

Communication System used by Hong Kong Voluntary Observing Ships – Inmarsat C

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The Inmarsat (International Maritime Satellite) system provides communications services to parties and organizations operating in remote regions including the oceans. As it can provide two-way communications for ships at sea to and from virtually anywhere in the world, it is a requirement for ships to carry Inmarsat communication systems on board in accordance with the International Convention for the Safety of Life at Sea.

There are different types of Inmarsat systems to meet different users' needs. Among them, Inmarsat C, which effectively provides a 'satellite telex' service, is used by almost all Hong Kong Voluntary Observing Ships (HKVOS) for reporting ship weather observations to the Hong Kong Observatory (HKO) through a low-cost and easily installed Inmarsat C terminal on board. The Inmarsat C service is provided by four geostationary satellites over the four ocean regions of Pacific Ocean, Indian Ocean, Atlantic Ocean East, and Atlantic Ocean West, with effective latitudinal coverage extending from about 70° N to about 70° S (Figure 1).

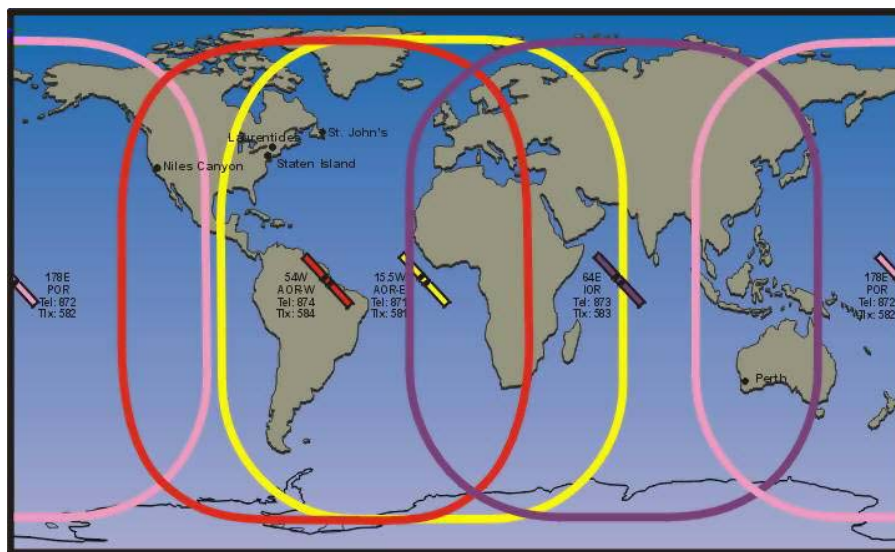


Figure 1. Coverage of the Inmarsat C system

For ships using Inmarsat C terminals, 34 Land Earth Stations (LES) on the ground operated by different service providers are at present available for providing the link between the satellites and the terrestrial telecommunications networks. As most of the HKVOSs are travelling over the Pacific and Indian Ocean, a LES service provider in Singapore is engaged to relay the ship weather reports to HKO. From 2003 to 2012, around 34,000 ship weather reports from HKVOS were received by HKO via Inmarsat C.



Figure 2. Officer sending ship weather report via the Inmarsat C terminal on board a Hong Kong Voluntary Observing Ship