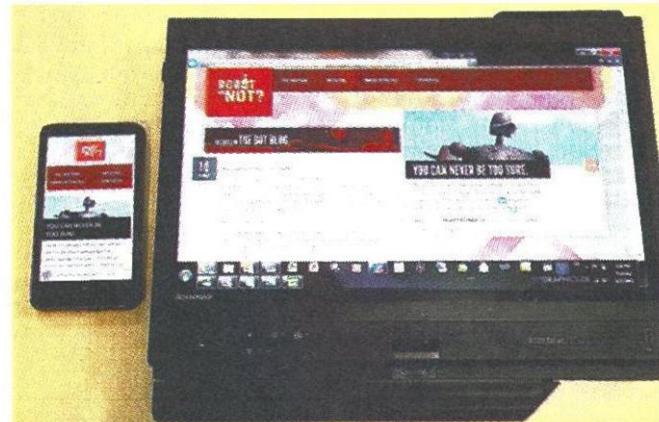
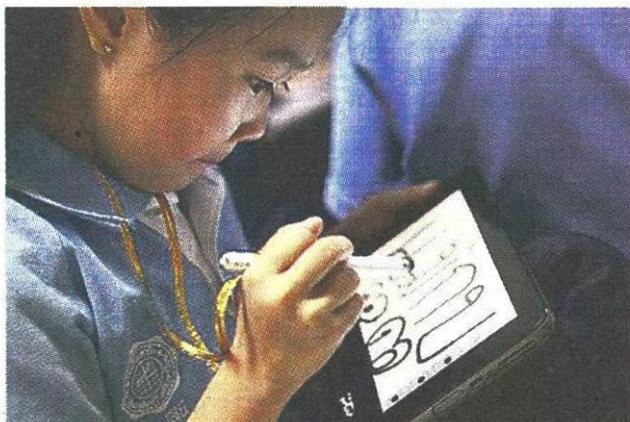




'SMAC' ALL SET TO TAKE GIANT STRIDES >> 5B

2013 TRENDS

'SMAC' ALL SET TO TAKE GIANT STRIDES



Convergence to impact businesses and individuals in a big way

ASINA PORNWASIN
 THE NATION

3 G, mobility, cloud computing, and Internet are expected to be the key technologies in Thailand in 2013 that will together drive IT consumerisation, work and lifestyle throughout the year.

Vilaiporn Taweelappontong, Partner in Consulting practice for PwC Thailand, said that the four key technologies that will continue to change people's lives and work operating models as well as business strategies could be called in short SMAC (social, mobile, analytics and cloud computing).

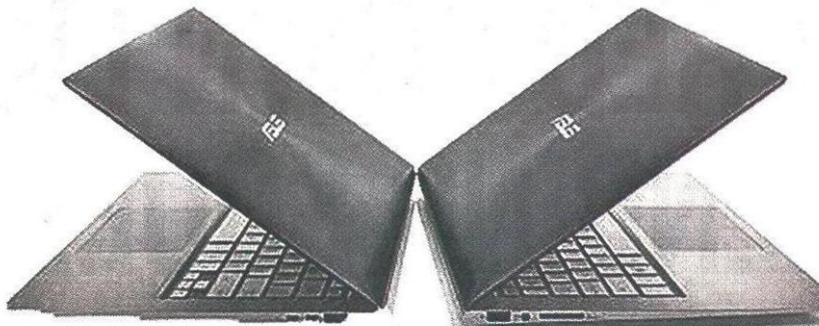
"Which of us does not use mobile devices? Which of us does not access

social networking websites like Facebook, Twitter and LinkedIn regularly on mobile devices? Which of us does not use search engine analytics, investment portfolio analytics, maps and turn-by-turn GPS navigation all of which use analytics and are in the cloud? SMAC is the combination of all of these trends coming together on mobile devices. This convergence is impacting businesses in many different ways," said Vilaiporn.

As consumer behaviour is shifting towards the online and digital world, it will see an increasing adoption of social media at the personal and company level such as apps platform. Meanwhile, as smart phones and tablets are reshaping the way the Internet is consumed, it will see an increasing creation of a blend of digital experience in the physical retail stores where people can purchase goods anywhere and at anytime, Vilaiporn said.

SMAC creates the possibility for new ways to develop products, interact with customers, partner with others, compete, and succeed. These new





technology trends are deeply changing the ecosystem in which companies compete: consumers are leading mass technology adoption for enhanced shopping experience and enterprise are forced to adopt new business model, Vilaiporn added.

Leading companies are adjusting their business and enterprise architectures to be more attuned to participating in or integrating with these expanding digital ecosystem spaces.

MOBILITY, CLOUD, AND INTERNET DRIVE IT CONSUMERISATION

IMC Institute's executive director, ThanachartNumnonda, said that 3G, mobile, and tablet will together play an important role in Thailand's ICT industry this year. The arrival this year of 3G service, which is expected to make the price affordable, will encourage greater adoption of smart phones and tablets as well as boost personal cloud service in Thailand this year.

