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Santa's Trip From an Engineer's Perspective

By John Connor
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TALLIL, Iraq—What might an engineer make of Santa Claus' annual Christmas trip around the globe in a reindeer-drawn sleigh to deliver presents to countless children?

One possibility is suggested by a document entitled "Santa Claus: An Engineer's Perspective" that was plucked from the Precision Mold Base website and surfaced over the holiday season at the headquarters of the Gulf Region South District of the U.S. Army Corps of Engineers, courtesy of GRS deputy commander Lt. Col. Gregory Raimondo, who, coincidentally, played Santa Claus at the GRS Christmas party. Here is a sampling:



Santa At GRS Christmas party, played by Lt. Col. Gregory Raimondo. (Photo by John Connor, USACE)

--"There are approximately 2 billion children (persons under 18) in the world," which, when subtracting those who aren't into Christmas, brings "the workload on Christmas to 15% of the total, or 378 million." This computes to 108 million homes, presuming at least one good child in each home.

--"Santa has about 31 hours of Christmas to work, thanks to the different time zones and rotation of the earth, assuming he travels east to west.. .This works out to 967.7 visits per second."

--Assuming that each of the 108 million stops is evenly distributed around the earth, we're talking about "a total trip of 75.5 million miles." This means that "Santa's sleigh is moving at 650 miles per second, 3,000 times the speed of sound."

--"Assuming that each child has nothing more than a medium-sized Lego set (two pounds), the sleigh is carrying over 500 thousand tons, not counting Santa himself. On land, a conventional reindeer can pull nothing more than 300 pounds. Even granted that

'flying' reindeer could pull ten times the normal amount, the job can't be done with eight or nine of them. Santa would need 360,000 of them."

--"600,000 tons traveling at 650 miles per second creates enormous air resistance; this would heat up the reindeer in the same fashion as a spacecraft re-entering the earth's atmosphere."

After that, things turn decidedly dicey for Santa and his reindeer, at least from this particular engineering perspective.

This might recall for some the old joke about the lawyer, the clergyman, and the engineer. All had been sentenced to death by the guillotine. The lawyer was first and was asked if he had any last words. He complained about the injustice of it all and how his rights were being violated. The guillotine fell but stuck halfway and he was allowed to go free, as was the custom in the case of malfunctions. The clergyman praised the Almighty—and again the guillotine got stuck halfway. He, too, was spared. Next came the engineer, who inspected the guillotine and said, "I think I see your problem here."

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