spam. Usually these will have a low score. If the sender should be on your Friends list, just right-click and Add to Friends.

For each desirable e-mail that was tagged as spam, look to see if there are identifying characteristics that you can use so that you get the message in the future. The easiest is, of course, to add the sender to the Friends list. There may be a better way. Perhaps you can add the entire domain to the Friends list, or add a GoodWord that will let similar messages reach you in the future.

The goal of positive tuning is to find out why friends and non-spam were rejected and fix it without allowing an easy way in for spammers.

4.3.3 Negative Tuning

- Once you've done the positive tuning, watch for spam coming into your InBox. Look at the e-mail and see if it could've been tagged as spam.
- Does it have spam-like words? -> Add to the BadWords.
- Do you get lots from the same e-mail or domain? -> Add the e-mail or domain to Spammers.
- Do they use lots of HTML? -> Increase the points for HTML formatting.
- Do they use loud HTML (reds, yellows, large fonts)? -> Increase the max points or sensitivity in

HTML Volume.

- Did one of the analyzers find something? -> Increase the points for that if it won't knock out your good e-mail.
- Are profane e-mails getting through? -> Increase the points for Profanity.

5 Customer Support

This User's Manual focuses on your specific needs, supplying most of what you need to know to be productive with Spam Sleuth™. Below we have listed several options to choose from to assist you with any help you may need using Spam Sleuth™. Additional information about Spam Sleuth™ can be found in the README file.

5.1 Spam Sleuth Help File

To access the Spam Sleuth™ help file, click Help > Help Topics. We encourage you to use the Spam Sleuth™ help, because it's a complete, informative reference system. In addition, Help offers several advantages over the printed manual.
In the Help Index, you can type in a keyword, and the program automatically looks it up for you. While reading the Help file you can click on a "hot" phrase to jump to a related topic. And later you can retrace your steps; flipping backwards through the topics you jumped from. Or you can read topics in order, like turning the pages of a book, either forward or backward.

5.2 How to Find Specific Topics in the Help File

The Help system displays both the Contents and Index lists, providing alternative ways to get information pertaining to a specific topic. The list of Contents shows the major categories of Help. When a category is chosen, you'll be presented with Help text directly, or a pop up menu of topics, from which your choices will be narrowed. The index allows you to look up a word or phrase you have in mind. Type the word or phrase, or look in the alphabetical list for your topic, select it, and click Display.

Clicking on the highlighted word or phrase brings up a list of Associated Topics. Double click on any associated topic to read the contents. Or double click on the word or phrase to go directly to its first associated topic.

If you prefer to browse or read straight through Help, go to any topic as a starting point. From there, use the >> and << buttons to move through topics forward or backward. You can read through the entire Help system in this way.

5.3 Visit Our Web Site

Program Web Site:

http://www.bluesquirrel.com/products/SpamSleuthEnterprise/

If you cannot find the information you need at the program web site, try our FAQs located in our Technical Support area for assistance.
http://www.bluesquirrel.com/support/

5.4 Technical Support

http://www.bluesquirrel.com/support/

5.5 Customer Service

You're more than welcome to contact us via telephone. If you would like to speak with a Blue Squirrel representative regarding non-technical issues please select from the following options:

Phone: 801-352-1551
Toll Free: 800-403-0925
Fax: 801-912-6032
E-mail: sales@bluesquirrel.com
Note: Hours are: Monday through Friday, 8:00 a.m. to 5:00 p.m. Mountain Standard Time.

5.6 Mailing address

Blue Squirrel
686 E. 8400 South
Sandy, UT 84070

6 Reference

6.1 Glossary

APOP – Authenticated POP – a way of sending the password to the incoming e-mail server in an encrypted way so that it cannot be retrieved by network sniffers. Only some POP3 servers support this feature. You can test it with the POP3 Test button.

ASMTP – Authenticated Simple Mail Transfer Protocol – A specification for sending user and password information to an SMTP server. See SMTP. The original SMTP did not allow for authentication.

Blacklists – Blacklists keep track of the IP addresses of known spam servers, and open relay machines that can assist spammers. Spam Sleuth can check with these servers to determine whether an e-mail was sent from a known spam server.

Charsets – E-mail programs can specify a non-standard character set which is usually used for Chinese and Korean e-mails. E-mails that use other character sets can show additional characters. Spam Sleuth allows you to add points for these characters and also for e-mails that specify different character sets.

ESMTP – Extensions to Simple Mail Transfer Protocol – A specification for additional

features beyond SMTP. See SMTP. ESMTP servers can support additional login methods.
IMAP4 – A protocol based on RFC 1730 that allows downloading messages as well and putting messages into folders on an e-mail server. Most ISPs use POP3 instead of IMAP4. Most servers that support IMAP4 also support POP3. Spam Sleuth uses POP3 and not IMAP4.

