



CASE STUDY

TORCH RELAY TO VANCOUVER

Winter Olympic Torch Relay Media Contribution

The Challenge

When Image Media Farm (IMF) of Vancouver (British Columbia) was bidding to provide the media coverage for the 2010 Vancouver winter games torch relay, they knew it was going to be a tough job. The Olympic Flame that originated in Olympia, Greece, was to visit over 1000 communities in 106 consecutive days, covering 45,000 km / 28,000 miles of the Canadian landscape from coast to coast to coast.

The Olympic flame would be transported by air to the northern most latitudes. The rest of the journey would consist of a road trip from St John's, Newfoundland, the eastern tip of Canada to Vancouver on the western coast, a route of over 16,000 km / 10,000 miles.

As demanding as the journey was going to be, there would inevitably be weather, time constraints plus operational and budgetary pressures to contend with. It is perhaps not surprising there were mixed feelings when

IMF Inc. won the contract; satisfaction for providing the winning bid, resolution for the work ahead and anxiety, perhaps even a little fear, for the technical and production difficulties that would be faced.

The challenge was clear: to provide a mobile satellite uplink service, to be operated by a novice engineer; capable of providing SD and HD video feeds to North America, plus

high speed data internationally; moving site twice a day almost everyday for 3½ months through the Canadian terrain, in winter.

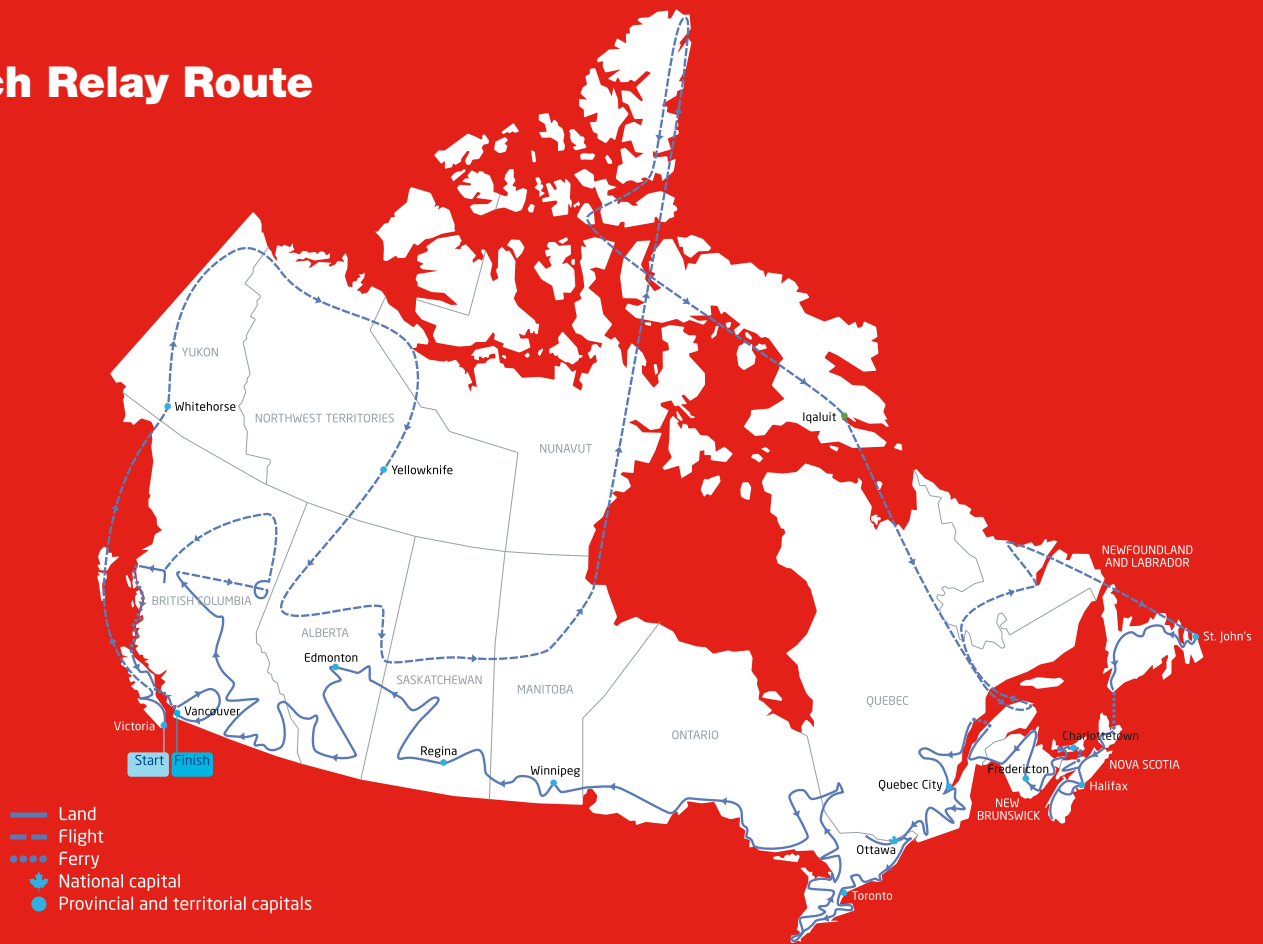
This was going to be a formidable job in anyone's book!

Introducing the SIS LIVE uPod

SIS LIVE is the largest satellite uplink provider in Europe. The uPod is its award-winning fully automated mobile satellite uplink system which has revolutionised



Torch Relay Route



the SNG market in the UK and mainland Europe.