Also, social network are still on track to highlight technologies in Thailand this year. It will see more corporates adopt social network, across platforms, and apply them to their business purposes.

"This year, with the availability of the 3G network, there will be more adoption of smart phones and tablet devices and more people will always stay online and will create consumerisation. Meanwhile, more corporates will continue to use the social network for marketing," said Thanachart.

Head of marketing, Google

Thailand, Pornthip Kongchun said that mobile will continue to be the big thing in Thailand this year. Mobile is also a reference to the multi-screen, "always on" consumer, accessing the Internet anywhere, anytime, for just about anything.

"As more and more Thais come online and use smart devices that allow them to be 'always on', we see a more informed, more connected consumer. So, the question is really, how can Thai businesses leverage this opportunity?

By taking their business or their brands to where Thai consumers are," said Pornthip.

She added that a multi-screen consumer does not rely on the information they see on TV alone. They search. They're social. They make decisions about products and services before they ever step in a store or sample a product. They are looking local, but so many businesses are invisible to them because they don't have an online presence or the experience they give consumers online is less than ideal.

Moreover, in 2013, search and social-media marketing are a must for businesses. Consumers search for information before they buy. They also rely heavily on their social network for information and advice about products and services.

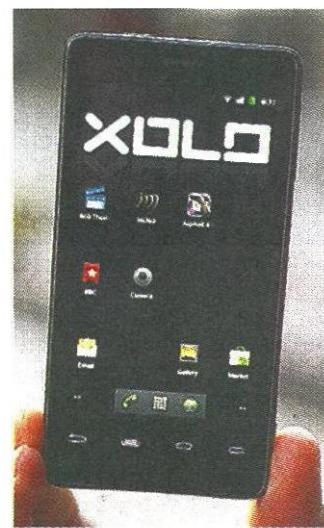
The other highlight Pornthip sees is the evolution of the cloud as more and more Thai businesses adopt a 100-per-cent web with Google Apps. The widespread adoption of cloud computing by Thai businesses, and businesses around the world, is not a trend for the future, it is a reality today, she said.

SAP Thailand's managing director Thomas Conrad Zack predicted that cloud computing will start to take hold in Thailand in 2013 and it is moving beyond the early adopters to a more mainstream solution option for small and medium-sized and enterprise customers.

The economics are compelling, and the time-to-value will be even more critical as businesses look to roll out new solutions around talent management, supply chain, CRM, and even ERP solutions.

"We expect to see a continued adoption around not only public cloud, but hybrid cloud solutions where some of the customers' key applications will remain on-premises, but new and fast moving areas of technology like CRM and HR will be adopted in the public cloud," said Zack.

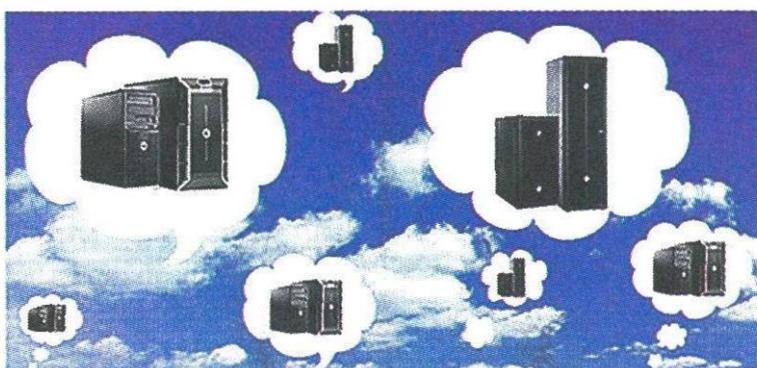
Moreover, he added that mobility is continuing to change the shape of



business applications used by customers in Thailand. With the proliferation of smart phones and tablets

across Thailand, people want flexibility to take their business with them, and interact with all key business applications anytime, anywhere.

"We expect to see 'mobile' as the new desktop or default way to interact with the business systems, and 2013 is the year this will really begin," said



Zack.

Meanwhile, Cisco Systems (Thailand)'s country manager Tatchapol Poshyanonda, said that 3G and Wi-Fi rollout, which make the mobility and collaboration solutions viable, Internet of Things, which connects the unconnected such as industrial equipment, smart building, medical device, digital TV, near field communication technology, and Big Data are considered as the highlight technologies this year.

Additionally, IT consumerisation is also considered as the major trend this year.

Dell's managing director for Thailand and general manager for Indochina, Anothai Wettayakorn, said that the big thing in 2013 is IT consumerisation, and that will remain the important trend throughout the year.

Consumerisation is the intersection of a user's preference to work with identical methods in the office and at home. The machine becomes an extension of a user's identity. This is inclusive of hardware and applications – be

they Web-based or resident. Most of the corporate customers want professional tools with consumer appeal. The consumer appeal and nice design will help bring them the uniqueness, personalisation and styles, Anothai said.

"IT consumerisation is the key reason for the bring-your-own-device [BYOD] trend as well," Anothai added.

