

Professional Issues Assessment 3: Columbia

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This exercise is based on the chapter “The Cognitive Style of Powerpoint” in Edward Tufte, *Beautiful Evidence*, Graphics Press, 2006.

During the January 2003 spaceflight of shuttle Columbia, 82 seconds after liftoff a 1.67 pound (760 grams) piece of foam insulation broke off from the liquid fuel tank, hit the left wing, and boke through the wing’s thermal protection. . . .

To help NASA officials assess the threat, Boeing Corporation engineers quickly prepared 3 reports, a total of 28 PowerPoint slides, dealing with the debris impact. The reports provided mixed readings of the threat to the spacecraft; the lower-level bullets often mentioned doubts and uncertainties, but the highlighted executive summaries and big-bullet conclusions were quite optimistic. Convinced that the reports indicated no problem rather than uncertain knowledge, high-level officials decided that the Columbia was safe and, furthermore, that no additional investigations were necessary. Several NASA engineers had hoped that the military would photograph the shuttle in orbit with high-resolution spy cameras, which would easily have detected the damage, but even that checkup was thought unnecessary given the optimism of the 3 Boeing reports. And so the Columbia orbited for 16 days with a big undetected hole in its wing.

Columbia burned up during re-entry around 9am on 1 Februrary 2003. All seven astronauts died: Rick Husband, William C. McCool, Michael P. Anderson, David M. Brown, Kalpana Chawla, Laurel Clark, and Ilan Ramon.

Your task is to rewrite the accompanying PowerPoint slide, taken from one of the Boeing presentations. Aim for clarity, and to make it easy for someone reading the slide to assess the threat accurately.

Name _____