

1-1-1990

Simplified English Handbook & Guide To Simplified English Analyzer (SEAN)

University of Central Florida Institute for Simulation and Training

Find similar works at: <https://stars.library.ucf.edu/istlibrary>
University of Central Florida Libraries <http://library.ucf.edu>

This Research Report is brought to you for free and open access by the Digital Collections at STARS. It has been accepted for inclusion in Institute for Simulation and Training by an authorized administrator of STARS. For more information, please contact STARS@ucf.edu.

Recommended Citation

University of Central Florida Institute for Simulation and Training, "Simplified English Handbook & Guide To Simplified English Analyzer (SEAN)" (1990). *Institute for Simulation and Training*. 165.
<https://stars.library.ucf.edu/istlibrary/165>



Institute for Simulation and Training

SIMPLIFIED ENGLISH HANDBOOK

&

GUIDE TO SIMPLIFIED ENGLISH ANALYZER (SEAN)

**UNIVERSITY OF CENTRAL FLORIDA
TECHNICAL DOCUMENTATION II
SPRING 1990**

M 03

Table of Contents

Acknowledgements	4
Introduction	5
Simplified English Handbook	
SE Overview	7
Introduction	7
Philosophy of SE	8
Purpose of the SE Rules	9
Implementation	9
Benefits of SE	10
A Different Approach to English	11
Using SE	13
Introduction	13
Vocabulary	13
Nouns	17
Noun Clusters	17
Articles Before Nouns	18
Verbs	18
Forms of Tense	19
Use of the Past Participle	20
Use of Active Voice	21
Sentences and Paragraphs	23
Punctuation and Word Count	30
Warnings and Cautions	35
Extended Examples	37
Tutorial for SE	41
Introduction	41
Vocabulary	41
Nouns	44
Verbs	46

Sentence Length	52
Punctuation	55

Guide to the Simplified English Analyzer (SEAN)

SEAN Overview	59
What SEAN Does	59
SEAN's Limitations	59
Programmable Rules	60
Nonprogrammable Rules	60
SE Style	63
How SEAN Can Help	63
Limitations and Possibilities	63
Using SEAN	65
Introduction to Using SEAN	65
Conventions	65
Keys	66
Naming Files	67
Installing SEAN	68
Starting SEAN	69
Setting SE Rules	70
Selecting the Function	70
Turning Rules Off or On	71
Returning to the Main Menu	72
Analyzing a Document	72
Running the Analysis	72
Exiting the Analysis	76
Creating or Editing a File	76
Entering Text	76
Adding or Deleting Text	78
Moving the Cursor	78
Moving from Word to Word	79
Moving to the End of a Line or Document	79

SE Overview

Introduction

SE was developed in the late 1970's by the Association Européenne des Constructeurs de Matériel Aérospatial (AECMA) and the Aerospace Industries Association (AIA) in response to the need to write complex information clearly and concisely.

SE is a subcategory of English. It uses a limited vocabulary and a set of grammar rules that help you create documents an international audience can easily understand.

The SE dictionary includes 1500 approved words with single designated meanings. The SE rules:

- limit the variety of words used
- develop standard grammatical constructions
- assign one clearly defined meaning to each word.

The Simplified English Handbook provides technical writers the foundation for understanding SE. You can use this handbook independent of the *Guide to the Simplified English Analyzer (SEAN)*.

Philosophy

Documents written in SE are easy for your audience to learn and understand. Although more precise than everyday English, SE cannot be used to describe abstract or mathematical materials. SE makes specific allowances for technical terms that cover such items as:

- parts nomenclature
- mathematical/scientific/engineering terms
- technical names.

The AECMA/AIA committee chose words for their simplicity and relationship with other languages. For example, *occur* is more internationally understood than *happen* and was chosen for that reason.

In SE, words have restricted uses. *To fall* is used to indicate the idea of gravity, not the idea of a decrease in quantity. The expression *the pressure falls* is no longer available to you when following the SE rules. You must instead write *the pressure decreases*.

Only one word is assigned to each set or associated group of meanings. *Start* cannot be a synonym for *begin*, *commence*, or *initiate*.

The SE dictionary contains a limited number of short, common words (approximately 1500, excluding nomenclature). The AECMA/AIA committee carefully selected and defined these words, using *Webster's International Dictionary* as the source for the definitions. The committee eliminated all possible ambiguities and chose the clearest word to convey the appropriate meaning.

Purpose of the SE Rules

SE provides a subcategory of English that non-proficient English speakers can quickly learn and understand. The rules define which grammatical constructions and words are allowed in new documents. Writers from such different locales as California and England can write documents to the same standard.

In many different ways, SE can help you create a document that conveys exactly one meaning to your audience.

Implementation

SE, if used properly, will help you to logically organize the steps in an instruction. The sample below illustrates a comparison of text written in Standard versus SE.

Example: Standard

1. On fueling control panel move power switch to ON. Check that power switch and overflow lights are extinguished. Ensure that shutoff valve lights are illuminated.
2. Pressurize refueling system and check that outer wing tank overflow lights illuminate, shutoff valve lights remain ON and that fuel does not flow into tanks.

Example: SE

1. On the fueling control panel, set the power switch ON.

Make sure that:

- power light and overflow valve lights are off
- shutoff valve lights are on.

2. Apply pressure to the refueling system.

Make sure that:

- the lights for the overflow valve of the outer wing tank come on
- shutoff valve lights stay on
- fuel does not flow into the tanks.

Benefits

SE gives you the opportunity to write clear technical documents without making them sound tedious. Also, SE may help to reduce the size of your document and the amount of time needed to produce it.

SE will help you create documents that are more accessible for an international audience. Costly errors can be prevented when documentation is clearly written.

A Different Approach to English

SE documents are easy to read. Anyone with a basic understanding of English can easily read documents written in SE.

Writing in SE is different. You must have an excellent command of the English language to write properly in SE; including a strong knowledge of mechanics and grammar.

The SE rules are not a complete set of grammar rules that can stand alone. SE can only supplement the existing rules of English grammar by requiring the writer to reduce the complexity of sentence structure. The disciplined SE structure still allows you to use stylistic devices, as long as they conform to the SE rules.

There are thousands of technical terms used by the aerospace industry, and more are created every day. The SE dictionary does not include technical terms, but they can be added to the list to fit the needs of your particular document.

The following instructions and tutorial will help you develop your understanding and mastery of SE. Once you are familiar with the vocabulary and the rules, your SE documents will be better structured and more concise. After writing some practice sentences, you will better understand how SE simplifies your documents.

Using SE

Overview

This section explains the rules for writing documentation in SE. Though SE is similar to standard English, SE has a specified set of 37 rules. These rules are divided into six sections: Vocabulary, Nouns, Verbs, Sentences and Paragraphs, Punctuation and Word Count, and Warnings and Cautions.

Each rule includes an explanation and a specific example showing the difference between standard English and SE.

An extended example illustrating many of the SE rules is provided at the end of this section. The approved SE vocabulary is listed in Appendix A.

Vocabulary

Of the 37 SE rules, six relate directly to the use of vocabulary. They are listed here with examples that highlight the function of the limited vocabulary.

Rule 1: Choose the words for procedures, technical names, and manufacturing processes from the SE dictionary.

The 1500-word SE dictionary is found in Appendix A. When writing in SE, look in the SE Dictionary for acceptable words.

In SE, you will often have to repeat the same word many times in one text. This is necessary because of the limited number of words

and their strictly defined meanings. This repetition of words helps the reader to understand the text. Do not confuse the reader by using different words to describe the same thing. Once you have chosen the words to describe something, continue to use these same words, particularly for technical names.

Rule 2: Use each SE word so that it adheres to its assigned part of speech.

Each SE word has been assigned a single part of speech. All parts of speech are included in the SE Dictionary with the exception of pronouns and interjections.

The limited vocabulary includes verbs, prepositions, conjunctions, adjectives, adverbs, and nouns. In this limited vocabulary, SE uses one universally accepted word to represent a group of synonyms.

Example: Standard

abandon
cease
halt
discontinue

SE

stop

Although abandon, cease, halt, and discontinue all have the same meaning, *stop* is used in the SE Dictionary to represent these synonyms for its clarity.

Rule 3: Use approved words only as defined in the SE Dictionary.

Using words defined in the SE dictionary maintains the one-word, one-meaning structure.

Example: Standard

Assess the quantity of fuel needed.

SE

Calculate the quantity of fuel necessary.

Because *assess* is not an approved word as defined in the SE Dictionary, substitute the word *calculate*. Refer to the SE Dictionary whenever you are unsure if a word is available for you to use.

Rule 4: Technical names and manufacturing processes are the only unapproved nouns allowed by SE.

When deviating from the 1500 word vocabulary, it is acceptable to use unapproved words when referring to specific technical names and manufacturing processes. Refer to the name or process by the same noun each time it is referred to.

Example: Most threaded fasteners on the L-1011 jet transport aircraft are Tri-wing developed by the Phillips Screw Company. Other types in general use are: Torq-Set and Hi-Torque.

Although the words *Tri-wing*, *Torq-Set*, and *Hi-Torque* are not listed in the SE Dictionary, they are acceptable because they are technical names.

Rule 5: Use the shortest and simplest technical name for any particular object.

When several technical names apply to a particular object, refer to the SE Dictionary for the appropriate choice. The words in the dictionary were chosen for their international acceptance. If a technical name is not in the SE Dictionary, use the simplest possible unapproved technical name and use the term consistently. Do not use technical jargon that would confuse the reader.

Example: Standard

Pylon cluster unit of the wing.

SE

Wing pylon.

Rule 6: Make instructions as specific as possible.

When describing a procedure, write clear and concise sentences to make the instructions more understandable to the reader. Do this by writing only one instruction per sentence.

Example: Standard

Examine incoming analog signal strength and digitalize the signal with a digital processor unit.

SE

1. Examine the analog signal.
2. Change it to a digital signal.

Nouns

SE has specific grammar rules that apply to nouns. These rules cover the use of noun clusters and articles.

Noun Clusters

Rule 7: Break up noun clusters which have more than three nouns.

A noun cluster is three or more nouns that are not broken apart by punctuation or conjunctions.

Example: Standard

Engine exhaust gas temperature

SE

Temperature of the exhaust gas from the engine

Articles Before Nouns

Rule 8: Put an article or a demonstrative adjective before nouns.

Use *the*, *an*, and *a* in front of all nouns to help clarify text.

Example: Standard

Stop start procedure.

SE

Stop the start procedure.

Verbs

SE has specific rules that have to do with verbs. These rules include forms of tense, use of past participle, use of active voice, and caution against verb omission.

Rule 9: Use non-SE verbs only if they are manufacturing process words.

Specialized manufacturing terms can be used in SE documentation when there is no corresponding SE word. Use these specialized terms as verbs only in specific manufacturing processes.

Samples of SE acceptable manufacturing process verbs:

anneal	bond
buff	burnish
crimp	cure
drill	extrude
grind	insulate
magnetize	mill
normalize	ream
ream	remetal

Forms of Tense

Rule 10: Use only the present tense, past tense, and simple future tense.

Present, past, and simple future are the only three verb forms allowed in SE. Other forms are not allowed.

Example: Standard

adjusting

SE

adjust, adjusted, will adjust

Use of the Past Participle

Rule 11: Use the past participle only as an adjective—either with a noun or after the verb *to be* or *to become*.

A past participle can only be used as an adjective to modifying a noun or after verbs of the form *to be*.

Example: SE

Connect the disconnected wires again.

This example shows *disconnected* is used as a adjective to modify *wires*.

The wires become disconnected.

This shows *disconnected* follows the verb *become*.

Rule 12: Do not use the past participle with a helping verb to make a complex verb.

Do not create complex verbs that use past participles.

Example: Standard

has adjusted, can be adjusted, will be adjusted, must be adjusted

SE

is adjusted, you can adjust, will adjust

Use of Active Voice

Rule 13: Let the verb show action.

In the active voice, the verb shows the action. In passive voice, which is avoided in SE, the subject is acted upon, rather than performing the action.

Example: Passive

The meter gives an indication of 450 ohms.

Active

The ohmmeter shows 450 ohms.

Rule 14: Use active voice in procedures, descriptions, and operations.

In each of these three cases, active voice is mandatory for clarity and ease of understanding.

Example: Passive

The procedures have been made the same by the manufacture to decrease the maintenance time.

