NOAA's Beacon Registration Database (RGDB)

SARSAT Beacon Manufacturers Workshop 2021

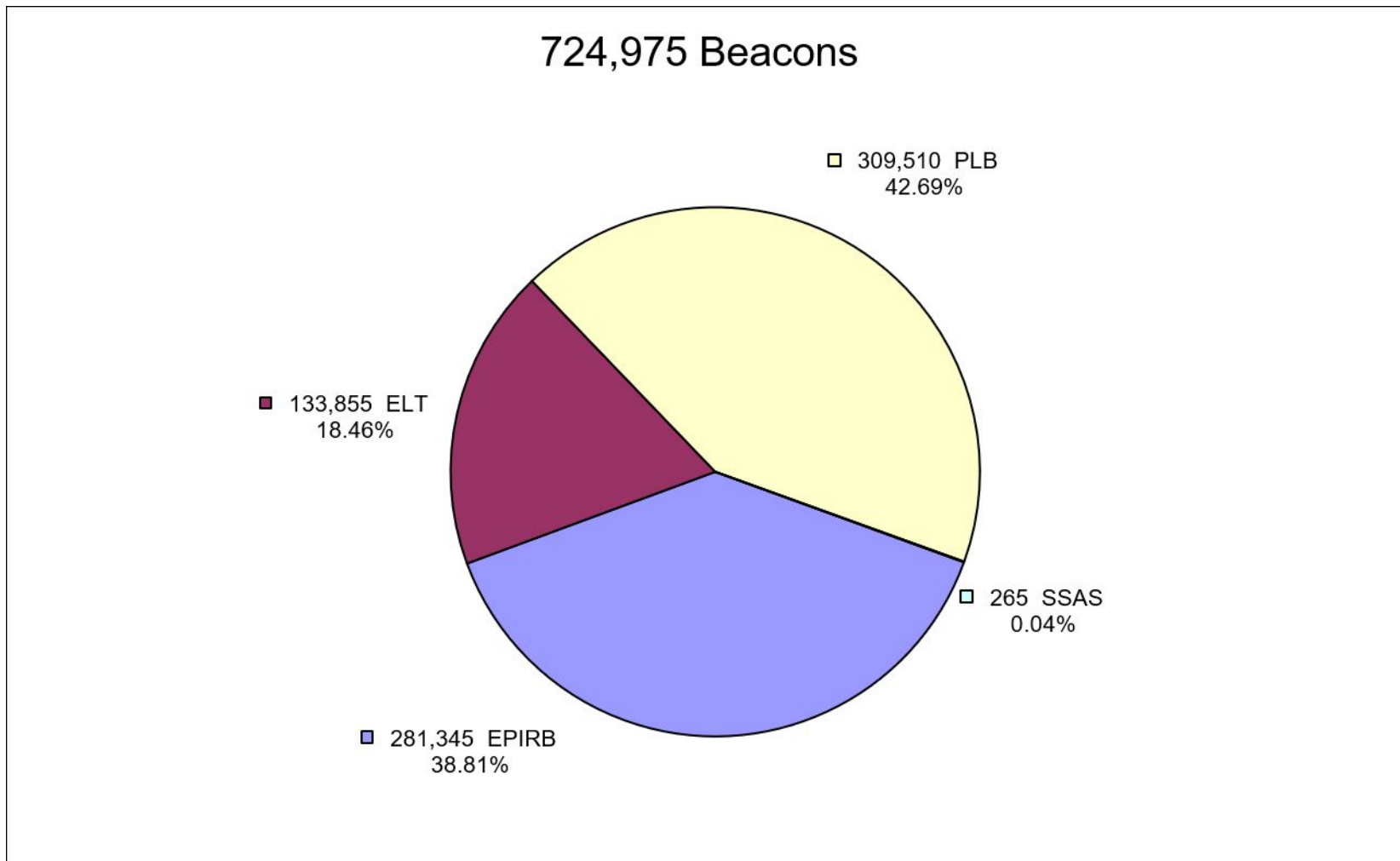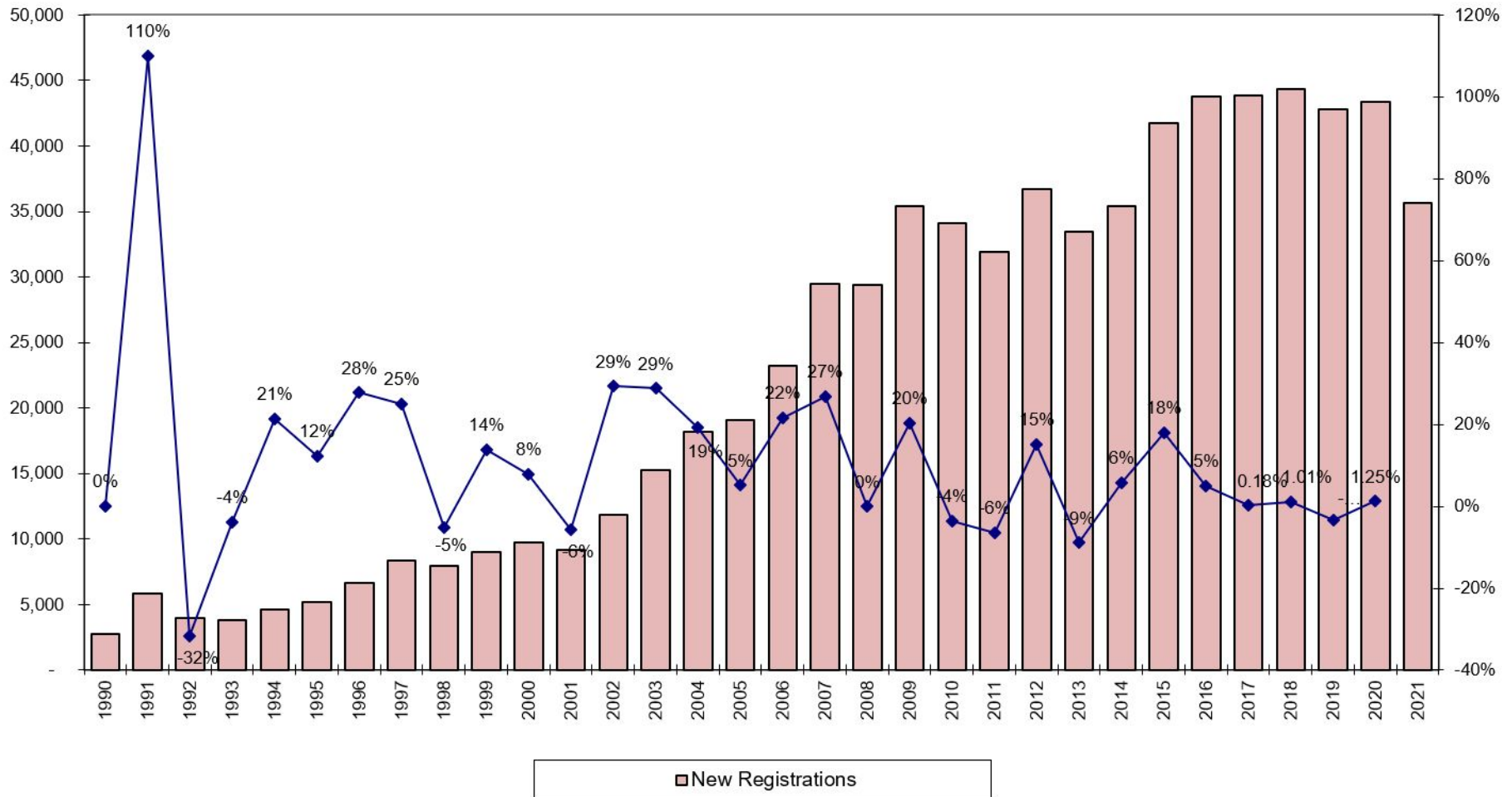Apurve Mathur

