

# Safety, safety, safety:

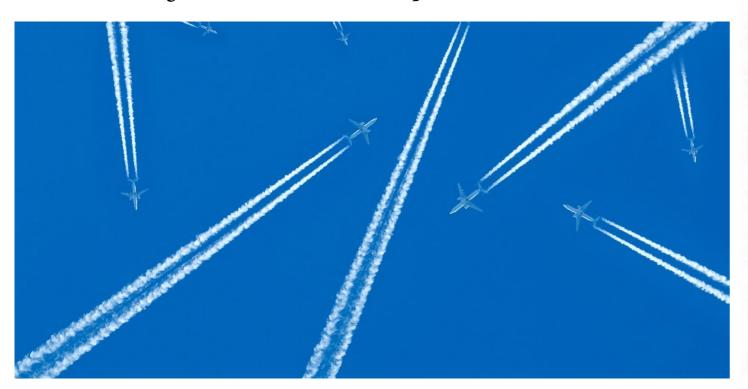
As the number of planes in our skies continues to grow, so the need for safety becomes even more important.



An ICAO review of 28000 incident / accident reports has found that over 70% of the problems were caused by language.

ICAO standards now demand that all pilots flying internationally and all air traffic controllers providing services to international flights must have a minimum level of English.

This level of English is known as ICAO Operational Level 4.







### ICAO Descriptors for Operational Level 4:

### **VOCABULARY:**

Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete, and work related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.

#### STRUCTURE:

Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning.

#### **COMPREHENSION:**

Comprehension is mostly accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.

#### **FLUENCY:**

Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting.

#### PRONUNCIATION:

Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation but only sometimes interfere with ease of understanding.

#### **INTERACTIONS:**

Responses are usually immediate, appropriate, and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming, or clarifying.

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## The Challenge:

The busy and changing work patterns of pilots and controllers mean that traditional classroom-based courses are mostly impractical and ineffective. However, technology now offers exciting new opportunities for the way we live our lives, including the way we learn languages. *Independent* study programs offer greater flexibility and advantages so that learners can study at their own pace and when and where they want. Such programs have historically been useful for improving vocabulary, grammar and listening skills. They have however been ineffective at improving a learner's speaking skills.

#### That is until now!



"I am motivated to improve my English but have no time to go to classes. What can I do?"



## The Partnership:





### Mayflower College:

- •was founded in 1988 and provides English language training for international learners.
- •welcomes to the UK approximately 1000 learners per year from 50+ countries.
- •has been involved in Aviation English since 1992, providing general and aviation-specific courses to air traffic controllers and pilots (see www.aviationenglish.com).
- •is the founder of the Test of English for Aviation (T.E.A.).
- •was represented on the ICAO PRICESG Linguistic Sub Group.
- was a presenter at the ICAO workshops in Moscow in June 2006 and May 2007.
  was a speaker and moderator at the ICAO Regional Workshop in Paris in September 2006.
- •was a speaker at ICAO Aviation Language Symposium in Montreal in May 2007.

### Carnegie Speech:

Carnegie Speech is the premier developer of software for assessing and teaching spoken language skills. Its products, initially developed at Carnegie Mellon University, use patent-pending speech recognition and pinpointing technology.

The pinpointing technology uses

automated speech recognition and advanced Artificial Intelligence techniques to pinpoint exactly where an error is being made in spoken English sounds, rhythm, pitch, or grammar and gives immediate feedback to the user. The corresponding intelligent tutor then creates an individualized study program for each student – this maximizes the student's learning effectiveness and minimizes the training time.

Carnegie Speech's products are installed in 13 countries around the world and have been adopted by customers such as Hewlett Packard, General Electric, IBM, and Accenture.

