

## ***S1000D User Forum 2010***

***“Application of S1000D within a state-of-the-art Integrated Logistic Support environment”***

**September 27 - September 30, 2010  
Aerostar Hotel, Moscow, Russia**

***“Simplified Technical English, ASD-STE100 -  
A writing resource for technical accuracy”***

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ASD Simplified Technical English

## **A worldwide standard**

**Technical writers started to use ASD Simplified Technical English, ASD-STE100 (STE), in the 1980s.**

**It was initially applicable to commercial aviation. Then, it became also a requirement for military projects.**

**Primary texts for Maintenance Manuals, Data Modules and Service Bulletins for the commercial and military aircraft are written in STE.**

**Vendors of components for these aircraft write their Component Maintenance Manuals and Data Modules in STE.**



## ***Why Simplified Technical English?***

### ***What is it?***

- **STE is not a new idea...**
  - **Professor K.C. Ogden wrote the “Basic English” in 1930.**
  - **Caterpillar first used their Fundamental English (CFE) in the 1970s.**
  - **Other industries use Controlled Languages.**
- **But STE was the first controlled language used in aerospace maintenance. It is the best known one and a model writing standard for other industries.**



## ASD Simplified Technical English

### Historical Background

**1979 - The Association of European Airlines (AEA) thought that a simplified language applicable to the aircraft maintenance documentation was necessary. The “European Association of Aerospace Industries” (AECMA) agreed to find a solution and started the project with the Simplified English Working Group (SEWG).**

**1983 – 1986 - After the analysis of many maintenance texts, the SEWG set the writing rules, a controlled dictionary and examples. Also, the Aerospace Industries Association (AIA) of America sent their representative in the SEMG.**

**1986 - First release of the SE Guide (AECMA Document PSC-85-16598).**

**1987 – 1989 - ATA and S1000D made AECMA SE a mandatory requirement.**

**1995 – After a long clean-up work, the SEWG released the SE Guide with many new features and the examples included in the Dictionary (Issue 1, 15 Sep 1995). The SEWG became the SE Maintenance Group (SEMG).**



## ASD Simplified Technical English

### Historical Background

- 1997 – **Some airlines representatives became SEMG Associate Members.**
- 1998 – **The AIA Canada (AIA-C) got full SEMG membership.**
- 1998 - 2001 - **Updates and amendments of the SE Guide (Rev 1 and Rev 2).**
- 2003 – **S1000D 2.0 opened to Land and Sea (SE not only for Aerospace).**
- 2004 – **Full revision of the SE Guide (Issue 2, 15 Jan 2004).**
- 2005 – **AECMA became ASD. The SE Guide became the Specification ASD-STE100 with the word “Technical” added to its name (Issue 3, 15 Jan 2005). SEMG became STEMG.**
- 2006 – **Some military representatives became STEMG Associate Members.**
- 2007 – **Full revision of the Specification. EC Trademark (Issue 4, 15 Jan 2007) included.**
- 2008 – **The European Handbook for Defence Procurement (CEN WS10 framework) recommended S1000D and STE as its best practice standards for documentation.**
- 2009 – **ASD-STE100 presentation at EASA and FAA.**

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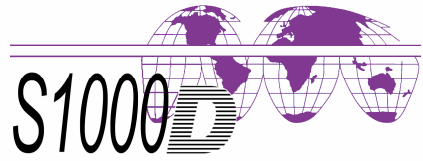