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Registration Database Lead

Topics That Will Be Covered

- RGDB Statistics

- Registration Forms and Beacon Labeling

- Beacon Servicing

- UIN Errors and Beacon Recalls

- Beacon Disposal

- New RGDB Website Features

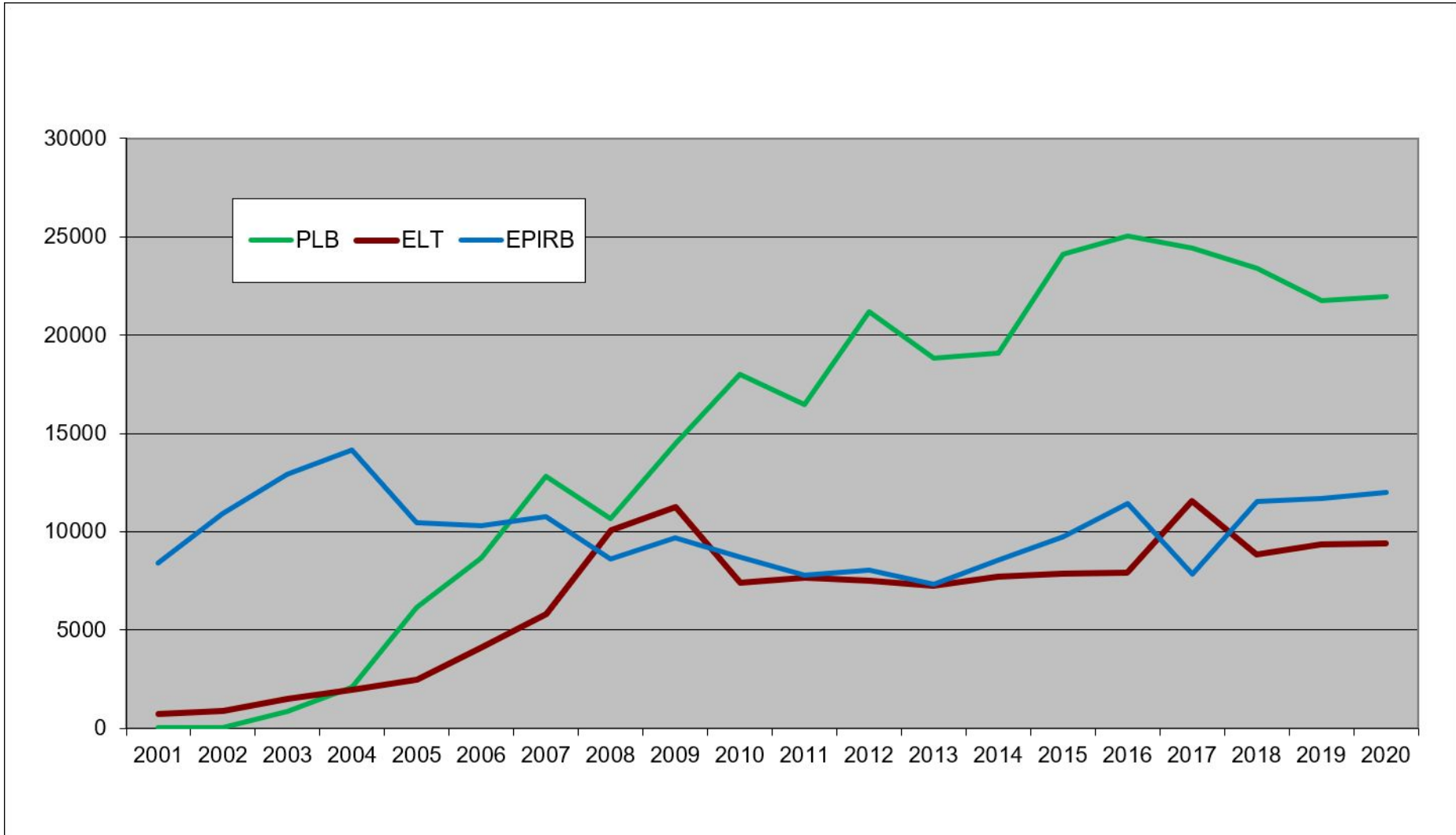# Registered Beacons by Beacon Type (Current to August 2021)

