

Staying connected around the globe

IsatPhone Pro provides reliable link in the most remote regions



The IsatPhone Pro provides remote professionals with reliable, high-quality voice connectivity in the most distant locations.

Unlike most professions, mining and mineral exploration business is often conducted in secluded locations, far from any established communications infrastructure. However, thanks to satellite technology, the world has moved closer as new technologies emerge. Launched in the second half of 2010, Inmarsat's IsatPhone Pro has made staying in touch from distant locales easier, more efficient and affordable.

Supplying the most reliable satellite link

Formed in 1979 to meet the emergency communications needs of maritime fleets, today, Inmarsat has geostationary orbit satellites located 36,000 kilometres above the equator. Compared to low-earth orbit satellites,

located 800 kilometres above earth, Inmarsat's satellites ensure greater reliability without climatic interference.

The IsatPhone Pro utilizes the Inmarsat-4 satellites, winner of the 2010 Royal Academy of Engineering's MacRobert Award for innovation. No other satellite phone on the market offers global coverage from geostationary satellites in L-band. "We have L-Band satellite frequency, given to us for our services for emergency communications for boats," says Simon Curran, Inmarsat's market development manager responsible for the mining sector. "It is not affected by the elements, so regardless of the climate, there is no interference."

According to Curran, most satellite phone providers use low-earth orbit constellations or operate with geostationary satellites, but lack the global reach of Inmarsat. "As the satellites sit above the equator, the further towards the poles you go, the harder it is to achieve a look angle and thus be able to connect," Curran explains. "We have tested the phone well into Alaska and it functioned fine."

Crisis management

In less than a year on the market, the IsatPhone Pro has already been widely adopted for use in crisis zones worldwide. The emergency communications aid agency, Télécoms Sans Frontières, has used the IsatPhone Pro, deploying it over the past year in Haiti, Indonesia and Japan. Inmarsat is able to monitor usage and has noted traffic increased significantly over Japan following the triple disaster.

"The satellite forces down 193 beams, like a honeycomb," Curran says. "We can monitor usage, and can transfer capacity from lower usage areas to hot-spot areas, either automatically or reactively."

Once a mine is fully operational with infrastructure in place, the IsatPhone Pro can be used as an emergency reserve for the mine's established communications infrastructure. Should bad weather knock out the mine's communications system, the IsatPhone Pro will still work, because the L-band frequency will remain active. "It guarantees permanent communications capabilities, augmenting the safety of the operation," Curran says. "As a backup solution, it can be a life saver."

As well, Inmarsat has agreed to become the commercial operator of another L-band satellite, named Alphasat, which will provide supplemental L-band coverage across Europe, the Middle East and Africa. It is scheduled to be ready for 2012.

Built for distance and endurance


The IsatPhone Pro is built to withstand many climates, including heavy rains and temperatures ranging from minus 20 to plus 55 degrees Celsius. It is dust, splash and shock resistant and humidity tolerant. The IsatPhone Pro offers satellite telephone, voice mail, text and email messaging, and GPS location data. Using a Lithium-ion, 3.7 volt battery, it claims a charge life of up to 65 per cent longer than that of other satellite phones. “The IsatPhone Pro sports the longest battery life, with 100 hours standby and eight hours talk,” Curran says. “With built-in Bluetooth technology, the first for global satellite phones, you can put the handset outside and stay inside to make your call, protected from the elements.”

The phone’s interface was designed to resemble today’s cell phones for ease of use. It offers a wide array of features, including a speaker phone option, conferencing and speed dialling. Contacts can be synchronized with Microsoft Outlook 2007. As well, the phone supports eight languages: English, French, Spanish, Portuguese, Japanese, Chinese, Arabic and Russian. A 2.4 kbps voice codec is incorporated to ensure voice quality is clear and users can be easily understood.

As of March, Inmarsat’s IsatPhone Pro now offers data service. Using circuit-switched data capability, a data rate of up to 20 kbps is included in a firmware upgrade. End users are able to send anything they normally would from a Smart phone – email, attachments, documents and photos.

Cost is a major advantage of the IsatPhone. “We fixed our price point below anything in the market,” Curran says. “We garnered a lot of interest that way. Although there are different payment structures available, in general, the handset costs approximately US\$600 and calls average around US\$1.00 per minute.”

Using the latest components and manufacturing technologies allowed Inmarsat to launch the phone at a competitive price. “This opens up a new market for the product – those who previously considered satellite phones too expensive to justify,” Curran adds. “It is also attractive to existing satellite phone users looking for a network with a longer life expectancy than their current provider.” The satellite constellation is expected to remain in operation until the mid-2020s, making the IsatPhone Pro a smart option for remote operations or as an emergency communications backup that will not have to be replaced due to an imminent constellation failure.

Gerbrand Schalkwijk, vice-president of global enterprise sales for Stratos, a leading distributor of remote communications devices and services, explains that the IsatPhone Pro offers a competitive advantage in comparison to other handheld satellite phones. “The services offer high-quality voice connectivity via small, affordable equipment – ideal for remote workers in the oil and gas, mining, government, media and first-responder communities,” he explains. 

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