REMOTE PRODUCTION

ST Engineering

Access to the Cloud

The pace of innovation in satellite connectivity is facilitating disruption across many industries and the film and photography world is no different. Remote production – or Remote Integration Model (REMI) – allows live content to be captured from a remote location and managed from a master control room. Today, when remote production takes place, cloud computing is an incredibly powerful tool in any producer's arsenal.

From film productions to news crews, access to the cloud is such a powerful enabler of productivity that the demand for satellite connectivity as part of a blended all-IP solution is well justified, even in remote areas.

Covid-19 has also played a part in changing the production landscape, acting as a catalyst of sorts, as people had to innovate to remain productive. On the one hand this has boosted demand, subscriptions and the number of people using streaming services in general. However, it's not uncommon for this new influx of activity to cause congestion and overload terrestrial networks. Equally the pandemic influenced outside broadcasting (OB) when the number of sports events, and other large, broadcasted gatherings were reduced.

Three REMI Options for Production Crews

While the world is still recovering and events are taking place once more, satellite has an important role in solving the remote production problem due to its inherent advantages. Delivering content to vast geological areas and to the four corners of the world, including the most remote places, means it can extend far beyond the reaches of any existing terrestrial network. On top of this, the advent of High Throughput Satellites (HTS) simply compounds these advantages, offering greater throughput at low latency while being more financially efficient. Ultimately the ability to blend different technologies, including cellular, terrestrial and satellite - frequently presents the most attractive and versatile solution. When the situation calls for remote production either by a news crew or film company there are currently three main options to choose:

The Traditional Approach

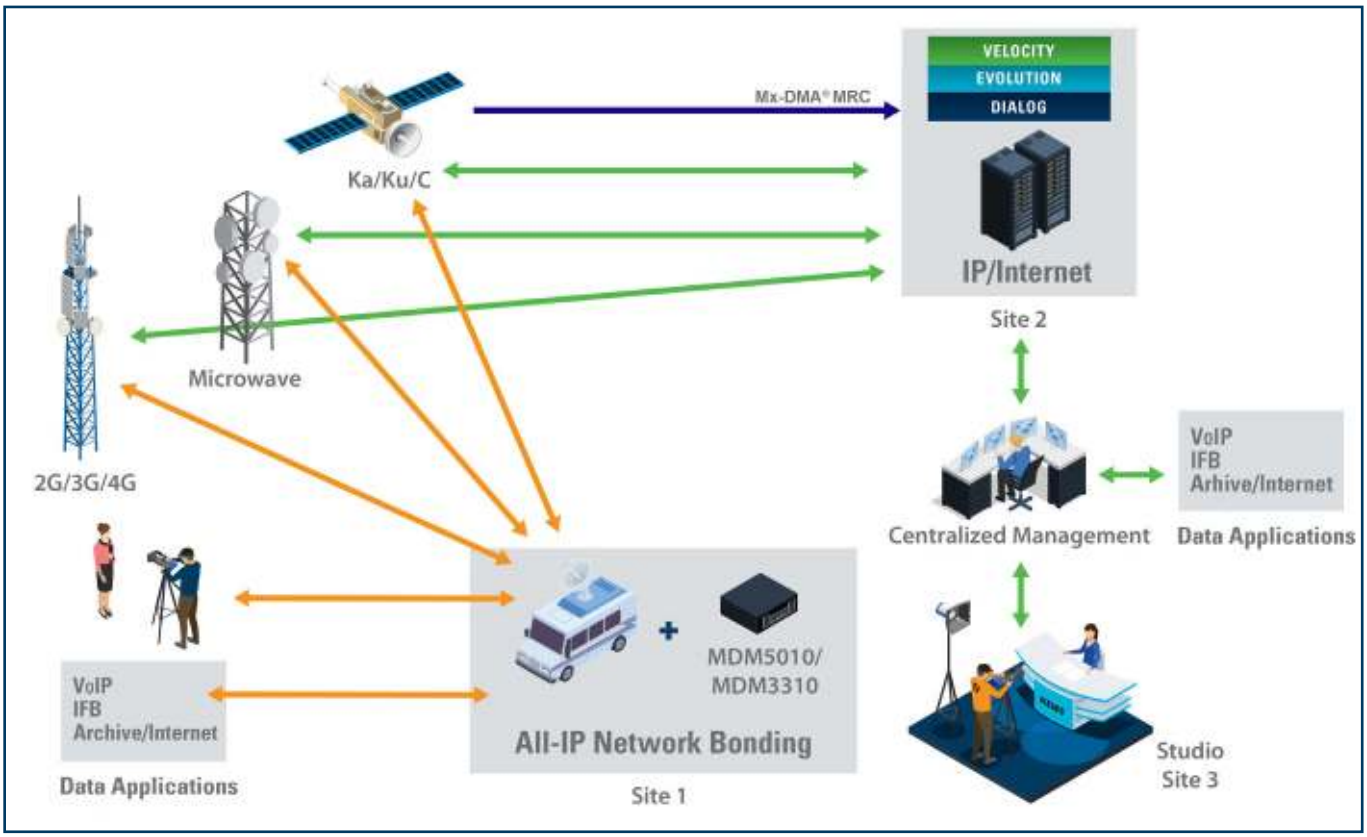
This involves the use of vehicles, usually vans decked out with advanced pieces of kit for the purposes of two-way audio and video, such as transmitters and receivers with dish antennas directed toward satellites. However, this solution is both costly and requires a very high skill threshold for the personnel running the equipment. Not to mention, the sort of vehicle required may simply be unsuitable for certain terrain in the first place rendering it ineffective for truly remote productions.