724,975 Beacons

- 309,510 PLB — 42.69%
- 133,855 ELT — 18.46%
- 281,345 EPIRB — 38.81%
- 265 SSAS — 0.04%

New Registrations by Year
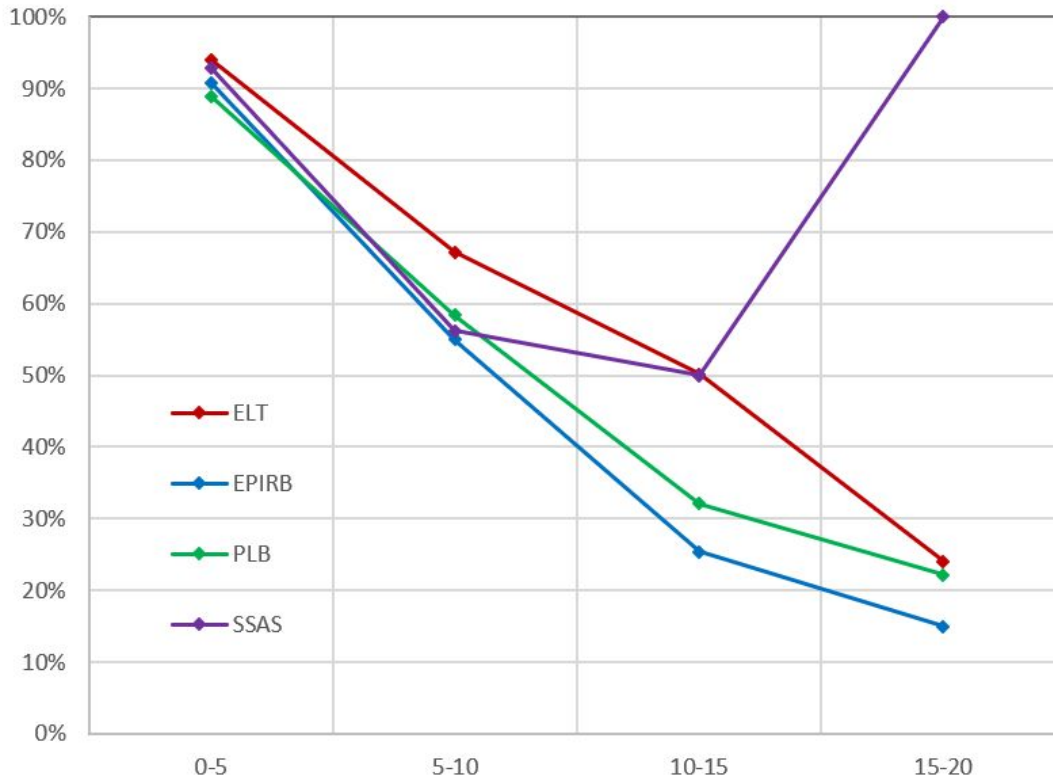# (1990 - August 2021)

New Registrations by Type (2001 – 2020)

Registration Renewal/Currency – By Beacon Type

% Active Beacon Registrations by Age (5-year Bins)

Of beacons registered in the last 5 years,
94% of ELTs,
90.8% of EPIRBs, and
88.9% of PLBs have
been updated/renewed
within the past 2 years.

	Actual Number of Beacons by Years			
	0-5	6-10	11-15	16-20
ELT	51,665	15,762	9,363	598
EPIRB	73,013	18,083	8,710	4,349
PLB	128,134	46,950	14,789	1,329
SSAS	13	9	18	3

Access to RGDB Statistics

Registration statistics are updated on a monthly basis on the NOAA SARSAT website at:

www.sarsat.noaa.gov/statistics.html

This file shows

- First-time registrations by beacon type for each month from April 2016 through the most recent month

- Cumulative registered beacon counts by type of beacon

Registration Forms and Beacon Labeling

Provide owners with **the latest** NOAA registration form, found at:

https://beaconregistration.noaa.gov/RGDB/forms

Affix a legible UIN label to the blank registration form and ensure that it matches the UIN on the enclosed beacon. Follow these guidelines when creating your UIN labels:

- Use a large font size so owners can read the UIN correctly. Small fonts promote errors, particularly when an owner submits their registration by fax to NOAA.

- Use a font such as Consolas for all UIN labels to help owners distinguish between "0" and "D" and "8" and "B":

    0 1 2 3 4 5 6 7 8 9 A B C D E F

- Print UINs in appropriate groupings (5-5-5 for 15-hex; 6-6-6-5 for 23-hex), with a space separating each group of numbers; this improves owner accuracy when completing a paper form or registering online (see the form sample on page 11).

