

**Special Edition**

Special Edition Broadcast

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Latest

## LS telcom completes spectrum consulting for Caribbean Telecommunications Union (CTU) and Organisation of Eastern Caribbean States (OECS)

*LS telcom has completed the spectrum consulting services for the Harmonized Caribbean Spectrum Planning and Management Project commissioned by the Caribbean Telecommunications Union (CTU) and the Organisation of Eastern Caribbean States (OECS).*

The Inter-American Development Bank (IDB) financed both projects, which include 14 Caribbean countries altogether. LS telcom provided consulting services on harmonized technical and policy approaches for the Caribbean digital broadcast switchover, and developed recommendations for harmonized white space management in the

region. Part of the study was the assessment and analysis of the situation in each participating CTU and OECS member country. A stakeholder workshop and capacity building sessions were held in July during which the results and recommendations were presented and subject matter knowledge was transferred.

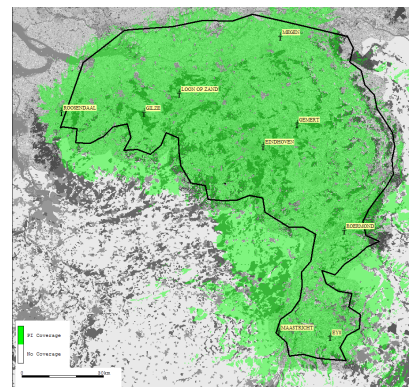
For further information please go to: <https://www.youtube.com/watch?v=zAkWzseQtPk> ←

## LS telcom supports DAB+ licensing process in the Netherlands

*Stichting ROOS, the umbrella organisation of regional public radio broadcasters in the Netherlands, asked LS telcom to support them in the evaluation of bids for the procurement of DAB+ networks in the Netherlands.*

The consulting services carried out by LS telcom spanned from coverage verification of each bidding solution for each allotment in the Netherlands, to compliance check with licence conditions, ROOS requirements, and international coordination. After LS telcom's extensive evaluation, ROOS awarded a winning bid for every single allotment. LS telcom experts first simulated the coverage proposed by each bidder and compared this to the coverage percent-

age requested. This included mobile DAB coverage, overlap with existing FM coverage as well as indoor coverage. The LS experts went on to evaluate each bidder's network design in terms of interference, GE06 and bilateral agreements' conformity. Finally, they identified the most cost-effective solution fulfilling the selection criteria. For the winning solutions, they also calculated the spill over percentage per allotment. ←



Picture: Portable Indoor coverage (95% location probability) for allotment 7A

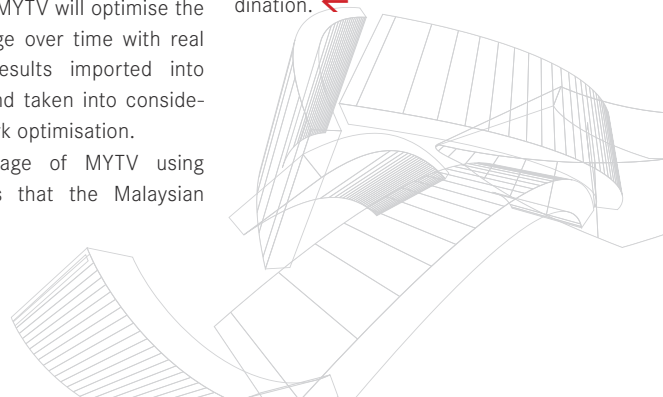
## MYTV purchases CHIRplus\_BC for Malaysian DTT network rollout

*MYTV Broadcasting Sdn Bhd (MYTV), the company tasked by the Government to operate the infrastructure and network facilities for Digital Terrestrial Television (DTT) in Malaysia, purchased CHIRplus\_BC, LS telcom's broadcast network planning and optimisation software, to support them in the digital terrestrial television (DTT) planning and network rollout.*

MYTV engineers perform network planning tasks and simulate changes in the implementation scenario with CHIRplus\_BC. The software helps the MYTV network planning engineers to compile necessary documents and parameters for testing and commissioning in no time at all, ensuring that contractors deliver exactly what was specified in the procurement tender. MYTV will be able to reply to complaints from users much faster by

checking immediately whether there is fixed rooftop only or portable indoor coverage, too, taking immediate and appropriate action depending on the type of coverage. In the long run, MYTV will optimise the network coverage over time with real measurement results imported into CHIRplus\_BC and taken into consideration for network optimisation. Another advantage of MYTV using CHIRplus\_BC is that the Malaysian

regulator MCMC, the Malaysian public broadcaster RTM, and regulators in neighbouring countries are also using the software, hence facilitating faster data exchange, cooperation and coordination. ←