Active

The manufacturer made the procedures the same to decrease the maintenance time.

Passive

The circuits are connected by a switching relay.

Active

A switching relay connects the circuits.

Passive

The main gear leg is held by the side stay.

Active

The side stay holds the main gear leg.

Rule 15: Write verbs in imperative form.

To test whether the verb is in imperative form, ask the question, *by whom or what is the subject being acted upon?* If the text gives an answer to the question, it is not written in imperative form.

Example: Not imperative

The test can be continued by the operator.

When reading this sentence, ask *what* can be continued by the operator. Because the question can be answered, this sentence can be rewritten in the active voice.

Active

Continue the test.

Caution: The previous rules have discouraged the use of passive voice in SE documentation (see **SE Instructions: Rules 13, 14, and 15**). However, one situation exists where passive voice must be used. Passive voice is allowed in SE when it is forced by the limited word choice.

Example: Active

Test for leaks.

Correct Passive SE

Do the leak test.

This example is correct because in SE, *test* is used only as a noun.

Rule 16: Do not omit a verb to make your sentences shorter.

Do not try to condense text by cutting out verbs.

Example: Not correct

Rotary switch to INPUT.

Correct

Set the rotary switch to INPUT.

Sentences and Paragraphs

Both sentence structure and paragraph structure are critical in SE. Since the style of writing is concise, keep sentences and paragraphs as uncomplicated and direct as possible.

Rule 17: Keep sentences as short as possible.

When writing procedures, be as concise as possible without omitting necessary information. Instructions written in long sentences are confusing and difficult to follow.

Since description and operation topics are more complex, one sentence in ten can be 25 words long.

Example: Standard

Highly stressed steel parts are generally magnafluxed to detect cracks, resulting from heat-treatment or machining strains, or welding, which may leave cracks resulting from the heating and cooling of the metal or from improper welding procedure.

SE

Do a magnaflux test on highly stressed steel parts to find cracks or welds. Heat-treatment and machined strains cause the cracks. Welds make cracks when you increase and decrease the temperature or when welds are not correct.

Rule 18: Include one topic per sentence.

Include only one topic in a sentence to avoid confusing the reader. When you discuss more than one topic in a sentence, the reader is overwhelmed. Present the material slowly so the reader has a chance to understand what to do (see Rule 23).

Example: Standard

The differential input is controlled by a hydraulic motor which can add or subtract revolutions to the engine drive rpm.

SE

A hydraulic motor controls the differential input. The motor adds or subtracts revolutions to the engine drive.

Rule 19: Use connecting words to join separate sentences.

Avoid writing long and complex sentences. Instead, write short sentences that are logically related. Combine the shorter sentences with connecting words: *thus, also, so, but, and, then, now*.

Note that *but* and *and* are included in the list of connecting words. The idea that you cannot start sentences with these connecting words no longer applies to standard English, as long as you do not overuse these words as initial words (see Rule 26).

Example: Standard

It is of extreme importance to use like bolts in replacement. Refer to the applicable Maintenance Instruction Manual and Illustrated Parts Breakdown.

SE

Use the same type of bolt when you replace a bolt. Also, refer to the applicable Maintenance Instruction Manual and Illustrated Parts Book.

Rule 20: Vary sentence length and construction to keep descriptive text interesting.

While you must write short and concise sentences, avoid writing all sentences the same length. Include both short, instructive sentences and longer, descriptive sentences to keep the reader interested in the material. Sentences that have similar lengths are monotonous to read and easily lose the reader's attention.

Rule 21: Write only one instruction per sentence except when the instruction requires simultaneous actions.

Write only one instruction per sentence unless two functions must be performed at the same time. In this case, include instructions for both functions in one sentence.

Example: Standard

Firmly press the power driver against the collar,
operate the power driver until the collar's wrenching
device has been torqued off.

SE

Push the power driver tightly against the collar.
Operate the power driver until the driver torques off
the wrenching device of the collar.

Rule 22: Use paragraphs to show your reader the logic of the text.

Use paragraphs to discuss a topic fully. Paragraphs allow you to explain a topic completely and to show how actions are related.

Example: Turn the switch to the ON position.

When you turn the switch ON, the motor starts. The motor provides the power necessary for the plane to move. The motor provides the electricity to power the controls.

Rule 23: Limit each paragraph to one topic.

Include only information that directly relates to the topic of the paragraph (see Rule 18).

If a topic has several aspects, do not put all of the information in one paragraph. Instead, write each aspect as a separate paragraph.

Rule 24: Always start the paragraph with the topic sentence.

The first (topic) sentence is the most important part of a paragraph. The topic sentence lets the reader know what the paragraph discusses. The topic sentence allows the reader to relate the information to other paragraphs.

Rule 25: Use a tabular layout for complex material and to show that procedure steps are closely related.

To help keep information clear and easy to read, use a tabular layout to show the relationship between steps. The tabular layout is also known as a vertical layout or a list. This layout eliminates the need to write long, complex sentences (see Rule 30).

Example: Standard

Testing for hardness is accomplished by a device that applies a known load to a penetrator on the surface of the material being tested. A minor load is first applied seating the penetrator in the material; penetration is then effected by the application of a major load.

SE

To do a test for hardness:

- Use a device that applies a known load to a penetrator on the surface of the material
- Apply a minor load to engage the penetrator in the material
- Apply a major load to engage the penetration.

For steps that are closely related but performed at different times, write the instructions using the tabular layout. The tabular layout makes the instructions easier to read and understand.

Example: Standard

Press and hold the SHORT-CIRCUIT discriminator switch and, with the switch still depressed, set the TEST/RESET switch to TEST and hold in this position. Check that all lights remain extinguished.

SE

Do these steps together:

- Keep the SHORT-CIRCUIT discriminator switch pushed in
- Hold the TEST/RESET switch at TEST
- Make sure that all the lights stay off.

Rule 26: Use connecting words to make the relationship between sentences and paragraphs clear.

As with any type of writing, use connecting words to tie two sentences or paragraphs together. Connecting words show the relationship between the two sentences or paragraphs. Examples of connecting words are *thus, but, and, this, that, those, so, as a result, for the same cause, and at the same time* (see Rule 19).

Rule 27: Limit paragraphs to six sentences.

Write simple and concise paragraphs. Paragraphs that have more than six sentences are hard for the reader to comprehend.

While longer paragraphs let you discuss complex material more thoroughly, make sure the paragraphs are coherent. Remember to discuss only one topic in a paragraph (see Rule 23).

Rule 28: Use one-sentence paragraphs no more than once every ten paragraphs.

Though paragraphs must be kept short, avoid writing one-sentence paragraphs. Too many short, one-sentence paragraphs make the text choppy and hard to read. Using paragraphs with different lengths presents the information in a more interesting way. Use one-sentence paragraphs to emphasize an important point.

Punctuation and Word Count

Use punctuation marks to show how certain parts of the text are related to each other. The rules for using punctuation in SE follow the rules for standard English. Make sure the punctuation in your document has a specific purpose and is not randomly inserted in the document. Using too little or too much punctuation confuses the reader.

Certain punctuation marks help determine the word count for a sentence, an important aspect in SE. Refer to the word count rules before counting the words in sentences (see **Rule 33**, **Rule 34**, and **Rule 35**).

Rule 29: Use a comma to separate the beginning descriptive statement (dependent clause) from the rest of the instruction.

As in standard English, place a comma after the introductory dependent clause. The comma separates the clause from the main sentence and makes the sentence easier to understand.

Example: Standard

When torque tubes are being installed the mounting brackets should be properly aligned so that they will not bind the bearings when bolts are tightened.

SE

When you install torque tubes, make sure the mounting brackets are correctly aligned. If you align the brackets correctly, the bearings will move freely when you tighten the bolts.

Rule 30: Use the colon and dash only in tabular layouts.

In SE, you can only use the colon and the dash when writing information in a tabular layout. The colon signals that related information follows, either a list, a table, or an explanation of the material. A dash makes the material easier to read and indicates steps (see Rule 25).

Example: To form a hi-shear riveted joint:

- prepare the hole
- insert the pin into the hole
- place the collar over the end of the pin
- prepare the hi-shear set and bucking bar
- start riveting.

Notice that each step starts with an upper case letter and that a period is placed at the end of the last step only.

Rule 31: Use the hyphen to combine words.

Use the hyphen only to join two or more words and to show the relation between two or more words. When using the hyphen, make sure the text does not confuse the reader. Examples of acceptable hyphenated words are given.

Two-word terms used together:

low-altitude flight
air-conditioned compartment
transmitter-receiver unit

Two-word fractions or numbers:

twenty-six hose clamps
three-sixteenths inch
one thirty-second increment

Adjectives with three or more words:

five-to-one ratio
bleach-and-water solution
trial-and-error method

Terms that consist of a capital letter or a number and a noun:

T-square measurement
three-prong connector
100-watt light source

Compound verbs consisting of a verb plus a noun, as in manufacturing processes:

to arc-weld
to die-cast

Terms in which the prefix ends with a vowel and the root word begins with a vowel;

pre-engage the starter
re-inflate the air pump
de-ice the wings

Rule 32: Place hyphens between words of technical names that consist of four or more words to show how they are related.

Place hyphens between related words to avoid confusion. Without hyphens between the related words, readers may not know how the words are related.

Example: Not Correct

A self sealing torque controlled collar containing a Teflon sealing insert within its internal counter-bore is available to provide fuel tight joints without the need for sealants.

Correct

Use a self-seal torque-controlled collar to give fuel-tight joints that have no necessary sealants. The collar contains a Teflon seal insert in its internal surface.

Rule 33: Count the colon and the dash as a full stop to find the sentence length.

The colon and the dash are considered full stops in SE. When you count the words in a sentence, count the words before the colon or dash as one sentence and the words after the colon or dash as a separate sentence.

Rule 34: Count each word in a hyphenated group as a separate word.

If a hyphenated word is two complete words, count each word as two separate words. However, if the hyphenated word includes a prefix, count the hyphenated word as one word.

Two words:

push-pull tubes
vibration-damping effect
taper-pinned levers

One word:

non-powered equipment
re-attached bolt

Rule 35: Count the text inside parentheses as a new sentence to determine the sentence length.

When counting words to determine the length of a sentence, count the text inside parentheses as a separate sentence.

Example: Turn the reamer clockwise (never counter-clockwise, even when removing) with just enough pressure to keep it feeding.

According to the SE rules, the example is two sentences. The main sentence has twelve words and the text in the parentheses has five words.

You may also use parentheses:

- to reference figures or text
- to set off text that is not part of the main statement
- to mark text that needs more separation than is provided by commas
- for letters or numbers that indicate items of a list within a sentence
- for letters or numbers that indicate steps of a procedure.

Warnings and Cautions

In situations where there is a danger to the user or equipment, SE dictates the structure of the warnings and cautions.

A warning tells an operator that injury or death is possible if he does not follow the instructions. A caution tells the operator that damage to the equipment is possible.

Rule 36: Start a warning or caution with a simple and clear command.

Start the warning with the required action given first. Additional information may be given, but do not bury the necessary action within the explanation.

Example: Standard

The synthetic lubricating oil used in this engine contains additives which, if allowed to come into contact with the skin for prolonged periods, can be toxic through absorption.

SE

Do not get the engine oil on your skin for long periods.

1. The oil is poisonous.
2. It can go through your skin and into your body.

Rule 37: Add a brief explanation to a warning or caution to give a clear idea of the possible risk.

Include a reason for giving a caution to make the warning clear to people in the working environment. Show a cause and effect relationship with the warning or caution to emphasize the effect of the warning.

Example: Standard

Reed and Prince or Phillips heads require a special driver made for the particular screw. The drivers for the two are not interchangeable.

