NOAA's Beacon Registration Database (RGDB)

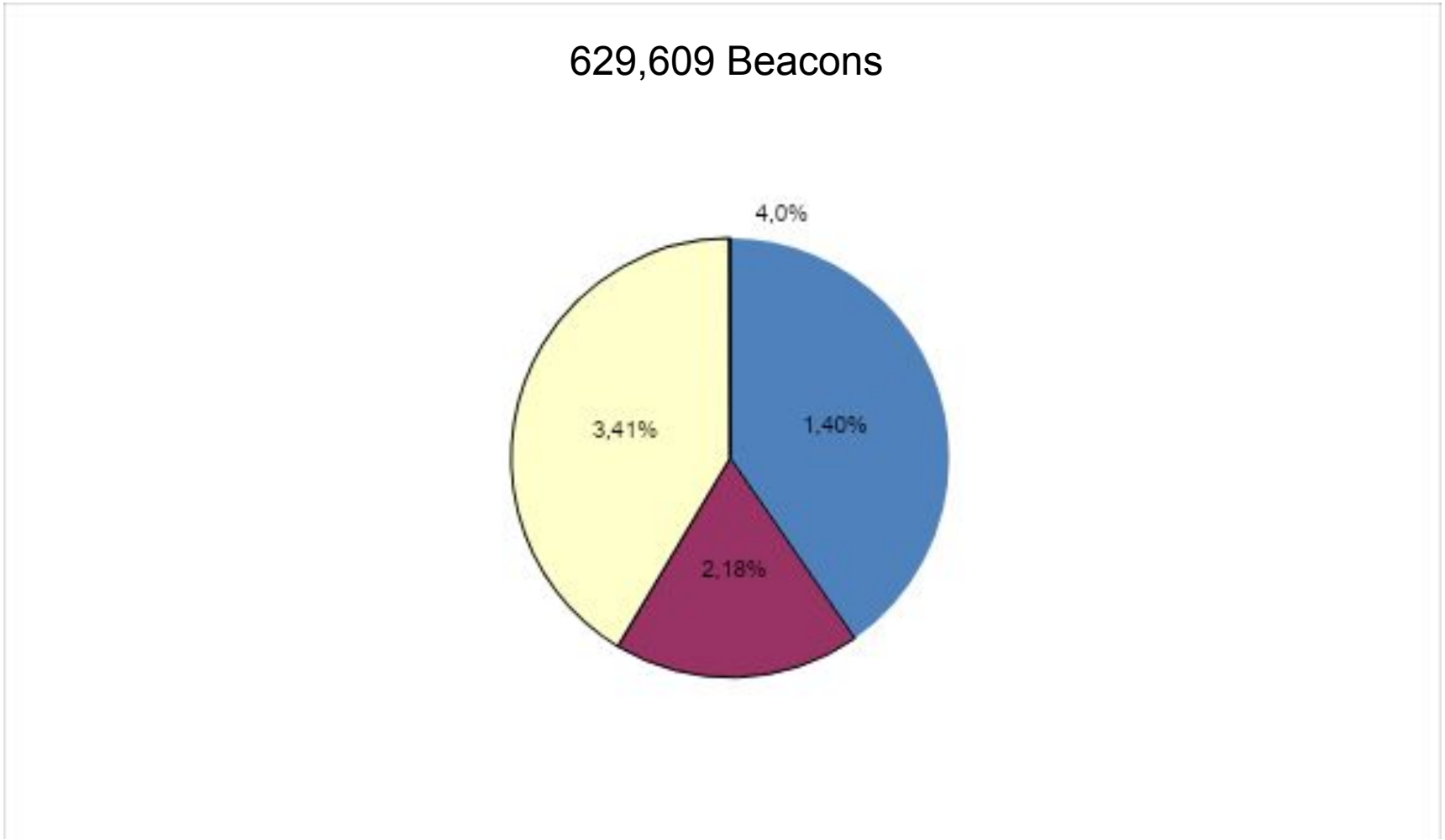
SARSAT Beacon Manufacturers Workshop 2019

