11 AECMA Simplified English

Most of us are aware that English is the standard language for flight control throughout the world, but it is not so widely known that English is widely used for aircraft maintenance manuals as well. It would obviously be extremely expensive to translate all these manuals, as well as all the amendments to them, into the natural language of each purchasing country. It could also be rather dangerous since any mistranslation due to ambiguity in the source text and/or lack of technical knowledge by a translator could have disastrous consequences.

However, this did give aircraft engineers in Europe and many other countries the problem of having to read these manuals in what was to them a foreign language, and this also presents a risk of misunderstanding the instructions, so in the late 1970's the Association of European Airlines asked airframe manufacturers to investigate readability criteria for maintenance documentation within the civilian aircraft industry.

As a result the AECMA Documentation Working Group set up a project group. This project group has researched the procedural texts in maintenance manuals and its initial suggestions for improvement have been embodied in the AECMA document PSC-85-16598 "A Guide for the Preparation of Aircraft Maintenance Documentation".

The purpose of the Guide is to produce texts that are understandable without translation for non-native speakers of English. It was not designed with a view to using machine translation and I understand that where there is translation of AECMA texts, it is still done by human beings.

This Guide can be purchased from a technical services company in Derby for about £180. Presumably it would normally be used by aircraft manufacturers and/or their subcontractors, or the maintenance arm of an airline.

However, it may be the simplest way of finding out what a 'controlled language' looks like, since, although a number of companies, such as Perkins Engines, Rank Xerox, Bull, Caterpillar etc. use controlled languages with machine translation systems, they are not published for use outside their companies.

What is AECMA Simplified English?

Simplified English consists of a limited vocabulary and a set of writing rules. The vocabulary includes verbs, prepositions, conjunctions, adjectives, adverbs, and nouns, and in this vocabulary, a family of

synonyms is represented by only one of its members. For example, *start* is used instead of *begin,* *commence, initiate,* or *originate.*

Words are chosen for their simplicity and relationship with other languages. For example, *occur* was chosen because it is more international than *happen.* Where there is a choice between American English and British English, the American version is preferred - American spelling (Webster's Dictionary) is used.

In Simplified English, a word may have a restricted use. *To fall* for example, is used to indicate the idea of gravity, and not the idea of a decrease in quantity. So the expression *the pressure falls* is no longer available to the writer who follows the Simplified English rules. He must write *the pressure decreases.*

The user of a maintenance manual whose first language is not English may have difficulty with the complexities of the English language. To help overcome such difficulties, there are a set of rules to make the written message easier to understand. Thus they have tried to simplify both the vocabulary and the writing style.

Besides the words in the Dictionary the writer can also use those words which he decides belong to one of two categories: either Technical Names or Manufacturing Processes. For example, the Dictionary cannot help the writer decide whether a certain part of the aircraft is better called *flight deck* or *flight compartment.* Such in-house preferences have to be decided by a company's own house rules.

The Guide is not intended to be used to teach English. The Guide assumes that the writer has a good command of written English. The restricted vocabulary and the rules should help the experienced writer to present complex information simply. Writing is clearly a complex task, and writing in Simplified English still requires language fluency and professionalism.

Other Controlled Languages

I understand that there is a French version called "Français Rationalisé" which is a product of the French aerospace industries association (GIFAS). It is to be used for documentation for the French "Rafale" fighter plane. This documentation will in turn be translated into AECMA SE, but by human beings, and not by machine.

There may be a German version being developed by the University of Munich, but this is not confirmed.

JDW