SE

A special driver made for each type of screw is necessary for Reed and Prince or Phillips head screws. You can not change the two drivers. *If you use the incorrect screwdriver on these screws you can damage the screw head.*

Examples of a Document Written in Standard and SE

Instrument Power Switch—Standard English Version

The lever lock INST POWER switch located on the right side of the pilot's instruments has the positions OFF, NORM, and EMER. Under normal conditions the switch is set to the NORM position providing a ground to the emergency bus power relay. The emergency bus power relay is located behind the emergency bus circuit breaker panel and is energized by voltage from essential AC bus No.1. If a malfunction occurs in the normal AC system and essential AC bus is de-energized, the emergency bus relay switch will be de-energized, its open contacts will disconnect the hydraulic motor solenoid from the emergency bus and the hydraulic motor control will be de-energized and the emergency generator will be activated. The EMER position of the INST POWER switch is used to manually activate the emergency generator. This is needed because if the AC system is functioning satisfactorily and the DC system malfunctions, the emergency generator will not be automatically activated. Setting the INST POWER switch to the EMER position removes the ground from the emergency bus power relay allowing the emergency bus power relay to de-energize. From this point on, the sequence of events that transpire to bring the emergency generator on the line is the same as those events described for a normal AC power failure. Positioning the INST POWER switch to OFF disables the emergency generator system.

Instrument Power Switch—SE Version

The lever lock switch marked INST-POWER is located on the right side of the pilot's instruments. This switch has three positions:

- OFF
- NORM
- EMER.

The switch is set to the NORM position under normal conditions. This position provides a ground to the bus power relay in emergency situations.

In emergency situations, the bus power relay gets energized by voltage from essential AC bus No. 1. The bus power relay is behind the bus circuit-breaker panel.

If these two simultaneous events happen—

- a malfunction occurs in the normal AC system *and*
 - essential AC bus in de-energized, *then—*
1. the emergency bus-relay-switch de-energizes;
 2. the open contacts of the emergency bus-relay-switch disconnects the hydraulic motor solenoid from the emergency bus;
 3. the hydraulic motor control de-energizes;
 4. the emergency generator activates.

The EMER position of the INST POWER switch manually activates the emergency generator. The emergency generator will not activate automatically when the AC system works and the DC system does not work. The INST POWER switch EMER position removes the ground from the emergency relay; then the emergency bus relay de-energizes. From this point on, the steps to bring the emergency generator on the line is the same as the steps for a normal AC power failure. When the INST POWER switch is OFF, the emergency generator system stops.

SE Tutorial

Introduction

SE documents are easy to read, but writers of SE documents must follow a set of specific grammatical and vocabulary rules. Following these rules consistently requires automated feedback, which can be provided by the Simplified English Analyzer (see SEAN Tutorial).

The SE tutorial teaches you the basic skills needed to begin applying SE rules to writing documentation. It provides instruction, examples, and exercises for each subcategory of SE rules so you can take an active part in learning to write in SE.

How to Use the Document

Read the rules at the beginning of each section before doing the exercises. If you are already familiar with the rules for that section, go on to the next section.

This tutorial covers the SE rules: 2, 3, 7, 8, 10, 12, 13, 14, 15, 16, 17, 19, 21, 25, 29, 30, and 32. For information about the rules not covered in this tutorial, refer to SE Rules.

Vocabulary

Rule 2: Use only the parts of speech given for approved words in the SE Dictionary.

Example: Standard

The controls should be set at *about* zero.

To see why this is not SE, read the SE Dictionary entry for *about*:

about (pre): "concerned" with, (note: for other meanings USE: APPROXIMATELY, AROUND).

About can only be used as a preposition, not an adverb. As the entry suggests, you could change it to:

Example: SE

Set the controls to *around* zero.

or

Set the controls to *approximately* zero.

Exercise

Revise the following sentence so it conforms to rule 2. You may need to refer to the SE dictionary in Appendix A.

The procedure for freeing frozen control surfaces is outlined in section 2.

Revision

Section 2 outlines the procedure for releasing frozen control surfaces.

Rule 3: Use approved words as defined in the SE Dictionary.

Example: Standard

To *free* a frozen control surface, activate the emergency release control.

To see why this is not SE, read the SE Dictionary entry for *free*:

free (adv): That can move without limits.

Since the SE Dictionary gives no alternatives to *free*, you need to find a synonym for *free* that means *release*. The entry for *release* is:

release (v): To make free.

Release can replace *free* in the example sentence.

Example: SE

To release frozen control surfaces, activate the emergency release control.

Exercise

Revise the following sentence so it conforms to rule 3. You may need to refer to the SE dictionary in Appendix A.

The maintenance schedule in section 2 outlines about 30 separate tasks.

Revision

The maintenance schedule in section 2 outlines approximately 30 separate tasks.

Nouns

Rule 7: Break up noun clusters which have more than 3 words.

Example: Standard

The aircraft altitude control service scheduling must follow the standard maintenance schedule provided on the facing page.

SE

Follow the standard maintenance schedule (provided on the facing page) to service aircraft altitude controls.

Exercise

Revise the following sentence so it conforms to rule 7.

Use the control surface mechanism maintenance schedule to determine proper maintenance intervals.

Revision

Use the maintenance schedule for the control surface mechanism to determine the proper maintenance intervals.

Rule 8: Put an article or a demonstrative adjective before nouns.

Example: Standard

Aircraft altitude controls must be serviced according to the standard maintenance schedule.

SE

Service *the* aircraft altitude controls according to the standard maintenance schedule.

Exercise

Revise the following sentence so it conforms to rule 8.

Control surface maintenance scheduling must follow table on page 2.

Revision

The control surface maintenance scheduling must follow the table on page 2.

Verbs

Rule 10: Use only the present, past, and simple future tenses.

Example: Standard

If the wing control surfaces *have been* serviced, go to step 2.

SE

If the wing control surfaces *are already serviced*, go to step 2.

Exercise

Revise the following sentence so it conforms to rule 10.

The maintenance schedule requirements will have been met by following the table on page 2.

Revision

The maintenance schedule requirement *will be* met by following the table on page 2.

Rule 12: Do not use the past participle with a helping verb to make a complex verb.

The past participle can combine with forms of the verb *be* to form the passive voice, or *have* to form the perfect tenses. Neither use is allowed in SE.

Example: Standard

The controls *were adjusted* before we started maintenance procedures.

or

We *have adjusted* the controls before starting maintenance procedures.

SE

We *adjusted* the controls before we started maintenance procedures.

Exercise

Revise the following sentence so it conforms to rule 12.

The wing control surfaces are to be adjusted according to the table on page 2.

Revision

Adjust the wing control surface as shown in the table on page 2.

Rule 13: Let the verb show action.

Example: Standard

The servicing of the controls should follow the standard maintenance schedule.

SE

Follow the standard maintenance schedule when you service the controls.

Exercise

Revise the following sentence so it conforms to rule 13.

The use of the schedule on page 2 will ensure proper maintenance intervals.

Revision

Use the schedule on page 2 to ensure the proper maintenance intervals.

Rule 14: Use active voice in procedures, descriptions, and operations.

Example: Standard

The maintenance of most systems can be scheduled as shown in the table on page 2.

SE

Schedule the maintenance for most systems as shown in the table on page 2.

Exercise

Revise the following sentence so it conforms to rule 14.

The adjusting of the wing control surfaces must be in accord with the guidelines given in section 2.

Revision

Adjust the wing control surfaces as shown in the guidelines given in section 2.

Rule 15: Write verbs in the imperative form.

Example: Standard

The estimating of damage repair costs must follow the guidelines given in section 2.

SE

Follow the guidelines given in section 2 to estimate damage repair costs.

Exercise

Revise the following sentence so it conforms to rule 15.

The use of advance scheduling will speed maintenance procedures.

Revision

Use advance scheduling to speed maintenance procedures.

Rule 16: Do not omit a verb to make your sentences shorter.

Example: Standard

Service the aircraft altitude controls according to the standard maintenance schedule, following page.

SE

Service the aircraft altitude controls as shown in the standard maintenance schedule *given* on the following page.

Exercise

Revise the following sentence so it conforms to rule 16.

Use the estimating schedule, opposite page, to determine repair costs.

Revision

Use the estimating schedule, *given* on the opposite page, to determine repair costs.

Sentence Length

Rule 17: Keep sentences as short as possible.

Example: Standard

The controls for the adjustment of the wing control surfaces must be set at zero when conducting all routine maintenance procedures. (21 words)

SE

The controls to adjust the wing control surfaces must be set at zero in all routine maintenance procedures. (18 words)

Exercise

Revise the following sentence so it conforms to rule 17.

Follow the standard schedule of maintenance for all pneumatic systems on all aircraft, except as noted in the section on special maintenance procedures.

Revision

Follow the standard maintenance schedule for all aircraft pneumatic systems except as noted in special maintenance procedures.
(17 words)

Rule 19: Use connecting words to join separate sentences.

Example: Standard

Add fuel to the tank. Do not overfill the tank.

SE

Add fuel to the tank *but* do not overfill it.

Exercise

Revise the following sentence so it conforms to rule 19.

Remove the orange wire from the housing. Do not touch the wire against the side of the housing.

Revision

Remove the orange wire from the housing *but* do not touch the wire against the side of the housing.

Rule 21: Write only one instruction per sentence in procedures except when two actions have to be done at the same time.

Example: Standard

To change the filter, remove the filter cover, unscrew the mounting screws, and remove the old filter.
(Multiple instructions in one sentence.)

SE

To change the filter:

- remove the filter cover
- unscrew the mounting screws
- remove the old filter.

Exercise

Revise the following sentence so it conforms to rule 21.

Before starting the engine, ensure that all tools and spare parts are removed from the engine compartment, that the engine compartment cover is closed and locked, and that all gauges read properly.

Revision

Before you start the engine, make sure that all tools and spare parts are removed from the engine compartment. Make sure that the engine compartment cover is closed and locked. Make sure that all gauges read properly.

Punctuation

Rule 25: Use a tabular layout for complex material and to show that procedure steps are closely related.

Rule 30: Use the colon and dash only in tabular layouts.

Example: Standard

The on-board computer consists of sensors, a CPU, a display screen, and a keypad.

SE

The on-board computer has:

- sensors
- a CPU
- a display screen
- a keypad.

A tabular layout better organizes the components of the on-board computer. The colon sets off the tabular material and the dashes identify each component of the computer.

Exercise

Revise the following sentence so it conforms to rules 25 and 30.

To adjust the instrument panel brightness, locate the brightness control knob on the left side of the panel, pull the knob towards you, adjust the brightness by turning the knob right or left, and push the knob towards the panel to avoid accidental adjustments.

Revision

To adjust the instrument panel brightness:

- locate the brightness control knob on the left side of the panel
- pull the knob towards you
- adjust the brightness by turning the knob right or left

- push the knob towards the panel to avoid accidental adjustments.

Rule 29: Use a comma to separate the beginning descriptive statement (dependent clause) from the rest of the instruction.

Example: Standard

When opening the cover be sure the cables are not attached.

SE

When you open the cover, be sure the cables are not attached.

Exercise

Revise the following sentence so it conforms to rule 29.

To unlock the control panel push the buttons on both sides of the unit at the same time.

Revision

To unlock the control panel, push the buttons on both sides of the unit at the same time.

SEAN Overview

What SEAN Does

SEAN is a writing aid that helps you create clear, correct, SE documents. SEAN analyzes ASCII text files, parsing them according to the rules of SE. ASCII text files are text files without program-specific format codes.

SEAN displays the text file on the top half of the screen and provides a running analysis of SE errors which are found in the document. SEAN looks for SE problems with grammar, style, and word usage. These errors are listed on the bottom half of the display screen, along with suggestions for change.

You cannot edit the document as it is being analyzed by SEAN. Instead, the product of a SEAN analysis is a new ASCII text file. You can change your text file while in SEAN's Edit mode, or you can exit SEAN and load the new ASCII text file into a word processing program to be further refined. You may repeat this cycle until you are satisfied with the document, or SEAN flags no further errors.

SEAN is a writing aid. The program never changes your original document, so you are always in control. SEAN never decides, only recommends. The final decision is always yours.

SEAN's Limitations

SEAN is a tool to help you write, but there are limitations. SEAN works by applying rules that deal with the syntax, or structure, of writing.

SEAN cannot replace a human editor. It does not understand the actual meanings of words or the exercise of literary license. It also does not have a human ear to judge how the writing sounds.

SEAN cannot find all types of errors. In some cases, SEAN points out correct (or at least allowable) phrases as errors. For example, if you use a manufacturing process term, SEAN flags the word because it does not appear in the approved SE vocabulary. Yet your use of the process term may be allowable under the rules of SE.

Consequently, SEAN does not make changes for you. Instead, SEAN points out possible errors and stylistic weaknesses, and suggests alternatives for you to consider. It is up to you to decide which of SEAN's recommendations to follow.

