

## Experimental civilian aircraft

Experimental aircraft have historically been Government-funded, industry-produced and military-oriented—but often with decided civilian transport applications. Over the last decade, however, the military's emphasis has shifted to interceptors and missiles, not many of which have civilian value. Private industry cannot afford the high-risk research investment—especially with no market insurance. Thus a vacuum has been developing in the area of civil experimental aircraft research.

Congress has been urging the National Aeronautics and Space Administration to expand its program to fill the gap. Traditionally, the space agency has participated in the testing of experimental craft, such as the Air Force's X series (notably the X-15), but it has not undertaken the complete development of a craft.

Now NASA is proposing to go one step further. It will design, research and test experimental aircraft representing civil needs and turn the results over to industry.

The expansion of two offices—Short Take Off and Landing and Advanced Technology Experimental Transport—both in the Office of Advanced Research and Technology (SN: 11/14, p. 389), was designed to begin fulfilling this job.

First, to alleviate the hazards of airport congestion, says Edgar M. Cortright, Director of NASA's Langley Research Center at Hampton, Va., "we have chosen [to concentrate on] the externally blown flap and augmentor-wing jet STOL airplanes." The STOL craft, says Gerald G. Kayten, manager of the two offices, "will not be a light wing, but a turbopan, high wing loading, comfortable airplane with lots of propulsive lift."

The space agency, coordinating its efforts with the Departments of Transportation and Defense, will design and build the craft, explore the certification requirements, and research the guidance, navigation and airport needs. Engineers say this activity, if funded, could be completed for industry earlier than 1975.

In addition, says Cortright, NASA is preparing a program for an experimental transport using advanced aerodynamic concepts developed by Dr. Richard T. Whitcomb, also of Langley. Among Dr. Whitcomb's ideas is a supercritical wing (SN: 11/14, p. 389), which aims at solving problems of efficient cruise at speeds approaching the speed of sound. "We are convinced," says Cortright, "that a return to the experimental airplane concept is in the national interest. □

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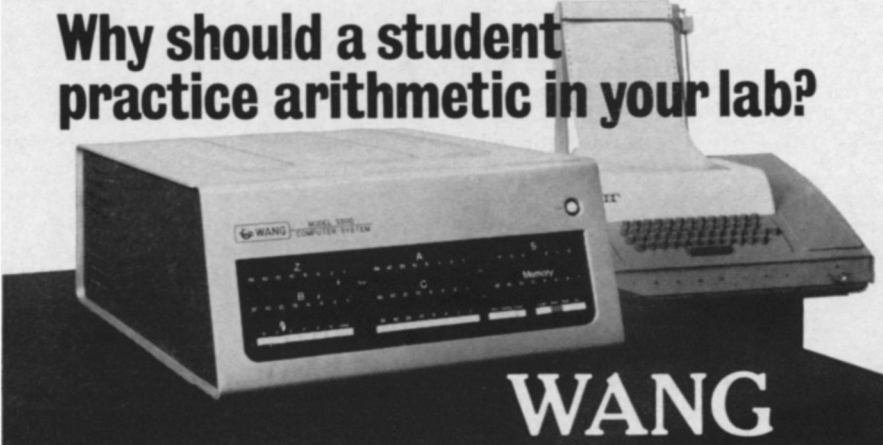
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