

## Case Study

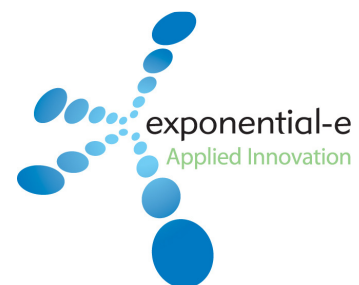


# *Dynamic disruption through applied innovation*

## Input Media Case Study

Exponential-e supplies Input Media with  
broadcast quality video

“Exponential-e with their ultra-low latency  
Next Generation Network, provides a viable  
and cost effective option to the broadcasting  
industry”



## Exponential-e - the UK's thought leader in Ethernet-based WAN solutions



Exponential-e, the specialist Next Generation Ethernet and applications provider, in partnership with TANDBERG Television, the global technology provider for the world's leading broadcasters, has deployed a converged network solution incorporating a broadcast quality, live video link between Input Media's London office and their new Manchester office. Input Media, one of Europe's premier sports production companies, needed a solution in order to contribute live programming between their sites and Exponential-e's fully-managed solution offered the lowest-latency and lowest packet-loss, making it perfectly suited to Input Media's uncompromising needs.

Input Media produces and host broadcasts for several live national and international events, including top football, tennis and boxing matches for heavyweight favourites such as ITV Sport, BBC Sport and ESPN. Recently listed as the top independent sports producer in the UK, Input Media decided to open a regional office in Manchester (Input Media North), to provide an autonomous base for regional production opportunities. In light of the professional calibre of the events they cover and their broad international appeal, finding a broadcast-quality video transmission solution of the absolute highest quality and reliability for Input Media North was vital.

Mike Norris, Head of Technology, Input Media commented: "Contribution of live sports programming requires a resilient solution that ensures error free transmission of the video content. This means our service is particularly sensitive to packet loss and latency. We must be completely confident that the service won't fail by suffering errors during transmission. For this reason we sought out a provider who could ensure these performance credentials. Exponential-e's solution, in partnership with TANDBERG Television, fitted the bill."

Delivered over a single converged 100 Mbps VPLS Ethernet connection, Exponential-e's solution for Input Media comprises a 10 Mbps WAN data link between their Manchester and London office, 35 Mbps business-grade Internet access and 55 Mbps for the video service, all over a single pipe. The video solution encompasses TANDBERG Television's broadcast standard video compression solutions. An encoder and decoder were placed on opposite edges of the network to compress the video signal from one office before it traverses the network, and then decompress it when it leaves the network and travels to the other office. Exponential-e's SLA gave Input Media complete peace of mind that,



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should a fault occur on any of the hardware, engineers would be on-site with a replacement within 24hours.

Nick Symes, Head of Broadcast IT at Input Media commented: "We were looking for a turn-key solution for our inter-site communications. Unlike other providers, Exponential-e didn't just supply us with the connectivity and leave us to source and manage the associated hardware, their close relationship with TANDBERG Television meant they could offer us the solution as a complete package and they took responsibility for managing the solution as a whole. This was ideal for us as it meant a single point of contact for the solution. It also minimised the likelihood of errors during rollout."

Running over a Layer 2, switched network, Exponential-e's video solution is geared towards organisations such as Input Media who broadcast live events and rely on faultless service performance. Exponential-e's network topology means it is zero-hop which completely minimises latency and packet-loss. As testament to this superior performance, MPEG Forward Error Correction (FEC) is not required. FEC adds extra data to the MPEG video stream in order to correct errors at the receiving end. Such practice is common where retransmission is impossible, as with live satellite links, but comes at the cost of a higher bandwidth requirement. The quality of Exponential-e's Next Generation Network meant that Input Media didn't need to enable FEC, thus saving them wasted bandwidth and improving the efficiency and performance of their network. Such low error rates would be near-impossible to achieve using Layer 3, routed infrastructure.

John Griffith, Sales Director, TANDBERG Television commented: "Exponential-e with their ultra-low latency Next Generation Network, provides a viable and cost effective option to the broadcasting industry. Their high-performing network, teamed with our market-leading hardware means our solutions should be a serious contender for companies looking at reassessing their video broadcasting needs, for example, for the 2012 Olympics".

Along with the performance of the solution, the fact that Exponential-e could provide a range of services across a single converged connection was a big driver for Input Media. This enabled them to consolidate the separate contracts they had with their Internet provider, their WAN provider and their video connectivity provider into a single, more easily-managed contract. It also put them in the perfect position to experience the

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control and flexibility of Exponential-e's Next Generation Network. David Edo, Account Manager, Exponential-e explains: "In receiving multiple services over our converged connection, Input Media have the ability to re-distribute the bandwidth allocated to different services on an ad-hoc basis. So, for example, at night when no video is being broadcast, they could reappropriate the 55Mbps of bandwidth allocated to video onto their data connection of 35Mbps, bumping the bandwidth for data up to 90Mbps and promoting speedier data replication between offices for DR."

Nick Symes, Head of Broadcast IT at Input Media said: "The fact that Exponential-e could bundle Internet and WAN connectivity in with our video connection saved us a substantial amount on infrastructure costs and enabled us to optimise network usage and maximise efficiency through the flexible allocation of bandwidth across all our services."

Nick continued: "On top of the excellent features of the solution, the level of service we received from Exponential-e was second to none. They went out of their way to ensure we were 100% happy with the solution. This really stands out from larger suppliers where such personal service is rarely experienced."

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