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Boeing doesn't believe the PSEU was responsible for the Lauda Air crash. Smith's concerns about the unit's software on the 747 has been "addressed and resolved," Villiers said.
Smith, who has 13 years experience as a computer engineer, resigned in June of 1990 after turning in what he called a "diluted" report with no mention of the potential ramifications from the software flaws. Boeing awarded him its Certificate of Outstanding Performance just before he quit.
Smith, who now lives in Longview, said he told Boeing officials the software contained an "architectural flaw" that could lead the unit to send a random signal to other electronic systems within a jetliner, providing them with false information. So poorly designed was the PSEU software, he said, that he recommended that it be completely redesigned.
One of the electronic sub-systems linked to the PSEU is the auto-restow, which is supposed to automatically retract a jet's back-up ground braking system, the thrust reverser, if it accidentally starts to deploy in flight.
The reverser system is only supposed to be activated on the ground during landings. But federal aviation experts have found that the system deployed during flight shortly before the Lauda jet crashed in Thailand last May, killing all 223 aboard.
Laboratory simulations of the accident showed the thrust reverser could have caused the pilots to lose control and crash.
While Villiers said that the PSEU can electronically converse with the auto-restow system, he said it could be a system to collect.

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Boeing: Random signals key systems possible

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ing. "It all depends on what is going on with the airplane at the time," Smith said. "There's no way to repeat the exact conditions that would cause the messages to be sent. It can cause the system to crash, or get false information, or just go crazy."

For example, Smith said, the control unit could notify the rest of the electronic subsystems that the plane's landing gear was down while the plane was still in flight. That would cause the auto-restow to switch to a ground-speed mode control check, Smith said. The system would then "see that the aircraft was going too fast, and kick in the reverse thrusters — while the aircraft was really in flight."

The National Transportation Safety Board, the federal agency charged with investigating the Lauda crash, said last summer it believed the plane went down because the thrust reversers somehow activated while the plane was climbing to just under 30,000 feet over Thailand. But the agency hasn't explained how the braking system deployed.

Smith said yesterday he left Boeing because he had been forced by his superiors there to hand in the report with no mention of the PSEU software's threat to other aircraft systems.

Nonetheless, Smith's report to Boeing does warn of potentially serious problems with the PSEU software. Smith said

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