



LINE OF SIGHT — SPRING 2004

THE QUARTERLY NEWSLETTER ABOUT SATELLITE NEWSGATHERING

INSIDE THIS ISSUE:

<i>Opinion</i>	2
<i>Advent EXOS</i>	2
<i>SNG Training</i>	3
<i>CML Moves</i>	3
<i>SISLink uPod</i>	3
<i>MPEG-4</i>	4
<i>Sat-Comm</i>	5
<i>Useful Resources</i>	6
<i>New Book</i>	6

BeaconSeek offers:

- Consultancy
- Project Management
- Systems Integration
- Location Event Planning
- Training
- Market Studies
- Regulatory Affairs Advice

LAUNCH OF LINE OF SIGHT

Jonathan Higgins, Managing Director of BeaconSeek, talks about the launch of this new newsletter about SNG ...

Welcome to the first issue of *Line Of Sight*, the new quarterly newsletter about the world of satellite newsgathering — and what's more, it's free!

The title of course refers to the basic condition of achieving a microwave transmission (though with COFDM that is not the case anymore).

You may notice that it's flagged as Spring 2004 — unlike other publications, we're going to publish according to the date on the top, rather than before it. Of course, with NAB just coming up, we have several new products featured.

Our aim is to bring you an insight into the stories behind some of the press releases, and also offer in each issue some useful tips and links to resources that are useful.



I have to confess that I don't want to limit our coverage to just satellite matters — terrestrial microwave newsgathering still has its place in the newsgathering armoury in many countries, so we want to cover that as well.

If you want a new product or service featured, or just want to tell us about some news, then please email all the details to us at los@beaconseek.com.

To become one of the most accurate sources of information on SNG, we are really looking forward to hearing your views, comments and suggestions. We'll try to accommodate your wishes. What's more, in each issue we will feature the most interesting emails we've received.

Please feel free to print as many copies off for colleagues to read, or email it on, and I look forward to hearing what you and your colleagues think about *Line Of Sight*. ■

SATELLITE OPERATORS TEAM UP TO DEFEAT INTERFERENCE

Ever heard of SUIRG — the **Satellite Users Interference Reduction Group**?

It's a global industry organization consisting mainly of satellite operators (including **Intelsat, PanAmSat, Inmarsat, and New Skies Satellites**) aimed at combating the increasing and costly problem of satellite radio frequency interference (RFI).

Comprised of representatives from both private industry and the public sector, SUIRG shares and disseminates RFI information and remedies, works with industry to define equipment standards and proficiency training, and actively pursues programs to reduce or mitigate satellite interference.

High on their list of targets are SNG operators who accidentally illuminate the wrong satellite or transponder, causing interference to other users. We all know it happens, and

we all try to avoid it, but we know that very few of us freely admit to it. Increasingly, satellite operators want to eliminate malicious interference as it is dramatically affecting their customers' transmissions.

SUIRG acknowledge that everyone makes mistakes from time to time, so what they're trying to do is eliminate operator error resulting in the 90% of disturbed transmissions to focus on the 10% of malicious interference.

SUIRG, with the backing of **GVF** (Global VSAT Forum), **CASBAA** (Cable & Satellite Broadcasting Association of Asia) and **ISOG** (Inter-Union Satellite Operations Group), are trying to introduce new training initiatives aimed at SNG and other VSAT applications. ■

BETTER NEWS TECHNOLOGY = BETTER INFORMED?

OPINION

The conflict in Iraq has seen an explosion in the use of compact SNG units for really bringing the battle directly into the living room. Both during the invasion and since we've been swamped by pictures and reports of live action from the centre of skirmishes between the Allied forces and the local population.

But technology aside, many are beginning to question the editorial validity of having had the ability of 'embedding' journalists. What seemed at first as a God-given opportunity for feeding the ever-hungry mouths of rolling 24 hour news channels, with gratuitous 'lives' left, right and centre, often resulted in little more than ego-pumping of the reporters and channels concerned — all in the cause of 'informing the public'.

A number of news organizations are now realising that, in fact, in subtle and not so subtle ways, their reports were being 'directed' by the military 'politicians', who were capitalizing

on the use of the latest technology from the midst of battle to get their 'message' across.

Now, many of you involved in operations in the field may say that so long as the bars and tone are OK, who gives a ****? But perhaps we all need to be aware that having and using the latest kit does not necessarily mean that the story is told with any more clarity than on radio 60 years ago, with primitive scratchy disk recordings from World War 2 battles.

Whether you're a tech or a reporter, you are equally 'journalists' in the broadest sense of the term. Everyone involved should certainly be conscious of the impact that doing their job has on the viewing and listening audience — and how much true informing is really going on. ■

*"...so long as the bars and tone are OK, who gives a ****?"*

ADVENT LAUNCHING NEW FLYAWAY SYSTEM AT NAB2004

Advent will launch their new EXOS compact flyaway system at NAB.