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## Climb Level 4:



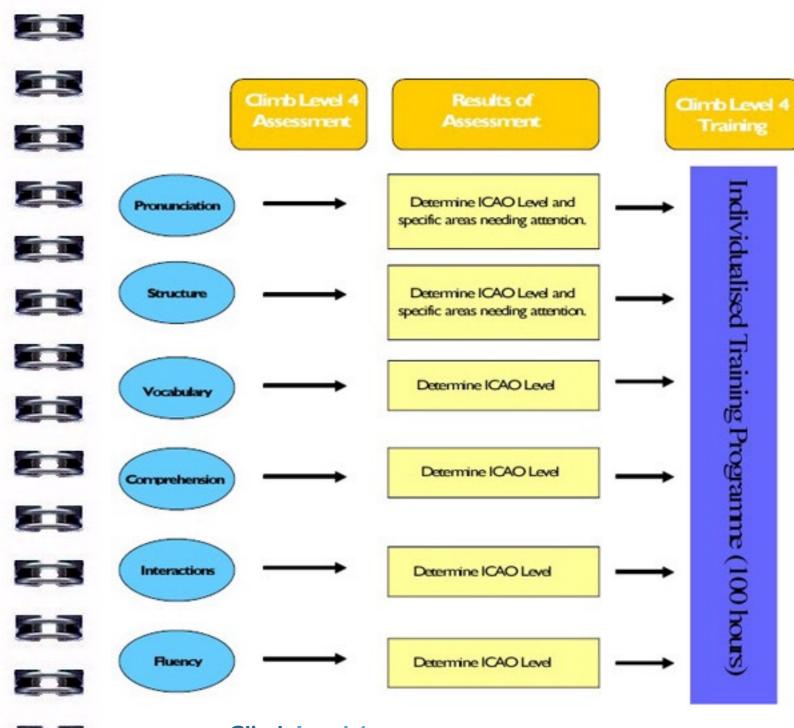
**Climb Level 4** is an internet-based, English language assessment and training solution. It is most suitable for pilots and controllers whose level of English is presently ICAO level 3 or 4 and who wish to improve to ICAO level 4 or 5.

The process begins with an assessment of the learner's spoken English using automated speech recognition and advanced Artificial Intelligence techniques. This serves two purposes:

- 1) to rate the learner's speaking and listening skills according to the ICAO descriptors in the required areas of pronunciation, structure, interactions, fluency, vocabulary and comprehension.
- 2) to produce an individualized training program which takes into consideration the learner's present ability in each of the six ICAO descriptors (pronunciation, structure, interactions, fluency, vocabulary and comprehension).

In addition, the assessment will analyze the learner's specific strengths and weaknesses in the areas of pronunciation and grammar and consequently produce training exercises which only focus on the learner's particular problems in pronunciation and grammar.

For example, if in the assessment a learner demonstrates that s/he is able to pronounce clearly "w" and "v" sounds then the training program will not include exercises on the "w" and "v" sounds. However, if the learner has difficulties, for example, with "h" and "th" sounds then the training program will include exercises on these areas of pronunciation.



**Climb Level 4** Assessment and Training Process

"What I need is a training program which is specific to me and my problems."





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"I need to know my level of English now so that I can see how much I need to progress in order to meet ICAO requirements"

### CL4 - Assessment:

Using advanced Speech Recognition technology, this assessment tool allows the learner to test himself in order to see his present level of English in each of the skills required by ICAO (pronunciation, structure, interactions, fluency, vocabulary and comprehension).

There are 8 parts to the assessment test:

Part 1: Warm Up – questions about the learner and his work.

Part 2: Grammar test - a detailed test of the learner's understanding and ability to use grammatical structures. (STRUCTURE)

Part 3: Pronunciation test - a detailed test of the learner's ability to produce a wide variety of English sounds. (PRONUNCIATION)



Part 4: Repeat – the learner is required to listen to various sentences and then repeat them word-for-word. (FLUENCY, STRUCTURE)

Part 5: Situation summary – the learner listens to dialogues between pilots and controllers and then is required to summarize what happened. (COMPREHENSION, FLUENCY, INTERACTIONS)

Part 6: Structure – the learner hears various sentences with incorrect grammar usage and is required to say the correct version. (STRUCTURE)

Part 7: Vocabulary – the learner must select the best word in order to complete various sentences. (VOCABULARY)

Part 8: Corrections and Confirmations – the learner listens to various dialogues and corrects the misunderstandings. (COMPREHENSION, FLUENCY, INTERACTIONS)

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# CL4 - Training:

Following the assessment, the program creates an individualized training program for the learner – this is based on the learner's performance in <u>each</u> of the 6 skills. The "Intelligent Tutor" determines those areas of the language which the learner needs to improve and then selects appropriate exercises to meet these objectives.