Polling Mode – The mode in Spam Sleuth which is the opposite of POP3 Proxy Mode. In Polling Mode, Spam Sleuth must check your e-mail before your e-mail program. Any non-spam messages will be left on your e-mail server, while spam messages will be removed and temporarily stored.

POP3 – Post Office Protocol 3 – A specification for an e-mail server to talk to an e-mail client. Based on RFC 1939, POP3 specifies how an e-mail program like Eudora, or Outlook communicate with a server to get the e-mail.

POP3 Proxy Mode – The mode in Spam Sleuth which when activated in account configuration will cause Spam Sleuth to become your e-mail server. You must modify two settings in your e-mail program when using POP3 Proxy Mode. Change the Incoming (POP3) Server to localhost, and change the login/username to your full e-mail address.

Regular Expressions – A very powerful syntax for searching for complex patterns in texts such as e-mail messages. The syntax of the regular expressions used in Spam Sleuth can be found in Appendix A.

SMTP – Simple Mail Transfer Protocol – A specification for an e-mail client to send e-mail to a server, or for an e-mail server to send e-mail to an e-mail server. Based on RFC 821, SMTP specifies how e-mail is sent.

Turing Test - Named after Alan Turing, it is method of determining whether the sender was a human or a machine. A test is given to the sender which is difficult for a machine, but trival for a human.

VIP Key - An unlock code that you should have if you've purchased the program. It is usually e-mailed to you if you purchased online. It should also be on the CD or the Manual if you have the hard copy.

6.2 Appendix A (Regular Expression Syntax)

This section covers the regular expression syntax used by Spam Sleuth's Power Filter when using regular expressions for matching strings.

Literals

All characters are literals except: ".", "*", "?", "+", "(", ")", "{", "}", "[", "]", "^", "$" and "\". These characters are literals when preceded by a "\". A literal is a character that matches itself.

Wildcard

The dot character "." matches any single character except ':'

Repeats

A repeat is an expression that is repeated an arbitrary number of times. An expression followed by "*" can be repeated any number of times including zero. An expression followed by "+" can be repeated any number of times, but at least once. An expression followed by "?" may be repeated zero or one times only. When it is necessary to specify the minimum and maximum number of repeats explicitly, the bounds operator "{}" may be used, thus "a{2}" is the letter "a" repeated exactly twice, "a{2,4}" represents the letter "a" repeated between 2 and 4 times, and "a{2,}" represents the letter "a" repeated at least twice with no upper limit. Note that there must be no white-space inside the {}, and there is no upper limit on the values of the lower and upper bounds. All repeat expressions refer to the shortest possible previous sub-expression: a single character; a character set, or a sub-expression grouped with "()" for example.
Examples:
"ba*" will match all of "b", "ba", "baaa" etc.
"ba+" will match "ba" or "baaaa" for example but not "b".
"ba?" will match "b" or "ba".
"ba{2,4}" will match "baa", "baaa" and "baaaa".
Non-greedy repeats
Whenever the "extended" regular expression syntax is in use (the default) then non-greedy repeats are possible by appending a '?' after the repeat; a non-greedy repeat is one which will match the *shortest* possible string.
For example to match html tag pairs one could use something like:
"<\s*tagname[^>]*>(.*?)<\s*/tagname\s*>"
In this case $1 will contain the text between the tag pairs, and will be the shortest possible matching string.

Parenthesis

Parentheses serve two purposes, to group items together into a sub-expression, and to mark what generated the match. For example the expression "(ab)*" would match all of the string "ababab".

Non-Marking Parenthesis

Sometimes you need to group sub-expressions with parenthesis, but don't want the parenthesis to spit out another marked sub-expression, in this case a non-marking parenthesis (?:expression) can be used. For example the following expression creates no sub-expressions:
"(?:abc)*"
Forward Lookahead Asserts
There are two forms of these; one for positive forward lookahead asserts, and one for negative lookahead asserts:
"(?=abc)" matches zero characters only if they are followed by the expression "abc".
"(?!abc)" matches zero characters only if they are not followed by the expression "abc".

Alternatives

Alternatives occur when the expression can match either one sub-expression or another, each alternative is separated by a "|". Each alternative is the largest possible previous sub-expression; this is the opposite behavior from repetition operators.
Examples:

"a(b|c)" could match "ab" or "ac".
"abc|def" could match "abc" or "def".