It's a complete modular satellite uplink system, offering data transmission, high-speed Internet, two-way comms with the studio, and MPEG-2 video/audio transport streams.

Key to reducing size and weight is a break from the traditional 19-inch rack mounted equipment in flight cases - instead EXOS has small rugged weatherproof modular units, built to withstand the harsh transportation and operating environments of SNG uplinks.

There are four modules in the range, each weighing less than 3 kg. The Data-bridge module with broadband IP modem offers 'always-on' connectivity for file transfer, telephone, two way talk-back and video-over-IP option. The Video Exciter module is an MPEG-2 DVB-S standard 4:2:0/4:2:2 encoder/modulator/upconverter, featuring low delay encoding and EBU-standard BISS encryption. The Satfinder



ADVENT EXOS

module with integral GPS receiver, compass, and satellite position calculation software offers an easy-to-use tool for an unskilled operator to align the antenna system.

Finally, there are a range of RF PA units (in C, Ku or DBS band) from 5 Watts SSPAs to 400W TWTs, all controlled under remote control from the EXOS user interface. All modules (with the exception of the most high powered PA units) are DC powered giving flexibility to power from a vehicle battery or using the EXOS PSU module

from any mains supply.

Advent has also developed new compact flyaways with the **Mantis 120** (1.2m) antenna and **Mantis 100** (sub-1m) antenna, weighing only 25kg, also to be launched at NAB.

Both the Mantis and EXOS systems are designed to fully comply with the latest airline maximum weight limits for checked-in baggage. ■

"Key to reducing size and weight is the break from traditional 19-inch rack-mounted equipment in flight cases."

SNG TRAINING

There is a dearth of formal SNG training courses around (although **BeaconSeek** run them on occasions), and **Digiworkz** in Singapore has a number of **SNG Operations Refresher** courses running - 30 & 31 March, 1 & 2 April, 4 & 5 May, 6 & 7 May 2004.

The **DigiWorkz Regional Broadcast Training Centre** has been established by **Ngee Ann Polytechnic** and **Asia Pacific Broadcasting** magazine to provide broadcasters and production houses in the Asia Pacific region with hands on skills taught by expert trainers.

The SNG equipment for the **Digiworkz** course is being provided by **Vislink** (UK).

Any formal training initiative is to be encouraged in our industry, which suffers much from training too often being limited to newcomers having to learn by peering over an-

other experienced person's shoulder. While on-the-job training is always necessary, a period of theoretical training in the classroom is always useful to the novice.

While we're on the subject of SNG training, courses are run regularly by the **BBC** (UK) and once a year in the fall by **NAB** as well.

Here at **BeaconSeek** we run courses for companies on request — but because of the patchiness in demand, we don't run public courses. Nevertheless, we applaud any organization that provides training in this area.

We wish every success to **Digiworkz** with their courses, and if you know of any other formal courses being run, please let us know so that we can promote them. ■

“Any formal training initiative is to be encouraged in our industry”

END OF AN ERA — CML LUTON CLOSURES AND JOINS ADVENT

For those of us for whom **Continental Microwave** (along with **Advent**) is synonymous with SNG, we regret to report that the CML factory at Crawley Green Road in Luton, Bedfordshire (UK) closes at the end of March 2004.

All production is being centralized at **Advent Communications'** premises in Chesham — some 30 km away in Buckinghamshire.

For a while now the CML has, as with **Advent**, been branded under the group name **Vislink**. **Continental Microwave** was bought by the **Vislink Group** (formerly **Silvermines**) in the mid-1990s for £11m, after having been

owned by several holding companies. In 2000, **Vislink** also bought CML's arch-rivals, **Advent Communications**, for £16m. **Microwave Radio Communications (MRC)** in the US, and **Multi-point Communications (UK)** were also acquired by **Vislink** during this period.

The final consummation of **Advent** and **CML** has been a long time coming — many of us wondered how the two entities could co-exist for so long.

But if any of you remember dealing with both companies when they were bitter rivals, it all still seems a little strange ... ■

“... if you remember dealing with both companies when they were bitter rivals, it all still seems a little strange ...”

SISLINK LAUNCHES UPOD AT NAB

SISLink, one of Europe's leading independent provider of uplink services, are moving into manufacturing. Over the years they have manufactured a number of vehicles for their own fleet.

But at **NAB** they will be launching **uPod**, a self-contained automatic uplink designed to provide broadcasters with an alternative to a full SNG/OB vehicle. **uPod** has been designed with flexibility and ease of operation in mind, and is so adaptable, according to **SISLink**, that it can be bolted onto almost any vehicle.

