

Global Communications Newsletter

May 2008

ComSoc Portuguese Chapter: 2007 Activities By Luis Correia, Portugal Chapter Chair

During 2007, the ComSoc Portuguese Chapter was involved in several ways in Distinguished Lecturer Tours (DLTs), in conjunction with the Portuguese scientific community working in the vast area of both wired and wireless communications. Moreover, the ComSoc Portuguese Chapter has provided, through its Website, a permanent list of conferences in the area, improving the information flow among the Portuguese scientific community working in communications.

Aiming to pursue state-of-the-art topics, a DLT on “Next-Generation Wireless Broadband” was organized along with Germany and Romania. This lecture, by Prof. Benny Bing from Georgia Institute of Technology, Atlanta, addressed key standards and technologies underpinning promising broadband wireless access solutions, including 802.16, 3G/4G/LTE, mobile digital TV broadcast, and 802.22, emphasis being given to wireless bandwidth management, wireless multimedia services, cognitive radio technologies, and fixed-mobile convergence.

Within the same scope, Prof. Moe Win, from Massachusetts Institute of Technology, Boston, was invited to present “Recent Advances in Ultrawide Bandwidth Communications and Networks,” with particular emphasis on recent advances in system design and analysis. This lecture was part of the participation of Portugal in a DLT along with Italy.

Besides DLTs, the ComSoc Portuguese Chapter also invited experts from different areas to provide talks on several subjects: “Techniques for Cognitive Radio” by Prof. Homayoun Nikookar from Delft University of Technology, The Netherlands, and “Optimization of 3G Networks” by Dr. Ian Oppermann from the University of Oulu and Nokia Networks, Finland. In the former, sensing, as an important element of cognitive radio awareness was described; OFDM, as a spectrally efficient modulation scheme, was discussed and explained; and waveshaping and beamforming, as alternative techniques, were reviewed. The latter was focused on key issues in the practical optimization of modern mobile 2G/3G networks.

In a different scope, Therese Catanzariti from GE Healthcare, Helsinki, Finland, was invited to give a talk on “GPL, MIT, BSD, OSS (and Me): Introduction to Open Source.” She addressed several issues related to open source codes, particularly the risks and challenges of working with this kind of software.

During 2008, the ComSoc Portuguese Chapter will continue pursuing the same objectives.

15th International Conference on Telecommunications ICT 2008 will be held in St. Petersburg, Russia, 16–19 June 2008

*By Dmitry Tkachenko and Yevgeni Koucheryavy,
Russia*

IEEE Russia Northwest Broadcast Technology, Consumer Electronics, and Communications (BT/CE/COM) Chapter has been recently approved by IEEE Conference Services as a technical co-sponsor for the 15th International Conference on Telecommunications, ICT 2008, to be held in St. Petersburg, Russia, on 16–19 June 2008.

ICT was first initiated by the Centre for Telecommunications Research, King’s College London, United Kingdom. Based on the initial success of Dubai in 1994, ICT has been held annually in Bali (1995), Istanbul (1996), Melbourne (1997), Chalkidiki, Greece (1998), Jeju, Republic of Korea (1999), Acapulco, Mexico (2000), Beijing, China (2002), Tahiti (2003), Fortaleza, Brazil (2004), Cape Town, South Africa (2005), Funchal, Portugal (2006), and Penang, Malaysia (2007). Many scientists, engineers, students, professionals, and technical staff, representing a variety of organizations such as universities, research institutes, telecommunication operators, and equipment manufacturers, have attended previous ICT events.

ICT is mostly focused on network and Internet technologies, and its expected program reflects new trends in telecommunications such as the trend toward decentralized and self-organizing network architectures, the importance of security for communications systems, and convergence of communications, broadcast, and consumer technologies.

Information about ICT 2008 is available at the conference Web site, <http://www.ict08.org>. The ICT 2008 conference is going to be included in the IEEE Conference Publication Program, and it is expected that the conference proceedings will be entered into the IEEE Xplore database.

