

MEA TABLET MARKET GREW 26.1% YEAR ON YEAR IN Q4 2014

DUBAI: Middle East and Africa (MEA) tablet market recorded robust year-on-year growth in the final quarter of 2014, with holiday purchases and aggressive end-of-year promotions spurring a particularly strong performance in the consumer segment. The latest figures released today by global advisory services firm International Data Corporation (IDC) show that the overall MEA tablet market grew 26.1% year on year in Q4 2014 to total 4.43 million units, with the activities of several Far East manufacturers spurring significant annual growth in shipments of Android (33%) and Windows (131%) tablets.

"The telco channel experienced its highest ever rate of growth during the final quarter of 2014," says Victoria Mendes, a research analyst at IDC Middle East, Africa, and Turkey. "There are a cou-

ple of reasons behind this growth - in South Africa, Vodacom, one of the biggest telecom operators in the country, introduced its own tablet and shipped approximately 170,000 units during the quarter, while in Turkey, local vendor Casper shipped around 100,000 tablets through the Telco channel."

Year-on-year growth of 16% saw Samsung continue as the leading vendor in MEA, with the Korean giant shipping a total of 886,000 units to the region in Q4 2014. And despite suffering a decline of 11%, Apple retained second place in the market, with shipments totaling 580,000 units. Lenovo remained in third position, but with year-on-year unit growth of 100% and volumes totaling 572,000 units for the quarter, the vendor is extremely likely to overtake Apple at some point during 2015. Asus maintained its fourth

position despite shipments falling 7% to 206,000 units, while Turkish vendor Casper increased its shipments 80% to 180,000 units on the back of strong growth in the consumer and education segments.

"Moving forward, the MEA tablet market is expected to see a significant slowdown in growth," says Fouad Charakla, a research manager at IDC Middle East, Africa, and Turkey. "This has become particularly evident since the start of the new year, with the MEA market set to experience its first ever quarter-on-quarter decline in Q1 2015 amid intensifying competition from smartphones and phablets. Nevertheless, the MEA tablet market is still forecast to post double-digit growth for 2015 as a whole, while other regions around the world will experience much bigger slowdowns or even



Fouad Charakla

declines. The consumer segment will remain the major contributor to this growth, but we also expect to see a huge

contribution from the commercial segment in 2015, with education deals being a major driver."

GOOGLE, MICROSOFT BATTLE DRIVES DOWN PRICES FOR PCs, TABLETS

SAN FRANCISCO: Google is releasing its cheapest Chromebook laptops yet, two versions priced at \$149 aimed at undercutting Microsoft's Windows franchise and gaining ground in even more classrooms.

Various PC manufacturers have been working with Google to design lightweight laptops running on the Chrome operating system since 2011. The newest versions are made by Hisense and Haier. Hisense's Chromebook can be ordered beginning Tuesday at Walmart.com and Haier's version can be bought at Amazon.com.

Their arrival coincides with Microsoft's rollout of a lower-priced Surface tablet in an effort to reach students and budget-conscious families. Pre-orders for that device began Tuesday, too.

As the prices for tablets and smartphones have been declining, it has forced on PC makers to lower their prices, said International Data Corp. analyst Jay Chou. The success of the Chromebook line is intensifying the PC pricing pressure.

"It has been good news for consumers, but not so good for vendors," Chou said.

The cheaper version of the Surface Pro 3 sells for \$499, compared with \$799 to \$1,949 for the higher-end models. The discounted version has a slightly smaller screen - 10.8 inches rather than 12 - a slower processor, and less flexible kickstand - just three angles rather than unlimited positions.

The Chromebook has served a dual purpose for Google. Like the company's Android software for mobile devices, the Chrome system is set up so users will automatically begin using Google's search engine and other services, such as Gmail and YouTube. Google has used the Chromebooks as a prod to bring down the prices of all PCs, something the company wanted to do because it has more opportunities to show the digital ads that bring in most of its revenue when more people can afford to buy an Internet-connected device.

"We cannot be happier that Microsoft is helping drive down the prices of PCs," said Caesar Sengupta, Google's vice president of product management for Chromebooks. "If Microsoft is reacting to (Chromebook's low prices), that's fantastic. We love it."

Unlike most computers, Chromebooks don't have a hard drive. Instead, they function as terminals dependent on an Internet connection to get most work done.

Despite those limitations, Chromebooks have been steadily gaining in popularity, particularly in schools, as more applications and services made available over Internet connections - a phenomenon known as "cloud computing" that has reduced the need for hard drives.

About 6 million Chromebooks were sold worldwide last year, more than doubling from 2.7 million in 2013, according to IDC. In contrast, sales in the overall PC market slipped 2 percent last year, marking the third consecutive annual decline. IDC is projecting 8 million Chromebooks will be sold this year.

Besides the \$149 laptops, Google also is attacking Microsoft on other fronts. Later this spring, Google and Asus are releasing a hybrid Chromebook that can be used as either a laptop or tablet with a 10-inch screen. Called the Chromebook Flip, it will sell for \$249.