It automatically finds and tracks a fixed or inclined satellite capacity, and is fully redundant with two pods each containing a com-

plete uplink chain.

uPod is fully equipped with PAL/NTSC analogue or SDI inputs, spectrum analyser displays and dual path capabilities.

uPod is also said to be deal for use with most vehicles — inside all that is required is the operator with a Tablet PC. It can also be controlled remotely via a fibre optic cable. For 'flyaway mode', **uPod** can be easily broken down into manageable units.

Unfortunately at time of writing, **SISLink** wouldn't let us publish any pictures — so we'll show you what it looks like in the next issue. ■

REAL-TIME MPEG-4

MPEG-4 for SNG has finally arrived. As demonstrated by **NDTV (New Delhi TV)** it's now possible for MPEG-4 to be used in real-time. NDTV have a fleet of 15 SNG trucks that are equipped with **Envivio 4Caster** MPEG-4 encoders.

Using about 1.1 MHz of bandwidth, NDTV are doing daily live transmissions at 1 Mbps, achieving approximately the same level of quality as MPEG-2 at over 2.5 Mbps.

The NDTV trucks use 90cm **SWE-DISH** DA-90 motorized antennas, along with **CPI** rack-mount (indoor) 200W Ku band TWTA HPAs. The modulators are **Paradise** P300 series.

What's very interesting about these trucks is that NDTV built all 15 vehicles, using a local Tata chassis cab model as the base, and doing the integration work themselves.

Added to that NDTV developed their own PC scheduling system in-house for coordinating feeds from these 15 trucks as well as 12 other bureaux across India using the same **Envivio 4Caster** encoders.

NDTV's use of MPEG-4 AVC is no trick — we've seen the video, and it really is stunning using MPEG-4 AVC (the newer version of MPEG-4). The 4Caster unit is only 1RU high, although it is quite deep.

Although MPEG-2 is going to be around for quite a while, it's inevitable that more and more broadcasters are going to experiment to capitalize on the bandwidth savings that can be achieved with MPEG-4 AVC.

Meanwhile **Tandberg** are offering Windows Media 9 encoding in their E5920 series, but no doubt if MPEG-4 AVC becomes the compression of choice amongst broadcasters, they'll produce a competitive offering as well.

NAB, Broadcast Asia, and IBC will be the foremost places to see the new compression schemes bat-



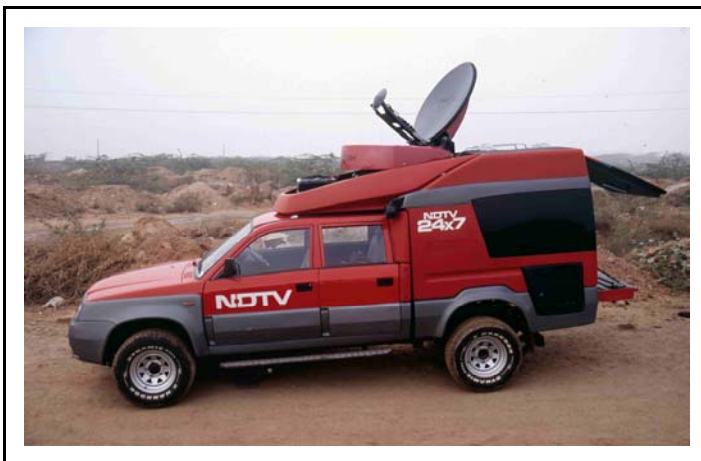
SWE-DISH DA-90K

ting it out.

We've tried the 4Caster out for ourselves, and it certainly produces excellent quality pictures at low data-rates — much better than we have seen on Windows Media 9.

As the saying goes, we live in interesting times ...

“We’ve tried out the 4Caster, and it certainly produces excellent quality pictures at low data-rates”



NDTV SNG TRUCK



ENVIVIO 4CASTER BROADCASTER 3500

SAT-COMM RE-VAMP SNG PACKAGES

Sat-Comm (UK) have made some changes to their vehicle-mount SNG packages, just in time for NAB (like everybody else).

They re-vamped their **M160** 1.6m vehicle package to include a pod to cover the reflector and house the HPAs. The aerodynamic glass fibre roof pod, which not only will house the antenna itself but also one or two HPAs, will make the system look 'sexier' than before. The pod can also house an air-conditioning unit as well, subject to sizing.

Suitable for the majority of SNG vehicle requirements, the 1.6m auto-pointing SNG antenna still features highly efficient dual reflector optics, and the system is manufactured using lightweight corrosion-free materials (including carbon fibre and Kevlar).

The M160KU uses high precision antenna pointing systems, available with three levels of



SAT-COMM M160-KU

enabling use of inclined orbit satellites.

