

Repère : MELVE

SESSION 2003

Durée : 2 H

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**BREVET DE TECHNICIEN SUPERIEUR**

**MAINTENANCE ET EXPLOITATION DES MATERIELS AERONAUTIQUES**

**EPREUVE U2 :**

**ANGLAIS**

## QUESTIONS HANG OVER COLLISION

### Why didn't ACAS prevent last week's mid-air crash?

Differences have emerged between versions of what pilots were told and did in the minute before their aircraft collided over Germany on 1 July in Europe's first mid-air collision since 1976 and the world's first which airborne collision avoidance systems (ACAS) should have prevented.

One of the key questions facing investigators studying the collision between a DHL Boeing 757 freighter and a Bashkirian Airlines Tupolev TU-154M is how two ACAS-equipped aircraft came to descend at the same time instead of being safely directed apart. The 757 pilot reported that he was descending in response to an ACAS direction, but it is not known whether the Tu-154M pilot was descending in response to the controller's instruction, or for another reason.

German accident investigation agency BFU was last week still trying to establish whether the Tu-154's ACAS was working. If it were not, then that could help explain the sequence of events.

#### How ACAS works

The airborne collision avoidance system (ACAS), in practice the US-designed traffic alert and collision avoidance system (TCAS), is a

transponder-based aircraft system designed to alert pilots to collision risk. It provides a cockpit display of all ACAS or transponder-equipped traffic in the vicinity, with relative heights shown.

If a conflict develops, the ACAS tells the pilot to climb or descend to avoid the collision. If both aircraft are equipped with ACAS (as opposed to one having only a transponder), the system software determines which pilot shall be advised to climb and which to descend.

All civil fixed-wing aircraft with a maximum take-off weight exceeding 15,000kg (33,000lb), or more than 30 seats, operating in European Civil Aviation Conference countries have been required to carry the latest ACAS equipment - TCAS Version 7 - since 1 January, 2000. Due to delays in certificating Version 7 equipment, however, operators in Europe were exempted under certain circumstances from complying until last September. Eurocontrol confirms that both aircraft involved were equipped with ACAS and both complied with reduced vertical separation minima requirements.

Source: FLIGHT INTERNATIONAL  
9-15 JULY 2002 (adapted)

### TRAVAIL A EFFECTUER

#### 1 - Traduction en français 10 points

Traduisez en français la première partie du texte, du début, titre et sous titre inclus, à '*...that could help explain the sequence of events.*'

#### 2 - Rédaction en anglais 10 points

Répondez en anglais aux questions suivantes en une cinquantaine de lignes :

- What is being done to avoid air accidents?
- Is it possible to prevent ALL aircraft accidents? Justify your answer.

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