

Humanoid robot Pepper is amusing, but is it practical?

By Michael Liedtke
The Associated Press

SAN FRANCISCO — While merrily chirping, dancing, and posing for selfies, a robot named Pepper looks like another expensive toy at a San Francisco mall. But don't dismiss it as mere child's play.

Pepper embodies the ambitions of SoftBank Robotics, an Asian joint venture formed by a trio of major technology companies that's aiming to put its personable robots in businesses and homes across the U.S. over the next few years.

If the technology advances as SoftBank Robotics hopes, Pepper could become a playmate, companion, and concierge. It could eventually respond to voice commands to retrieve vital information, make reservations, and control home appliances that are connected to the internet.

That's the theory, anyway. For now, Pepper is more amusing than practical, Forrester Research analyst J.P. Gownder says. For instance, Pepper has been directing shoppers to stores in the mall through text messages because it still isn't advanced enough to say them out loud. And Pepper still has trouble understanding what people are asking, requiring shoppers to type in their requests for mall directions on a tablet mounted on the robot's chest.

SoftBank is trying to improve Pepper's capabilities by focusing first on the business market — retailers, hotels, auto dealerships, and even hospitals. SoftBank hopes to use those environments to learn more about what consumers like and don't like about Pepper and, from that, teach it more tasks, said Steve Carlin, the venture's vice president for marketing and business development in North America.

Greetings in the mall

The recently launched test runs in Westfield Corp.'s malls in San Francisco and Santa Clara, California, mark the first time Pepper has made an extended appearance in the U.S. The robots began appearing just before Thanksgiving and will stick around through mid-February. Carlin says about 300 to 500 people per

Lobster prices high as catch drops and China imports climb

By Patrick Whittle
The Associated Press

PORTLAND, Maine — Lobster lovers are used to adjusting to high prices, but this winter, they're shelling out even more for the cherished crustaceans because of a lack of catch off of New England and Canada and heavy exports to China.

Winter is typically a slow season for U.S. lobster fishermen and an active one off Atlantic Canada. But the catch is slow in both countries this year, in part because of bad weather, industry sources said.

And the winter months are also an important time for exports to lobster-crazy China, which celebrates its New Year holiday January 28. It's increasingly popular to celebrate the Lunar New Year with American lobster. That's causing demand at a time when supply is low.

American consumers who were paying \$9 to \$11 per pound for a live lobster in September — already higher than the previous year — are now sometimes paying upward of \$13 per pound. There are enough lobsters to go around, but China's demand is likely to only grow, said Bill Bruns, operations manager at The Lobster Company of Arundel, Maine.

"They are building infrastructure to meet more demand," Bruns said, who added that China's middle class "hasn't stopped growing, and they keep eating."

American lobster exports to China have topped 12 million pounds and \$85 million in value for three years in a row. The



day engaged with Pepper during its first month in the San Francisco mall. During a recent visit, kids flocked around the four-foot-tall humanoid as it spoke in a cherubic voice that could belong to either a boy or girl.

Westfield views Pepper as a way to make shopping in the mall more entertaining and enjoyable at a time when people are increasingly buying merchandise online. Three Peppers are sprinkled in heavily trafficked areas around Westfield's San Francisco mall and two more are in the Santa Clara center. If all goes well, Westfield also plans to bring Pepper to its New York mall at the World Trade Center and Garden State mall in Paramus, New Jersey.

"We put her in our (human resources) system and have given her a name tag," says Shawn Pauli, senior vice president for Westfield.

Market ambitions

Pepper got its start two years ago in Japan before expanding into Europe. In those two markets, more than 10,000 Peppers are already operating in grocery stores, coffee shops, banks, cruise lines, railway stations, and homes. Most of the robots are in businesses. SoftBank hasn't disclosed how many have been sold to

country imported a fraction of that amount as recently as 2010, when it imported less than a million pounds of the crustaceans.

Meanwhile, prices charged by wholesalers in the U.S. are rising, too. The wholesale price of a 1.25-pound live hard shell lobster rose about a dollar in the New England market from December to January, when it was \$7.75/pound, according to Urner Barry commodities publishing.

The loss of fishing days due to bad weather off Canada has caused a supply issue at a busy time of the year, said market analyst John Sackton, who publishes a website called SeafoodNews.com.

"It's become very difficult to get supply and you still have people scrambling to ship lobsters to China for Chinese New Year," he said.

The winter pinch is happening at a time when the U.S. lobster catch, based mostly in Maine, Massachusetts, and New Hampshire, is booming. U.S. fishermen have caught more than 100 million pounds of lobster for seven years in a row after having never accomplished that feat previously, federal records say. Lobsters were worth a record of more than \$600 million at the docks in 2015, records show.

The slow winter fishing season isn't cause for concern in the grand scheme of things, said David Cousens, a South Thomaston lobsterman who is president of the Maine Lobstermen's Association.