## Turnkey medium wave broadcast site built for Magic 828 AM

*After winning the medium-wave radio licence for Cape Town last year, Magic 828 AM, contracted LS of South Africa (Pty) Ltd. to establish its complete transmission site and is considered to be the first private and commercially owned medium wave transmission facility in South Africa.*

The project included the supply and installation of a quarter-wavelength (90.3 m) mast and its associated antenna tuning unit, along with the complete design of the transmission system comprised out of a Nautel 25 kW solid-state medium wave transmitter, standby generator, telemetry system, air conditioning, and all other equipment required for the normal operation of the site. The complete system has been housed in two 6 metre converted shipping containers, equipped with the necessary internal infrastructure.

During a recent industry Open Day, LS of SA invited the Magic 828 Management Team and industry associates to take a closer look at the completed

and fully functional containerised infrastructure. The new containerised system allows for the complete installation and pre-commissioning of the transmitter and its associated systems off-site, an important prerequisite for the successful final installation of the system in a remote location.

On site construction and installation work has now been completed and preliminary testing as conducted has revealed very positive results. The station has elected its 'on-air' date as October 1, 2015.

*For further information on the medium wave broadcast site project, you can also watch the video on:* <https://youtu.be/-Ox5Htctgr8> ←



Picture: The completed facility as installed for Magic 828, in the Western Cape

## Turnkey delivery of broadcast frequency planning and coordination system to Kuwait's Ministry of the Interior

*LS telcom delivered the fully-fledged analogue and digital broadcast planning and coordination system CHIRplus\_BC to Kuwait's Ministry of the Interior (MoI), including extensive broadcast and tool training.*

Ziad Azhari, ETI president, quoted MOI Engineers who attended the training as saying: "We were extremely pleased with the short implementation time of the software system CHIRplus\_BC and with the comprehensive training we received from LS telcom."

The training included broadcast theory on digital terrestrial television, network planning and optimisation as well as international coordination in addition to CHIRplus\_BC tool training. LS telcom broadcast experts trained seven engineers from the MoI Kuwait. ←



## Offer better service to your television customers with MYBestServer radio coverage display

*Build trust with your television viewers and win new customers by letting them check for themselves the coverage and reception quality of your service at their location.*

MYBestServer is a web-based application, which can be integrated on any company's website. It displays service coverage areas and the best server from a specified wireless service at a user's location on GoogleMaps. To check your location, you can enter an address or GPS coordinates.

Specific technical information on base stations, transmitters and on signal path and profile is displayed to professionals, such as network operators, broadcasters, antenna installers and

regulators. This makes the tool a valuable companion to them in many circumstances; such as evaluation and revision of digital migration plans and antenna installation.

The application supports broadcast and point-to-multipoint wireless technologies and its functionality may be adapted to accommodate specific user requirements. It can be acquired as the standalone solution MYBestServer or as an add-on to CHIRplus\_BC. ←

## LS telcom assists Cense Media, Malaysia, in winning FM licence and roll out for new programmes in Malaysia



*LS telcom provided consulting and engineering services to Cense Media Malaysia to win a new FM licence in East Malaysia. This includes assisting Cense Media to also deploy the FM network.*

The study covered site surveys, real antenna design and optimisation, ERP (effective radiated power) optimisation as well as coverage calculations for two

sites in Eastern Malaysia. LS telcom experts also assisted Cense Media in the submission of the apparatus assignment application form to the Malaysian regulator MCMC. Coverage results were delivered on various map formats.

Cense Media have now successfully obtained the licence and will be on air within the next six months. ←



## Radio quietness for largest radio telescope

*LS of South Africa (Pty) Ltd. carries out DTT and GSM coverage simulations and airborne antenna radiation measurements.*

The Square Kilometre Array, SKA, is an international effort to build the world's largest radio telescope, with eventually over a square kilometre (one million square metres) of collecting area. To host the telescope, South Africa's semi-desert Karoo region was chosen together with Western Australia's Murchison Shire, for its radio quietness, amongst other scientific and

economic reasons. The Karoo regions of South Africa provide the perfect radio quiet backdrop for the high and medium frequency arrays that will form a critical part of the SKA's ground-breaking telescope spanning continents.