The ICT 2008 program will include more than 100 technical papers, a number of distinguished keynote presentations from recognized experts affiliated with companies (e.g., Cisco, AT&T) and universities, tutorials, workshops, plenary, poster, and panel sessions. The Program Committee encourages interested ComSoc members to attend ICT 2008. Besides all of the above, it is also a good opportunity to visit St. Petersburg at the time of White Nights, which is the best season for visiting this beautiful city.

Distinguished Lecturer Tour in Latin America

By Stefano Bregni, Italy

Distinguished Lecturer Tours (DLTs) are an excellent initiative of the IEEE Communications Society. They allow students and professionals to attend lectures in their country given by international distinguished experts. On the other side, the lecturer himself has the pleasant opportunity to visit foreign universities and companies. What's more, DLTs may be effective to foster ComSoc membership by promoting its image of leadership in disseminating knowledge.

For me, it is a great honor and pleasure to serve as a Distinguished Lecturer. Sincerely speaking, this is the ComSoc appointment of which I proudest of all.

This article summarizes some highlights of my last DLT, given in Latin America in October 2007. The full report is posted at the Comsoc Web site (<http://www.comsoc.org/socstr/org/chapters/LADLT/index.html>). My purpose is to display what I consider a paragon of a DLT, organized in an excellent way by the LA Region and all local Chapters (however, this was not the only excellent DLT I had, as can be noted by reading my other reports of previous DLTs posted on the ComSoc Web site).

Summary of Lectures

My 2007 DLT hit Mexico, El Salvador, Panama, and Colombia. I gave full-day and half-day lectures entitled "Synchronization of Digital Telecommunications Networks" and "Introduction to PDH and SDH Transmission Systems" at the following locations and dates:

- 1) Puebla, Mexico, Univ. De Las Americas (UDLA), 1 October 2007
- 2) Puebla, Mexico, UDLA, 2 October 2007
- 3) Mexico City, Instituto Politécnico Nacional - UPIITA, 3 October 2007
- 4) San Salvador, Hotel Terraza, 5 October 2007
- 5) Panama, Riande Continental Hotel, 8 October 2007
- 6) Panama, Riande Continental Hotel, 9 October 2007
- 7) Cartagena, Colombia, Univ. Tecnológica de Bolívar, 11 October 2007

Overall Impression

This was my fourth DLT in Latin America. It was the longest I ever had. After my previous tours in Latin America, I was not surprised that this one also turned out to be yet another outstanding and memorable experience, thanks to the warm welcome, the effective organization, and the beauty of the places I visited.

I wish to thank everybody involved in its organization, beginning with Araceli G. Gomez (LA Region Director in 2007) and José L. V. Gonzalez (LA DLT Coordinator), together with all those who received me in the towns I visited. The fact that I was welcomed in all places as an old-time friend and not as yet another business guest really makes the difference between a DLT like this one and regular work travel. Also for this, I am grateful to everybody.

All local chapters organized and promoted the events in advance very well. All lectures were attended by numerous people and well appreciated. The ComSoc activities were pre-



Groups attending lectures in Panama (above) and San Salvador (below). In the second photo, I am wearing a traditional Salvadorean shirt, a present from my kind hosts.

sented, and the advantages of being ComSoc members were pointed out to the audience, as should happen in all DLT lectures.

Some lectures were attended mostly by university students and faculty members, others mostly by engineers of telecommunications companies. According to the varied audience, lectures were adjusted to meet different expectations and interests.

Puebla

My stay was organized by José L. V. Gonzalez, DLT Coordinator for Latin America and Chair of the Puebla IEEE Section, and Luis G. G. Ojeda, Chair of the Puebla ComSoc Chapter, both professors at UDLA.

