

# APB

DISTRIBUTION

## GatesAir bolsters executive team



GatesAir has appointed John Belza as chief financial officer (CFO). Reporting to CEO Bruce Swail, Belza will oversee the finance function, and develop new processes and initiatives to drive operational efficiencies throughout the company. Also overseeing the human resources and information technology functions for GatesAir, Belza was most recently CFO at Lombart Instrument, a private equity-held medical equipment distribution company.

## ABOX42's smart STB platform helps launch multi-screen IPTV service

1&1, a Tier 1 Internet and telephone service provider in Germany, has launched a multi-screen IPTV service powered by ABOX42's M30-series smart set-top box (STB) platform. ABOX42's STB platform is pre-integrated with the multi-screen TV solution from Zattoo, which allows 1&1 subscribers to view TV content on the main TV screen, as well as on secondary devices such as tablets, smartphones, streaming devices and PCs. The M30 ensures "efficient streaming" of HD broadcast and on-demand content using MPEG-DASH playout for live TV with multi-audio and teletext, local and cloud recording/time-shift, as well as multi-DRM support.

### Next Month @ Distribution

Digital Terrestrial Television

## PANELLISTS



**Martin Coleman**  
Executive Director  
Satellite Interference  
Reduction Group



**Amitabh Kumar**  
Director, Corporate  
Zee Network



**Shalu Wasu**  
Managing Director  
Eleven Sports Network

# Cellular-based transmission: More flexibility in live remote productions

As 3G, 4G and, to a lesser extent, 5G networks become more prevalent around the world, cellular-based transmission is providing an increasingly viable option to traditional satellite broadcast vehicles, as **Shawn Liew** discovers.

**B**on Om Touk, or the Cambodian Water Festival, is an annual festival celebrated fervently by Cambodians from all walks of live, and characterised by boat racing along the Sisowath Quay in Phnom Penh. To capture the vibrancy of last year's *Bon Om Touk*, held in November, Cambodia's National Television of Kampuchea (TVK) deployed LiveU's LU600 HEVC/H.265 solution, a portable transmission unit designed for global newsgathering, as well as live sports and events coverage.

Khim Vuthy, director general of TVK, explains: "We were really impressed by the LU600's video performance, as well as the bandwidth efficiency it provides. We were getting bandwidth at around 10Mbps, and even when we capped the bandwidth at 5Mbps, the video quality stayed the same."

For its coverage of past editions of *Bon Om Touk*, TVK used satellite outside broadcast (OB) vans, which restricted mobility, according to Vuthy. "With LiveU's cellular bonding technology, we had no such limitations and were free to go live wherever we wanted, including on boats to cover the races and from the top of a building when the King arrived.

"We are now planning to use multiple LiveU units for our daily newsgathering and event coverage," he continues.

According to LiveU, the LU600 delivers the "highest video quality and bitrate in the market (up to 20Mbps), and is set to offer the fastest file transfer (60Mbps), lowest delay and 100Mbps high-speed Internet connection." Field-upgradable to HEVC/H.265, the LU600 is also tailored



Cambodia's National Television of Kampuchea (TVK) deployed LiveU's LU600 HEVC/H.265 transmission unit to capture the vibrancy of *Bon Om Touk*, or the Cambodian Water Festival.



to the needs of mobile journalists with the offer of a new streamlined user interface that comes with an "ultra-responsive" five-inch capacitive touchscreen.

Does the TVK's usage of the LU600, also represent a clear shift towards cellular bonded solutions in the field, APB asks Ronen Artman, VP of marketing, LiveU. "It's true that in remote areas or harsh conditions, hybrid solutions provide broadcasters with a cost-effective and versatile replacement to traditional satellite trucks," he replies. "However, in areas with strong 3G, 4G and slowly emerging 5G networks, 4K HEVC/H.265 cellular bonding solutions are providing

**"In areas with strong 3G, 4G and slowly emerging 5G networks, 4K HEVC/H.265 cellular bonding solutions are providing an extremely high-quality, reliable and cost-effective solution for live video acquisition and production."**

**— Ronen Artman, VP of Marketing, LiveU**



The BBC and Sky are examples of broadcasters who have used Mobile Viewpoint solutions to cover live events in the field.

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To further bolster the transition to cellular bonding, a report released by LiveU last December found that data traffic for live video over IP has doubled over the past two years. LiveU alone delivered around 1.5 million live broadcasting hours in 2017. HD 720/1080 video traffic accounted for almost 80% of all traffic delivered in 2017, with an increase of over 120% in live HD sessions compared to 2016.

Perhaps more importantly, LiveU reported that 79% of all bonded video is now delivered over cellular networks only — wired Internet connection, Wi-Fi and satellite accounted for the

remaining share. The worldwide average uplink speed for video acquisition has reached 4.5Mbps, with developed areas experiencing approximately 9Mbps on average.

Specifically, Africa has seen a move away from satellite to cellular bonding, with cellular often replacing satellite in countries such as Ghana, Kenya and South Africa. This, according to LiveU, can be explained by the strength of the region's 4G networks and the lower costs offered by cellular, while some broadcasters are also creating multi-camera productions using cellular transmission units.

Artman adds: “The LiveU report reflects the transition away from traditional transmission methods to cellular bonding,



way of working and unleashing new formats.”

“Cellular-based transmission provides big cost-savings, and also delivers a far more flexible

— Michel Bais, CEO, Mobile Viewpoint



which is gaining ever greater traction with 4K HEVC solutions.

“With the growth in live IP video traffic, this shift will become even more apparent. Bringing higher quality with even greater reliability to the market, HEVC/H.265 enhances the use of cellular technology across multiple genres, such as live sports.”

