UK rolls out eLoran as GPS backup for safe navigation

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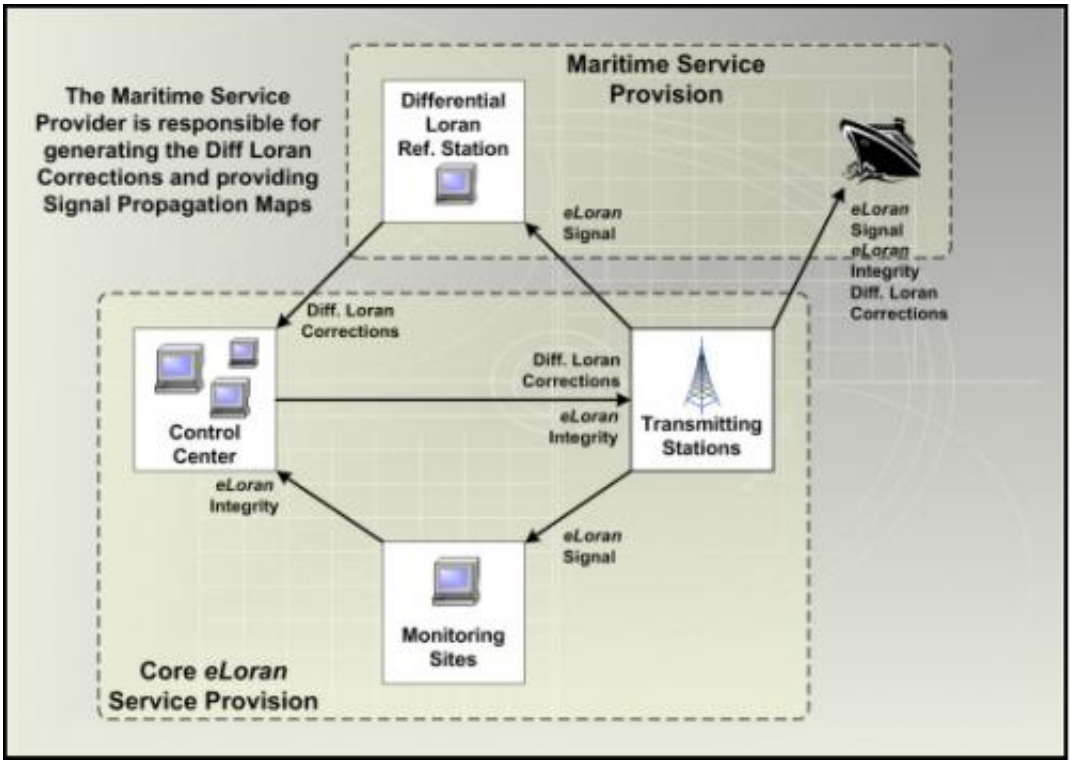

A differential-Loran System. Credit: International Loran Association. eLoran Definition Document. v1.0, 2007

The UK is on top of being GPS-fail proactive with its rollout of eLoran stations along the UK coastline. eLoran is now available at Dover and along the East coast of the UK. The rollout is for the purpose of backup to counter anything that goes wrong with GPS. The General Lighthouse Authorities (GLA) of the UK and Ireland announced the maritime

eLoran technology has reached the stage of "Initial Operational Capability," placing the UK as the first in the world to deploy this technology for shipping companies operating passenger and cargo services.

Seven reference stations are now in operation. Specifically, the General Lighthouse Authorities have finished installing eLoran in a number of ports along the east coast of Britain, said the BBC; this completes the first phase of the rollout. It is now in place in Dover, Sheerness, Harwich and Felixstowe, Middleborough, Leith, Humber and Aberdeen. As such, the stations are seen as an important support for safe shipping. Why seek an alternative backup to GPS? Both deliberate and accidental jamming are risks, causing concern because of the wide availability of GPS jammers online for as little as £30 capable of causing complete outages across all receivers currently on the market, said reports. An article about the eLoran stations in Digital Ship similarly said that "eLoran is seen as a vital backup to GPS, which is susceptible to interference from various sources, including space weather and GPS jammers."

The GLA say many critical instruments on ships use Global Navigation Satellite Systems, and if they fail the consequences could be disastrous. The new system, however, is ground- rather than satellite-based, in the event of a GPS failure. "All vessels that sail today are massively dependent on GPS," Martin Bransby, research and radio navigation manager for the General Lighthouse Authorities of the UK and Ireland, told the BBC. "It is their primary means of navigation - and a massive number of instruments rely on it too."

The eLoran move is called a milestone, setting a benchmark globally. Several nations, including South Korea, are now consulting with the GLA with a view to developing their own backup systems. said Digital Ship. A 2013 report in Inside GNSS said that with GPS jamming attacks from North Korea having increased in frequency and duration, the South

Korean government is interested in eLoran.

Prof. David Last from the Royal Institute of Navigation said that jamming was a real issue in Korea, according to the BBC. "There have now been three occasions when the North Koreans have transmitted high-powered jamming in South Korea." The Sun, he said, also can knock satellite systems offline.

Digital Ship, in the big picture, said the system is viewed as the most cost-effective alternative to GPS, and has potentially valuable applications that go beyond just the maritime world. "Unlike satellites, eLoran signals can reach inside buildings, under-ground and under water. That durability, combined with the timing signal delivered by the system, could be critical for the maintenance of the power grid, cell phones, financial networks, and the internet in the event of an outage."