Sets

A set is a set of characters that can match any single character that is a member of the set. Sets are delimited by "[" and "]" and can contain literals, character ranges, character classes, collating elements and equivalence classes. Set declarations that start with "^" contain the compliment of the elements that follow.
Examples:
Character literals:
"[abc]" will match either of "a", "b", or "c".
"[^abc] will match any character other than "a", "b", or "c".
Character ranges:
"[a-z]" will match any character in the range "a" to "z".
"[^A-Z]" will match any character other than those in the range "A" to "Z".
Note that character ranges are highly locale dependent: they match any character that collates between the endpoints of the range, ranges will only behave according to ASCII rules when the default "C" locale is in effect. For example if the library is compiled with the Win32 localization model, then [a-z] will match the ASCII characters a-z, and also 'A', 'B' etc, but not 'Z' which collates just after 'z'.
Character classes are denoted using the syntax "[:classname:]" within a set declaration, for example "[[:space:]]" is the set of all whitespace characters. The available character classes are:

alnum	Any alpha numeric character.
alpha	Any alphabetical character a-z and A-Z. Other characters may also be included depending upon the locale.
blank	Any blank character, either a space or a tab.
cntrl	Any control character.
digit	Any digit 0-9.
graph	Any graphical character.
lower	Any lower case character a-z. Other characters may also be included depending upon the locale.
print	Any printable character.
punct	Any punctuation character.
space	Any whitespace character.
upper	Any upper case character A-Z. Other characters may also be included depending upon the locale.
xdigit	Any hexadecimal digit character, 0-9, a-f and A-F.
word	Any word character - all alphanumeric characters plus the underscore.
unicode	Any character whose code is greater than 255, this applies to the wide character traits classes only.

There are some shortcuts that can be used in place of the character classes:
\w in place of [:word:]
\s in place of [:space:]
\d in place of [:digit:]
\l in place of [:lower:]
\u in place of [:upper:]

Collating elements take the general form [.tagname.] inside a set declaration, where *tagname* is either a single character, or a name of a collating element, for example [[.a.]] is equivalent to [a], and [[.comma.]] is equivalent to [,]. The library supports all the standard POSIX collating element names, and in addition the following digraphs: "ae", "ch", "ll", "ss", "nj", "dz", "lj", each in lower, upper and title case variations. Multi-character collating elements can result in the set matching more than one character, for example [[.ae.]] would match two characters, but note that [^[.ae.]] would only match one character.

Equivalence classes take the general form [=tagname=] inside a set declaration, where *tagname* is either a single character, or a name of a collating element, and matches any character that is a member of the same primary equivalence class as the collating element [.tagname.]. An equivalence class is a set of characters that collate the same, a primary equivalence class is a set of characters whose primary sort key are all the same (for example strings are typically collated by character, then by accent, and then by case; the primary sort key then relates to the character, the secondary to the accentation, and the tertiary to the case). If there is no equivalence class corresponding to *tagname*, then [=tagname=] is exactly the same as [.tagname.].

To include a literal "-" in a set declaration then: make it the first character after the opening "[" or "[^", the endpoint of a range, or a collating element.

Line anchors

An anchor is something that matches the null string at the start or end of a line: "^" matches the null string at the start of a line, "$" matches the null string at the end of a line.

Back references

A back reference is a reference to a previous sub-expression that has already been matched, the reference is to what the sub-expression matched, not to the expression itself. A back reference consists of the escape character "\" followed by a digit "1" to "9", "\1" refers to the first sub-expression, "\2" to the second etc. For example the expression "(.*)\1" matches any string that is repeated about its mid-point for example "abcabc" or "xyzxyz". A back reference to a sub-expression that did not participate in any match, matches the null string: NB this is different to some other regular expression matchers.

Characters by code

This is an extension to the algorithm that is not available in other libraries; it consists of the escape character followed by the digit "0" followed by the octal character code. For example "\023" represents the character whose octal code is 23. Where ambiguity could occur use parentheses to break the expression up: "\0103" represents the character whose code is 103, "(\010)3 represents the character 10 followed by "3". To match characters by their hexadecimal code, use \x followed by a string of hexadecimal digits, optionally enclosed inside {}, for example \xf0 or \x{aff}, notice the latter example is a Unicode character.

Word operators

"\w" matches any single character that is a member of the "word" character class, this is identical to the expression "[[:word:]]".
"\W" matches any single character that is not a member of the "word" character class, this is identical to the expression "[^[:word:]]".
"\<" matches the null string at the start of a word.
"\>" matches the null string at the end of the word.
"\b" matches the null string at either the start or the end of a word.
"\B" matches a null string within a word.
The start of the sequence passed to the matching algorithms is considered to be a potential start of a word.

Buffer operators

"\`" matches the start of a buffer.
"\A" matches the start of the buffer.
"\'" matches the end of a buffer.
"\z" matches the end of a buffer.
"\Z" matches the end of a buffer, or possibly one or more new line characters followed by the end of the buffer.

