

## Aerospace Major Studies Limited Airliner Visibility

Visibility from the cockpit of airlines has been compared by one pilot to the view obtained through the slit of a mail box.

Russell E. Bell found through research for an aerospace engineering course that little has been done to improve the situation.

The San Antonio senior pointed out recent development of planes to carry larger numbers of passengers makes prevention of mid-air collisions very important. The effect of restricted vision on the pilot though he may have on-board radar and other instrument capabilities must not be overlooked.

In certain flying situations, aircraft safety could be enhanced by giving the pilot a better view of his surroundings.

"Obvious natural limits to pilot visibility are the human eye, weather and clouds and state of mind," Bell reported.

"The eye can see only so far and it can see an object of a certain size. Precipitation and

clouds can reduce visibility practically to nothing depending on severity of the weather," he stated in a seminar report to Dr. Charles A. Rodenberger. "It is also known that if an individual is not concentrating on what he is looking at, he may not see it."

"Even with these natural limitations, aircraft designers and manufacturers place further restrictions on pilots by design and placement of the aircraft cockpit," he emphasized.

He noted only one study has been made of pilot visibility problems. Pilots questioned in a Civil Aeronautics Administration study revealed that visibility is critical in the final approach to landing, followed closely by gliding turns and taxiing.

Only two of six aircraft — the DC-3, DC-4, DC-6, Lockheed Constellation, Convair 240 and Martin 202 — satisfy minimum distance criteria desired at touchdown by pilots.

The best forward visibility of any of the six craft is almost

twice what the pilots considered best for taxiing. Visibility during a gliding turn was not considered very good in any of the six planes because a narrow vertical vision angle causes the pilot to "lose" the horizon. Also the wings and side of the cockpit of a banked plane may restrict sideways vision.

Possible improvements involve design of a protruding bubble-type canopy, locating the cockpit farther ahead of the wing, narrowing and shortening the aircraft's nose slightly or reduction and removal or better placement of window posts.

At four miles, Bell noted, a Piper Cherokee or Learjet can be hidden easily behind a one to three-inch wide window post.

"Any of the suggested improvements would greatly increase the pilot's visibility in most directions," he said, "and would be most effective from a safety standpoint during slow flight in congested air-traffic areas where the pilot has time to see and react."

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## Bulletin Board

### THURSDAY

DeWitt-Lavaca Home town Club will meet at 7:30 p.m. in Room 203 Academic. The meeting is for election of officers and making of plans for the Easter Party.

San Angelo-West Texas Home town Club will meet at 7:30 p.m. in Room 2D Memorial Student Center.

American Legion Post No. 159 and its auxiliary will have a dinner meeting at 7 p.m. in the Legion Hall. Members are asked to bring a covered dish; meat

will be furnished by the Legion. Association of Students from Mexico will meet at 6:30 p.m. in the Memorial Student Center.

Business Administration Wives Club will meet at 7:30 p.m. in Texas Room Bryan Building and Loan. J. H. Dozier will speak on "Buying a House." Husbands are invited to attend.

Soccer Club will meet at 5:30 p.m. at the soccer field to have a picture made. Everyone should wear white shorts.

### FRIDAY

Chess Committee will meet at

7:30 p.m. in Room 3B Memorial Student Center.

## BATTALION CLASSIFIED

**WANT AD RATES**  
One day . . . . . 4¢ per word  
3¢ per word each additional day  
Minimum charge—50¢  
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**Political Announcements**  
Subject to action of the Democratic Primary May 2, 1970.  
For U. S. Representative of the Sixth Congressional District of Texas.

**OLIN E. TEAGUE**  
(Re-Election)

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**OFFICIAL NOTICE**  
Official notices must arrive in the Office of Student Publications before deadline of 1 p.m. of the day preceding publication.

The English Proficiency Exam is going to be offered for Economics majors who have completed sophomore English requirements on March 17 from 2:00 - 4:00 p. m. in room 108 Nagle. Economics majors must pass this exam to be eligible for graduation. Please come by the Economics Department in room 115 Nagle by Friday, March 13, to sign up for the exam.

The English Proficiency Examination required of junior and senior students majoring in Chemistry is scheduled for March 18, 1970 at 7:30 p. m. in room 231 of the Chemistry Building. Students should consult notices posted in the Chemistry Building before March 13, 1970 for details. 7611

Application forms for Spring Award Scholarships may be obtained from the Student Financial Aid Office, Room 303, YMCA Building during the period February 16th - March 31, 1970. All applications must be filed with the Student Financial Aid Office by not later than 5:00 p. m. April 1, 1970. Late applications will not be accepted. 70126

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## Sincerity Key To Manners

(Continued from page 1)

transportation, and the Aggie provides the housing," she said. "Motels, homes of married couples, and apartments can serve as accommodations."

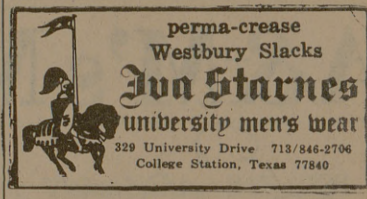
If an apartment is used, she said, a guy can move in with another guy, and their dates can share the vacant apartment.

The girls agreed that good manners are appreciated and should definitely be considered in selecting a date — even taking precedence over looks and money.

"Would you really rather go out with a guy who drives a '54 Ford and opens the door for you than with someone who drives a 1970 Riviera and lets you open your own door?" asked Mrs. Nancy Newton, special assistant to the dean of women at TWU and adviser to the group.

The panel nodded affirmatively.

The second presentation of the series, next Wednesday, will concern habits and customs of dating.



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