The training content is constantly revised based on the learner's performance in the exercises.

There is a wide range of interactive exercises in the Training Program - text-based exercises, image-based exercises, audio-based exercises and of course, speech-based exercises.

All exercises are set in an aviation context and include pilot-controller messages, meteorological reports, ATIS information and other authentic materials.

### Reference Materials included in Climb Level 4:

In addition to all the exercises contained in the Training Program there are also reference materials available for all students.

### **Speaking Pilot**

This tool converts the written word into sound - the learner simply blocks off some text, clicks on the Speaking Pilot and the text is converted to sound. It is even possible to select a male or female voice, British or American. This tool is an excellent way for learners to read and listen simultaneously.

### Grammar Reference

This facility lists all the most important grammatical points, explains how each point is used and gives examples of the grammatical point being used. The Speaking Pilot tool is available to convert the Grammar Reference text to speech.

### Messaging System

Using the messaging system within **Climb Level 4**, learners can communicate with other learners. Again, the Speaking Pilot tool can convert the text in messages to speech.

### **Dictionary**

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The learner can check words in the **Climb Level 4** dictionary. Each time the learner looks up a word that word and its definition is added to the learner's Personal Dictionary. The learner may edit the definitions of the words in his Personal Dictionary (for example, he may wish to add a translation of the word). The system can then automatically generate revision exercises based on the words and definitions in the learner's Personal Dictionary.

### Aviation Word Book

This book contains 2000 of the most important words needed to meet ICAO language proficiency standards. Each word is accompanied by a sentence with the word in context. For example:

### RUNWAY - The runway at Plymouth airport is only 2000 metres long.





The learner can hear the word and the sentence pronounced in either a British or an American accent.

Selected words can then be added to the learner's Personal Aviation Word Book.

Different types of exercises (including Speaking exercises) can then be generated automatically to practise the words in the learner's Personal Aviation Word Book

## Time is money:

Research has shown that by tailor-making the training solution to the individual's specific needs, progress is much quicker than with more traditional, generic training programs.

This means financial savings not only for the individual pilot / controller but also for the pilot's / controller's employer.



# Technical Requirements:

Generally speaking, if your computer is relatively new then you should have no problems using **Climb Level 4**.

### You will need:

- •Macromedia Flash Player 6 or higher (Get it free here)
- •Abobe Reader (Get it free here)
- •Sound Blaster compatible sound card
- •Speakers or headset with microphone
- •Screen Resolution: minimum 800x600; Colours: minimum 16 bit-Density



### Web browsers:

Climb Level 4 has been tested for compatibility with the following browsers:

Windows: Microsoft Internet Explorer, versions 5 and 6, Netscape Navigator, versions 6 and 7, Opera, versions 6 and 7.

## Prices:

Program	Description	Price
CL4 Shuttle:	This program lasts for 5 hours (spread over a 1-week period) and includes one initial assessment and then access to the training program.	US\$50
CL4 Short-Haul:	This program lasts for 100 hours spread over a 3-month period - this means an average commitment of about 8 hours per week. CL4 Short-Haul includes the personal training program and two assessments: one at the beginning and another to check progress at the end.	US\$395
CL4 Long-Haul:	This program lasts for 100 hours spread over a 6-month period - this means an average commitment of about 4 hours per week. CL4 Long-Haul includes the personal training program and two assessments: one at the beginning and another to check progress at the end.	US\$545

# How to register:

Climb Level 4 is due for release in Spring 2008.

Individuals or companies are welcome to participate (free of charge) in the trialing of the **Climb Level 4** assessment and training programs. For further information please contact: info@climb-level4.com