Although South Africa's Karoo region was chosen for its radio quietness, SKA still has to ensure that DTT and GSM transmission sites, situated closest to the SKA surroundings, will meet the defined interference levels of their radio telescope.

SKA commissioned LS of South Africa (Pty) Ltd. to determine the radiation levels of such DTT and GSM antenna sites. Previously, LS of SA performed coverage simulations and signal strength predictions of existing facilities in the direction of the core area of the radio telescope using the software SPECTRAemc. The results were communicated to SKA and consequently the DTT and GSM site operators which, in a spirit of excellent industry cooperation, reviewed their antenna designs and commenced with the implementa-

tion of changes as required.

On SKA's commission LS of South Africa (Pty) Ltd. then undertook antenna pattern measurements via remotely piloted aircraft (RPA). The RPA carries measurement and high-resolution position and orientation sensors, an autopilot, a high-powered processor and storage unit and a telemetry system. The measurement and navigational data is stored on board and also streamed to the ground control station in real time. The technology determines the horizontal and vertical antenna radiation pattern as well as radiated power. Airborne antenna measurements were done at SKA nominated installations where the performance of the transmission systems was quantified to allow SKA to determine compliancy with their stated radio quiet requirements.

SKA chose LS telcom for their extensive experience in radio frequency studies and measurements.

The final compliancy assessment of these installations will be done by SKA. ←



Picture ©: SKA Organisation

## Major European broadcast operators confirm high-value of airborne measurements via remotely piloted aircraft system

*Numerous well-established broadcast network operators such as Norking Norway and Norking Belgium, SRG SSR Switzerland, and Emitel Poland, contracted Colibrex, a 100% subsidiary of LS telcom, to conduct various antenna radiation pattern measurements via remotely piloted aircraft (RPA).*

The remotely piloted aircraft (RPA) technology is adapted to carry a measurement sensor, high-resolution position and orientation sensors, an autopilot, a high-powered processor and storage unit and a telemetry system.

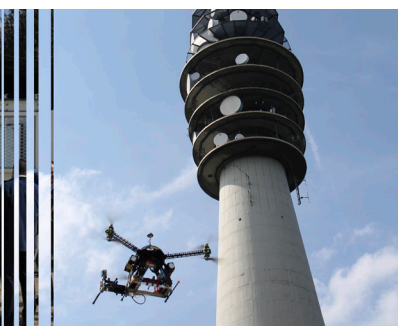
The measurements were extremely useful to the operators in either confirming their expectations of antenna settings or in detecting unwanted and sometimes even very critical radiation characteristics. When modifications

to the antenna installations were necessary, measurements were reiterated after each installation change until the real antenna radiation characteristics corresponded to the planned one. Colibrex conducted the measurements for various technologies, such as DVB-T/T2, DAB and FM.

While the concept of the measurements is the same for all projects, there is a variety of challenges, due to different environmental and operational conditions, that have to be coped with. The height of the installation, the size of the antennas and the high power transmission of the Katowice tower of Emitel in Poland and the Sint-Pieters-Leeuw tower of Norkring Belgium, for instance, necessitated flights around the antenna at a large radius.

In Norway, on the other hand, the operating team had to face challenging climatic conditions with very cold temperature and snow-capped land. In mountainous Switzerland, in turn, the access and topography of the sites were important factors, which had to be considered for efficient project planning.

All broadcast operators appreciated the high value-added of the airborne measurements, compared to other measurement methods. ←



Visit us at  
our Booth...