After the first lecture, Luis took me to visit downtown Puebla, which is a very nice town with old buildings in traditional style. The second day, before taking me to catch the bus to Mexico City, we visited one of the major tourist attractions of the area: the Pyramid of Cholula.

The Pyramid of Cholula is the largest monument ever constructed anywhere in the world, even one third larger in volume than the Great Pyramid of Giza in Egypt (which is taller, however). Today, the pyramid appears as a natural hill surmounted by a church, built by the Spanish (1594) on the site of a pre-Hispanic temple. Eight kilometers of tunnels, excavated by archeologists throughout the hill, allow visitors to see some of the inner walls.

After the visit to the pyramid we drank a refreshing cup of pulque, a traditional Aztec alcoholic drink made from fresh juice of Maguey, a sort of agave, fermented a few days and readily served. Since it cannot be conserved, it is mostly unknown outside the areas of production. It looks like a pale milky juice, with a light sour taste.

Mexico City

My stay was organized by Fernando Tavera, an executive of TELMEX and Chair of the ComSoc Chapter of Mexico. I consider it especially noteworthy that such a high-level manager of a private company expends considerable effort in

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Playing Games with 3G in Romania

By Nicolae Oaca, Romania

Orange and Vodafone: Winners in the Contest for the Last Two 3G Licenses!

On 13 October 2006 the winners of the beauty contest for the last two third-generation (3G) licenses in Romania were announced: RCS&RDS and Telemobil, revealing two surprises. RCS&RDS, a cable company without a mobile telephony network and without the support of any important player, won a 3G license, while Cosmote Romania, a cell company with a 2G network now covering over 97 percent of Romania's population, with 450 million to be invested until 2008 and belonging to OTE Group, lost a 3G license, raising question marks. The national regulatory body refused to award 3G license winners a 2G license or to regulate national roaming with 2G networks, making Deutsche Telekom withdraw from the contest. This is why I say that the big winners of the contest for the last two 3G licenses were Vodafone Romania and Orange Romania.

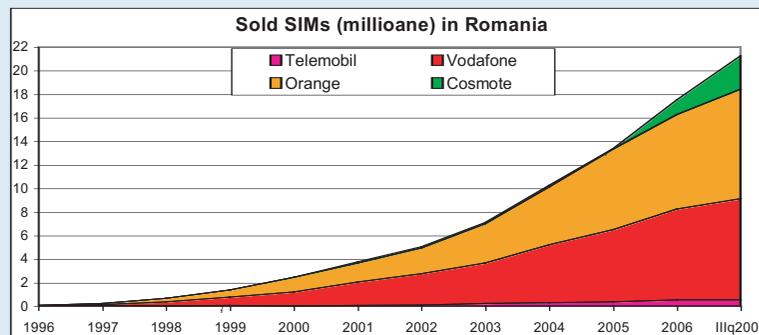
In January 2007 RCS&RDS and Telemobil paid their first license installments and got 3G licenses. In November 2006 RCS&RDS announced the commercial launch of 3G services in February 2007, which was only a field trial limited to two small areas in Bucharest and Otopeni. In May 2007 RCS&RDS again postponed the launch of 3G services until autumn, while on 9 October 2007 the launch of 3G services was postponed once more to mid-2008. One week later, Romanian newspapers announced that RCS&RDS provides 3G services only in Oradea and only to its company's clients (voice, CATV, Internet) for free. By the end of 2007, RCS&RDS provided its 3G services, DigiMobil, in eight major cities (Bucharest, Oradea, Timisoara, etc.) to its customers for fixed services (voice, CATV, Internet), announcing the commercial launch, too.

Fifteen months passed from the contest for the last two 3G licenses, and the winners of the last two 3G licenses remain ... Vodafone and Orange, a problem to think about for the authorities.

