



Dear Readers,

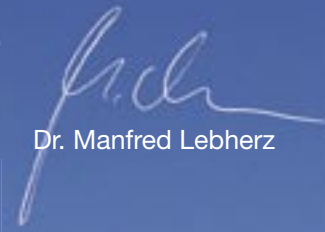
At the beginning of the New Year we would like to take the occasion to thank you for your confidence and the successful cooperation within the last year.

We wish all of you a happy, peaceful, healthy and successful year 2006 and are looking forward to a further productive cooperation.

Your LS telcom AG



Dr. Georg Schöne



Dr. Manfred Leberherz



Roland Götz

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ITU signs cooperation agreement with LS telcom for the use of network planning tools in developing countries

Within the framework of multi-stakeholder partnerships to support the WSIS Plan of Action and one of the results of WTDC-02, Programme 2, to „...recommend appropriate planning tools for telecommunication network planning“, ITU concluded a partnership agreement with LS telcom at Tunis during WSIS II.

LS telcom and ITU BDT have negotiated a cooperation agreement that will add LS telcom's **MULTIlink** software to the selected planning tools. **MULTIlink** will assist network planning experts and management operators, regulators and administrations of developing countries to use advanced network planning tools for demonstration, training and trials at

regional seminars, workshops and training courses of ITU.

ITU experts plan also to use **MULTIlink** for high-level radio access and core radio planning in next-generation networks (NGN) studies to help the governments and newly-formed regulators of developing nations to outline their future telecoms strategies.

Latest ITU policy for network planning is to enter into practical partnerships with specialist software vendors. ITU-BDT has surveyed the market for planning tools over the last 2-3 years, in order to enter into partnerships with companies having tools of commercial quality readily available. In this context, thorough documentation, maintenance, training and consulting services are just as important as a tool's ability to generate insightful results.

As a direct example of this partnership in action, Roland Götz recently presented a case study on the Planning of Broadband Wireless Access Networks to an ITU Regional Seminar on Fixed Mobile Convergence and New Network Architectures for the Arab Region, held in Tunis on 21-24 November 2005.



Hamadoun I. Touré, Director of Telecommunication Development Bureau (BDT), ITU and Roland Götz, member of the Board of LS telcom, sign the cooperation agreement

WiMAX - Mobility changes everything

The growing demand for broadband services on a global scale is clear and uncontested. Businesses, public institutions and private users regard it as an enabling technology and it has become a given requirement for delivering communication services in the Information Age. In last mile markets where traditional cable or copper infrastructures are either saturated, outdated or simply out of reach, Broadband Wireless Access (BWA) technology fills the void admirably, providing highly efficient and cost effective access services for millions of subscribers who would otherwise be left out of the loop. The introduction of the Wireless MAN standards (802.16 and HiperMAN) and the guidelines set forth by the WiMAX Forum to ensure its success, will do much to encourage the growth of broadband wireless markets everywhere, benefiting everyone in the delivery chain from equipment vendors to carriers to end users.

Although 802.16-2004 is an important step in the BWA history, 802.16e is what

has really grabbed the headlines. The technology has the potential to do to the broadband industry what the mobile phone did to PSTN. With an 802.16e interface card in your laptop, you could get high-speed internet in your house, walk out of your house and have the same access, board a bus and still have the same access - completely seamless, same device, same application, same network. Such services fit very well into the network strategy of operators of any type.

As one of the wireless industry's most experienced solutions provider, LS telcom has a long and impressive record of commitment to developing, planning, optimizing and consulting of wireless networks. LS telcom's current activities on WiMAX planning and optimization solutions is an indication of the serious growth potential of wireless networking solutions in broadband markets that are underserved by wireline infrastructures.

Spectrum Monitoring Upgrade for the Czech Republic

CTO, the Telecommunications Regulatory Authority of Czech Republic, has chosen LS telcom to supply the Spectrum Management System already several years ago. Recently, the system has been extended for full integration of the existing LS telcom Spectrum Management System with the new nationwide ARGUS radio monitoring system of Rohde and Schwarz. This extremely versatile project includes several monitoring centres and a substantial number of remote stations.

For this purpose LS telcom delivered additional **MONITORplus** software with propagation analysis upgrades. It enables the user to request monitoring actions and results remotely from places all over the country and analyse them afterwards. Owing to the integrated compare-functions, detailed investigation of measurements including the tracing of unlicensed emissions may be carried out, providing to the frequency manager a powerful inspection and analysis tool.

Spectrum Management System for the German Military integrating into NATO's ARCADE database

The German Bundeswehr has recently selected LS telcom as supplier of a military Spectrum Management System after detailed market evaluation. In future **SPECTRAemc** will be used for compatibility and frequency assignment analysis in all radio frequency ranges whereas **SPECTRAplan** is applied as the basic module for frequency planning.

The Allied Radiofrequency Computer Aided Data Exchange (ARCADE) system based on ORACLE database was introduced by the NATO to create

and maintain frequency management messages as essential basis for data exchange and administration.

Within only few months, LS telcom was able to fully integrate the ordered Spectrum Management System with the NATO/ARCADE database system. By this integration, it is now possible to access the ARCADE frequency assignment data by the same powerful query functions as already well known from the civilian version of the SPECTRA system.

Extension contract for Indonesian Spectrum Management System

POSTEL, the Indonesian regulator located in Jakarta, recently extended its existing SMS system. This happened one year after the successful implementation of the first phase in 2004, which also had been supplied by LS telcom based on the **SPECTRAplus** system.

