

# Global Communications

## Newsletter

October 2011

### *Women in Communications Engineering (WICE) Luncheon at ICC 2011, Kyoto*

*By Sarah Kate Wilson, USA, Chair of the Comsoc WICE Committee*

As a woman member of the Communications Society (ComSoc), I have noticed a wonderful trend over the past 20 years: I see more women participating in ComSoc. More of us are attending conferences, joining editorial boards, and chairing technical committees. We have made great progress, but as minority members of ComSoc, we can find ways to increase the membership and roles of women in ComSoc.

In 2009, the Women in Communications Engineering (WICE) committee was founded to promote the role of women in ComSoc. Heather Yu was the founding chair and we are grateful for her work in initiating and nurturing this group. I recently became the chair and hope to continue Heather's goal of recruiting and retaining more active female ComSoc members.

This year ComSoc sponsored a WICE luncheon at ICC 2011 in Kyoto where 12 women and 1 man, Shri Goyal, discussed the concept and future of this committee. We posed the question: How can WICE be useful to ComSoc women? Rather than answers, this question posed more questions, including:

1. As there are several groups for promoting women in Engineering, e.g. SWE, IEEE WIE, WEPAN, the question arose: How will WICE differentiate itself from these groups and what would be the benefit of participating in such a group?

2. Will WICE be focused on promoting more women in ComSoc but be open to all in terms of membership, or will WICE membership be limited to women members of ComSoc?

For the first question, it was pointed out that as WICE focuses specifically on women in ComSoc, this was a more focused venue where women from the same community could meet and discuss issues pertinent to our field. As such, WICE would be complementary to

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the existing women in engineering groups.

For the second question, the lunch table was divided. Some believe that all interested members should be allowed to participate regardless of gender, while others believe the group should be limited to women ComSoc members.

The conversation was lively and as Malathi Veeraraghavan from the University of Virginia said, this is the time for us to go home, do our homework and determine what we want from the organization.

In the meantime, we focused on what we could do now and we received the following excellent suggestions and requests:

1. Expand the membership and promote the group via ComSoc membership lists.
2. Establish a mentor program for young researchers.
3. Post profiles of successful ComSoc women on the website.
4. Have a section of the website where members can post their recent accomplishments.
5. Have a link to current job postings/requests.
6. Have a WIKI, moderated advice column where WICE members can post questions about career, and receive answers from more experienced WICE members.
7. Have a WICE workshop at ICC and/or Globecom focusing on career issues. Topics could include:
  - a. How to successfully network.
  - b. How to become more active in ComSoc.

Overall the meeting was fun, informative and though it was wonderful to see so many women in one room at ICC, we hope to have more at Globecom. WICE is now in its infancy but through meetings both face-to-face and on-line we hope to establish a committee that can increase the participation of Women in ComSoc.

# Turkish Electronic Communications Sector

By Galip Zerey, ICTA board, Turkey

ICTA, the Information and Communication Technologies Authority, the regulatory body for the electronic communications sector in Turkey, aims to create effective competition, to ensure the protection of consumer rights, to promote the deployment of services throughout the country, to ensure efficient and effective use of the limited resources, to promote new investments and technological developments in communications infrastructure, network and services through regulations and inspections in the electronic communications sector and to determine relevant regulations.

The Turkish electronic communications sector, which has been developing since the liberalization of the sector in 2004, has continued to develop in 2010. The market size of the ICT sector can be seen in Figure 1, with the total value of the market being US\$35 billion in 2010.

Similar to developments in the electronic communications sector, the amount of investments also tends to increase. Total amount of investments in the last five years in terms of fixed and mobile are shown in Figure 2. Following an increasing trend in the last six years, total investments in the electronic communications market in 2009 witnessed a considerable growth due to authorization of 3G services. In 2009 investments increased by 68 percent and reached to just over 7 billion TL. In 2010, there was a decrease in investment to 1 billion TL investment in fixed and 2.6 billion investment in mobile communications.

The number of fixed line subscribers decreased to 16.2 million corresponding to a penetration rate of 22.3 percent. Considering the fact that the average household rate in Turkey is around 3.97, it can be concluded that fixed line services reach a significant proportion of Turkish citizens.

Competition in the broadband Internet services market is also developing. After the opening up of ADSL and G.SHDSL ports of incumbent operator to the use of ISPs, resale of broadband access services commenced. On the other hand, ISPs started to be served by Türk Telekom's infrastructure for the provision of broadband services via bit stream access. By the end of 2010 the number of Internet subscribers in Turkey reached almost 8.7 million, due to a 28 percent increase.

3G mobile service, launched in 2009, has attracted huge interest among consumers, with the number of subscribers totaling over 19 million by year-end 2010. As of 2011 Q1, the number of 3G subscribers was 21.4 million. The total number of mobile cellular subscribers is 61.8 million, corresponding to a 85 percent penetration rate. The annual growth of mobile subscribers and penetration rates are presented in Figure 3. In parallel to 3G services, the number of mobile Internet users also went up substantially, and over 1 million subscribers have begun to use mobile Internet services via 3G.