Programmable Rules

SEAN examines your document according to SE rules. But only some of the SE rules can be reduced to algorithms which the computer can use in the analysis of your text. For example, SEAN points out words and phrases that can be replaced by other words in the authorized SE vocabulary. The suggested replacement words may not be correct in the context of your document, but some sort of revision is recommended.

SEAN also points out all sentences that are longer than 20 words. SE rules do not require all sentences to be shorter than 20 words, so the long sentences that SEAN marks as incorrect do not necessarily need to be changed. In description and operation topics, SE allows one sentence in 10 to be 25 words long. Some revision may be necessary if your document is consistently exceeding those limits.

As another example, SEAN points out all instances of passive voice. Again, SEAN's comments on passive voice occurrences do not mean that change is required. They do mean that the overuse of passive

voice is a common problem that can cause writing to sound weak and unsure. Passive voice can be an effective tool to focus attention on the object of the sentence.

Nonprogrammable Rules

Of the 37 SE grammar and style rules, some are not programmable because of their nonspecific nature. SEAN cannot consider these rules when analyzing your document, so you need to be familiar with these nonprogrammable rules before trying to write SE. Be aware of these nine rules as you write so that your document will conform to SE rules:

1. **Make your instructions as specific as possible.** Someone who is unfamiliar with a procedure can become confused if the instruction or explanation is not specifically clear. The reader should be able to interpret the instruction in only one way.
2. **Vary sentence lengths and constructions to keep descriptive text interesting.** SEAN counts the number of words in a sentence and checks for sentence structure, but it cannot check for interest. Descriptions can become lengthy and involved, so vary your sentence patterns to keep the reader's interest and to keep the subject matter clear.
3. **Use paragraphs to show your reader the logic of the text.** Dividing up complicated instructions or descriptions into paragraphs helps the reader understand the material.
4. **Use connecting words to make the relationship between sentences and paragraphs clear.** Connecting words enable the reader to follow the text. Smooth transitions display the logic and flow of the material and aid the reader's comprehension.

5. **Present new and complex data slowly.** Ease the reader into a new or complex subject and allow the reader to become familiar with new concepts in small steps. Clearly describe and explain the new subject before beginning instructions or procedures.
6. **Start a warning or caution with a simple and clear command.** SEAN cannot tell if a warning command is simple and clear—it can only tell if the words are allowed. If an instruction or procedure is important enough to be labeled as a warning or caution, give the command careful consideration so that it can be interpreted in only one way.
7. **Add a brief explanation to a warning or caution to give a clear idea of possible risk.** SEAN cannot tell whether you explain your warnings and cautions. You need to be sure that if the subject or instruction is important enough to warrant a warning or caution, you explain enough about the instruction so that any risk is clear and apparent.
8. **Keep to one topic per paragraph.** SEAN cannot tell whether a paragraph contains more than one topic. The reader is less likely to be confused if you focus on one subject at a time.
9. **Always start the paragraph with the topic sentence.** SEAN cannot recognize a topic sentence. Starting the paragraph with the topic sentence lets the reader know what the paragraph is going to explain and helps with the flow and readability of the text.

For more discussion on these and other SE rules, see the Using SE section in the *SE Handbook*.

SE Style

Writing an SE document with style, or flair, may seem an impossibility because of the restrictions of SE grammar. Most of the obstacles are associated with the writer's learning curve: once you have some experience with the SE writing process, the possibilities for writing stylistically satisfying documents will become apparent.

How SEAN Can Help

SEAN forces you to think about writing SE when it spots incorrect phrases and constructions and flashes them on the screen. If you see your errors flashed before you often enough, eventually you will stop making those errors. As your awareness of good SE writing increases, there is bound to be a decrease in mistakes. Implied in SEAN's use is its eventual disuse. SEAN trains as it works. While you will have to continue running SEAN as a check on your SE documents, eventually SEAN's use will be limited to confirming the correctness of your documents.

Limitations and Possibilities

SE makes harsh demands of its writers. SE rules restrict normal writing style by limiting your vocabulary, forbidding rhetorical devices such as analogy, and severely curtailing verb tenses and voice options. Even the word count of sentences and the lengths of paragraphs are limited.

The most promising initial approach to writing stylistically pleasing SE is to address the sense and sound of the sentences and paragraphs. A careful, logical ordering of your text helps the smooth procession of ideas, and this in turn greatly aids the user's comprehension. Each thought should be complete, and the words and sentences should flow easily.

To get the greatest use of SEAN's unique abilities, apply your effort to logic and clarity, to the hierarchical structure and the segmentation of topics and ideas. These are the areas where your intelligence and sensibilities are irreplaceable.

Using SEAN

Introduction to Using SEAN

This section tells you how to use SEAN to prepare and analyze an SE file. If you are not an experienced computer user or if you want to quickly learn the basics of SEAN's capabilities, begin with the SEAN tutorial in the next section.

In this section you will find:

- Conventions
- Naming files
- Installing SEAN
- Starting SEAN
- Setting SE rules
- Analyzing a file
- Creating or editing a text file
- Writing a text analysis to file
- Printing a file
- Troubleshooting
- Exiting.

Conventions

This manual follows certain conventions to help you recognize keys, screen messages, and instructions.

Boldface is used for the names of the functions and to indicate a particular key to press.

Example: Press **F3**.

Italics show the exact wording of on-screen messages.

Example: *Please enter text file name. Input text file name.*

The *Select* instruction directs you to choose a function from the main menu. You may select a function in one of two ways:

1. Use the arrow keys to highlight the name of the function you wish to use, then press **Enter**.
2. Type in the letter that is capitalized in the function's name.

Keys

The **Enter** key instructs the computer to proceed with a command. Depending on the keyboard, this key is sometimes marked **Return**, or with a small arrow pointing to the left (↵), with both the word and the arrow on the same key.

The **Esc** key is a quit key. You may leave the function you are using at any time by pressing the **Esc** key. This key returns you to the main menu. You may then either select another function or exit the program.

Pressing **Esc** while in the main menu screen takes you out of SEAN (see **Exiting**).

Two keys perform special actions when you using a SEAN function. They do not operate from the main menu screen. They are labeled with **F** and a number, and are referred to in the manual as function keys. These keys may be in the group at the left side, or across the top, of your keyboard.

The F2 key calls up a directory of the files in the drive you specify. If you forget the name of the file you want to analyze, you can see a list of the files on your disk by using the F2 key. Pressing F2 displays the message:

Please enter the directory path. A:\, B:\ or C:\)
Path:

At the prompt you may enter the path for the directory you wish to examine. This function displays a list of the files, but does not allow you to call a file to the screen.

To exit the directory, press the Esc key.

The F3 key automatically loads a file. Pressing F3 displays the message:

Please enter text file name. Input text file name:

At the prompt you may enter the file name for the file you wish to load.

Naming Files

In some of its functions, SEAN asks for a file name. Files names must conform to DOS file name conventions. If you are creating a new file, the name may be up to eight characters, plus a period and a three-character extension.

There are some limitations to observe when creating file names. Not all of the characters on the keyboard may be used, because some are reserved for DOS commands. These characters are:

" / \ [] : ; | < > + = . ,

Do not use any of these characters in file names except the period, which is used to separate the first part of the name from the extension.

It is a good idea to write down the names of your files for later reference. If the name is not self-explanatory, be sure to include a brief description of the file's contents.

For more information on naming files in DOS, refer to the manual for the word processing program you are using.

Saving Files in ASCII

SEAN can only analyze a file formatted in ASCII. For instructions on how to save a file in ASCII, refer to the manual for the word processing program you are using.

Installing SEAN

SEAN is only intended for use on IBM or IBM compatible computers. SEAN must be installed on a PC that has at least a 286 processor and at least 640K RAM. To run SEAN you must install MS DOS version 3.1 or higher.

1. To install SEAN on your computer's hard drive, first insert the SEAN disk in the A drive.
2. Change to the A drive by typing A: and press **Enter**.

3. Type *INSTALL* and press Enter.

This action instructs your computer to automatically install the SEAN program in drive A onto your hard drive and to create a subdirectory for it. The screen displays this message:

Installing SEAN to hard drive

4. When the message disappears and the A:\ prompt reappears, return to the C drive by typing C: and press Enter.
5. To access SEAN, type *SEAN* and press Enter.

You are now in SEAN, and the screen displays the SEAN main menu.

Starting SEAN

1. If SEAN is already installed on your hard drive, at the C:\ prompt, type *SEAN*.

This action brings up the SEAN program and the screen displays the SEAN main menu.
2. If your computer does not have a hard drive, first insert your DOS disk into drive A and load it.
3. After loading DOS, remove the DOS disk.
4. Insert the SEAN disk in drive A.

5. To access the program, type:
SEAN and press **Enter**.

The computer then loads *SEAN* and the screen displays the *SEAN* main menu.

Setting SE Rules

The **Set SE Rules** function lets you analyze a file for specific rule infractions by turning sets of rules on or off. When you first enter *SEAN* all the sets of rules are turned on. Use the **Set SE Rules** function to turn off any rules you do not want *SEAN* to use during an analysis.

These sets are:

- Non-SE words
- Noun clusters
- Passive voice
- Sentence length
- Paragraph length
- Word substitution.

When all sets are turned on, *SEAN* analyzes for all programmable rules.

Selecting the Function

1. Select **Set SE Rules** from the main menu.

The **Set SE Rules** option menu appears and the screen displays the six rules, each followed by a shaded box containing the word *ON* or *OFF*.

Below the block of rules, the screen prompts:

Please type the rule number ('0' for back to the main menu):

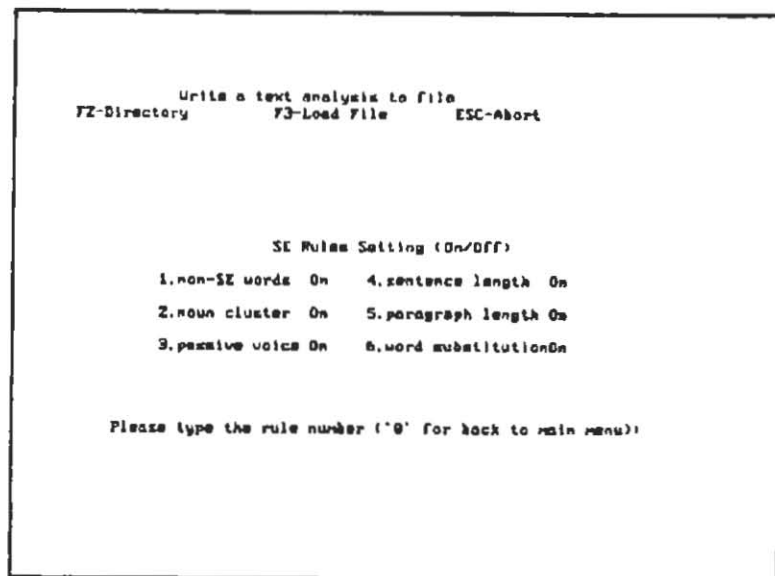


Figure 1

Turning Rules Off or On

1. Type in the number of the rule you want to turn on or off and press Enter.

The word in the box changes from *ON* to *OFF* or from *OFF* to *ON*. You may turn any or all of the rules on or off. SEAN analyzes only for the rules that are turned on.

2. Repeat this step for each rule you wish to turn on or off.

Returning to the Main Menu

SEAN will not automatically return to the main menu from the SE rules option menu. To return to the main menu:

1. Press 0 and Enter.

The main menu appears on the screen.

Analyzing a File

The **Analyze a text on screen** function allows you to see a step-by-step analysis of the document. SEAN analyzes your document on screen and shows you its comments at the bottom of the screen. This function lets you move through the analysis at your own pace by allowing you to press any key when you are ready to move on.

If you do not wish to see the analysis on screen and simply want a print out of the file with the editing comments inserted, see **Writing Text Analysis to File** in this section.