In the summer, Asus and Google will start selling a new Chrome device that will provide people a cheaper way to upgrade an old PC. The device, called the Chromebit, is a stick loaded with an entire operating system that can be plugged into any HDMI port. The Chromebit's price hasn't been set, Google says it will cost less than \$100. Here's what you need to know about the cheaper Surface Pro 3 and new Chromebooks:

Pros and cons of the surface

Graphic artists, engineers and finance professionals



This product image provided by Google shows the Haier Chromebook 11, a \$149 laptop running on Google's Chrome operating system. Google is releasing two \$149 laptops in an effort to undercut Microsoft's Windows franchise and drive down already falling personal computer prices. —AP



This product image provided by Google shows the Google Chromebit by Asus. The device is a stick loaded with an entire operating system that can be plugged into any HDMI port, providing people a cheaper way to upgrade an old PC. —AP

needing to run complex software might still want the company's higher-end Pro 3, said Dennis Meinhardt, director of program management for Surface. But the Surface 3 should be good for everyday tasks, he said, and brings the Pro 3's premium feel to a device that will be affordable to more people.

The new Surface model is thinner and lighter, partly because it gets rid of the fan - similar to Apple's new MacBook laptop. At 214 pixels per inch, the screen resolution is comparable to the Pro 3's.

Battery life is promised at 10 hours for video playback. The Surface 3 runs the regular version of Windows

8.1, just like the Pro 3. In the past, Microsoft has used a lightweight version called RT in its cheaper tablets. The Surface 3 also has a USB port, a feature that distinguishes the Surface line from most rival tablets.

Sizing up the chromebooks

Both the Hisense and Haier models have 11.6 inch screens, 2 gigabits of memory and run on Rockchip processors. The Hisense machine promises up to 8.5 hours of battery power per charge while Haier is touting up to 10 hours of power per charge on a battery that can be removed for easier replacement. —AP



LOS ALAMITOS: Faith Lennox, 7, right, smiles as she holds an extra plastic prosthetics part with her newly 3-D printed hand at the Build it Workspace in Los Alamitos, Calif., on Tuesday. At left, her aunt, Grace Stedman. — AP

3-D PRINT TECHNOLOGY PROVIDES 'ROBOHAND' TO 7-YEAR-OLD GIRL

LOS ALAMITOS: Seven-year-old Faith Lennox never thought much about putting a prosthetic limb where her missing left hand had once been.

Not until the little girl learned she could design her own, strap it on easily and then jump on her bike and pedal away at speeds previously only imagined. With family members occasionally shouting "Be careful" and "Watch out for that car," Faith firmly placed her new hand's bright blue and pink fingers on her bike's left handlebar and took off for a seemingly endless sojourn around the Build It Workspace on Tuesday morning. Inside, just a short time before, that hand had rolled off a 3-D printer that built it overnight.

"I don't think we'll ever get her off it," said her mother, Nicole, smiling with resignation as she watched her daughter continue to circle the parking lot in this Orange County suburb. The prosthetic that had just made such a task immediately easy represents a breakthrough in small, lightweight hands that are economical and easy for children to use. It weighs only a pound and costs just \$50 to construct out of the same materials used to make drones and automobile parts.

When Faith outgrows it in six months or a year, a replacement can be made just as cheaply and easily, said Mark Muller, a prosthetics professor at California State University, Dominguez Hills, who helped with the design. He said a heavier adult model with sensors attached to a person's muscles would run \$15,000 to \$20,000.

Faith manipulates her hand without sensors. Instead, as she happily demonstrated over and over after the bike ride, she moves her upper arm back and forth.

That in turn opens and closes its blue and pink fingers - "my favorite colors," she noted with a smile - that she uses to grasp

objects like the favored plush toy she brought with her.

The oldest of three children, Faith had compartment syndrome when her position during childbirth cut off the flow of blood to her left forearm, irreparably damaging tissue, muscle and bone. After nine months of trying to save the limb, doctors determined they had to amputate just below the elbow.

She had tried a couple more traditional - and more expensive - prosthetics over the years but found them bulky, heavy and hard to use. Her parents were working with the nonprofit group E-Nable to get her a 3-D-printed hand, but the technology is so new there's a waiting list, her mother said. Then she learned of what Build It Workspace could do from a friend whose son visited with his Scout troop. The small studio teaches people to use high-tech printers, provides access to them for projects and does its own commercial printing.

Although the company, founded less than a year ago by mechanical engineer Mark Lengsfeld, has printed out everything from pumps for oil and gas companies to parts for unmanned aerial vehicles, this was the first hand Lengsfeld and his employees had built.

So he used E-Nable's open-source technology and called in Cal State, Dominguez Hills' experts for guidance.