Apurve Mathur
ERT, Inc.
Registration Database Lead

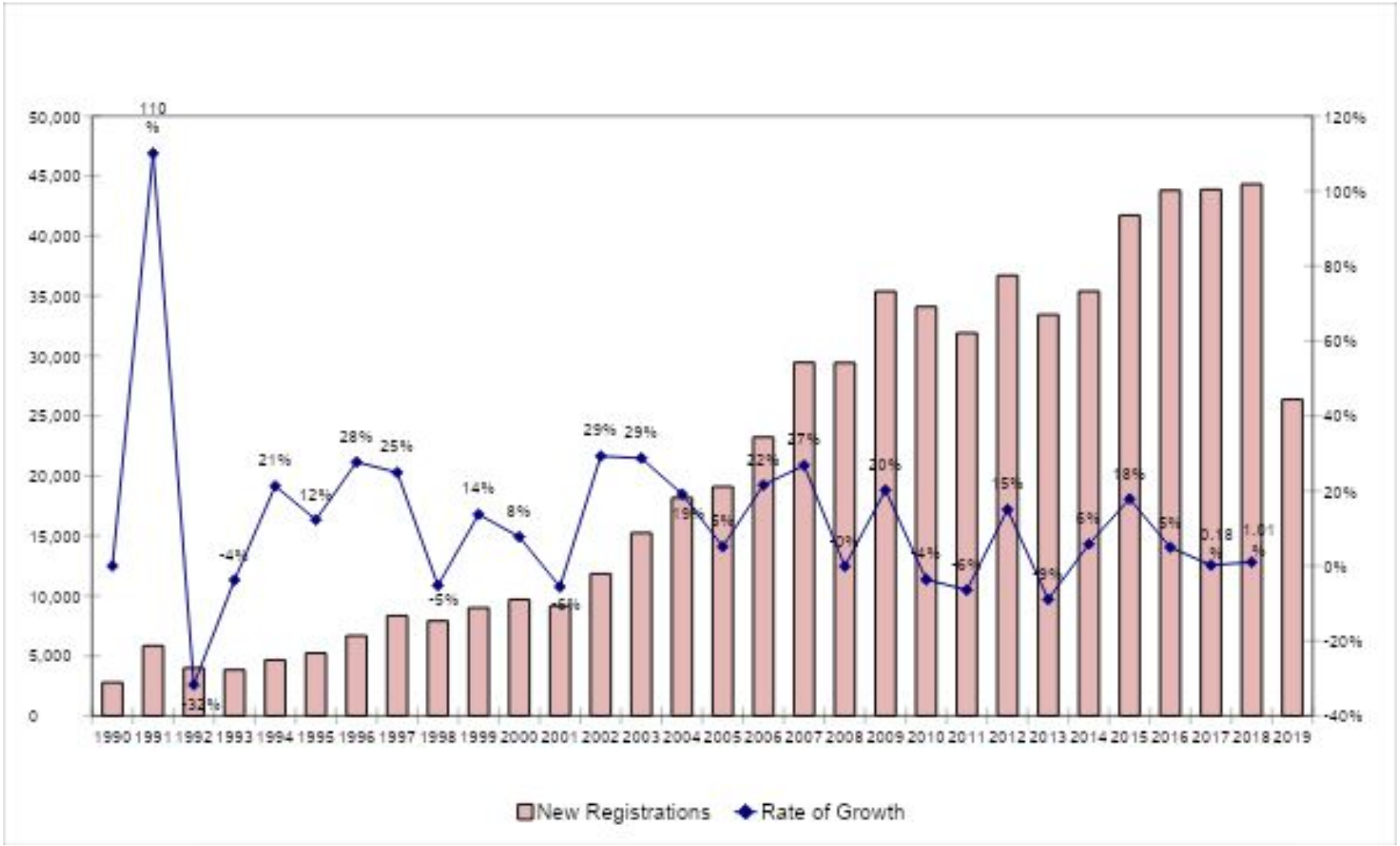
Topics That Will Be Covered

- RGDB Statistics
- Registration Website Improvements
- Checksum Implementation
- Forms and Labeling
- Beacon Servicing
- UIN Errors and Beacon Recalls
- National Use Beacons
- Beacon Disposal

