

Draft Data Specification for On-Demand Fishing Gear

Data Element	Transmission Type	Operator	Enforcement	Ocean User/ Mobile Vessel	Gear Manufacturer	Fisheries Manager
Unique Owner ID	Priority Cloud	Y	Y		Y	
Device ID	Acoustic/Priority Cloud	Y	Y		Y	
Device Trawl ID	Priority Cloud	Y	Y	Y	Y	
Device Health	Acoustic/Delayed Cloud	Y	Y		Y	
Device Status	Acoustic/Delayed Cloud	Y	Y		Y	
Device Location	Priority Cloud	Y	Y	Y	Y	
Device Datetime	Priority Cloud	Y		Y	Y	
Release Notification	Acoustic	Y	Y		Y	

Table 1. Draft data fields for on-demand fishing gear devices, as identified by enforcement, fishery managers, and industry representatives. The table breaks down data access by user permission and data transmission priority. Live access (Y) refers to a data element that would need to be available in real time for various user groups.

Glossary of Data Elements

Unique Owner ID - Identification number of an individual user that can be tied to vessel ID, hull ID, operator ID, permit #, license #, and/or vessel name.

Device ID - Device ID may contain a standardized code for the device manufacturer, year, model, serial number, and class of release (e.g. acoustic, galvanic, timer, etc). The specific structure of the code should be as short as possible to reduce data payloads for satellite (priority) transmissions.

Device Trawl ID - Device Trawl ID is used to connect two devices that are on the same trawl so that it can be displayed appropriately on a chart plotter.

Device Health - refers to some metric that describes the device's remaining capacity for release, such as battery % or air pressure (PSI), depending on the type of release system being used.

Device Status - Refers to some list of yet to be determined statuses (e.g., 'armed', 'malfunction', 'deployed'), possibly communicated in 2 byte true/false array.

Device Location - Decimal degrees (or smallest data load) out to some number of decimal places.

Device Datetime - Time and date of the initial setting of gear (UTC)

Release Notification - An acoustic message from the device that notifies the user that the activation of the device has been initiated.

Glossary of Transmission Type

Acoustic - This refers to the mode of communication that the device will need to use if interrogated acoustically.

Priority Cloud - This refers to data fields that may be required to be sent to the cloud as soon as possible with either a cellular or satellite connection.

Delayed Cloud - This refers to data fields that may be required to be sent to the cloud, but may not need to be sent by a satellite connection. These data are generally not time sensitive or necessary to prevent gear conflict, but should be sent when the user is within cellular range.