The virtual desktop infrastructure is the next big thing listed in a lot of chief information officers' agenda. The massive transformation is happening in how people stay connected, both with work and play, resulting in a proliferation of devices and explosion in data. Challenges then arise in how to manage and secure the devices and data.

"Mobile professionals want access to data anywhere, anytime and

a consistent experience across all computing devices while IT organisations value strong manageability and security to support the level of mobility their customers expect," said Anothai.

Intel Microelectronics (Thailand)'s country manager Accharas Ouysinprasert said that touch and small mobile computing devices will continue to influence the market in Thailand and around the world. However, in 2013, consumers will have even more to choose from. Ranging from mobile phone computing, tablets, Ultrabooks, notebooks, All In One, PCs etc. It could expect to see many form factors that offer combined key features of two or more devices.

"With 3G and Windows 8, which is an enablement of touch, becoming available in 2013 in Thailand, we will see a big leap in IT usage, expanding into first-time buyers and remote areas at a rapid rate. BYOD and cloud will be among top priorities for enterprises to plan and incorporate into the action," said Accharas.

He added that touch and a wide range of computing devices – from phones, tablets, Ultrabooks, all-in-one PC – will continue their magic in 2013. New convertible designs and touch will become the new norm for personal and immersive mobile PC

experience. These trends define the new direction for PC innovation.

3G PLAYS A KEY ROLE

DTAC's chief corporate affairs officer Darmp Sukontasap sees 2013 as an exciting year for the Thai telecom industry, with the launch of 3G services under 2.1 gigahertz spectrum by all operators in around the second quarter of the year and the possible auction of new spectrums, which can be used for 4G (LTE) technology.

He said this year competition among telecom operators would become even more intense. Operators will try their utmost to show off the quality of their network and introduce new and innovative products and services to consumers at affordable prices. This will enable consumers to benefit fully from the new technology, as well as the intense competition among all operators.

"Due to the expanded coverage of 3G services in the country, what we will also see in 2013 is the sharp rise in data usage by consumers and the introduction of various bundled service packages of voice, SMS and data that consumers can choose from," said Darmp.

These service packages will be designed to suit the needs and lifestyle of each consumer group. This will make life much easier for consumers and more economical for them at the same time.

"In my view, with the growth of smart phones and the proliferation of new and advanced mobile applications, we will see that mobile phones and tablets will increasingly take over from PCs and laptops on Internet access," said Darmp.

He added that cloud computing and personal cloud are also a thing to watch as mobile technology will make it increasingly convenient for individuals to virtually store their personal content on the go, while having access to Web-based services that they prefer at the same time.

The growth in data usage and Internet access through mobile devices will, in turn, lead to the development of increasingly sophisticated, but easier to use, mobile applications for both individuals and organisations.

"In essence, 2013 will bring all of us one step closer to an integrated digital ecosystem where mobile devices and mobile services play a key role," said Darmp.

PwC's Vilaiporn also agreed that the arrival of 3G technology will encourage people to look forward to better information, much faster data

access and multimedia services from the mobile phones and tablets. Therefore, it will be a rapid change in mobile innovation.

"We can expect to see new capabilities, including technologies that could change how users interact with the devices and how the devices interact with the environment. We will see evolution in digital operating model. We will see more content-based business. In personal use, there will be more live TV on mobile, more real time streaming of music and movies, much faster e-mail exchange with large attachments," said Vilaiporn.

SECURITY IS CONTINUING TO BE IMPORTANT

According to research by Kaspersky Lab and B2B International, 72 percent of companies are expecting to use the concept extensively in the near future. Hackers are seeking channels to steal company data, financial data, or even personal data. All of them are considered as valued information.

For consumers, ICT is an integral part of their daily lives. Whether people have a computer at home, use online banking services or simply receive electricity supplies, the community's reliance on technology is increasing. People put personal and financial information on the Internet without security awareness. Hackers can steal the valuable information, cause damage to people and make money.

It is being said that 2013 is the year

of personal security awareness and prevention of data loss.

Meanwhile, the president and founder of ACIS Professional Centre, Prinya Hom-anek, an IT and information security professional, said that security will continue to play an important role in the technology landscape this year.

He said that ACIS had listed the Top Ten IT and information security trends in 2013. They are: personal personal privacy vs personal cloud; consumerisation and BYOD vs organisational security management; national/personal Security vs advanced persistent threat (APT); cyber-security threats vs top management leadership; consumer privacy vs location/context aware application, augmented reality(AR); consumer behaviour/lifestyle vs Big Data analytic; people privacy vs national lawful interception; attack attribution vs international relations; mobile payment/banking vs mobile spyware/trojan; and real-time system availability with zero downtime vs business resilience.

"The latest cyber-security trends for 2013 and 2014 include cyber-norms, attack attribution, cyber-security readiness, advanced attack beyond APT, physical unclonable function, critical information infrastructure protection, actionable analytics, enterprise app stores, the infinite data centre, the End of Service Desks, BYOD and multiplatform, supply chain risk management," said Prinya.