ASD Simplified Technical English

## ***Why a controlled language for aerospace industry?***





ASD Simplified Technical English

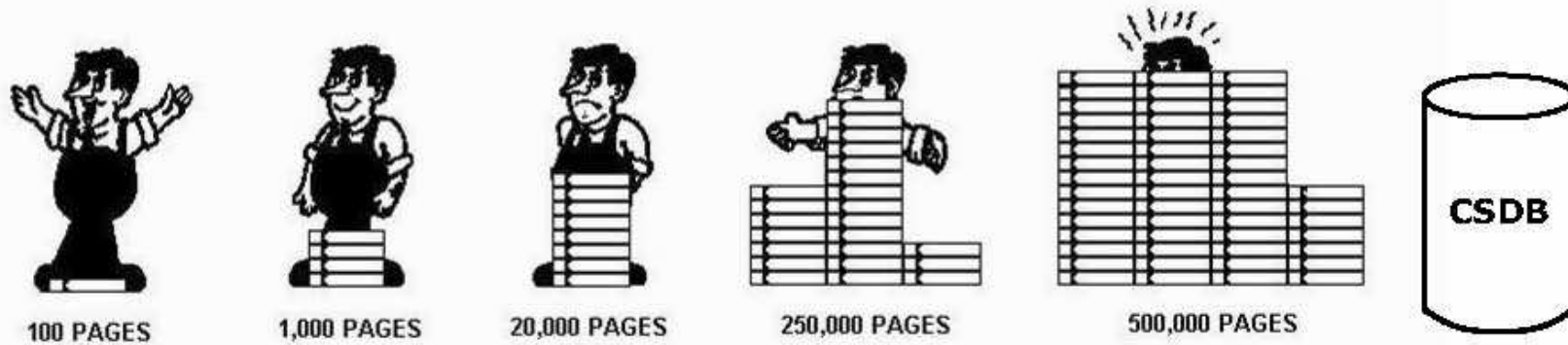
## The increasing complexity of aircraft





