GSM SMS

Datawell - Oceanographic Instruments

GSM SMS: a cost effective alternative to HF for near shore applications

GSM performance

GSM (Global System for Mobile communications) is the 2nd generation digital cellular network used by mobile phones. GSM supports voice calls and data transfer including the transmission of SMS (Short Message Service). GSM networks now cover more than 90% of the world's population in up to 219 countries. (GSM Association, www.gsma.com).

GSM is mostly used for wireless communication on land. However the coverage maps (e.g. of The Netherlands and United Kingdom, see other side) show that GSM coverage extends many kilometres out to sea. Experiments on the North Sea demonstrated reliable communication over distances more than 10 Km. This makes GSM a good data link alternative for buoys that are close to the shoreline.

Datawell GSM SMS option

The great advantage of the GSM link is the quick and easy setup. No worries about receiving stations near the shoreline, your network provider has already arranged for that. A PC and GSM modem with a small antenna in the office or on board the ship suffice.

To save buoy energy and telephone costs compressed wave spectra are transmitted at a user selectable interval via SMS (Short Message Service a.k.a. text messages). GPS location and buoy status are also transmitted.

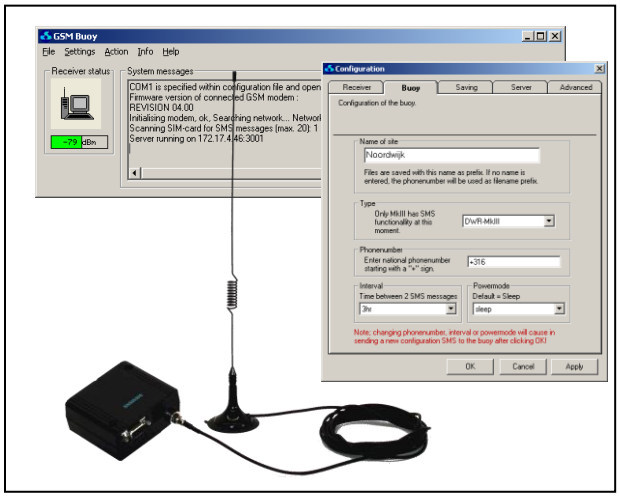
Use Datawell GSM receiver software "gsmBuoy" for buoy (re)configuration and collecting incoming messages. Wave spectra can be viewed with the W@ves21 software.

GSM network information

In order to determine if the GSM link is suited for your situation and to determine the proper network provider, visit the GSM Association website:
www.gsma.com/aboutus → coverage maps
The buoy's GSM quad band modem can handle GSM 850, 900, 1800 and 1900 MHz frequency bands.

Features of the Datawell GSM SMS link

- Receiver: GSM module + desktop antenna + PC.
- Receiver location independent of buoy location.
- GSM network automatically tracks buoy upon buoy re-deployment or in case of (un)intended buoy drift.
- Simultaneous logging of multiple buoys.
- Get buoy data on any location (office, onboard, car).
- Reliable cost effective data transfer over GSM network infrastructure.
- Easy functionality check using your mobile phone.
- Receive latest compressed spectrum at ½-, 1-, 2- or 3-hourly intervals.
- Receiver unit may be down for several hours without any data loss due to network provider buffer.
- Optional iBuoy software for transmission of full spectrum and other data. Read technical note "iBuoy for Iridium and GSM" for more information.



Datawell BV
Zomerluststraat 4
2012 LM Haarlem
The Netherlands

T +31 72 534 52 98
F +31 72 572 64 06
E sales@datawell.nl
W www.datawell.nl

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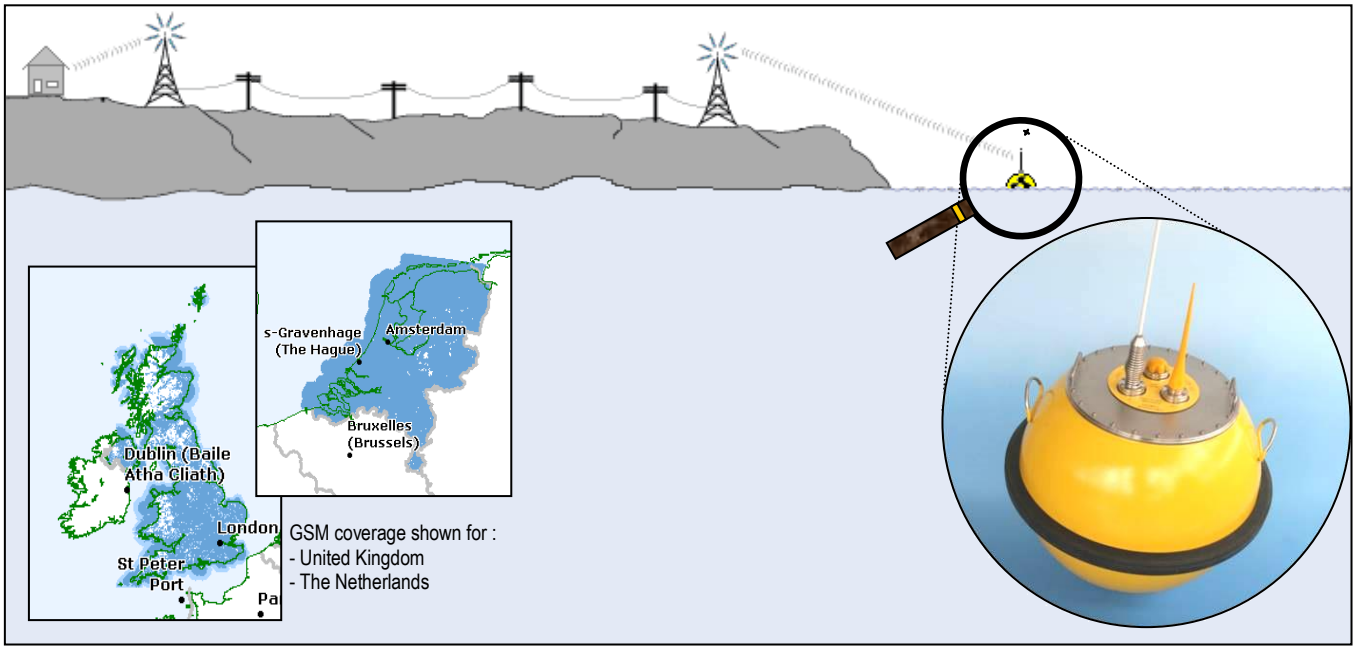
Specifications

GSM modem	Frequency band	Quad-band : GSM 850 / 900 / 1800 / 1900 MHz
	Output power	Class 4 (2 W) @ 850 / 900 MHz Class 1 (1 W) @ 1800 / 1900 MHz
	Energy consumption	< 60 mW (continuous)
	SIM card	prepaid Mini-SIM card subscription Mini-SIM card
General	Data	Argos 31 byte (transmission over SMS in PDU format)
	Update interval	every ½, 1, 2 or 3 hours
	Interface	desktop GSM modem connects to PC via RS-232 serial
	Software	gsmBuoy, W@ves21
	Availability	DWR-MkIII, DWR-G



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