Cellular Bonding

The second option is cellular bonding. It became ubiquitous, using 3G and 4G cellular networks to fetch video back from remote locations. This has greatly reduced the skill threshold involved and uses dedicated equipment via all-IP transmission, but the big drawback is that these cellular networks are susceptible to congestion. If a given network is contended it will badly affect transmission quality.

Blended All-IP Networks

The latest trend is blending all available IP networks together. By doing so it mitigates the risk.... the risk of damaging the quality of the transmission associated with cellular bonding by allowing satellites to be used instead when IP terrestrial networks are not up to scratch. The ability to easily switch to satellite for a reliable connection is facilitated by recent developments in satellite technology that support high quality video such as the prevalence of Ka-band satellites that can provide higher throughput with a lower power draw than the Ku-band satellites often found on traditional SNG vehicles.



When terrestrial networks are not available, become contended over time, suffer from too much jitter or occasionally are not cost-effective, IP satellite may be the only connectivity option left to modern news crews to handle all IP applications they require.

Truly Remote Production

This blending of all-IP networks has been used to great effect in areas that are truly hard to reach such as in the case of commercial productions on wild mountain ranges. The remote mountainside often has little to no cellular reception and when the clients themselves are not able to be present on the mountain, a production company requires an online collaborative solution. To guarantee the kind of connection they needed, blended all-IP solution can use a portable satellite and dynamically amalgamate the available cellular networks with satellite signal to delivered high quality connectivity in an incredibly isolated location. The crew can then stream the video from set to the platform for real time collaboration. Media production, whether that be commercial television or film are switching to these cloud-based workflows and this blended solution is the key piece of tech that makes it all possible.

ST Engineering iDirect's partner Dejero recently used the Newtec Dialog® technology to a great effect to support one such commercial production company in the Canadian Rocky Mountains. The end result meant that they were able to flawlessly stream to offsite clients without worrying about latency or shaky connection. This means that the real time feedback facilitated the same kind of conversation that would occur if all parties were in fact on set.

The flexibility and reliability of the blended all-IP approach also manages to reduce the costs previously associated with satellite solutions and HTS have made waves by improving the price and user experience. More satellite constellations are launched frequently, and this is particularly true in the case of LEO and MEO satellites resulting in a projected 14x increase in capacity before the end of the decade. This will further reduce the costs involved and pave the way for more deployments.

Performance and Agility for Any Environment

Satellite has become a vital component of any producer's toolkit and is making waves for the versatility it offers.
ST Engineering iDirect is now able to provide a portfolio of products that can meet the needs of any remote production scenario or application. Where other solutions like terrestrial or cellular connectivity struggle satellite is here to guarantee the quality connectivity required is available not only with the performance but agility to suit any environment better than other existing connectivity platforms. ST Engineering iDirect's Mx-DMA® technology is able to offer a single return link suitable for most use cases while reducing operational complexity making the most of statistical multiplexing.