E-GEAR:
connected fishing gears #OceanofThings (OoT)

Authors: Gaëtan Fabritius (1) & Pierre Vassal (2)

Abstract: The CLS E-GEAR program is leveraging disruptive satellite-based IoT connectivity KINEIS to tackle different challenges related to fishing gears (safer operations, marine litter, precise and sustainable management of marine resources etc.). The KINEIS Newspace connectivity is today making such an E-GEAR program technically and economically viable. This change of paradigm is suddenly opening up new horizons for the ocean observation community in relying on such global and collaborative opportunities to collect in-situ data. CLS, in cooperation with IFREMER and partners, is relying on its expertise in the fisheries industry and oceanographic community to make it possible along the CLS promoted #OceanofThings (OoT) concept to feed existing networks and communities.

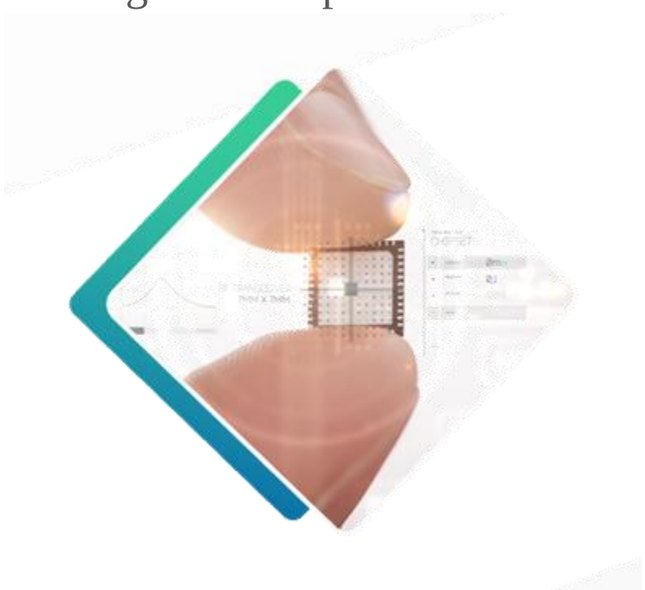

Fig.1: Argos New Generation Chipset

Fig.2: example of E-GEAR tag

Fig.3: E-GEAR tag fishing data close to anchored fishing net

1. INTRODUCTION

Satellite connectivy used to be a limiting factor for ocean observation capabilities and network, due to form factor, energy and cost. Newspace and KINEIS connectivity is challenging this and openning up new opportunities such as the E-GEAR program which intends to propose citizen science and collaborative efforts to collect information at sea, beyond other operational benefits for the fishermen and fisheries stakeholders.

Fig.4: Drifting simulation, visualisation of data

Fig.5: E-GEAR data flow

2. CLS E-GEAR PROGRAM

First of all, and beyond the collection of in-situ data, E-GEAR is:

- An operational tool for fishermen's at sea operations
- A solution to better fight against ALDFG / Ghost Fishing / Marine Litter as per IMO MARPOL
- A tool to support sustainable management of marine resources
- A tool to support local circular economy initiatives

gfabritius@groupcls.com & pvassal@groupcls.com