

Year's Best Gift Could Be A Job From Santa

December 17 2009, By Chris Gorski, ISNS



Santa's greatest gift could be employment. Credit: NASA.gov

In this year's myriad discussions of stimulus and jobs programs, no one has yet publicly raised the idea to ask Santa Claus to take Christmas Eve off. Outsourcing his job by asking mere mortals to deliver presents to the world's children could provide the jolt required to right a staggering economy.

Claus could not be reached to comment on this story. Independent researchers have yet to develop a reasonable understanding of the techniques that allow him to travel the globe, delivering packages to hundreds of millions of residences over the course of a single evening.

NORAD -- the military organization responsible for the aerospace and maritime defense of the United States and Canada -- [tracks his sleigh](#) on

radar, and speculators have attributed his swiftness to everything from special reindeer feed to relativistic physics.

Because little hard data is available to explain Claus' techniques, distributing the goods would have to depend on familiar vehicles such as delivery trucks. The mathematical techniques of operations research, a discipline that tackles complicated problems like scheduling [commercial aircraft](#) and improving productivity, would have to be the secret weapon. The job is large, researchers said, but not insurmountable.

According to the U.S. [Census Bureau](#), the number of children in the world age 14 and younger is 1.8 billion. Assuming two kids per household, 900 million residencies would require deliveries. Presents can be delivered only when kids are asleep, leaving a window of no more than 10 hours, and probably fewer -- to allow for those who would sneak out of bed to check under the tree. Accounting for time zones, Claus has fewer than 36 hours to deliver all these presents. It's a flabbergasting, improbable 7,000 deliveries per second.

Fact sheets from major delivery agencies suggest that replacing Claus' efforts would be a huge job. UPS Inc. reports serving 7.9 million customers daily; FedEx lists an average daily volume of 7.5 million shipments; and even the Postal Service never matches the volume of Claus' delivery effort, even on the busiest mailing day of the year -- albeit with the advantage of fewer places to stop, clustered in a single country.

"The key is having the right amount of everything, at the right time," said Warren Powell, an operations researcher at Princeton University in N.J. He suggested that the shipping methods would greatly impact the speed and cost -- air delivery is quick and costly, ships are slow and cheaper.

"If you can start making toys in the spring and summer, you can start moving them late summer and fall using fairly low-cost options," said Powell.

Claus' sleigh may be able to carry all the presents at once, without reloading, which makes one factory at the North Pole sensible. For his replacements, it would be much more efficient to spread the toy production to many locations, and ease the burden to deliver the toys to local warehouses where delivery drivers load up for their [Christmas](#) Eve trips.

"For us the place to start is: how many people do I need to do the job?" said Jack Levis, the Director of Process Management at UPS. He's responsible for the systems that assign deliveries to drivers, suggest the routes they take and other analytical projects.

Levis' job often involves making the plans to hire personnel and divide up work. "It's how much work do you have to do? Where is it? How many people do I need in each area?"

On average, drivers deliver 200 packages per day, said Levis. If drivers, motivated by Christmas cheer, increase their productivity and each visit 200 households, delivering presents for each child, 4.5 million drivers could visit the 900 million households around the world in a single night.

Because toy production has not yet been decentralized and is believed to occur at the North Pole, the effort would be even larger. In addition to delivery drivers, the effort would also require feeder drivers (to bring the presents from the North Pole to regional distribution centers), sorters (to sort the packages at distribution centers and assign them to each delivery driver), and logistical planners.

Many of these workers would start working long before Christmas Eve

to prepare for the big day. Additionally, some cultures share holiday gifts on multiple days, or on days other than Dec. 25, allowing drivers to work multiple days. Launching this jobs program could really put a dent in the unemployment problem.

Santa, when's the last time you took a vacation?

© 2009 Inside Science News Service

Citation: Year's Best Gift Could Be A Job From Santa (2009, December 17) retrieved 23 April 2024 from <https://phys.org/news/2009-12-year-gift-job-santa.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.