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### 2022-12-24 santa tracking

Let's talk about a different kind of radar: the one notionally pointed at the north pole. That's right, it's a Christmas post. I will keep it mercifully short, and follow up soon with the article I wrote most of today (not at all Christmas themed) before a tangent reminded me of this topic.

For decades now, NORAD, the North American Air Defense Command, has operated the "Santa Tracker." This service, ostensibly backed by NORAD's radar and satellite remote sensing, updates children on Santa's progress as he rounds the globe delivering presents.

Just as traditional now as the Santa Tracker are newspaper articles recounting its origin story. It generally goes like this: Sears ran a Christmas advertisement telling children to call a phone number to talk to Santa. They misprinted the phone number, so that it was actually the phone number for the "Red Phone" at NORAD, where a kindhearted Air Force officer had to improvise when the phone started ringing---not with news of impending doomsday, but with hundreds of children anxious to speak with an authority even higher than the Air Defense Command.

As tends to be the case with such popular stories, the version we hear today is arms length from the truth. From contemporaneous reporting, it seems the facts go more like this: The phone number printed in the advertisement was correct, but one particularly child misdialed. Instead of getting Santa Claus, they got the desk phone of Col. Harry Shoup, at what was then called CONAD. Shoup was reportedly gruff and ended the call quickly, only later realizing (due to a joke made by another NORAD employee, placing an image of Santa on a map board) that they could turn the incident into a publicity coup. That they did, and over decades the story has become more and more embellished to the favor of NORAD.

Obviously there is a cynical take on military public relations here, but it's a holiday, so let's focus instead on the more positive: telephone trivia.

There are elements of the well-known story that are clearly doubtful. The "red phone" for instance, with some articles saying the child called on a "secure line." Secure telephone lines, as a matter of definition, are either on separate secure telephone networks (such as AUTOSEVOCOM, the secure sibling of AUTOVON) or make use of cipher equipment that encrypts the via a method deemed sufficient for the purpose---typically by the NSA, which has historically preferred to stick to classified or "suite A" algorithms. A random child wouldn't be able to call a "secure line," either because they were not on the secure network or because they did not have the cipher equipment, depending on the type of secure connection.

In the time period of these events, 1955, cipher equipment was primitive but did exist.

SIGSALY, the first functional secure voice encipherment system, entered service in 1943... but did require a room full of equipment and multiple operators. Most likely, a "secure line" at NORAD would be understood to refer to a NORAD-internal secure telephone network, likely the set of leased lines used to communicate with SAC bases. As a practical matter, though, the term "secure line" does not seem to have been in very common use until the 1970s introduction of the STU enciphered phone. The STU initially connected in cleartext "insecure" mode and then completed a negotiation before starting enciphered "secure mode," making the movie phrasing "is this a secure line" a real question someone would ask, necessary to confirm that the STU had successfully set up encryption.

What phone did some kid reach? The original Sears ad is easy to find. It was run by a Colorado Springs Sears location, which should be obvious considering it was a local call (long-distance toll free calling was not yet common in the '50s), and NORAD is located just outside of Colorado Springs, so the whole thing must have happened in that area. Still, very few news articles go beyond just saying "Sears."

The phone number in the ad is ME 2-6681. Remember that in the '50s, phone numbers were still commonly written using exchange names... but dialed using numbers, so that ME 2-6681 would be dialed as 632-6681. ME, the exchange name, could be short for a number of things. Since AT&T really set the numbers before they set the names, AT&T internally circulated a list of suggested exchange names that, for 63, included Medford, Melrose, Mercury, etc. In the case of Colorado Springs, it seems this phone number would have been read Melrose 2-6681, although the newspaper ad suggests the seasonally appropriate reading Merry Christmas 2-6681.

The nature of this phone number is a point of contention---the common version of the story is that this number is incorrect and actually goes to NORAD, but more reliable reporting from the time period suggests the phone number in the ad was correct and a child just misdialed. Besides the fact that the latter seems more likely, we can check newspaper archives to see if this number was ever advertised outside of the Sears incident. In fact it was. An advertisement in the Colorado Springs Gazette-Telegraph, 10 Oct 1960, lists the phone number ME 2-6681 for Walker & Co Realtor-Insurer. Walker & Co continued to advertise that same phone number through the '70s, but what of '55 when the original NORAD (CONAD) incident occurred? Unfortunately the newspaper archive I use doesn't have the Gazette-Telegraph prior to 1960, so I think we are left to speculate that Walker & Co likely picked up the phone number after Sears was no longer using it.

In any case, given that the child apparently misdialed a local phone call, it seems most likely that it was either the phone at Shoup's desk or at a watch desk he was manning. Given that he was a colonel at the time and not likely to be on rotating watches, I would imagine the phone he was in the habit of answering was the one in his office.

In the decades since the original '50s introduction of the Santa Tracker it has expanded into a massive phenomenon and perhaps the most successful single PR effort for the Air Force and, now, Space Force. It has taken odd turns from a particularly ostentatious collaboration with the Canadian Royal Air Force which reportedly intercepted Santa with an injured reindeer in 1958 to celebrity voice-overs by Aaron Carter in video versions of the tracker.

And all of this over a misdialed phone call. Well, that and fifty years of military propaganda.