Running the Analysis

1. Select *Analyze a text on screen* from the main menu.

The screen will look like this:

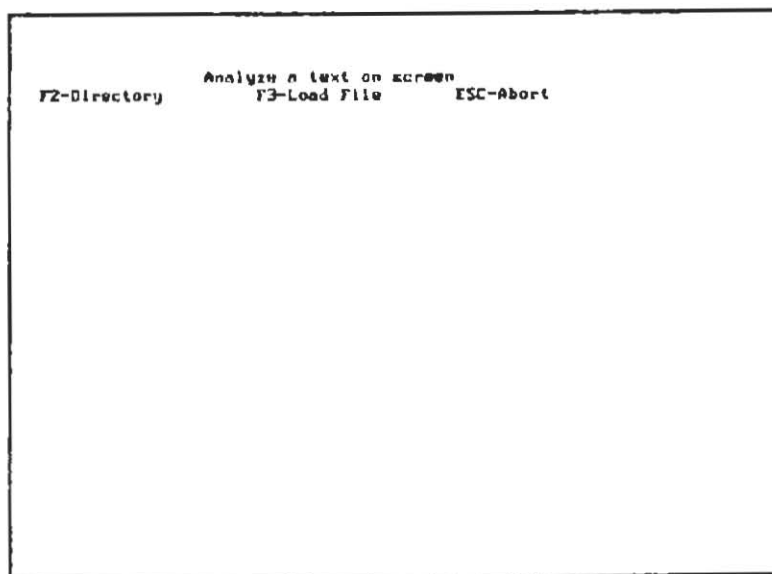


Figure 2

2. To retrieve a file for SEAN to analyze, select the *Load File* option at the top of the screen by pressing the F3 function key.

The screen prompts:

Please enter the text file name.
File name:

3. Type in the name of the file (including any extensions) that you want SEAN to analyze; press Enter.

Note: Remember that the file to be analyzed must be an ASCII text file (see **What SEAN Does: SEAN Overview**).

The screen then prompts you to name the output file:

Please enter the output file name.

File name:

4. Type a name for the new file that SEAN creates; press Enter.

This new file will include the text with the analysis comments inserted.

Note: The output filename must conform to DOS file naming rules (see **Naming a File**).

SEAN then loads your file and begins to analyze your document.

A new screen appears. The top half of the screen displays the first line or two of your document. SEAN positions a carat (^) under the first incorrect word it comes to.

At the bottom of the screen, under the division bar labeled *Analysis of Text*, SEAN displays a comment indicating the rule broken.

The screen looks like this:

Content of text
otify the navigator of any change in flight, like change in altitude,
course, or airspeed. If change in flight plan is made, consult the navigator.

Analysis of text
>> Passive voice 'is made'

ESC-Abort

>> Press any key.

Figure 3

5. After you have noted the error and are ready to move on, press any key to continue.

SEAN then positions the carat under the next rule violation. The comment for this new violation is displayed at the bottom of the screen.

6. Press any key to move on to the next occurrence.
7. Repeat step 6 until SEAN has analyzed the entire document.

Exiting the Analysis

1. When all the text is analyzed, SEAN automatically returns you to the SEAN main menu.
2. To exit at any time during the analysis, press Esc (see Exiting).

This action returns you to the main menu.

Creating or Editing a File

Edit a File is a word processing function that enables you to create a text file or edit a text file directly on the screen. Whether you are creating a new file or editing an existing one, the steps for entering, adding, and deleting text are the same.

Entering Text

Edit a File offers you an uncluttered screen that resembles the blank sheet of paper you insert in a typewriter. When you type, characters appear at the position of the cursor, just as they do when you use a typewriter. To begin a new line of text, insert a carriage return by pressing Enter; the cursor wraps flush to the left margin.

Pressing Enter moves the cursor from the line it is on to the left margin of the next line. Without the Enter keystroke, characters form one long line of text, disappearing off the left edge of the screen as you type. The disappearing characters are not deleted, just hidden because the screen can only visually display 78 characters at a time.

Since the screen is roughly the width of a standard size page (8-1/2" - 11-1/2") press Enter every 78 characters. The printer can only print the text that is displayed on the screen.

Edit a File tracks the position of the cursor on the reference line at the top of the screen. The reference line informs you where your cursor is in relation to the page displayed on the screen.

Line refers to the position of the cursor on the vertical axis with each character position equivalent to a number; the first position being one. *Col* refers to the cursor's position on the horizontal axis with the position equivalent to a number; the first position is also one.

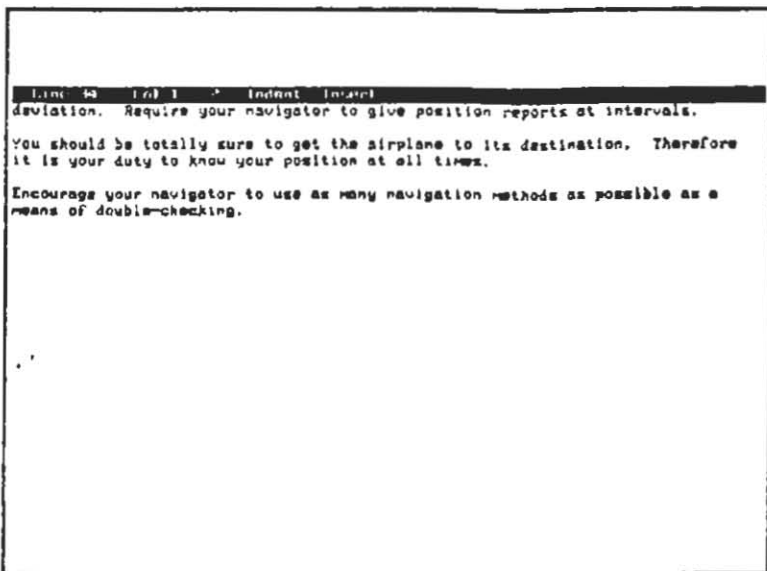


Figure 4

Adding and Deleting Text

Unlike a typewriter, **Edit a File** allows you to make additions or deletions to your text without retyping the document.

The default setting for entering text is the insert mode: as characters are entered, the existing text reformats to accommodate the addition.

Edit a File also gives you the option to switch from the insert to the typeover mode. Press **Insert** and the word *Typeover* replaces *Insert* at the top of the screen.

This mode allows new characters that you enter to type over and replace existing characters. If there is nothing but blank space you will not notice the typeover mode, but if there are existing characters, they will disappear when you type.

To delete characters, press either the **Backspace** key or the **Delete** key. The **Backspace** function moves the cursor from the right to left, erasing characters as it moves. Characters located after the cursor move one space to the left with each character deletion.

The **Delete** function works differently. The cursor does not move when you press **Delete**; instead, the characters move. Press **Delete** and the character at the cursor is deleted, moving the next character to its place.

Moving from Character to Character

The arrow keys move the cursor on the screen in four different directions: left, right, up, and down. Press the **Left Arrow** (←) or **Right Arrow** (→) key to move the cursor one space to the left or right accordingly.

Press the **Down Arrow** (↓) or **Up Arrow** (↑) key to move the cursor up or down one line of the document. With this method of scrolling, you can examine a document carefully line by line and reformat as you add or delete text.

Combined with other keys, the arrow keys can quickly move the cursor to the next word or to the end of a line or document.

Moving From Word to Word

To move the cursor from one word to the first letter of the next word (left or right), hold down the **Ctrl** key; then press the appropriate **Left Arrow** or **Right Arrow** key.

The difference between *Ctrl-Left* and *Ctrl-Right* is that if the cursor is at any character other than the first character of a word, *Ctrl-Left* moves the cursor to the beginning of that word rather than to the beginning of the preceding word. *Ctrl-Right* always moves the cursor to the first character of the following word regardless of the cursor's location.

Moving to the End of a Line or Document

Sometimes you may want to move the cursor from a position within a line to the end of the line or edge of the screen.

To quickly move to the left end of the line, hold down the **End** key, and then press the **Left Arrow** key; to quickly jump to the right, hold down the **End** key, and then press the **Right Arrow** key.

To quickly move to the top of a file, hold down the **Ctrl** key, and then press the **Home** key; the cursor moves the top of the file. To move to the end of a file, hold down the **Ctrl** key, and then press the **End** key; the cursor moves to the end of the file.

Using *Edit a File* to Create a File

1. Select *Edit a File* from the main menu.

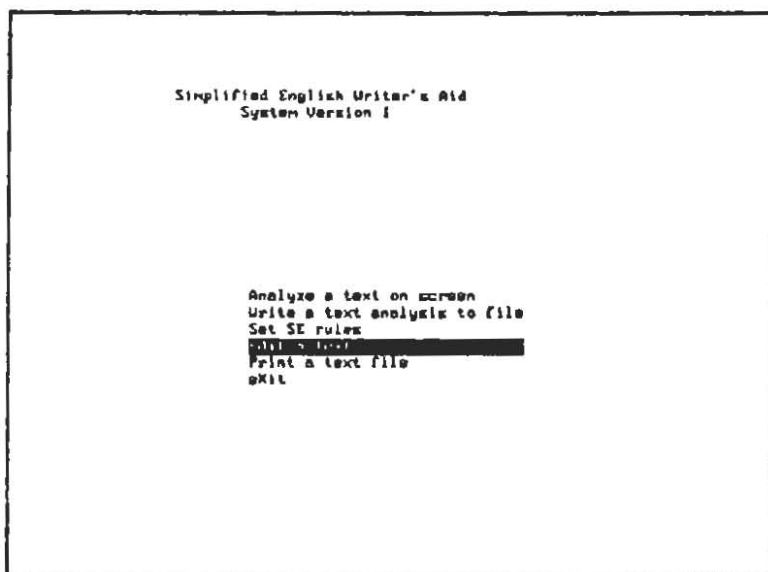


Figure 5

The *Edit a File* screen displays the title line, *Edit a Text File*, at the top of the screen, with the reference line directly below. The reference line displays the special function options: *F2-Directory; F3-Load File; Esc-Abort* (see *Keys, Screen Messages, and Instructions*).

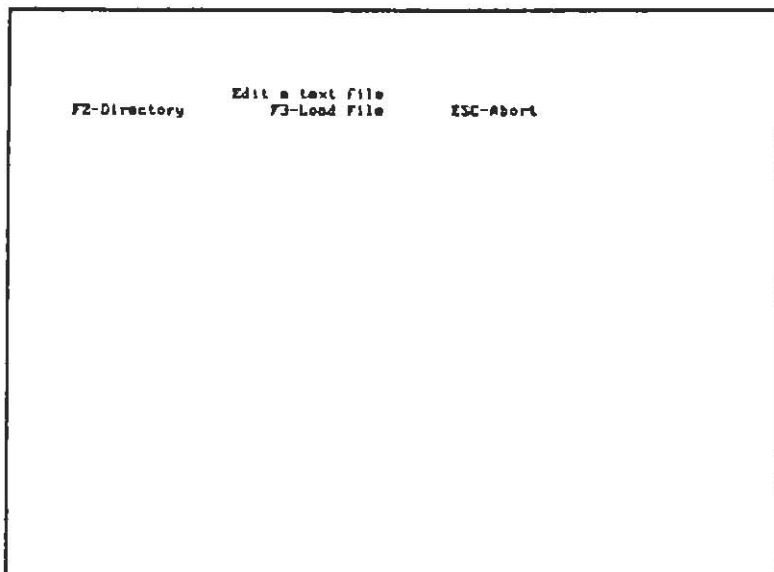


Figure 6

2. Press F3.

The screen prompts you to create a file name:

Please enter the text file name. Text file name:

3. Type in a file name; press Enter.

The message disappears, leaving the screen clear for composition.

4. Type in your text.

5. Press Esc to exit.

The screen prompts you to verify exiting:

Do you wish to save the changes? (y,n).

6. If you want to save your file, type Y for yes. If you do not want to save your file, type N for no.

Responding Yes automatically saves your file to the hard drive. After typing Y or N, SEAN returns you to the main menu.