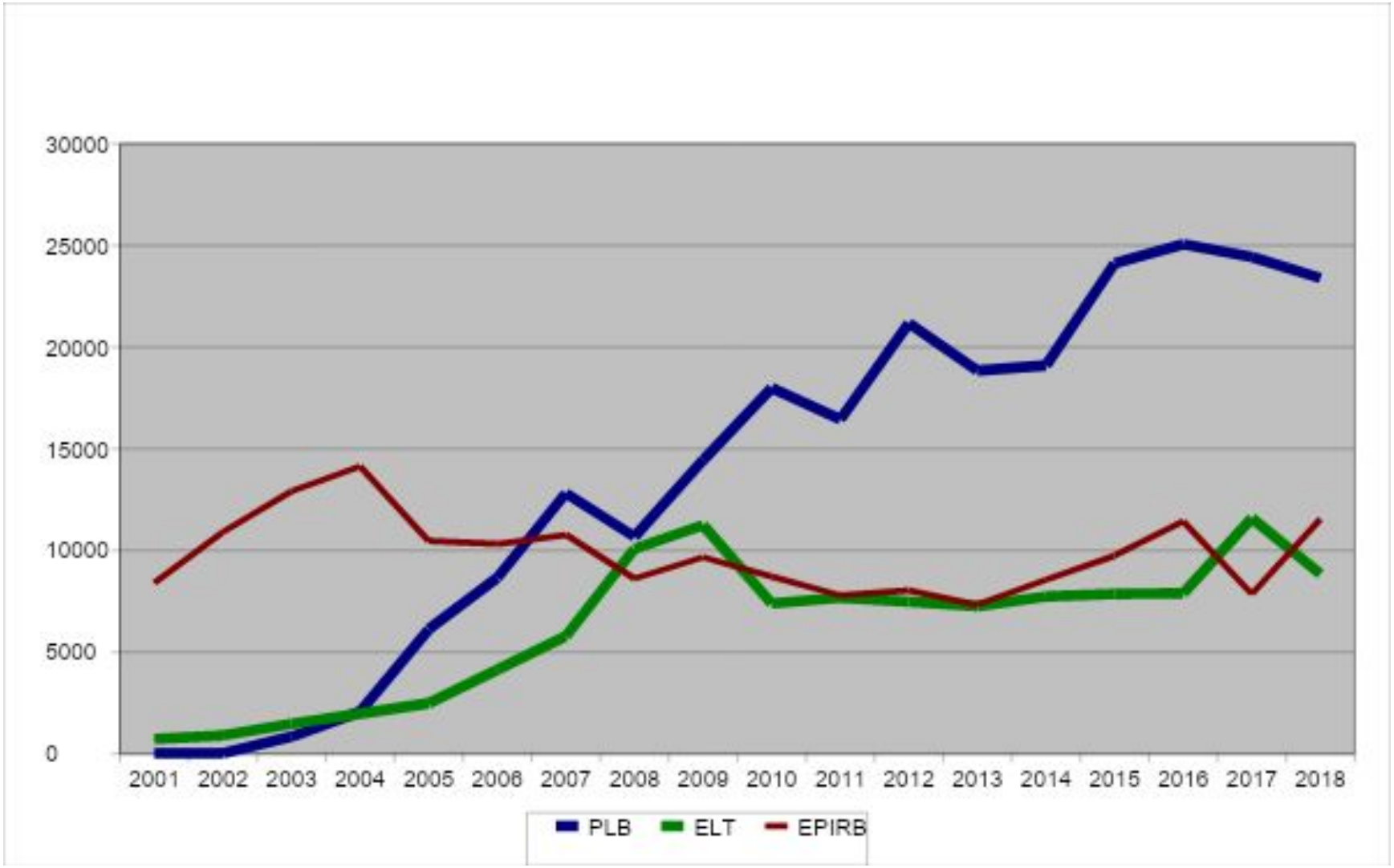
Registered Beacons by Beacon Type (July 2019)



New Registrations by Year (1990 - July 2019)