Telemobil Waits for Shareholders' Financing

In July 2007 Telemobil tried a US\$125 million bond issue on the U.S. market, failing because of market conditions. To market conditions one should add the business plan asking for financing. It is not so easy to convince investors to put money into a business based on code-division multiple access (CDMA) technology into a country member of the EU, the amount envisaged, US\$125 million, meaning sticking with CDMA. With very few trials to spread CDMA technology in Europe, Portugal, and the Czech Republic, CDMA remains a technological island in the EU (one million users in an over 630 million market), which has prove, in the last years to be the motherland of the GSM and UMTS technology family. This could be a reason for the high risk associated with the bond issue.

On 29 October 2007, two Romanian newspapers announced that Saudi Oger was to take over the 45.76 percent stake owned by Qualcomm in Inquam, while Omnia Fund is an important shareholder in Telemobil via Inquam, a majority shareholder in Telemobil. Saudi Oger and Omnia Fund are both owned by the family of the former Lebanon prime minister Rafiq Hariri. One also announced that Telemobil will launch 3G services in the second quarter of 2008, covering 19 cities first and 110 cities by the end of 2008. In 2008 Telemobil will invest US\$60 million to launch 3G services and expand its CDMA network, quoting Piermario diPietro, the compa-



ny's CEO. Should one understand that Oger Telecom permits to stick with the technological island of CDMA, or were negotiations in progress?

RCS&RDS Valuation Increased Three Times in 70 Days!

During last summer, the Romanian press announced RCS&RDS's intention to float on the London Stock Exchange (LSE), increasing 15 percent share capital via a global depositary receipt (GDR) issue. The initial public offering (IPO) was planned in late 2007, representing nominative preferential shares with dividend priority and without voting rights.

Preparing for the IPO on LSE, RCS&RDS was becoming much more aggressive in promoting its services to grab as soon as possible as many as possible clients in order to become more attractive: no connection fee for new users since June 2007, fixed telephony for free since July! The results, according to Romanian press, are not bad: 1.1 million CATV users (stagnation), 1 million fixed telephony users in early October 2007 (250,000-user growth since July, when service is provided for free), 500,000 Internet users in mid-September, 510,000 DTH users in summer. To these one should add its presence in other Central European countries (Hungary, the Czech Republic, Slovakia, Croatia, and Serbia).

There was other campaign, too. A leading economic Romanian newspaper, in its 30 July 2007 issue, valued RCS&RDS at 750 million, and between US\$1.5 and 2 billion a few days later on 2 August 2007! Another newspaper, in its October 2nd 2007 issue enters the game and valued RCS&RDS at US\$2.575 billion (1.816 billion), while the first newspaper, in October 9th 2007 issue, wrote on the first page, under the newspaper name, "RCS&RDS to be valued at 2.5 billion euro by listing at London Stock Exchange!"

It is difficult to value RCS&RDS so high as long as the only financial data provided in the IPO prospectus, "by December 31 2006, the company registered US\$297.1 million revenues and US\$109.0 million EBITD," do not lead to newspapers' optimistic appraisal.

RCS&RDS Postpones Again

The mystery of the spectacular increase in the company's valuation (three times increase from 750 million on 30 July to 2.5 billion on 9 October), as in a fairy tale, was unveiled by the news announced on 9 October 2007: RCS&RDS postpones to the middle of next year the launch of mobile services planned in late 2007. Four weeks later, on 7 November 2007, RCS&RDS postponed again its London Stock Exchange IPO, due to market conditions, declaring that it was trying to raise a half billion euro (or US\$) syndicated loan till the end of the month. On 13 November 2007, a company's official announced

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IST MOBILE AND WIRELESS SUMMIT/*continued*

that RCS&RDS' IPO is on track: RCS&RDS will be floated on LSE in the first half of 2008. Telemobil failed to raise US\$125 million due to market conditions, while RCS&RDS looked for four times more immediately after Standard & Poor's worsened Romania's rating perspective from stable to negative! In early December 2007, the company's main shareholder, Zoltan Teszari, pledged collateral for the loan arranged by ING and Citibank London (to be contracted from a syndicate of 14 banks) in total 79.22 percent of RCS&RDS' share capital. The highest loan for a Romanian cell company was US\$300 million for MobiFon/Vodafone in August 2002, when the industry was far from saturation: 5 million sold SIMs or 22 percent penetration.

