

# Tracking Santa has never been so high-tech

December 13 2005

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It's a Christmas tradition that many parents of inquisitive children have come to appreciate immensely, and an opportunity for the U.S. military to show its softer side to the public. Best of all for taxpayers, though, is that corporate tie-ups and volunteering efforts make tracking down Santa relatively cost-free for the government's coffers.

From Dec. 24 to the early hours of Dec. 25, the North American Aerospace Defense Command will be keeping tabs on Rudolph and his eight fellow reindeer as they help Santa Claus deliver presents to children across the globe.

So instead of pestering parents to tell them when exactly St. Nick will show up on their doorsteps with presents, moms and dads can tell their kids to call up NORAD (1-877-446-6723) for the latest on where exactly the North Pole resident is with the goods.

Last year NORAD's Santa tracking Web site, [www.noradsanta.org](http://www.noradsanta.org), received 912 million hits from 181 countries, with a quarter of those hits coming before Dec. 24. In addition, the Peterson Air Force Base in Colorado received over 55,000 calls on Christmas Eve day alone.

The most frequently asked questions on Christmas Eve are "Where is Santa?" and "When is he coming?" said Jody Vazquez, first lieutenant and media officer at the NORAD base. She added that Santa "typically comes around 10 and 11 p.m., when children are usually fast asleep ... because Santa won't stop if they're not in bed."

NORAD has gotten support from major corporations and local businesses to keep costs effectively non-existent for the military. Vazquez pointed out that Web connectivity will be provided free of charge by AOL, while phone services will be offered by MCI, among other sponsorships.

The Web site will come alive "after lift-off from 4 a.m. Eastern Time to 4 p.m. on the 25th," and track Santa traveling from his North Pole residence to his final destination of Hawaii, Vazquez said. In addition to tracking his travels online as he makes an appearance in all countries, NORAD will have about 500 volunteers made up of NORAD and military personnel and family members as well as members of the local community.

While calls will be answered largely in English, non-English speakers can join in the Santa-watching activities too as the organization has its site available in a total of six languages -- French, Spanish, Italian, Japanese, German and English -- with German being a new addition this year.

There are, however, no immediate plans to add Chinese, one of the most widely spoken languages in the world, or Arabic, which is the language spoken in regions where the United States is struggling to put forward a positive image, but Vazquez said that the organization is always "looking to add" new languages in response to demand.

Just as it prepares for its primary mission, namely to monitor and defend airspace in the United States and Canada, NORAD is preparing methodologically for the big day and taking advantage of all the technologies at its disposal to keep tabs on the sleigh procession.

"NORAD uses four high-tech systems to track Santa -- radar, satellites, Santa Cams, and jet fighter aircraft," the organization said, adding that "the satellites can detect Rudolph's bright red nose with practically no

problem. With so many years of experience, NORAD has become good at tracking aircraft entering North America, detecting worldwide missile launches and tracking the progress of Santa, thanks to Rudolph."

Certainly, NORAD has plenty of experience dealing with children anxious to know the exact whereabouts of Mr. Claus. It is now 50 years since NORAD's predecessor, the Continental Air Defense Command, first took calls from children after department store Sears misprinted its Santa hotline number for children and publicized CONAD's number by mistake. Yet instead of simply hanging up on the kids, the command's director of operations, Colonel Harry Shoup, instead told callers about where he could locate Santa on his radar screen.

"The moment our radar tells us that Santa has lifted off, we begin to use the same satellites that we use in providing warning of possible missile launches aimed at North America. These satellites are located in a geosynchronous orbit ... at 22,300 miles above the Earth. The satellites have infrared sensors, meaning they can see heat. When a rocket or missile is launched, a tremendous amount of heat is produced -- enough for the satellites to see them," NORAD said.

In addition, the group pointed out that since 1997 it has been using high-speed digital cameras called Santa Cams to provide imaging data for the Web site.

Finally, NORAD said that about a dozen jet fighters are equipped with Santa Cams, and "Canadian NORAD fighter pilots, flying the CF-18, take off out of Newfoundland to intercept and welcome Santa to North America. Then at numerous locations in Canada other CF-18 fighter pilots escort Santa, while in the United States American NORAD fighter pilots in either the F-15 or F-16 get the thrill of flying with Santa and the famous Reindeer -- Dasher, Dancer, Prancer, Vixen, Comet, Cupid, Donner, Blitzen and Rudolph."

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