**SET Expo, São Paulo/  
Brazil**  
25<sup>th</sup> - 27<sup>th</sup> August 2015

**IBC, Amsterdam/  
Netherlands**  
11<sup>th</sup> - 15<sup>th</sup> September 2015

**ABU Digital Broad-  
casting Symposium,  
Kuala Lumpur/Malaysia**  
29<sup>th</sup> Feb - 3<sup>rd</sup> March 2016

**NAB Show,  
Las Vegas/USA**  
16<sup>th</sup> - 21<sup>st</sup> April 2016

**Broadcast Asia  
Singapore**  
31<sup>st</sup> May - 3<sup>th</sup> June 2016

## Astro Radio, Malaysia, engages LS telcom again for site re-location

Malaysia's leading FM network provider Astro Radio has engaged LS telcom to support them in relocating two transmitter sites in East Malaysia. The work includes the identification of suitable frequencies for the new sites. LS telcom experts performed a frequency scan at the new locations as well as coordination analysis at frequencies with the lowest usable field strength. They proceeded with interference and coverage analysis for the most suitable frequencies. Astro Radio chose LS telcom experts, as they had already carried out several transmitter relocation studies for the FM network operator with great success. ←

## Community Radio Frequency Plan for the Seychelles

The Department of Information & Communication Technology (DICT) of the Seychelles commissioned LS of South Africa (Pty) Ltd to review the FM frequency plan and to create a community radio frequency plan for community radio broadcasting services on the Seychelles. The frequency band under investigation included the 87.5 - 108 MHz band. The LS telcom experts used the software CHIRplus\_BC to perform field strength and coverage analysis. Site location changes and their impact on the existing frequency plan were also part of the project. ←

## Save the date for the LS Summit and USERgroup 2016!

The next LS Summit and LS telcom USERgroup will take place from 11<sup>th</sup> - 14<sup>th</sup> of July 2016. The Broadcast & CHIRplus\_BC USERgroup is the largest of all LS telcom software user groups. Save the date and contribute to shaping CHIRplus\_BC's future functionality!

## Training needed? New skills required?

### LS telcom Training Academy, Germany

Check out our latest broadcast training courses: tool training, broadcast technologies and theory, latest regulations...

- Broadcast Planning Week: October 19-23, 2015
- Broadcast Tool Week: November 9-13, 2015
- Digital Terrestrial TV Week: November 23-27, 2015

...and many more!

Over 3000 participants have attended the LS Training Academy since its foundation. Book your course now, email [Training@LStelcom.com](mailto:Training@LStelcom.com) or call +49 7227 9535 600. ←



LS telcom AG  
Amtsgericht Mannheim,  
HRB 211164

Board: Dr. Manfred Leberer,  
Dr. Georg Schöne,  
Dipl.-Ing. Roland Götz  
USt-IdNr.: DE211251018

- SPOT ON -

- These customers continue to trust in us and ordered more CHIRplus\_BC licences: Broadcast Partners (Netherlands), Emitel (Poland), the engineering company Babcock (UK), MYTV (Malaysia)
- After ETV, the Serbian DVB-T2 broadcast network operator, the Montenegro Broadcasting Centre (RDC) acquired CHIRplus\_BC and CHIRplus\_FX, including mapping data and training.



- These customers are well trained:
  - Radio Television Malaysia (RTM)
  - Sharjah Media Corporation, UAE



For further information, please visit our  
website [www.LStelcom.com](http://www.LStelcom.com) or contact us:

**LS telcom AG**  
Im Gewerbegebiet 31-33  
77839 Lichtenau  
Germany

+49 7227 9535 600  
+49 7227 9535 605

[Info@LStelcom.com](mailto:Info@LStelcom.com)  
[www.LStelcom.com](http://www.LStelcom.com)



## Subsidiaries

**LS telcom Limited**  
1145 Hunt Club Road, Suite 100  
Ottawa, ON, K1V 0Y3  
Canada

**LS telcom UK Limited**  
Riverside House - Mezzanine Floor,  
2a Southwark Bridge Road  
London SE1 9HA, United Kingdom

**LS telcom Inc.**  
5021 Howerton Way, Suite E  
Bowie, Maryland 20715  
USA

**LS of South Africa Radio  
Communications (Pty) Ltd.**  
131 Gelding Ave, Ruimsig,  
Roodepoort, 1724 Johannesburg  
South Africa

**LS telcom SAS**  
4 av Morane-Saulnier  
78140 Vélizy  
France

**Colibrex GmbH**  
Victoria Boulevard B109  
77836 Rheinmünster  
Germany

**RadioSoft Inc.**  
194 Professional Park  
Clarksville, Georgia 30523  
USA

**LST Middle East FZ-LLC**  
Office 101, Building EIB 01  
Dubai Internet City, Dubai  
United Arab Emirates