When Faith quickly strapped on their new creation and headed out to ride Tuesday morning, as TV cameras captured the moment, Lengsfeld admitted he was nervous. After being up all night finishing the hand, he wanted to test it himself to be sure it worked. "But she did fine with it," he said, chuckling. She noted it did fine by her as well. "I didn't have to lean so much," she said of the difficulty of navigating and steering a bike with just one hand. —AP

GOOGLE MAPS LETS YOU PLAY PAC-MAN

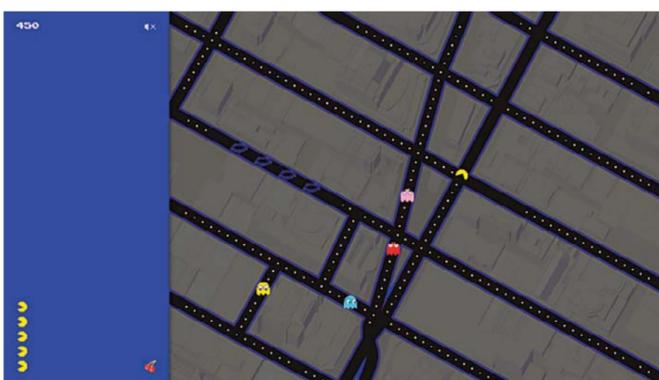
WASHINGTON: Google's mapping service rolled out a gameified version inspired by the classic Pac-Man, turning the real streets of a city into a labyrinth to gobble up pellets and ghosts. A Google spokeswoman said the game was an early April Fool's joke. It allows users to play the game featuring the popular character created in 1980 in select locations.

If there are not enough roads at a given site, the game cannot be played, and Google

alerts users that "it looks like Pac-Man can't play here."

It was unclear how long the feature would be available.

Play on Google Maps was similar to that of the classic arcade game, with desktop computer users manipulating the yellow Pac-Man character with keyboard keys to eat up pellets, white ghosts and fruit while avoiding colored ghosts. —AFP



This screen shot made Tuesday shows the Times Square area of New York in Pac-Man form on Google Maps. Google added the option to convert its popular navigation service into the Pac-Man video game in celebration of April Fools' Day. —AP

RECAPTURING THE HUMANITY IN THE INTERNET'S BIRTH, ON STAGE

PALO ALTO: Is the Internet a force for public good, or for social control? Or a bit of both? Such tensions, so prevalent in today's debates, were rife at the very dawn of the computer age. Hoping to stimulate debate about the future of technology, a new production at Stanford University brings to stage the life of Internet pioneer Doug Engelbart who envisioned a more humanist role for computers. "The Demo," an experimental opera, dramatizes the so-called "Mother of All Demos" in 1968 in which Engelhart's team at Stanford set up some 65 kilometers (40 miles) of cable to share a presentation with a conference on computers in San Francisco.

The 90-minute demonstration, which included Engelbart sharing a grocery list from his wife, lay the groundwork for the Internet, video conferencing and data cutting-and-pasting-and marked the invention of the computer mouse, a nomenclature for which the scientist is heard apologizing. At a time when computers were clunky number-crunching machines, Engelbart - who died in 2013 - opened a path for better known figures such as Apple's Steve Jobs and Microsoft's Bill Gates to develop the ever-expanding world of personal computers and gadgets.

"It grounds you in where we are now. We really tried to emulate the humanity that we saw in Engelbart," said Mikel Rouse, the co-composer of "The Demo" which premieres Wednesday evening.

"Without telling the audience what to think because that's never interesting the goal is that when they focus on Facebook or on privacy issues, they can think about what this is all about and where it came from," he said.

Rouse sits in a tie at a desk to portray Engelbart in "The Demo," turning the complete 1968 experiment-jargon and all-into a libretto in which Rouse sings to a whirl of electronic music and projected images. Fellow composer Ben Neill plays the mutant trumpet, an electronic-infused version of the trumpet he invented, in the role of Engelbart's assistant William English.

• Contrast of cultures

"The Demo" flashes back to past episodes from Engelbart, who trained as a World War II navy radar technician.

After Japan's surrender, Engelbart spent a year in the Philippines. He was transformed at a Red Cross library in Leyte where he read an article in Life magazine about early US plans for computers.

The young Engelbart discovered the goal that later became his motto at Stanford-how to use machines to extend the power of the human mind. Yet the influences around him were complicated. The Stanford Research Institute, with which he was affiliated, faced heated protests for working on military

technology during the Vietnam War.

But even as the Pentagon encouraged early research on the Internet, the scientists took their inspiration instead from the 1960s California counter-culture.

Footage of the 1968 demo exists thanks to camera footage by Stewart Brand, who edited the hippie bible Whole Earth Catalog. Engelbart himself dabbled in LSD, according to "What the Dormouse Said," John Markoff's book on the era on which "The Demo" is inspired. The opera offers hints of the era through sounds of protests and musical allusions to 1960s psychedelia and West Coast jazz. But the heavy beats are more reminiscent of Electronic Dance Music, transplanting "The Demo" to the present day.

• Asking questions through art

"The Demo" again comes back to 2015 through flashing images-of connectivity maps and tech companies-projected on the trusses of the concert hall. Rouse's movements are projected overhead, and an entirely different set of characters resembling an office perform behind a transparent screen, in further representations of the Internet.

Experimentation in form is encouraged by the layout of Stanford's Bing Concert Hall, whose 842 seats are arranged as a "vineyard" surrounding the stage. —AFP