

Technology reduces contention during crew calls

While VSAT satellite beams are improving every month, they still have limited capacity. In order to avoid contention-related slowdowns, or committed information rate (CIR) overruns, both VSAT providers and ship managers should utilise applications and services that are bandwidth efficient. Voice service is an easy place to start achieving efficiencies because standard voice over IP (VoIP) services are not optimised for maritime satellites.

There are two main categories of bandwidth in telephone systems: idle and active. Idle bandwidth describes how many megabytes the system will use waiting for the phone to ring. Active bandwidth is divided into two parts: codec bandwidth (level of voice compression – a major factor in voice quality) and overhead bandwidth (how much additional bandwidth is used to route the voice to its destination).

On a PC, Skype uses 60 Kbps of active bandwidth during a call, and more during a video call. A VoIP phone uses about 48 Kbps (or more) per phone call in active bandwidth. On land that doesn't matter, but at sea it does. Active bandwidth is a large contributor to contention and CIR overruns. Since voice is typically granted a high quality of service (QoS), it gets priority over other traffic. If a ship has a CIR of 32 Kbps, one single VoIP call can blow past

that and slow everyone's Internet experience to a crawl, especially in a high-contention area. Multiple simultaneous calls become impossible on all but the biggest CIR plans.

That is why there are several companies that have arisen recently that tout their reduced bandwidth utilisation for maritime voice calls. Vobal Technologies has focused specifically on minimising both idle and active bandwidth. Vobal's idle bandwidth is only about 5MB per month. Total active bandwidth (codec plus overhead, in both directions) averages about 6 Kbps per call. That's about 22 minutes of talk time per MB used, at only a fraction of a typical CIR. Multiple simultaneous calls can be made in a fraction of standard VoIP bandwidth, dramatically reducing CIR needs and usage. In addition, Vobal's solution works on both VSAT and FleetBroadband, for those ships that have a failover setup. For such hybrid users, Vobal's bandwidth efficiency is even more crucial.

With Vobal on board, contention is significantly reduced and money can be saved by choosing a smaller CIR plan (or the same CIR plan can remain while vastly improving everyone's Internet experience). **VSAT**

By Ronnie Raviv, Vobal Technologies' chief operating officer

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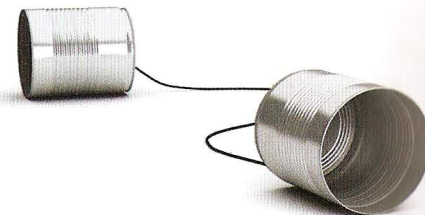
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