Arguably, one broadcast terminology that is increasingly becoming synonymous with cellular-based transmission is remote production. While remote live

production previously required an OB van and a crew to create a talk show, press conference or any remote production, this is changing, notes Michel Bais, CEO of Mobile Viewpoint. “With the introduction of our WMT products, two to four video feeds can be transported back to the studio with minimal equipment, where a director can decide which feed to use,” he describes. “Being able to easily transmit several feeds to a central studio location makes it much easier for a producer or director to carry out multiple productions in a single session, which saves time and money, and which otherwise would have been spent on having personnel out on location.”

Mobile Viewpoint's Multicam portfolio, for example, enables broadcasters to transmit four separate video streams from a remote location, and also features

four intercom and tally channels to enable full four-camera registration.

Making the case for cellular-based transmission, Bais says: “It enables the production of live video via mobile. It allows people to broadcast from places such as trains or cars. Cellular-based transmission provides big cost savings, and also delivers a far more flexible way of working and unleashing new formats.

“Products such as Mobile Viewpoint's WMT range makes it possible to go live from anywhere, with no need for cables or satellite connections, at just 10% of the original cost.”

Going beyond live video transmitted over mobile networks, Bais also predicts proxy editing through mobile to be the “next big thing”. Some, he notes, are calling this the ‘connected camera’, in the sense that editing can begin from the central storage by using low-resolution clips that are transferred from the camera over bonded cellular.

Proxy editing, Bais believes, will result in a much faster turnaround, enabling producers to create the final product on location.

“Also, by using a bonded cellular unit, the high-res clips can be downloaded after they are created, and can be used to go live instantly on social media platforms, for example, when the edited version is saved for the evening news or a talk show.” **APB**

## Pilgrim Media uses the EnGo to catch *The Runner*

It was more than 15 years ago that Matt Damon and Ben Affleck came up with the idea of *The Runner*, but it took until 2016 for technology to be available to make the multi-platform idea work for a mainstream entertainment audience.

The idea behind *The Runner* is that a ‘runner’ has 30 days to make it across America, while the entire country attempts to solve clues that help their favourite ‘chasers’ — who are constantly in pursuit — go after thousands of dollars in prize money. If the runner is caught, then a new runner takes over from that point.

Because *The Runner*'s game play and audience engagement depended on coverage of the action in real time, nobody could really know in advance where the action or the story would go. The key challenge was to figure out how to quickly move high-quality content back to the studio for editing and provide live feeds from constantly changing locations.

Pilgrim Media Group worked closely with the project's technical consultant, Jerry Kamen, to develop the infrastructure and workflow necessary for a project

like *The Runner*. It was then that Pilgrim Media Group approached Dejero about using the latter's technology for the groundbreaking reality competition series.

Pilgrim Media Group (formerly Pilgrim Studios) is a leading independent reality-TV production company based in North Hollywood, California, USA, and who specialises in quality non-fiction cable programming. Some of its most popular shows include *Ghost Hunters* (Syfy), *Wicked Tuna* (National Geographic Channel), *The Ultimate Fighter* (Fox Sports 1), and *Fast N' Loud* (Discovery).

Pilgrim has also entered the emerging digital video and video-on-demand (VoD) space with shows like *The Runner* (Go90) and *Zane's World* (FB/YT).

For *The Runner*, the Pilgrim production team used nine Dejero EnGo mobile transmitters to encode and transmit all live and recorded video back to Pilgrim Media Group's Los Angeles studios for daily editing. Small enough to be wearable or mounted on the camera, the form factor and the fact that it was battery-powered made the EnGo ideal for this highly



Dejero's EnGo mobile transmitters were used to capture *The Runner*, a reality TV series conceptualised by Matt Damon and Ben Affleck

mobile shoot, said Pilgrim.

When a traditional camera would risk drawing attention to the runner — making it too easy for the chasers — producers used the Dejero Mobile App whenever discreet shooting was required to create and share video content from their phones.

As it was impossible to predict the moment when a runner would be captured, using the app often proved easier and more efficient than setting up a camera. This meant content delivered by the Dejero Mobile App was frequently featured in *The Runner*'s unscheduled “Breaking News” segments.

Dejero's patented network blending technology created a virtual network that dynamically

and intelligently managed the routing of packets to minimise the effects of fluctuating bandwidth, packet loss, and latency differences of individual cellular connections. The blended network provided the necessary bandwidth to quickly transfer Pilgrim's content back to the studio for editing.

On location, the field crews composed of a team of camera operators and a manager. They used a combination of Dejero EnGo mobile transmitters and Mobile Apps on their phones to capture footage of the runner and the chase teams. Once their USB flash memory drives were full, they connected them directly to the EnGo.

Using Dejero's network blending technology, the files on the USB

drives or captured on the phones were transported to the Dejero Broadcast Server over multiple cellular connections. Back at the studios in LA, editors set up watch folders to get alerts for when a new file was added. From there, the editors either edited the content or sent it directly to air.

Jerry Kaman, broadcast engineering consultants, Pilgrim Media Group, commented: “The ability to get our footage to the studio rapidly was vital in order to meet our deadlines for the three daily live shows. Dejero's blended network technology was the only realistic tool for producing *The Runner*, as the teams began in one city and ended in another every single day. I'm delighted with Dejero's technology, which has performed extremely well, and the support has been outstanding.”

*The Runner*, added Dejero, is an excellent example of how Dejero's technology can be used for so much more than the live transmission of video. On average, the Pilgrim production teams were able to transmit nearly 100GB of content per day, in addition to another two hours of live video, resulting in 75 episodes over 30 days.