A 3G License for Cosmote!

It is clear that the last two 3G licenses are not being used properly, making us think again about a duopoly in mobile communications, now in 3G. Before Cosmote launched in December 2005, Romania had a duopoly, GSM900 cell companies (Vodafone and Orange) having about 90 percent of the market. The owners of the last two 3G licenses seem to have problems financing network rollout and commercial launch of services, while ANRCTI, the Romanian regulatory body for telecommunications, quietly assists playing games with the last two 3G licenses, waiting for the first checkpoint of license clauses in mid-2008, when one could decide to cancel a license if deemed appropriate. It will be too late, and means losing

more than a year and a half, poor competition, and so on.

Something could be done to not end up playing games with 3G. As long as the last two 3G licenses owners are not hurrying to commercially launch 3G services, and as long as Cosmote Romania has financing (450 million planned till 2008) and proper conditions (2G networks covering over 97 percent of the population and support of a regional group, OTE) to build up a 3G business and compete with Vodafone and Orange, ANRCTI should award Cosmote Romania a 3G license. A 3G license to Cosmote Romania will trigger events, stimulate the owners of the last two 3G licenses to make a decision quickly, and increase competition and investments in mobile networks. That is in Romania's interest!

DISTINGUISHED LECTURER TOUR/*continued*

organizing lectures by international experts, at no charge for students of Mexican universities.

San Salvador

My stay was organized by Gustavo N. Chavez, Chair of the El Salvador IEEE Section, and Arne Guerra and Armando Torres Marmol, past-Chair and Chair of the El Salvador ComSoc Chapter.

I like El Salvador very much for its natural beauty and the sweetness of its people. I believe that El Salvador is not known enough: it is not visited by international tourists as much as it deserves.

Right after my arrival, I enjoyed a long walk downtown, surprised to notice only a couple of tourists besides me. On Saturday Gustavo, with his wife and nephew, accompanied me for a full day of sightseeing around El Salvador. We went first to the big volcanic lake of Coatepeque. Then we headed to El Tazumal, one of the main Maya archeological sites of El Salvador. Finally, we went to Suchitoto, a cozy village in traditional style, now under strong tourist development after having been abandoned during the civil war 20 years ago.

Panama

My stay was organized by Ivan Armuelles, Chair of the Panama ComSoc Chapter, supported by Haydi Galvez and Gustavo Diaz, elected Chair and Chair of the Panama IEEE Section. Before my lecture, Ivan gave a 10-minute presentation about the activities and mission of IEEE ComSoc. I think this is an excellent idea, since a major goal of DLTs is to promote ComSoc and foster membership.

I did not miss the opportunity to visit a bit of Panama also on my own, walking around and exploring areas outside the canonical tourist spots. The historical center, with its colonial style, is a picturesque area that no visitor should miss.

Cartagena

My stay was organized by Karen K. B. Bustillo, past Chair of the IEEE Student Branch of Cartagena Universidad Tecnológica de Bolívar, supported by José-David Cely, Chair of the Colombia IEEE Section. I am also grateful to Prof. Gonzalo L. Vergara and Alberto C. P. Palacios and Lia S. S. Lopez, Chair and Treasurer of the Student Branch.

El Centro Historico of Cartagena is on the UNESCO's World Heritage list. It exhibits an impressive fortification system, comprising walls and a big castle. All buildings are in Spanish colonial style, painted with different bright colors. In addition to its beauty, El Centro features many excellent restaurants and a vibrant nightlife. Colombia is a wonderful country for its nature and its people, and Cartagena is one of its gems.

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