Using *Edit a File* to Edit

1. Select **Edit a File** from the main menu.

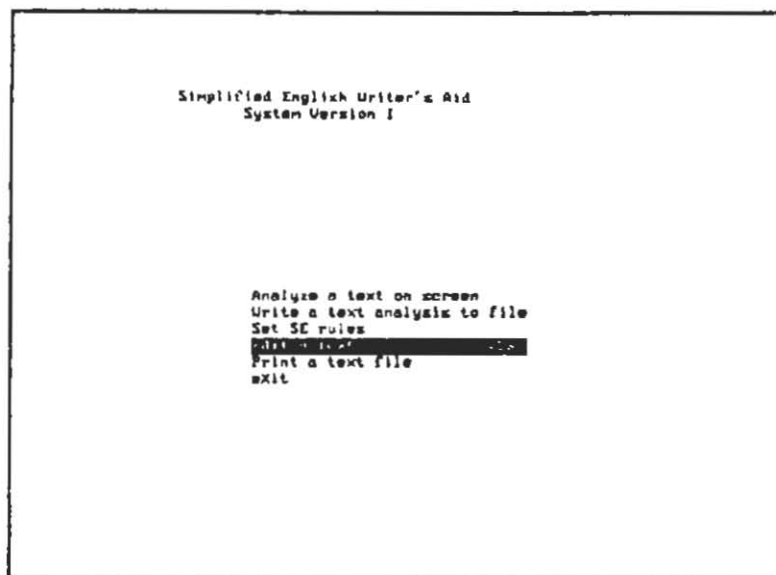


Figure 7

The **Edit a File** screen displays the title line, *Edit A Text File*, with the reference line directly below. The reference line displays the special function options: *F2-Directory; F3-Load File; Esc-Abort* (see **Keys, Screen Messages, and Instructions**).

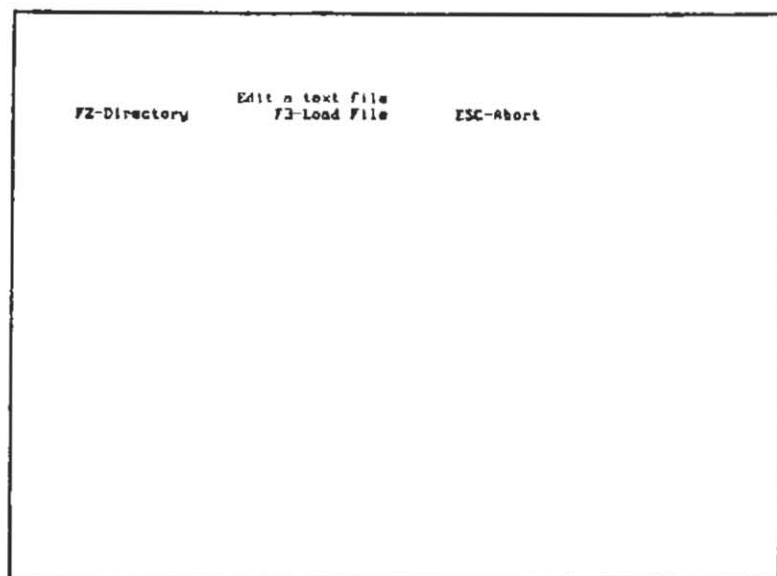


Figure 8

2. Press F3.

The screen prompts you to type in the name of the file you wish to edit:

Please enter the text file name. Text file name:

3. Type in the name of the file; then press Enter.

Your file appears on the screen.

4. Edit the file.

5. Press **Esc** to exit the **Edit a File** option.

The screen prompts you to verify exiting:

Do you wish to save the changes? (y/n).

6. If you want to save the changes to your file, type **Y** for yes. If you do not want to save the changes to your file, type **N** for no.

Responding **Yes** automatically saves your file to the hard drive, replacing your original file with the file on the screen. After typing **Y** or **N**, **SEAN** returns you to the main menu.

Writing a Text Analysis to File

The **Write a Text Analysis to File** function is a short-cut method of analyzing and saving a file. Unlike **Analyze a File**, it analyzes without displaying the analysis comments on the screen. This process is much quicker than when the analysis process is displayed. When the file prints out, the analysis and comments are on the printout.

Use the **Write a Text Analysis to File** function when you want a file analyzed, but do not need to see the analysis process.

Selecting the Function

1. Select **Write a Text Analysis to File** from the main menu.

The **Write a Text Analysis to File** screen displays a title bar at the top, with a reference line directly below.

The reference line offers the options *F2- directory*; *F3- load file*; and *Esc- abort*.

2. Press F3.

Entering File Names

Once you have the function screen, SEAN prompts you to type in the name of the file you wish to analyze:

Please enter the text file name. Input text file name:

1. Type the name of the file to be analyzed and press Enter (see Naming Files).

The screen now prompts you to enter a name for the file after it is analyzed:

Please enter the output file name. Output file name:

The output file name may have the same name as the input file, but it must have a different three-letter extension.

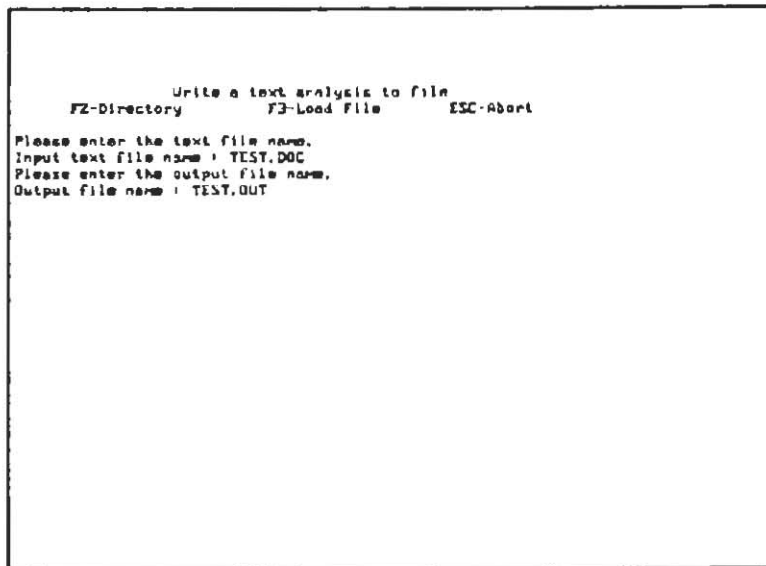


Figure 9

2. Type the name of the analyzed file and press Enter.

.. The screen displays the message:

Text is analyzed, please wait.

SEAN analyzes the text, saves it to a file, and automatically returns to the main menu screen.

Printing a File

The **Print A File** function lets you print your files. You may print any file that is stored in SEAN's memory.

Be sure a printer is attached to the terminal and is turned on.

Selecting the Function

1. Select *Print A Text File* from the main menu.

The **Print a Text File** screen displays a title line at the top, with a reference line directly below.

The reference line offers the options *F2- directory*; *F3- load file*; and *Esc- abort*.

Starting the Printout

1. Press **F3**.

The screen prompts you to type the name of the file you wish to print:

Please enter text file name. Input text file name:

If you have forgotten the name of the file you wish to print, you may call up the directory of files by pressing **F2**. You cannot print from the directory. When you find the name of your file make a note of it and press **Enter**. SEAN returns you to the main menu.

If you did not go to the directory, proceed to the next step. If you used the F2 function to check the directory, you must begin again by selecting the print function from the main menu.

2. Type the name of the file you want to print and press Enter.

The screen prompts you:

Name of list device [PRN]:

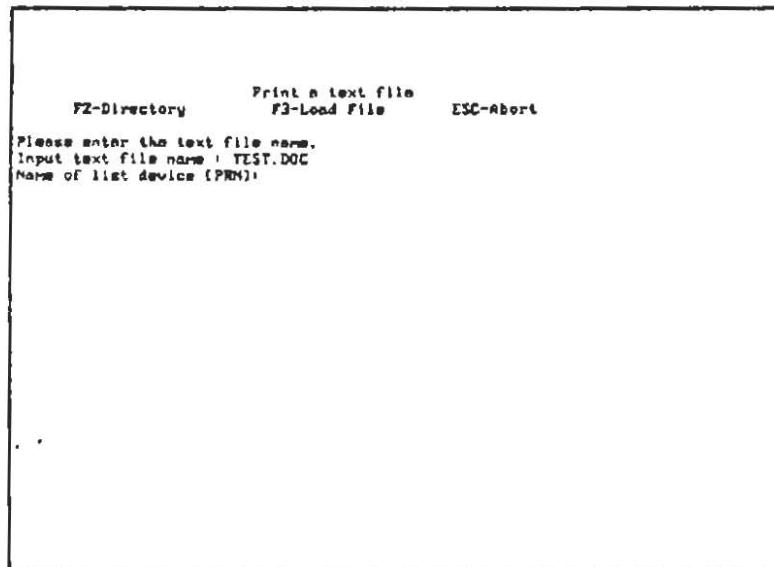


Figure 10

3. Press Enter.

The printout begins and the main menu automatically appears on the screen.

Troubleshooting

Occasionally you may accidentally press the wrong key. When this happens, SEAN displays an error message and tells you how to proceed.

Directory Error

If you use F2 to ask for a directory that is not available, the screen displays this message:

Disk read error on directory__.
Drive door may be open.
Retry, cancel or ignore (r/c/i):

First check the drive door. If it is open, close it and press r to retry the process.

If you retry and still get the error message, press c to cancel, and begin again with the proper directory designation.

When you press c to cancel, the function screen returns, displaying the message:

Error: illegal directory name.
>>Press any key to continue.

If you press i to ignore, the function screen returns, displaying the message:

*Error: illegal directory name.
>>Press any key to continue.*

Pressing any key returns you to the main menu. Select the function you want to use and continue with the process.

Function Key Error

If you are in a function screen and press a function key other than F2 or F3 while selecting from the reference line, the screen displays the message:

*Illegal function key.
Please type any key to continue.*

Pressing any key returns you to the main menu. Select the function you want to use and continue with the process.

File Name Error

When SEAN asks for the file name of an existing file and you enter the name of a file that does not exist, the screen displays this message:

*Text file does not exist.
>>Press any key to continue.*

Pressing any key returns you to the main menu. Select the function you want to use and continue with the process.

File Name Character Error

When you are creating a file name and use one of the characters that are reserved for DOS commands, the screen displays this message:

*Error: illegal file name.
Text file does not exist.
>>Press any key to continue.*

Pressing any key returns you to the main menu. Select the function you want to use and continue with the process, using allowed characters for the file name.

Exiting

At times you may want to exit your current screen and return to the main menu or quit the SEAN program altogether. In most cases you exit a screen by pressing **Esc**. In some cases there is more than one way to exit a screen.

To Exit A Function

You may exit any function from any screen at anytime. To do this, press **Esc**.

This action returns you to the main menu.

To Exit SEAN

You can only exit SEAN from the main menu. If you are in a function screen when you want to quit, first return to the main menu (see: To Exit A Function). When you are at the main menu, you can quit the SEAN program two ways:

1. Select *eXit* and press Enter.

This action returns you to DOS, and the screen displays a DOS prompt such as C:\.

OR

Press **Esc**.

The screen prompts:

Are you sure? (y/n):

2. If you have changed your mind and do not want to exit SEAN yet, type N and press Enter.

This action returns you to the SEAN main menu.

3. If you are sure that you want to exit SEAN, type Y and press Enter.

This action returns you to DOS and the screen displays the DOS prompt.

SEAN Tutorial

The Simplified English Analyzer (SEAN) helps you write a document that adheres to the rules of SE. This tutorial displays the functions of SEAN and shows you how to use the program to analyze a document.

The tutorial is written in two major sections: SEAN Features and Use of SEAN. The first section describes SEAN and some of the program's features.

The second section tells you how to open each option of the SEAN menu, describes the function of the option, gives examples of what the option does, and allows you to do practice exercises with each option of SEAN.

SEAN Features

SEAN analyzes documents for conformity to SE rules. It is not intended to be an editor or spelling or grammar checker.

When SEAN perceives a violation of a programmed SE rule, it calls your attention to it. SEAN also points out when a non-SE word is used. The program is able to identify non-SE words because it contains 1500 words in its SE dictionary.

SEAN also contains a unique feature, a Reverse Thesaurus, which suggests the SE synonym for words that are not in the SE vocabulary. This feature makes SEAN easier to use, because you do not have to look up a synonym each time you use a non-SE word in a document.

Other features of the program allow you to save an analysis to disk for later editing, print a paper copy of an analysis, or edit a text file while using SEAN.

Using SEAN

SEAN's menu contains several options:

*Analyze a Text on Screen,
Save an Analysis to Disk,
Set SE Rules,
Edit a File,
Print Analysis to Printer, and
eXit.*

There are two ways to select a function from SEAN's menu. The first method is to use the Up Arrow or Down Arrow keys to move the highlight bar over the option you want and press Enter. The second method is to type the capitalized letter of the option.

Example: Select *Save an analysis to disk* by using the **Down Arrow** key to highlight this option, or by pressing **S**.

Take a few minutes to familiarize yourself with the menu options and the different ways of choosing them.