"Guys offshore are reporting not very much. But I imagine they've probably got enough between Canada and here to fill that market," he said.

consumers.

Carlin acknowledges the U.S. will be a tougher market to crack than Japan, where he says consumers tend to embrace new technology more quickly.

In addition, Pepper's price is likely to be out of reach for most consumers. The robot currently sells for about \$2,000; a three-year subscription covering software upgrades, insurance, and technology support increases the total to \$18,000 to \$20,000.

Softbank Robotics is controlled by Japan's SoftBank Group, a technology conglomerate that recently pledged to invest \$50 billion in U.S. startups. A remaining 40 percent stake is equally owned by China's Alibaba Group, Asia's e-commerce leader, and by Taiwan's Foxconn, which assembles Apple's iPhone and is considering a U.S. expansion.

Pepper isn't alone

Despite its pedigree, Pepper already lags behind a cruder-looking robot that home improvement retailer Lowe's has been testing as a way to help shoppers find merchandise in its sprawling stores, Gownder says.

The "LoweBot," a box-like machine on wheels, began patrolling a San Jose, California store in November and will

Lunar New Year 2017 events from NYC to Disney to Vegas

By Beth J. Harpaz
AP Travel Editor

NEW YORK — The Lunar New Year begins January 28, kicking off the Year of the Rooster. The holiday is observed in China, Vietnam, and other Asian countries, but a number of U.S. destinations from New York to Las Vegas also host celebrations. Events include parades featuring lion dancers, special holiday menus at Asian restaurants, cultural festivals, and more.

Disney California Adventure Park in Anaheim, California hosts a Lunar New Year celebration from January 20 through February 5. Mickey Mouse and Minnie Mouse are costumed for the occasion, greeting guests and offering photo opportunities alongside other Disney characters such as Mulan and Mulan's dragon sidekick, Mushu.

Anaheim

Live performances at Disney California Adventure include Chinese acrobats, dancers, and musicians in colorful costumes, activities, and crafts themed on the holiday and three new marketplaces offering food inspired by Asian cuisine. A new short feature called *Hurry Home* will be shown each night prior to the *World of Color* show, telling the story of a little lantern on a journey home for Lunar New Year, using projected animation, lighting, special effects, and fountains.

The park will also be decorated with lanterns and banners wishing guests a happy Lunar New Year in English, Chinese,

ANDROID ANTICS. A boy plays with Pepper the robot at the Westfield Mall in San Francisco. While merrily chirping, dancing, and posing for selfies, Pepper looks like another expensive toy in the San Francisco mall where it is entertaining shoppers through mid-February. But it would be a mistake to dismiss Pepper as mere child's play, even though kids flock around the four-foot-tall humanoid as it speaks in a cherubic voice that could belong to either a boy or girl. (AP Photo/Jeff Chiu)

begin showing up in 10 other stores in the San Francisco Bay area in early 2017. If all goes well, it could become a fixture in all of Lowe's stores.

Gownder gives LoweBot the early edge over Pepper because Lowe's machine has a detailed database of the store's inventory, enabling it to quickly determine if something is in stock and then guide shoppers to the aisle where the requested item is located.

"While Pepper offers a lively, appealing interface, it remains to be seen whether it will fill the role that retailers want," Gownder says. "Does it have enough intelligence to answer customers' questions effectively?"

Early feedback

While LoweBot is a one-trick pony, focused on retail tasks, SoftBank's ambitions with Pepper are greater. Pepper has enough artificial intelligence to recognize smiles and frowns, helping the robot understand the mood of a person interacting with it. But it also tends to lock its electronic eyes on someone standing in front of it and continue to follow people as they look away while ignoring the next visitor.

A recent visitor to the San Francisco mall, Sharif Ezzat, noticed some of Pepper's shortcomings and concluded that the robot is still a long way from having mass appeal.

"I can't see it right now, but I can see where it's going," Ezzat said of Pepper's potential.

Chaz MacSwan, a puppeteer in San Francisco, was more impressed.

"Look at the joy it's bringing to people, especially the kids," MacSwan said. "I'd love to have one, especially if it could clean the carpets."



WORLDWIDE CELEBRATIONS. A lion dancer is seen during a Lunar New Year celebration in New York's Chinatown neighborhood, in this February 8, 2016 file photo. The 2017 Lunar New Year holiday begins January 28. New York is one of a number of cities around the country that hosts parades with lion dancers. Our special section celebrating the Lunar New Year begins on page 11. (AP Photo/Richard Drew, File)

Korean, and Vietnamese.

New York City

In New York City, visitors have three Chinatowns to explore: One in downtown Manhattan, one in the Sunset Park neighborhood of Brooklyn, and one in Flushing, Queens. Visitors can check out restaurants, food markets, and shops that sell everything from housewares to souvenirs.

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