The successfully supplied extension project includes additional licenses in order to roll-out the system country wide and for all radio services. Additionally the land-mobile technical analysis software (**CHIRplus LM**) is now also included in the system, providing highly sophisticated technical analysis and comfortable coordination support for trunking, GSM and other mobile services.

As special highlight also modules of the e-government solution **SPECTRAweb** were supplied.

The system extension was realised within only a few months including form adaptations, data conversion and process integration.

With going operational of this extremely modern system, POSTEL has done a significant move forward in order to optimise its Spectrum Management. With offices distributed over more than 4000 km and lots of islands, an intranet based SMS solution will bring the organisation much closer together.

e-Government solutions: WEB-enabled Spectrum Management System for UAE

Telecommunications Regulatory Authority (TRA) of the United Arab Emirates, being a real technological front runner in the whole Gulf region, has recently installed the web-enabled Spectrum Management tool-suite **SPECTRAplus** of LS telcom.

Special attention has been given to the e-Licensing module **SPECTRAweb**. It has been further developed and optimised for the specific needs of TRA, both in terms of layout localisation and user friendliness of the web functions for the public applicants. The layout has been optimised in order to seamlessly fit the **SPECTRAweb** solution into the existing TRA web pages. Besides others online processing of new license applications, license modifications, amendments and cancellations can be applied through the new web solution.

Owing to the flexible architecture of **SPECTRAweb**, other administrative and technical procedures and functionalities can easily be supported in future.

By using this technology, TRA will be able to reduce its internal costs significantly as most of the standard license cases may be kept completely paperless. Entry of requests and data material will be moved towards the license applicants, additionally reducing costs, efforts and risk for mistakes. For the license applicants on the other hand a faster treatment of requests will be a substantial benefit.

Together with TRA and several other customers LS telcom is currently pushing forward modern e-government solutions, which soon will form the foundation for state-of-the-art Spectrum Management systems.

Training Center News

Training Calendar 2006/2007

The new LS telcom Training Calendar for 2006/2007 is now released, offering various training courses and seminars in the fields of telecommunications and spectrum management.



Download your copy from our homepage www.LStelcom.com or contact us: training@LStelcom.com.

Next Training:

Introduction to LS telcom Spectrum Management Tool Family

Feb 13 - 17, 2006 - 5 days

Besides the above-mentioned administrative solutions also engineering and GIS components are under development or ready for use like the LS WEB GIS server. This map engine is based on the LS Pluto GIS technology allowing visualisation of maps, data, objects and calculation results on Intranet and Internet SMS portals.



Tunesian Regulator ANF decides for SPECTRAplus

ANF, the Tunisian regulator located in Tunis, has chosen LS telcom as the premier supplier for its spectrum management system SYSGAS (**S**ystème de **g**estion **a**utomatisée du **s**pectre des fréquences). The implementation of the system was carried out in the second half of 2005.

The system comprises the **SPECTRAplus** administration and billing software, **SPECTRAplan** for management of frequency plans, **SPECTRAemc** for technical analysis and **MONITORplus** as interface to ANF's existing monitoring

system. In the implementation phase various adaptations according to ANF's needs have been carried out. Amongst others a very complex fee schema has been implemented. The entire project, including documentation and **SPECTRAplus** software was localized into French language. This project again shows the strength of the **SPECTRAplus** licensing package with its virtually unlimited localisation possibilities which nowadays is available in English, French, Spanish, German, Chinese, Arabic, Farsi, Cyrillic and other languages.

CRC Propagation Model available for Broadcast planning and EMC analysis software

LS telcom AG has entered into a license agreement with the Communications Research Centre Canada (CRC) which entitles LS telcom to integrate and maintain the most recent version of the „CRC-Predict“ propagation model into their Broadcast planning software as well as their EMC analysis tools being part of comprehensive spectrum management systems for Regulatory Authorities. „CRC-Predict“ was developed by the CRC and has achieved worldwide recognition as a propagation prediction method considering various propagation effects (e.g. diffraction, earth curvature, land-use etc.).

By adding the CRC-Predict to the vast propagation model library within our radio planning and spectrum management systems, LS telcom complements the technical features by another „best-of-class“ calculation method to the benefit of our customers.

CRC-Predict will be made available as an additional upgrade feature for the software packages **CHIRplus_BC** and **SPECTRAemc**.



Photo: KATHREIN-Werke, Rosenheim

Spot on

New frame contract on broadcast planning with SRG

Swiss broadcast operator „SRG SSR idée Suisse“ awarded a new frame contract for the provision of terrestrial broadcast planning services to LS telcom's consulting & engineering department. The new contract reflects the long-standing, excellent cooperation between the SRG and LS telcom.



Photo: KATHREIN-Werke, Rosenheim

LS telcom contracted to provide National RRC06 database for Germany

LS telcom will provide a customer tailored software database solution for the management of allocations and allotments of DVB-T in Germany. In the light of the RRC-06 conference the German BnetzA wanted to have a versatile tool in order to easily manage and administer this data. LS telcom is implementing this solution based on its new dot.NET based SPEED platform, allowing ultra-fast realisation of even complex tasks.

E-plus selects LS telcom for OMC Linking Project

After the successful completion of a 3-months pilot phase, the German mobile network operator E-plus selected LS telcom to integrate network elements to the Operation and Maintenance Center (OMC) of their mobile network.

Impressum

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LS telcom

11th LS Summit 2006

LS summit 2006
11th Annual Seminar Day

On 5th July 2006 the telecommunication conference LS Summit will be taking place for the 11th time.

Again we will ensure that an interesting seminar program is to be expected.

Two days prior to this year's LS Summit, the LS telcom Usergroup will hold its annual conference in Lichtenau on 3rd/4th July.