Consumers have also shown huge interest in mobile number portability that came into force in 2008, and the total ported numbers exceeded 24 million in 2010. On the other hand, 27 thousand portings were recorded in geographic numbers in 2010. As of the end of 2010, including the three mobile operators, a total of 17 operators are connected to the Number Portability System.

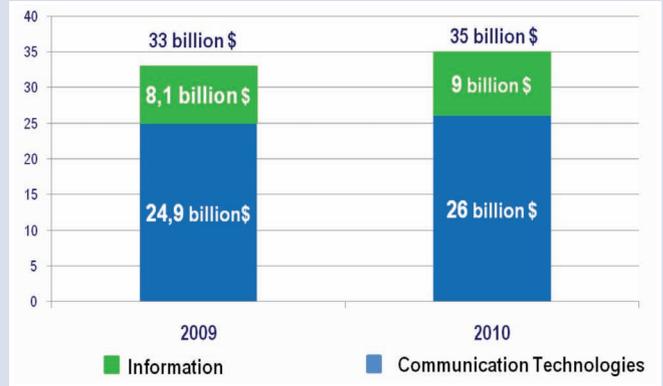


Figure 1. Market size of the Turkish ICT sector (source: ICTA).

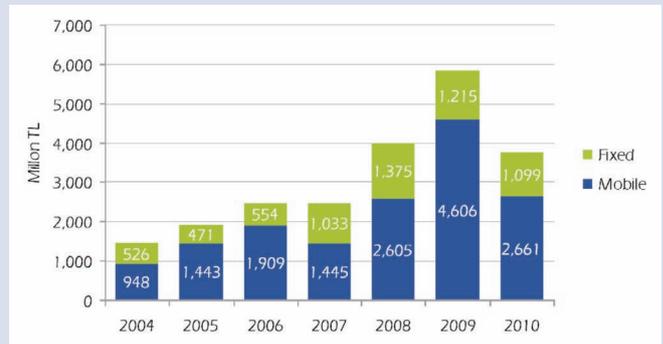


Figure 2. Total investments in electronic communications market (source: ICTA).



Figure 3. Number of mobile subscribers and penetration rates (source: ICTA).

Being the sole satellite operator in Turkey, TÜRKSAT is fulfilling the functions of establishing and operating communication infrastructure over the satellites serving at the position of 42° East, TÜRKSAT-3A and TÜRKSAT 2A satellites. These satellites have a vast coverage area including Turkey as well as all of Europe, North Africa, and all of the Turkish Republics, extending to the Chinese border. In this vast geography, these satellites provide both satellite communication services and high-quality direct TV broadcasting services through small diameter dish antennas.

Being aware of the ICT sector's contribution to Turkey's economy, ICTA carries out its duties aimed at forming a more advanced and more competitive electronic communications network.

# Activities of the Malaysia ComSoc Chapter

By Borhanuddin Mohd Ali, Hafizal Mohamad (past Chairs) and Tiong Sieh Kiong (Chair), Malaysia

ComSoc Malaysia is a relatively young and inexperienced chapter compared to many of our more illustrious chapters from advanced countries, but we've made our mark in our own way. Last year we were designated as the second most active chapter in IEEE Malaysia, losing to the winner by a whisker. As a consolation, one of our volunteers — our chapter chair a few years ago — won the volunteer of the year award for his continued contribution to the Section through the ComSoc chapter.

ComSoc Malaysia is now in the midst of a couple of high profile events. First, we have been in the thick of bidding for one of the forthcoming ICCs that are still open for bid (we lost the first one we bid on). This certainly demands a lot of stamina on our part in terms of human resources and finance. In the meantime, we are organizing the next Asia Pacific Conference on Communications (<http://apcc2011.org.my>), the 17th in the series. This event will be held in Kota Kinabalu, Sabah, situated in the northern part of Borneo Island, teeming with many natural wonders, where many of them are unique to this part of the world.

In the meantime we are committed to continue offering our best services to our 300 members, the largest chapter in Malaysia. In May, we organized two tutorials on IEEE 802.11s standards given by the vice chair of the working group himself, Guido Hiertz of Riedle Electronics, Germany. The tutorial was well attended, with about 50 researchers at Telekom Malaysia R&D, and a further 50 more comprised mainly of postgraduate students, at Universiti Putra Malaysia. And all these for ex gratia, graciously given by the speaker at no charge, except for our local hospitality.

We have also lined up a few more short courses to be given by our own volunteers in their respective areas of expertise. We hope these courses will raise the profile of ComSoc in Malaysia, and raise a few more dollars to fund our high profile bids, as mentioned above.