## ASD Simplified Technical English

# The increasing size and complexity of technical documentation and data



100 PAGES

1,000 PAGES

20,000 PAGES

250,000 PAGES

500,000 PAGES

CSDB

ONE MANUAL IN  
ONE VOLUME

500,000 PAGES  
THE LARGEST IN UP  
TO 30 VOLUMES

1910

1930

1950

1970

1990

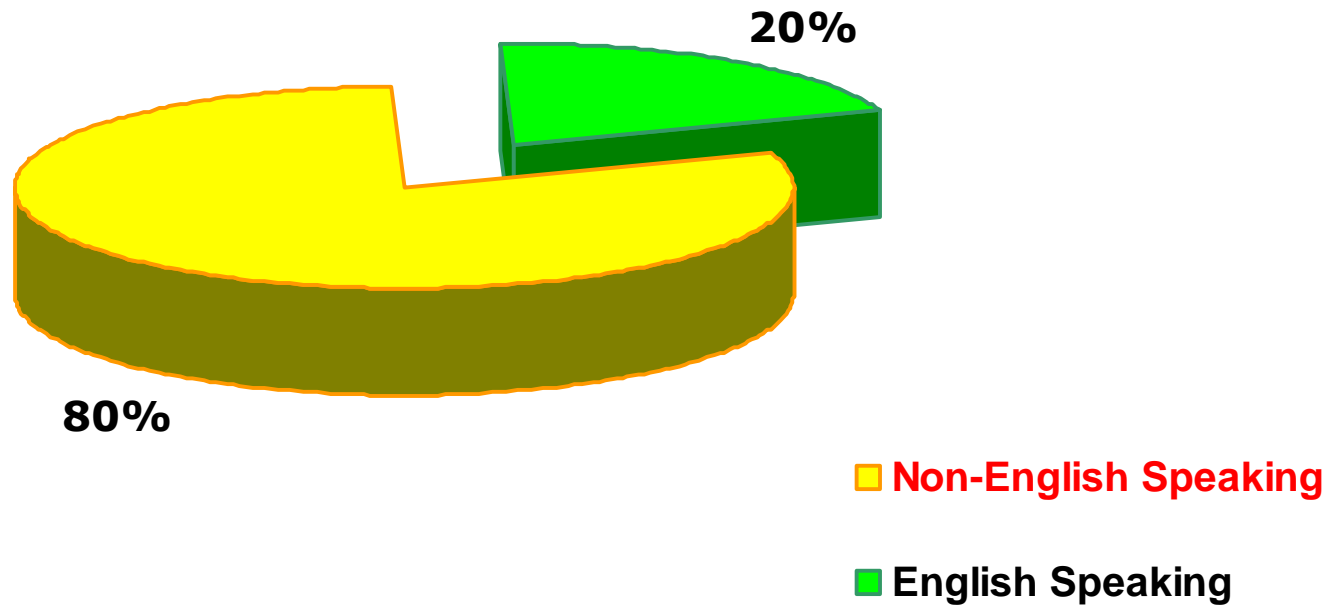
2000

IETP

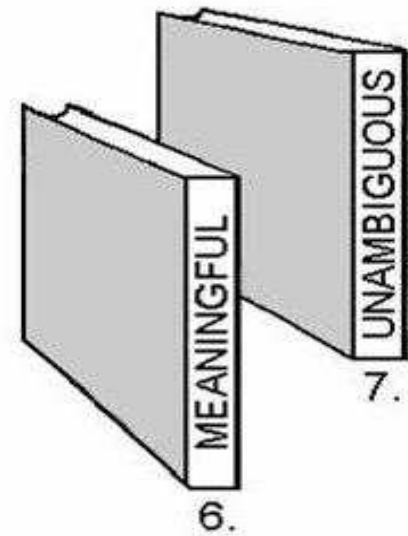
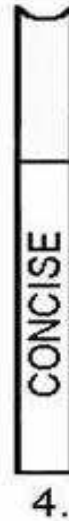
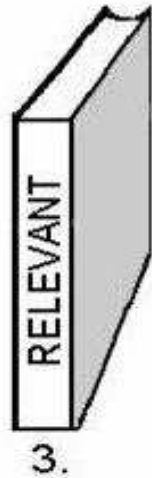
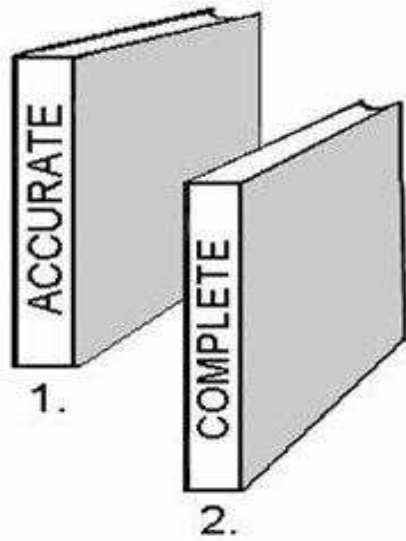




## The increasing number of non-native English speaking customers



**The maintenance data that must be:**





**But accurate technical text and correct presentation are not always sufficient:**

**The selection of the words is not easy.**

**Some customers do errors with texts that we think that are written in good English.**

***" Round the edges of the round cap. If it then turns round and round, as it circles round the casing, another round of tests is required."***



ASD Simplified Technical English

**A standard was necessary.**

**A standard that included:**

**a small number of words**

**words with defined meanings**

**words with defined parts of speech**

**a simplified structure**

***for the maximum benefit to the reader!***



ASD Simplified Technical English

Minimum Words

Simplified Structure



The basic condition for a

Controlled Language

A **Simplified** form of **English**

**Simplified Technical English**  
(ASD-STE100)



ASD Simplified Technical English

## **SIMPLIFIED TECHNICAL ENGLISH**

### **Specification ASD-STE100**



**European Community Trade Mark No. 004901195**

**International specification  
for the preparation of maintenance documentation  
in a controlled language**



## ASD Simplified Technical English



## ASD-STE100 Simplified Technical English has received European Community trademark.

**“In practice this means that the good results we have achieved are now being acknowledged by an audience outside the aerospace industry. The Simplified Technical English specification ASD-STE100, represents groundbreaking work in standardization, which is in line with the European Commission work program fostering an Innovation-Friendly Europe. And we hope this will help other industries in their standardization work,”**