Analyzing a File

SEAN will analyze a text file for adherence to thirteen of SE's programmable rules. Type **A** to enter the Analyze function. At the *File Name?* prompt, type *SAMPLE.DOC* to load the sample text file.

SEAN analyzes the first two lines of text that appear on the screen. SEAN positions a carat (^) under a word causing an error. An error message indicating the nature of the infraction, such as *noun cluster* or *illegal word use*, appears on the lower half of the screen. Note the mistake for later correction and press the **Enter** key to continue the analysis. The text scrolls automatically when the cursor reaches the bottom of the screen.

In the sample sentence, notice that the first word, *pressurize*, is highlighted.

Example: Pressurize refueling system and check that outer wing tank overflow lights illuminate.
(Incorrect Verb Form)

The error message at the bottom of the screen indicates the type of error SEAN has encountered. Make a note of the error and press the **Enter** key to continue analyzing the sentence.

When the analysis of the text is complete, SEAN automatically returns to the main menu. You may now choose to use the **Dictionary** function to look up acceptable synonyms for *illegal word use* errors or use the **Edit** function to correct or amend the text.

Save an Analysis to Disk

Select the option, *Save an Analysis to Disk*, from the SEAN main menu. Press the **Enter** key, and SEAN saves the file you are working on to the disk and directory you specify.

Although SEAN does not confirm that the file is being saved, you can check the directory to see that the file is present. Select *Analyze a text on screen*. Press F2 to see a directory of files on the appropriate disk. The name of your file will be there if SEAN correctly saved it.

Example: Earlier you named your file *SAMPLE.DOC*. When you press F2 and name the correct drive letter and subdirectory (if applicable), you will see *SAMPLE.DOC* listed among the file names.

Now press Esc to return to the main menu and bypass the analysis routine.

Exercises

1. Save the *SAMPLE.DOC* analysis you did earlier in this tutorial. For extra practice, try analyzing that same text file several more times, each time giving your output file a different name.
2. After saving each analysis, check the drive and subdirectory you chose to be sure the file is there.

Set SE Rules

Select *Set SE rules* from the main menu. You will see a screen entitled *SE Rules Setting (On/Off)*. There are six options on this screen:

1. *Non-SE Words,*
2. *Noun Cluster,*
3. *Passive Voice,*
4. *Sentence Length,*
5. *Paragraph Length, and*
6. *Word Substitution.*

Each option is followed by a shaded box that contains either the word **On** or **Off**. When you choose this option for the first time, all the boxes should be marked, **On**.

To turn an option on or off, type the number of the option and press **Enter**.

Example: To turn on the option 1. *Non-SE Words*, type 1 and press **Enter**.

Each of these options corresponds to a group of programmable SE rules. These rules deal with the aspect of SE that each option covers. For a complete list of SE rules, read the SE Tutorial.

Non-SE Words

This option is used to flag words that are not in the SE vocabulary. When this option is on, SEAN suggests SE words for non-SE words.

However, if this option is on and the *Word Substitution* option is off, SEAN flags any non-SE word as unrecognized. Turning the *Non-SE Words* option off makes SEAN ignore non-SE words.

Example: Be sure that your *compass* reading matches that of the navigator.

In this sentence, the word *compass* is a non-SE word. With the option turned on, SEAN would give the message, *Do not use the word COMPASS*.

Additionally, if the *Word Substitution* option is on, another message appears: *Replace COMPASS with DEVICE THAT TELLS DIRECTION*.

Noun Clusters

This option is used to flag noun clusters. A noun cluster is a group of three or more nouns in an unbroken string. When this option is on, SEAN flags noun clusters. When the option is off, SEAN ignores noun clusters.

Example: Computer printer paper guides are used to hold paper in place during printing.

This sentence contains what SEAN would perceive as a four-noun cluster, *computer printer paper guides*. With the option on, SEAN would give you the message, *Sentence contains a noun cluster. Noun clusters not allowed*. Rules that apply to this option may be found in the SE Tutorial (see Using SE: Rule 7).

Passive Voice

When this option is on, SEAN notes the use of passive voice. When the option is off, SEAN ignores occurrences of passive voice.

Example: *Make sure the engine has stopped before you begin work on the propeller blade.*

There are two examples of passive voice in this sentence: *make sure* and *has stopped before you begin*. With this option on, both of these phrases would be flagged by the message, *Passive voice. Do not use passive voice.*

SE rules that apply to this option may be found in the SE Tutorial (see Using SE: Rules 14, 15).

Sentence Length

This option tells you when sentences contain too many words. Generally, SE calls for sentences to be less than 20 words long. When *Sentence Length* is on, SEAN flags sentences that are too long, tells you how long each sentence is, and asks you to break the sentence. When the option is off, SEAN ignores sentence length.

Example: Use the left-hand ratchet wrench to loosen the securing bolt holding the propeller in place, making sure that you do not round off the shoulders of the bolt head.

This sentence contains 30 words. When the *Sentence Length* option is on, SEAN reports the message, *This sentence contains 30 words. Break the sentence, it is too long.*

SE rules that apply to this option may be found in the SE Tutorial (see Using SE: Rule 17).

Paragraph Length

Usually SE and SEAN require that paragraphs be kept to a maximum of six sentences each. When *Paragraph Length* is on, SEAN flags paragraphs that have too many sentences. When the option is off, SEAN ignores paragraph length. SE rules that apply to this option may be found in the SE Tutorial (see Using SE: Rules 27, 28).

Word Substitution

This option is used in conjunction with the non-SE Words option mentioned earlier in this section (see Non-SE Words). When this

option is on, SEAN offers SE options to non-allowed words. When this option is off, SEAN does not offer options to non-allowed words.

Exercises

1. Alternately turn the various SE Rule Settings on and off. Study the effects that turning on or off one or more settings has on SEAN's analysis of a document.
2. Rewrite the sentences used in the examples above so that they conform to the specific rule they violated.
3. Rewrite the sentences used in the examples above so that they conform to all the SE Rules.
4. After the sentences are all rewritten, imagine them as being in one paragraph. Would SEAN allow you to leave it as one paragraph?

Revisions

2. (*Poor*) Verify the reading on your device that tells direction with the navigator.

(*Better*) Verify your heading with the navigator.

The guides for the printer paper hold it in place during printing.

Wait for the engine to stop. Then work on the propeller.

The securing bolt holds the propeller in place. Loosen the bolt with the left-hand ratchet wrench. Do not round the shoulders of the bolt head.

3. Rewriting the sentences as they appear in the revision for Exercise 2 will satisfy the SE Rules.
4. No, the paragraph contains seven sentences. The rules of SE do not allow you to keep this as a paragraph (even if it did make sense).

Editing

The Edit function can be used to edit a text file on screen or to create a new document in the SEAN program. To continue the example, press E to enter the Edit function. The text file you have loaded appears on the screen.

Use the cursor keys to move the cursor to the first correction you wish to make. SEAN inserts rather than overstrikes text, so place the cursor on the first letter of the incorrect text and type in the correct version. Use the Delete or Backspace key to remove incorrect text one letter or space at a time.

In the sample sentence, go to the first error and type in the correction *Apply pressure* to rather than the incorrect *Pressurize*.

Example: **Apply pressure to Pressurize** the refueling system...Now use the **Delete** key to remove the word *Pressurize* and the extra space.

Example: **Apply pressure to the refueling system ...**Use the cursor control to continue to the next error that you note.

When you have finished editing the text file, press the **Esc** key to return to the SEAN main menu. If you reach the end of the file, SEAN automatically returns you to the main menu.

Print Analysis to Printer

Use this option only if you have a printer. Turn your printer on, and set the paper to the top of the page (if your printer has a tractor-feed mechanism). Select the option *Print Analysis to Printer* on the SEAN menu. After several seconds, your printer will begin to print the analysis.

The results of the printout may look odd at first, but do not be alarmed. SEAN is programmed to print comments at the point where errors occur, instead of using a footnote or endnote system. SEAN's method of printing comments is easy to read and understand. Printing comments at the end of the printout, or at the bottom of a page, tends to confuse users about which comment goes with which error.

It will not be possible for you to print a copy of the analysis if your computer does not have a printer attached. Do not worry; it is not required that you have a printed copy of your analyzed text to use SEAN. You may simply take notes while the analysis is in progress so you can later make changes in your file.

Exercises

1. If you have a printer, have SEAN print a copy on paper. Study the printed analysis to become familiar with the format SEAN uses when printing.
2. If you do not have a printer, press **x** to exit SEAN. Now type *TYPE SAMPLE.DOC* (or whatever name you used to save the analysis) and press **Enter**. Your analyzed file will scroll up the screen. If it scrolls by too quickly to read, exit out of the analysis. Again, type in the name of the document and press **Enter**. As soon as the document begins to scroll, press **Pause**. Press the spacebar to allow the text to scroll some more. Pause the text as many times as you need in order to read all of the text and the analysis.

Exit

The last option on the SEAN menu is *eXit*. Select this option to leave the program.

Appendix A: SE Word List

about	agree	approved
above	agreed	approximate
abrasive	agrees	approximately
acceleration	aid	are
accept	air	area
accepted	airborne	arm
accepts	aircraft	armament
access	airflow	around
accident	align	arrow
accidental	aligned	as
accidentally	aligns	assemble
accurate	all	assembled
accurately	allowance	assembles
acid	almost	assembly
across	along	at
adapt	also	ate
adapted	alternative	attach
adapts	alternatively	attached
add	although	attaches
added	always	authority
adds	ammunition	automatic
adjacent	an	automatically
adjacent to	analog	auxiliary
adjust	analysis	available
adjustable	and	average
adjusted	angle	away
adjustment	angular	axial
adjusts	apparent	axially
aft	apparently	axis
aft of	applicable	back
after	applied	bad
again	applies	badly
against	apply	balance
agent	approval	balanced

balances
bank
basic
be
bead
became
because
become
becomes
before
behind
below
bend
best
better
between
bled
bleed
bleeds
blew
blockage
blocked
blot
blow
blown
blows
blunt
bond
bonded
bonds
bottom
break
breaks
breathe
breathed
breathes

bright
brighter
brightest
brightly
broke
broken
brush
bubble
burn
burned
burns
burr
but
by
cable
calculate
calculated
calculates
calibrate
calibrated
calibrates
calibration
came
can
cancel
canceled
cancels
cap
capacity
careful
carefully
catch
catches
caught
cause
caused

causes
caution
cavitation
center
change
changed
changes
charge
charged
charges
check
chemical
chemically
chock
choke
circle
circuit
circular
clamp
clean
cleaned
cleans
clear
clearance
clearly
click
clip
clockwise
clogged
close
closed
closes
code
coil
cold
colder

coldest	continue	day
collect	continued	deceleration
collected	continues	decision
collects	continuity	decrease
color	continuous	decreased
come	continuously	decreases
comes	contour	defect
compare	control	defective
compared	controlled	deflate
compares	controls	deflated
complete	cool	deflates
completed	copy	defuel
completes	corner	defueled
component	correct	defueling
compound	corrected	defuels
compress	correction	dent
compressed	correctly	dented
compresses	corrects	depth
computer	corrosion	deterioration
concentration	could	device
condensation	count	diagonal
condition	counted	diameter
conductor	counterclockwise	did
configuration	counts	difference
confined	cover	different
connect	crack	differently
connected	curve	digital
connection	cut	digitally
connects	cuts	dim
constant	cycle	dimension
constantly	damage	dimly
contain	damaged	dimmer
contained	dangerous	dimmest
container	dangerously	direction
contains	data	directly
contamination	date	dirty
contents	dawn	disarm

disarmed
disarms
disassemble
disassembled
disassembles
discard
discarded
discards
disconnect
disconnected
disconnects
disengage
disengaged
disengages
disinfectant
display
distance
distortion
divide
divided
divides
do
does
done
down
downstream
drag
drain
drained
drains
drank
dried
dries
drift
drill
drink

drinks
drop
drunk
dry
during
each
ear
easier
easiest
easily
east
easy
eat
eaten
eats
edge
effect
eject
ejected
ejects
electrical
electrically
electrically
electricity
electromagnetic
electromagnetism
electronic
electronics
emergency
empty
end
energize
energized
energizes
energy
engage