Escape operator

The escape character "\" has several meanings.
Inside a set declaration the escape character is a normal character.
The escape operator may introduce an operator for example: back references, or a word operator.
The escape operator may make the following character normal, for example "*" represents a literal "*" rather than the repeat operator.

Single character escape sequences
The following escape sequences are aliases for single characters:

Escape sequence	Character code	Meaning
\a	0x07	Bell character.
\f	0x0C	Form feed.
\n	0x0A	Newline character.
\r	0x0D	Carriage return.

\t 0x09 Tab character.
\v 0x0B Vertical tab.
\e 0x1B ASCII Escape character.
\0dd 0dd An octal character code, where *dd* is one or more octal digits.

\xXX 0xXX A hexadecimal character code, where XX is one or more hexadecimal digits.
\x{XX} 0xXX A hexadecimal character code, where XX is one or more hexadecimal digits, optionally a unicode character.
\cZ z-@ An ASCII escape sequence control-Z, where Z is any ASCII character greater than or equal to the character code for '@'.

Miscellaneous escape sequences:

\w Equivalent to [[:word:]].
\W Equivalent to [^[:word:]].
\s Equivalent to [[:space:]].
\S Equivalent to [^[:space:]].
\d Equivalent to [[:digit:]].
\D Equivalent to [^[:digit:]].
\l Equivalent to [[:lower:]].
\L Equivalent to [^[:lower:]].
\u Equivalent to [[:upper:]].
\U Equivalent to [^[:upper:]].
\C Any single character, equivalent to '.'.
\X Match any Unicode combining character sequence, for example "a\x 0301" (a letter a with an acute).
\Q The begin quote operator, everything that follows is treated as a literal character until a \E end quote operator is found.
\E The end quote operator, terminates a sequence begun with \Q.

What gets matched?

The regular expression library will match the first possible matching string.

Regular Expression documentation was modified by Blue Squirrel with permission. The following message applies to the regular expression matching library:

6.3 Appendix B (Advanced Filter Syntax)

If you are using the Basic Filter, you don't need to use this syntax.

Boolean and other search logic are rich and complex topics which often take up a full semester of a college-level course. Obviously, a full explanation is beyond the scope of this Appendix. However, most Web searches do not require a full range of Boolean expressions but rely on a limited subset of the possible queries.

In this section, we present some examples of valid expressions in both standard English and their search syntax counterparts. The syntax examples given here could be all or part of an expression entered in the Query text box of WebSeeker's Advanced Refine dialog.

Individual Word Searches

To search for the word "shark," simply enter it as is:

```
shark
```

Phrase Searches

To search for the phrase "great white shark," use parenthesis and quotes:

```
("great white shark")
```

That last search looks for all three words in the order shown with no intervening words. Sometimes you would like to maintain the specified ordering but are willing to accept intervening words. To find "men are attacked by the great white shark," you could type the following which allows 3 words between each pair of words:

```
("men attacked shark :3")
```

Of course, the above phrase would also find something like "men are attacking and killing sharks."

Sometimes, because you're unsure of all of the words in a phrase, you may wish to specify that one or more of the words in the phrase are "expendable." For example, the following example specifies that any two of the words specified may be missing and still cause a match:

```
("men and women are attacked and killed by sharks :3:2")
```

If the default span of zero is desired, the previous expression could be entered as:

```
("men and women are attacked and killed by sharks ::2")
```

Proximity Searches

To find two or more words "near" each other but in any order, use a proximity search. For example enter:

```
[taxes deductions]
```

This finds .".taxes after all the deductions.." as well as .".deductions figured from state taxes..."

The brackets indicate that you want to find the words within a certain span or range. The default width of the span is 20 words. You may override the default: For example, here we make the span 10:

```
[federal deductions taxes :10]
```

You may also specify an expendable count. In the following example, we allow two words to be missing from those specified:

```
[federal and state deductions taxes :10:2]
```

Boolean Searches

To find all documents containing "shark," "whale" or "dolphin" (or any combination thereof), use the vertical bar character:

```
shark | whale | dolphin
```

To find all documents containing both "sea" and "ocean," use the ampersand character:

```
sea & ocean
```

Nested Expressions

Any place that you can use a single word in an expression, you may also use a phrase, proximity, or OR ("|") sub-expression. Here are some examples:

```
failed | "gave up"
("deep sea diving | scuba")  or equivalently  ("deep sea (diving | scuba)")
["cookies and cream" sweets]
(" ("Mother Theresa") ("India") :20")
```

Notice that phrases within phrases require parentheses.

Parentheses

Parentheses may be used to specify the order in which you want the expression to be evaluated. In the following example, we want the AND (&) to be evaluated before the OR (|):

```
(fast & cars) | racing
```

In the next example, we want the OR (|) to be evaluated before the AND (&):

```
Indy 500 & (fast | cars)
```

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