Through a contract awarded by IMF to Intelsat, the world's leading provider of fixed satellite services, SIS LIVE set out to transmit the Relay to millions of viewers using a Yukon SUV equipped with the company's uPod®. The service provided blended Intelsat's space and ground infrastructure with SIS LIVE's uPod system to support transmission of live SD and HD

feeds, along with voice and Internet communications.

With the push of a button the system locks on to the required fixed or inclined satellite. It does this using GPS, tilt sensors and a compass to determine where in the sky the antenna should be pointing. It then executes a search pattern for the specific satellite beacon frequency and verifies the satellite with a unique modem connection. The uPod is capable of finding and

tracking even inclined satellites automatically.

In normal operation when the remote modem locks to the incoming carrier it triggers the system to transmit its own modem signal, this establishes internet connectivity and if required Voice Over IP phones. Once the internet connection is established the control PC communicates with the SIS LIVE uBook scheduling system.

uBook enables online booking of uPod uplink systems and satellite space segment. Once these bookings are made and a uPod is on site and connected to uBook via the satellite modem link, all the transmission parameters are transferred from the online booking server to the uPod control PC. The control PC then automatically programs and controls the encoders, modulators and HPAs to initiate a fully automatic video transmission. It starts at the requested time with no need to make the traditional call to the satellite service provider, runs



for the duration booked and automatically shuts down. This automation has streamlined traditional SNG operations and allows for completely unmanned terminals to be operated remotely.

Adapting to the Challenge

IMF contacted a number of traditional uplink service companies all of which could provide the SD & HD video links. However:

‘SIS LIVE and Intelsat were the most proactive and only contenders who tested and proved a mobile satellite data connection of the speed we needed.’ Roger Williams, President of Image Media Farm Inc.

The uPod system normally uses inbound and outbound modem carriers of 128kbps, however for this application the carrier being sent from the remote modem was configured for 6Mbps and the return 256kbps. This allowed IMF to push large amounts of data to a 3rd party server. The data was transmitted over the satellite link to Intelsat’s Mountainside teleport in Maryland and then on to a server based in Vancouver via fibre.

The uPod was not operated in fully automatic mode in this case because the data link used the same leased satellite



capacity from Intelsat as the video transmissions. Data and video links were not needed simultaneously so this sensible use of satellite capacity helped manage costs.

The modem carrier transmitted to the uPod remained on constantly however, so the automated acquisition functionality of the uPod remained. This meant the operator simply had to turn on the satellite encoder/modulator for video transmissions or enable the uPod’s modem when data transmission was required.

By adapting functionality already built into the uPod system SIS LIVE & Intelsat were able to provide a solution to meet the

operational challenge.

Life on the Road

Chuck Magee, Freelance Technical Producer, contracted by IMF, operated the uPod and David Solomon, Broadcast Technical Coordinator with IMF, was in charge of using the satellite data link. Here is what they had to say looking back at the Torch Relay:

David Solomon:

‘The system handled itself very well even in the -40°C (-40°F), weather of Timmins Ontario when we had a special media request and had to deploy in these conditions. The weather stayed bitterly cold, occasionally very windy with snow storms for almost two weeks and we never had any weather related deployment or satellite link issues due to these conditions.

‘Our production demands changed by the minute and the flexibility of the uPod and the Yukon saved us more than once. Being able to send data at high speed made the uploading of web and HD content possible and often there simply was no alternative IP connectivity available. The SUV was fully equipped with VTRs and other production equipment that we were able to integrate into our workflow, that provided us with better efficiency.



'The combination of the SIS LIVE Yukon, the uPod and the dedicated satellite capacity from Intelsat allowed us on a number of occasions to uplink within moments of getting a request. We also crash edited an HD video piece in the middle of a field using the Yukon's engine and inverter power supply then fed it 5 minutes after we were done putting it together, this enabled the major broadcasters to use it more than expected due to the speed of delivery.

'The whole service and support provided by SIS LIVE and Intelsat gave us so much confidence. A job that at times seemed almost impossible was achieved with relative ease. What could have been a nightmare turned into an adventure and it could not have been done with out the SIS LIVE uPod.'

Chuck Magee:

'After 16,955 km and 87 days on the road I can say that the uPod system performed brilliantly in all conditions and situations throughout the Olympic Torch Relay.

'We encountered weather ranging from heavy rain through steady snow to freezing cold temperatures and were not impeded by any of these conditions. We were hit with



-40°C (-40°F), followed by consecutive days of -30°C (-22°F) weather and were still able to deploy and acquire the satellite. A little care was needed to remove ice from the front edge of the uPod and some "gentle physical encouragement" during initial elevation and azimuth moves was all that was needed.

'During our tour we received dozens of calls from network master control operators regarding our signal feed and in all instances the concerns were found to be sourced at the receive end. Not once was there a signal acquisition fault generated from our truck or the satellite system. These concerns were always traced back to in-house routing,

communication or interpretation of information at the receive site.

'There were many days where the uPod acquired the satellite with geographic and physical challenges that on paper would not have looked probable or even possible. The majestic Rockies appeared a little too high, we were boxed in by power lines, transformers or sky scrapers and we still achieved successful signal transmission.

'We gained a great sense of confidence in the uPod system and Yukon that served so well through these challenges and when the job finally came to its successful conclusion it was with a little sadness rather than relief that I handed the keys back.'