engaged
engages
engine
entrance
entry
equal
equally
equipment
equivalent
erase
erased
erases
error
estimate
examine
examined
examines
example
exhaust
exit
expanded
expired
explosion
explosive
extend
extended
extends
extension
external
externally
extinguish
extinguished
extinguishes
eye
face
fact

failure
fall
fallen
falls
far
farther
farthest
fast
faster
fastest
feather
feathered
feathers
feel
feels
fell
felt
ferried
ferries
ferry
file
files
filled
fills
filter
filtered
find
finds
finish
fire
fired
fires
first
fit
flag
flame
flammable

flange
flash
flashed
flashes
flat
flexible
flight
flow
flowed
flows
fluid
flush
flushed
flushes
focus
fold
folded
folds
follow
followed
follows
for
force
forward
forward of
found
free
freely
freeze
freezes
frequency
frequent
frequently
friction
from
front
froze

frozen
fuel
full
fully
function
gas
gave
general
geometry
get
gets
give
given
gives
glossy
go
goes
gone
good
got
got
graduation
graph
gravity
grease
grind
groove
ground
grounded
grounds
group
guard
had
half
hand
hang
hangs

hard	hot	inflates
harder	hottest	initial
hardest	how	initially
hardware	hung	injury
has	hydraulic	inner
have	hydraulically	input
head	ice	inspection
hear	identification	install
heard	identified	installation
hears	identifies	installed
heat-treated	identify	installs
heat-treat	if	instruction
heat	ignition	instrument
heavier	ignore	insulation
heaviest	ignored	intensity
heavily	ignores	interchangeable
heavy	immediately	interface
height	important	intermittent
held	in	intermittently
help	in front of	internal
helped	inboard	internally
helps	incident	into
here	include	irregular
high	included	irregularly
higher	includes	is
highest	incorrect	isolate
highly	incorrectly	isolated
hit	increase	isolates
hits	increased	it
hold	increases	item
holds	increment	its
hole	independently	jack
hook	indication	joint
horizon	inflate	keep
horizontal	inflated	kill
horizontally		killed

kills	lighter	lowered
kink	lightest	lowers
knew	lighting	lowest
know	limit	lubricant
known	line	lubricate
knows	linear	lubricated
label	liquid	lubricates
lamination	listen	lung
landing	listened	machine
large	listens	machined
larger	live	made
largest	load	magnet
last	local	magnetic
last	locally	magnetically
latch	location	maintenance
latched	lock	make
latched	lock-on	makes
latches	locked	malfunction
lateral	locked-on	mandatory
laterally	locks-on	manual
layer	locks	manually
leak	long	many
leakage	longer	mark
least	longest	mass
least	longitudinal	material
length	longitudinally	mating
less	look	mat
lesser	looked	maximum
let	looks	measure
lets	loop	measured
letter	loose	measures
level	loosely	mechanical
life	loosen	mechanically
lift	loosened	mechanism
lifted	loosens	medical
lifts	low	melt
light	lower	melted

melts	multiply	opened
metal	must	opening
middle	name	opens
military	near	operate
minimum	nearer	operated
minus	nearest	operates
mix	necessary	operation
mixed	negative	opposite
mixes	negatively	optional
mixture	neutral	or
mode	new	other
moderately	no	out
moist	noise	out of
momentarily	none	outboard
monitor	north	outer
monitored	nose	output
monitors	not	overboard
moor	notch	overhaul
moored	note	overlap
moors	notice	paint
more	number	painted
more	o.k.	paints
most	obey	pair
most	obeyed	park
motor	obeys	parked
motored	object	parks
motors	occur	part
movable	occurred	particle
move	occurs	paste
moved	of	patch
movement	off	peen
moves	oil	performance
much	on	permanent
multiplication	one	permanently
multiplied	only	permit
multiplies	open	permits

permitted
person
piece
pipe
placard
play
plus
pneumatic
pneumatically
point
pointed
points
poisonous
polish
polished
polishes
position
positive
positively
possible
possibly
post-()
power
pre-()
precaution
precision
preparation
prepare
prepared
prepares
preservation
pressure
pressurization
pressurize
pressurized
pressurizes
prevent

prevented
prevents
primary
problem
procedure
program
projection
propeller
property
proportion
protection
pull
pulled
pulls
pump
push
pushed
pushes
put
puts
quality
quantity
quickly
radial
radially
radioactive
radioactivity
radius
range
rate
read
reads
ream
rear
rearward
receive
received

receives
recess
recommend
recommended
recommends
record
refer to
referred to
refers to
reflection
refuel
refueled
refuels
regular
regularly
reject
rejected
rejects
related
relation
release
released
releases
remaining
removal
remove
removed
removes
repair
repaired
repairs
replace
replaced
replacement
replaces
reply
report

resistant
result
retract
retracted
retraction
retracts
right
rigid
risk
roller
rope
rough
rougher
roughest
rounded
routing
row
rub
rubbed
rubs
safe
safely
safetied
safeties
safety
same
sample
satisfactorily
satisfactory
saw
scan
schedule
scheduled
schedules
scratch
screw

seal
scaled
seals
second
secondary
see
seen
sees
selection
semicircular
send
sends
sensitive
sent
separation
sequence
serration
serviceable
servicing
set
sets
shake
shaken
shakes
shape
sharp
sheet
shield
shiny
shock
shook
short
shorter
shortest
show
showed

shown
shows
side
sideways
sign
signal
since
skid
slope
slot
slow
slower
slowest
small
smaller
smallest
smell
smelled
smells
smoke
smoked
smokes
smooth
smoother
smoothest
smoothly
snow
so
soak
soaked
soaks
soap
soft
solder
solid
solution

some	straight	system
something	strap	systematically
sound	strength	tacky
source	stressed	tag
space	strip	tagged
span	stripe	tags
spark	strong	tape
speak	stronger	task
speaks	strongest	tear
special	structural	telescopic
specially	structurally	tell
specification	structure	tells
specified	subassembly	temperature
speed	subsequent	temporarily
sphere	subsequently	temporary
spherical	subtract	tension
splice	subtracted	tertiary
spline	subtracts	test
spoke	such	than
spoken	suction	that
spray gun	sudden	the
spray	suddenly	their
stable	sufficient	them
stain	sufficiently	then
standard	sum	theory
start	supplied	there
start	supplies	these
started	supply	they
starts	sure	thick
stay	surface	thicker
stayed	switch	thickest
stays	symbol	thickness
stencil	symmetrical	thin
step	symmetrically	think
stop	symmetry	thinks
stopped	symptom	thinner
stops	synchronized	thinnest

third	transmitted	vertical
this	transparent	vertically
those	travel	very
thought	trestle	vibration
thread	tried	view
three	tries	visual
through	trouble-shooting	visually
thru	try	voice
thus	tune	volume
tight	tuned	warm
tighten	tunes	warning
tightened	turn	was
tightens	turned	water
tightly	turns	we
tightness	twist	weak
time	twisted	weaker
to the rear of	twists	weakest
together	type	wear
told	unit	wears
tolerance	unknown	weather
too	unless	weigh
tool	unsatisfactorily	weighed
top	unsatisfactory	weighs
torque	unserviceable	weight
torqued	until	weld
torques	unusual	went
total	unusually	went
touch	unwanted	were
touched	up	west
touches	upstream	wet
tow	use	wheel
towed	used	when
tows	uses	where
track	usual	which
transmit	usually	while
transmits	value	who

width
will
wind
winds
wire
with
without
wore
work
worn
worse
worse
worst
wound
write
writes
writing
written
wrote
you
your
zero

Glossary

Active Voice: using the verb to directly show the action of the subject.

AECMA: Association Européenne des Constructeurs de Matériel Aerospatial

AIA: Aerospace Industries Association

ASCII Text File: a text file without program-specific document formatting codes.

Automated Feedback: information about a process provided by a computer.

Character: any letters, numbers, punctuation marks, or other formatting and control symbols.

Connecting Words: words used to show the relationship between two sentences or paragraphs. Connecting words include *thus*, *also*, *as a result*, etc.

Directory: a display of the names of the files that are stored on a disk in one of the drives.

Directory Path: a DOS command specifying the drive and the sub directory in which your files are located.

Imperative Tone: the mood that expresses a command or request.

Jargon: specialized or technical language of a trade, profession, class, or fellowship.

MS DOS: stands for Microsoft Disk Operating System; a type of operating system software.

Nomenclature: a system of names; systematic naming in any art or science.

Non-Approved Technical Names: specific technical names not listed in the SE dictionary.

Noun Cluster: a group of three or more consecutive nouns that are not broken up by punctuation or supporting words.

PC: stands for personal computer, often an IBM personal computer.

Parse: to break a sentence down into its parts of speech with an explanation of the form, function, and syntactical relationship of each part.

Passive Voice: the combination of a form of the verb be with the past participle of the main verb.

Past Participle: verb tense that is usually formed by adding *-ed* to the root verb.

RAM: Random Access Memory; pertains to the memory chips that are mounted onto boards inside your computer's system unit; temporary memory.

SE: An acronym for Simplified English (see definition of Simplified English).

SEAN: Simplified English Analyzer

Simplified English: a subset of standard English used by an international consortium of aircraft companies, that has a limited vocabulary and 37 writing rules.

Tabular Layout: a vertical format used to show related steps and procedures.

Technical Names: approved nouns in the SE dictionary chosen for their international acceptance.

Topic Sentence: the first sentence in a paragraph that tells the main topic of the paragraph.

Word Count: the process of counting the number of words in a sentence.

Index

A

- Active voice, 20-22, 47 *see also* Rules of SE
- Adding and deleting text, 76-77
- Analyzing a document, 70-74, 93-94
 - see also* Writing Text
- Analysis to File
- Articles (parts of speech), 17, 43

C

- Colons, 32, 53
- Commas, 29, 55
- Connecting words, 24, 28, 51
- Conventions for using SEAN, 63-64
- Creating a file, 78-80
- Cursor movement, 76-77

D

- Dashes, 30, 32, 53
- Demonstrative adjectives, 17, 43

E

- Editing a file, 81-83, 100
- Entering file names, 84
- Entering text, 74-75

Exiting

- from a function to main menu, 90
- SEAN from a function, 90
- SEAN from main menu, 91

H

- Hyphens, 31-33

I

- Imperative voice, 21, 48
- Installation, 66-67
- Instructions, 15, 25, 52

J

- Jargon, 15

K

- Keys
 - functions of, 64-65

N

- Naming files, 65-66
- Noun clusters, 16, 42

Nouns
use of in SE, 16-17, 42-44

P
Paragraphs, 26-29
length, 28
topic sentence, 23, 27
logical order of text, 26
Past participles, 19, 45
Passive voice, 20-22
Past tense, 18, 44
Present tense, 18, 44
Printing a file, 86-88

R
Rules of SE, 12-35, 39-56
nouns, 16-17, 42-43
parentheses, 33-34
punctuation, 29-34
colons, 32, 53
commas, 29, 55
dashes, 30, 32, 53
hyphens, 31-33
sentence structure, 22-25
length, 23, 25, 29, 50
see also Topic sentences
verbs, 17-22, 44-50
tense of, 18, 44
use of unapproved verbs, 17
voice, 20-22 *see also*
Active voice, Passive voice
vocabulary, 12-16, 39-42

approved words, 14, 39-42
warnings and cautions, 34-35
word count, 32-33

S
Saving
an analyzed document to disk, 94-95
editing changes, 80
files, 95

Sentences, 22-25, 50-53
Simple future tense, 18, 44
Simplified English (SE)
benefits, 10
definition of, 7
philosophy, 8
purpose of rules, 9
rules, 12-35, 39-56
setting SE rules, 68-70, 95-100
tutorial, 39-56
usage, 9-10
using SEAN to help write SE documents, 61-62

Simplified English Analyzer (SEAN)
definition, 57
features, 57, 92
limitations, 57-58, 61-62
non-programmable rules, 59-60
programmable rules, 58-59

T

Tabular (vertical) layout, 27-28, 53-54

Technical names, 15,

Topic sentences, 26

Troubleshooting

directory errors, 88

function key errors, 89

file name errors, 89

file name character error, 90

Tutorial

SE, 39-56

SEAN, 92-102

U

Using SEAN, 63-102

V

Verbs

use of in SE, 17-22, 44-50

W

Words,

general use of, 12-15

approved for SE use, 12-15, 39-41

unapproved but allowed, 14, 17-18

Writing a text to file, 83

see also Analyzing a document

0000214