The most recent contribution of ComSoc Chapter



Second Best Chapter winner and best volunteer award, IEEE Malaysia Section Dinner and Award 2009. Second from left, Borhanuddin Mohd Ali, IEEE Malaysia Volunteer of the Year, 2009. Third from left, Mahamad Ismail, current IEEE Chair. Centre, Dato' Hod Parman, the guest of honour. Far right, Zaiki Awang, the then IEEE Chair. The other three are ComSoc Excomm members.



Final Year Project competition and award at International Islamic University Malaysia (IIUM). Second from left (next to the bunting) Tiong Sieh Kiong, the Chapter Chair. Furthest right, Fahruzan, ComSoc Excom Member. The others are students.

Malaysia is our award to the best final year students' projects winner. This year, we gave awards to students in Universiti Teknologi Malaysia, Universiti Tenaga Malaysia, Universiti Putra Malaysia, and International Islamic Universities. More are in the pipeline. Following are the winning students:

- 1) Universiti Tenaga Nasional (Uniten)  
Abdul Wafiy B. Abu Bakar
- 2) Universiti Tenaga Nasional (Uniten)  
Chai Tze Jian & Eric Ong Choon Tat
- 3) Universiti Teknologi Malaysia (UTM)  
Norfatin Akma Elias
- 4) Universiti Teknologi Malaysia (UTM)  
Nur Amira Shaharudin
- 5) Universiti Putra Malaysia (UPM)  
Lai Yeong King
- 6) Universiti Putra Malaysia (UPM)  
Low Chin Lin
- 7) International Islamic University Malaysia  
Khairul Ashraz Bin Ashruddin, Hazrami Bin Mat Jamil
- 8) International Islamic University Malaysia  
Muhammad Feroze Bin Akbar Jalaludin Khan,  
Shaker Mm Alkaraki



Event at Universiti Teknologi Malaysia, UTM. A student receiving award from the ComSoc Chapter Chair, Tiong Sieh Kiong.

# News on Mobile Broadband Services in Thailand

By Kamol Kaemarungsi and Keattisak Sripimanwat, IEEE ComSoc Thailand Chapter Chair,  
National Electronics and Computer Technology Center (NECTEC), NSTDA, Thailand

With the rapid growth of smart phones and tablets around the world, mobile broadband services have attracted a lot of investment and become revenue generating services for mobile cellular network operators in several near-saturated voice markets. This trend has been driven by the increasing use of social networking applications and several new multimedia services. In Thailand, this sector of the telecommunication industry has seen a lot of activity and competition has become more intense in recent years for a race to provide 3G mobile broadband services.

First, the fourth-largest mobile operator, who provided CDMA based network services and had the smallest number of subscribers, was bought out in December 2010 by the third-largest mobile operator in an attempt to extend its concession. This resulted in three major private operators and two Thai state-owned operators left in the industry.

Second, one of the state-owned operators just signed an official deal with a consortium of vendors in April 2011 to provide nationwide 3G services based on UMTS/HSPA in the 1900MHz spectrum. It claimed to be the first to provide commercial 3G mobile broadband service in Thailand in December 2011 but with limited coverage in Bangkok. However, this state-owned operator adopted a mobile virtual network operator (MVNO) strategy in which it focuses itself on operating and installing the new mobile broad-

band network, while its MVNO partners will resell its services and do marketing to promote the 3G services.

Third, more mobile operators began offering bundling packages of mobile data service with Wi-Fi hotspot service. This trend indicates the new lifestyle of mobile users with higher demand for broadband data and multimedia services in Bangkok. It clearly showed that the existing data networks of GPRS, EDGE, and CDMA 1X-EVDO were not enough for the new broadband applications.

Fourth, although the auction of 2.1GHz spectrum licenses for new 3G services was scrapped last year by the Administrative Court, this did not deter existing operators from attempt to upgrade their infrastructure to new broadband networks. The delay of new spectrum licensing for mobile phone services was also delayed by the transition and formation of the new regulatory body from the old agency. The National Broadcasting and Telecommunications Commission (NBTC) is the new title, and the House of Senates was expected to finalize the selection of the commission by August 2011. When the new commission is formed, the process of auction and licensing of the new spectrum for mobile broadband services should be renewed.

Finally, mobile service consumers have enjoyed the number portability rule enacted by the old regulatory body, which was called the National Telecommunications Commission (NTC). That first ever number portability, which has been in effect since late last year, allows mobile subscribers to change their mobile operator while maintaining their old mobile phone numbers.

Based on these activities in the mobile broadband market, mobile broadband consumers in Thailand should be able to benefit from both intense competition and upgrading of the mobile broadband service to 3G by every operators in the near future. Although there are also other new 4G technologies such as WiMax and LTE standards waiting to be installed by mobile operators, the current focus for mobile broadband services in Thailand is still on 3G and the stable standards of UMTS/HSPA.

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[www.comsoc.org/pubs/gcn](http://www.comsoc.org/pubs/gcn)

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