Sat-Comm have also introduced a new product called **Aura-Sat**. It is a low cost vehicle-mounted motorised Ku-band 1.2m antenna, with auto pointing and auto signal peaking. It's been designed to be a partner to **Newstreamer**, Sat-Comm's IP terminal.

The sleek low profile design of Aura-Sat gives the entire system a height of less than 30cm when stowed, and at under 60kg in weight the system is perfect for mounting on compact vehicles.

To control the antenna Aura-Sat's easy to use software can be installed on a laptop. Using information from Aura-Sat's in-

built GPS and compass, the system will automatically locate the chosen satellite and then an automatic peaking procedure will begin. The system's software also allows the operator to manually adjust the antenna along all three axes, plus displays the GPS coordinates, compass bearings and the antenna elevation on all three axes.

The system can also be supplied with arm mounted 200W HPA or 60W SSPA. ■

"The aerodynamic glass fibre roof pod will make the system look 'sexier' than before ..."

"... a height of less than 30cm when stowed ..."



SAT-COMM AURA-SAT

control. The entry level pointing system is reliant upon user-defined look angles entered via the antenna controller.

A more sophisticated version includes an extremely precise electronic compass and GPS sensor, providing accurate pointing to any satellite with little or no fine-tuning.

With the addition of an in-built beacon receiver, the step-tracking option ensures that the antenna pointing is continually optimised,

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NEXT ISSUE SUMMER 2004

Here are some of the items we hope to cover in the next issue ...

- Ka Band for SNG — Hype or Realistic Option?
- SNG Highlights from NAB & Broadcast Asia
- Safety issues in SNG & ENG Microwave
- Universal Access Procedures

USEFUL RESOURCES

- Looking to rent an uplink? Then look at **TVZ**, which has both current and upcoming news events around the world, and contact details for who's covering what — www.tvz.tv
- Not too many chat forums on SNG — but we found one which focuses on ABC's ABSAT newsfeed participants, but still makes interesting reading — www.abcnewsabsat.com/inv_forum/index.php
- Need to identify what's on which bird? Our perennial favourite is www.lyngsat.com
- Want to keep up to date with latest industry news? Try our news page, updated monthly — www.beaconseek.com/news/news.htm

Web addresses for organizations/companies featured in this edition

Advent/CML	www.vislink.com
Digiworkz	www.digiworkz.org
Sat-Comm	www.sat-comm.com
SISLink	www.sislink.co.uk
SUIRG	www.suirg.com

One professor's view of the book that covers it all

Satellite Newsgathering

"I am really pleased with the contents. It contains detailed and useful equipment description, and has the right pitch to explain physics of signal transmission without calling for scary maths."

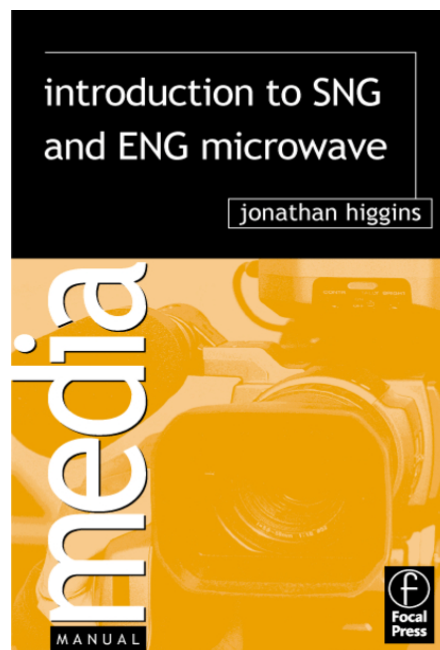
- Professor Gerard Maral of Ecole Nationale Supérieure des Telecommunications in Toulouse, and co-author with Professor Michel Bousquet of *Satellite Communication Systems* — the definitive book on the whole field of communications satellite technology.

INTRODUCTION TO SNG & ENG MICROWAVE

We're not going to pretend to not wave the flag for our own interests in LOS ... but in this case it's probably of interest to you as well!

Further to Jonathan's words at the beginning about covering terrestrial microwave as well as satellite links for SNG, we're pleased to announce the publication of Jonathan's second book — *Introduction to SNG & ENG Microwave*.

Published by Focal Press (as is the now infamous *Satellite Newsgathering*), this beginner's guide to electronic newsgathering links is designed to appeal to the student



as well as the idly curious.

One of 27 books published in the Media Manuals series by Focal Press, it covers every aspect of television production for the beginner.

Full of tips and insights, you can buy a copy of *Introduction to SNG & ENG Microwave* from Amazon, from Focal Press (www.focalpress.com) or from any one of a number of book outlets on-line.

You can even order it from your local book store. ☐

Enjoyed reading this issue of *Line Of Sight*? — let us know by sending an email to los@beaconseek.com