- Include the model number, serial number, and checksum on the label.

2nd Generation Beacon Registration Forms

2nd generation IDs are 23 characters vs. 15 for the current (1st generation) IDs

- NOAA will use a single form for each type of beacon (ELT, EPIRB, PLB) by adding another field for the 23-hex ID.

- The new forms will undergo OMB approval before they are uploaded to the website. This review can take 1-3 months to complete.

We request your feedback – especially any suggestions on how to make it easier for owners to fill out the beacon ID properly.

2nd Generation Beacons

- In addition to updating registration forms, the RGDB software will be updated to include a field for the 23-hex ID, new validation checks, and guidance.

- To help this rollout go smoothly, we need to make sure that we are using the same terminology that you will use. For example, how will you differentiate between 1st generation and 2nd generation beacons in your beacon packaging, literature, and on your website?

Beacon Servicing

- When servicing a beacon, check the NOAA decal registration expiration date and remind the owner to properly update/renew with NOAA if expired.

- When replacing a beacon, ensure the owner is aware that the new ID must be registered with NOAA and the old ID registration must be updated with the correct disposition of the old beacon.

- Include a registration form with the new ID whenever a beacon is reprogrammed.

- Inform the owner **in writing** that an ELT programmed with a 24-bit address or tail number ID must be reprogrammed if installed in a different aircraft.

Authorized Service Centers

We have noticed more issues with secondary beacon service providers and resellers in the last few years. Some of these issues have resulted in duplicate and incorrect IDs. You can help by:

- Communicating currently allowed beacon programming protocols for each generation of beacon (e.g., MMSI protocol is not allowed for 1st generation US-coded beacons, but will be included in the protocol for 2nd generation EPIRBs).

- Ensuring that centers have the most updated coding software.

- Implementing refresher training programs on reprogramming beacons.

- Developing a quality control program that includes the ability to monitor service center performance.

UIN Errors and Beacon Recalls

- To mitigate potentially serious problems, notify NOAA **immediately** of any of the following situations:

  1. Duplicate UIN encoded into any beacons
  2. UIN errors on forms or beacons
  3. Beacon recalls

- NOAA may be able to help investigate or communicate any potential issues to beacon owners. ***The goal is to save lives.***

Beacon Disposal (NOAA)

Landfill/dumpster activations are an increasing problem for SAR forces. They occur when beacons are not disabled and are thrown away with their batteries still installed.

- The RGDB website provides a link to the COSPAS-SARSAT beacon disposal guidelines (https://www.cospas-sarsat.int/en/beacon-ownership/disposal-of-old-beacons-and-old-batteries).

- In 2020 NOAA added text to most communications highlighting the importance of disabling a beacon prior to disposal, including a reference to the online C-S disposal guidelines.

- NOAA is considering adding disposal guidelines that would appear when an owner selects the "destroyed" status in their online registration.

Beacon Disposal (Manufacturers)

Beacon manufacturers play an important role in helping NOAA inform beacon owners about proper beacon disposal. Please consider:

- Sending us a list of the IDs for beacons you have received from owners and destroyed. One manufacturer is periodically providing a list to us, which allows us to reach out to beacon owners to ensure our database accurately reflects the beacon's status.

- Implementing a "buy-back" or "core-charge" incentive program for current owners to turn in their old, unserviceable beacons.

- Partnering with sellers or establishing service centers in high-use areas (e.g., Miami, Cape Cod, The Hamptons) to help increase proper servicing and/or disposal of old beacons.

New RGDB Website Features

- The "Frequently Asked Questions" page was significantly updated to provide useful information on beacons, registration, SAR response, and the COSPAS-SARSAT system.

- A mechanism was added to help owners link registrations to a user account based on their email address.

- For FGBs only, a validation was added requiring location protocol beacon IDs to end in FFBFF or 81FE0.

- Encoded tail number/24-bit address is now compared in real time to the tail number entered in the registration, highlighting mismatches that could be beacon ID errors (and therefore could affect distress response).

- A real-time check of the encoded TAC against valid TAC numbers was implemented to identify certain specific errors in beacon programming.

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