*François Gayet, Secretary General ASD Europe, October 2006, ASD Press Release.*



ASD Simplified Technical English

## ***So how does STE make text simpler and easier to read?***

**STE has two parts:**

**Part 1: a set of writing rules**

**Part 2: a controlled vocabulary**







## STE primary rules

- **Choose the words from:**
  - **Approved words in the Dictionary (controlled)**
  - **Technical Names (20 categories, not controlled, not listed in the Dictionary).**
  - **Technical Verbs (3 categories, not controlled, not listed in the Dictionary).**
- **Use the approved words only as the part of speech given in the Dictionary.**
- **Make the instructions as clear as possible.**



## **STE primary rules**

- **Do not write more than three nouns together.**
- **Put the article before the nouns.**
- **Use only the form of verbs that are listed in the Dictionary.**
- **Do not use the “-ing” form of a verb unless it is a part of a Technical Name.**
- **Use the active voice. Use only the active voice in procedures and as much as possible in descriptive text.**
- **Keep to one topic per sentence.**
- **Use the vertical layout for complex text.**



## **STE primary rules**

- **Write short sentences (20 words maximum in procedures, 25 words maximum in descriptive text).**
- **Write only one instruction per sentence.**
- **In an instruction, use the imperative “command” form.**
- **Write only one topic in each paragraph.**
- **Do not write more than 6 sentences in each paragraph.**



## **STE primary rules**

- **Start a warning or a caution with a simple and clear command.**
- **Identify your command correctly as a warning or a caution.**
- **Write notes so that you give information, not commands.**
- **Use a Different Construction to rewrite sentences when a word-for-word replacement is not sufficient.**



## An important resource for Flight Safety

- While newest technologies in aviation get a better reliability, human errors can become the primary cause of safety events.
- In aviation, the **Human Factors Concepts** are directly connected to **maintenance**.
- During maintenance, a person can do an incorrect task which can cause a malfunction of components and systems. This malfunction can have important effects on Flight Safety.
- The language used in the procedures is important for the correct maintenance. It is more important when the personnel use texts not written in their native language and they do not have a high knowledge of English.
- They must understand all procedures. They must do the tasks correctly.



ASD Simplified Technical English

## An important resource for Flight Safety

***“Sometimes, the technical language of the manufacturer does not translate easily into the technical language of the customer, and the result can be maintenance documentation that is difficult to understand”.***

*(International Civil Aviation Organization (ICAO) Secretariat  
“Awareness Grows of Importance of Human Factors Issues in  
Aircraft Maintenance and Inspection”, ICAO Journal,  
January-February 1996).*

**STE becomes an important tool to simplify the correct understanding of the maintenance instructions by the personnel. STE helps to remove the linguistic barrier.**



ASD Simplified Technical English

## **An important resource for Flight Safety**

**Controlled grammatical structures and vocabulary make text more easily understandable.**

**An easy and correct text can decrease the maintenance errors and the Human Factors risks.**

***“The Aerospace and Defence Industries Association of Europe, a champion of simplified English, has devised a system that uses no more than 900 words. The association's involvement demonstrates what often drives simplified English: the need for safety.”  
(The Financial Times, 26th August, 2008)***



## Summary of STE principles

- The STE vocabulary is restricted – approximately 860 approved words.
- STE shows you how to use the approved words.
- Each word has a defined meaning.
- Each word has a defined part of speech.
- STE gives the rules that help you write clearly. There is a set of easily-applied writing rules – approximately 60.
- STE helps to remove language problems where English is not the native language.
- STE makes it easier to translate English texts into other languages.
- STE gives added value to manuals and data modules written as specified in S1000D and ATA i2200.

***“With SE we may, at last, be on the threshold of making English logical and tidy.”  
(The Times, 13th April, 1987)***





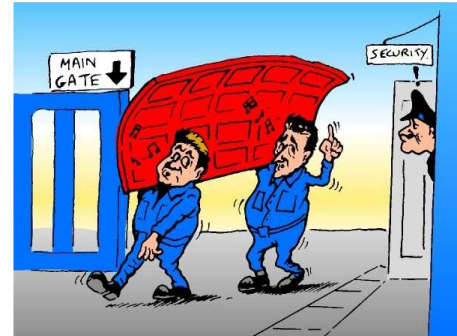
## ASD Simplified Technical English

**Remember, in STE: one word = one meaning!**  
**In STE, YOU.....**

Do not  
**perform** the  
task



Do not  
**carry out**  
the task



Do not  
**undertake**  
the task



**DO** the  
task !



## Who uses STE?

**In the aerospace world:**

- **Aircraft operators (airlines and military depots)**
- **Aircraft maintenance training centers**
- **Aircraft designers and manufacturers**
- **Aircraft component manufacturers**
- **Aircraft engine designers and manufacturers.**



## ASD Simplified Technical English

### Is STE only for aerospace?

**3% of the keywords included in the STE Dictionary are applicable to the aerospace documentation.**

**97% of the keywords are applicable to all types of documentation.**

**We can use the Writing Rules in all types of documentation.**



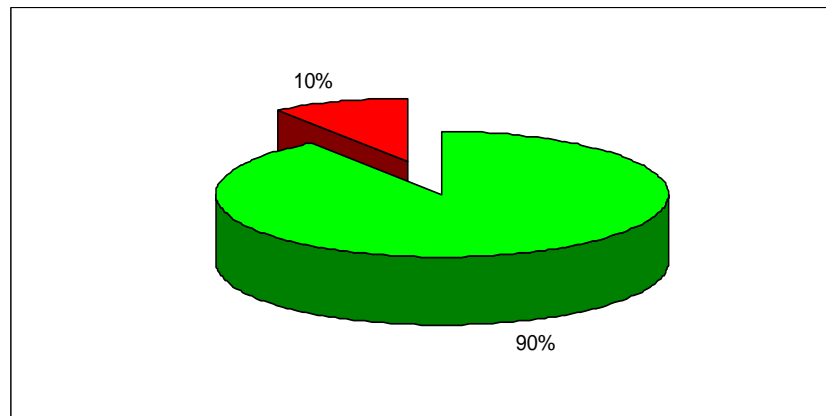


## Is STE only for aerospace?

**ASD-STE100 study for universal use (April 2008) – Final results**

**STE Writing Rules + Dictionary**

- **10% of STE is aerospace-related**
- **90% of STE is universal**





## Is STE only for aerospace?

### **ASD-STE100 study for universal use (April 2008) – Final results**

- **The WR Section has only 44 aerospace examples out of 124**
- **The Dictionary has only 420 aerospace examples out of 2334**
- **The Aerospace keywords are 31 out of 2166**

The study shows that we can use STE in other fields.

We can use the STE Dictionary as a “core” and add the Technical Names and Technical Verbs that are applicable to our companies, our projects and our industries.

You can see an example of general use in this presentation where:

**More than 90% of the text is written in STE!**



## Who uses STE?

### Non-aerospace world (with small adaptations):

- **High-Tech companies**
- **Oil companies**
- **Medical companies**
- **Truck designers and manufacturers**
- **Tyre manufacturers**
- **Digital camera manufacturers**
- **Diesel engine designers and manufacturers**
- **Passenger train designers and manufacturers .....**

**.....and many others!**





ASD Simplified Technical English

**THANK YOU FOR YOUR ATTENTION!**

**QUESTIONS?**

**More information?**

**Please visit:** [www.asd-ste100.org](http://www.asd-ste100.org)

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