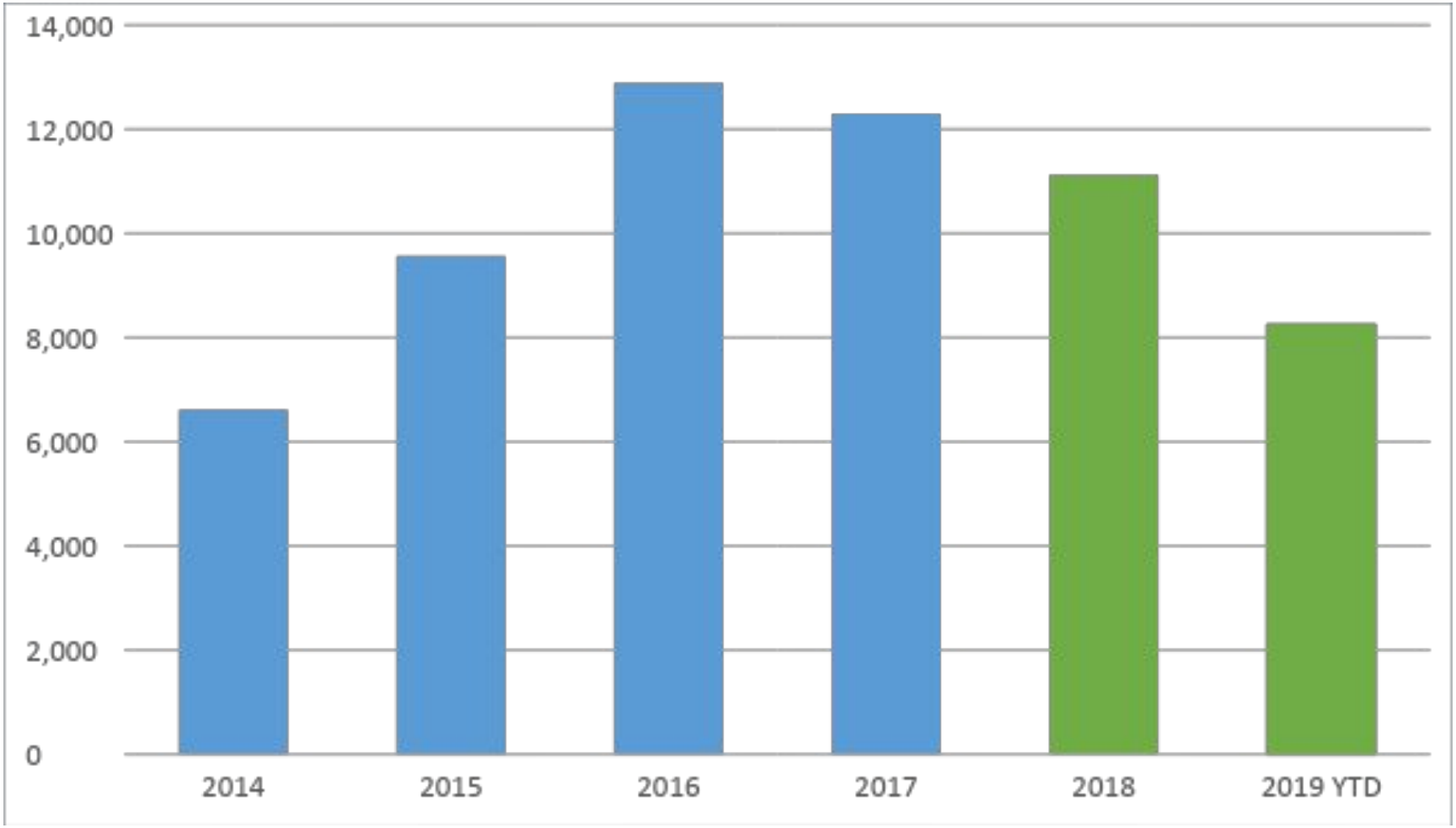
New Beacon Registrations by Type (2001 - 2018)



Registration Renewals by Month (July 2018 - July 2019)

Mon-Yr	Updated by Owners Through Website	Updated by NOAA	Total Registration Renewals	Percentage Updated by Owners Through Website	Percentage Updated by NOAA
Jul-18	38,361	11,526	49,887	77%	23%
Aug-18	40,041	11,467	51,508	78%	22%
Sep-18	31,292	7,818	39,110	80%	20%
Oct-18	33,724	8,777	42,501	79%	21%
Nov-18	35,261	8,281	43,542	81%	19%
Dec-18	27,620	7,284	34,904	79%	21%
Jan-19	39,418	8,033	47,451	83%	17%
Feb-19	38,447	8,392	46,839	82%	18%
Mar-19	42,866	11,275	54,141	79%	21%
Apr-19	40,056	10,385	50,441	79%	21%
May-19	43,352	11,005	54,357	80%	20%
Jun-19	42,591	10,380	52,971	80%	20%
Jul-19	38,395	9,620	48,015	80%	20%

Florida EPIRB & PLB Counts



Teen boating accident occurred in July 2015
FL legislation reducing vessel registration fees took effect in July 2016

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

RGDB Website Improvements – Changes of Ownership

The RGDB accepts "pending" registrations for UINs that are already actively registered, which increases accuracy and compliance:

- The new owner's registration information is stored in the RGDB until NOAA confirms the transfer of ownership.
- RGDB automatically notifies the current registered owner by email after the pending registration is submitted and provides a 1-click option to release the registration to the pending owner.
- RGDB automatically contacts the new owner of the beacon when their email or postal address is provided by the current registered owner to encourage complete registration.

Other RGDB Website Improvements

- Challenge questions allow quick, secure access.
- Real-time entry checks highlight data inconsistencies and errors.
- Registration reminder emails have embedded links allowing owners to easily renew with no changes or log in to update their information.
- Registrations are now uploaded and archived electronically, allowing workflow monitoring from input to quality check, improving accuracy and providing immediate access to records.
- The RGDB website address is now provided on the NOAA decal for all beacon types:

NOAA's Checksum Implementation

- NOAA's OMB-approved registration form contains a 5-digit checksum field, which is used by the RGDB to verify the 15-hexadecimal UIN.
- The checksum is not provided by all manufacturers at this time.
- Currently, owners can enter a registration in the RGDB regardless of whether the checksum value is correct, incorrect, or absent. This is intended to minimize owner confusion and frustration and hopefully increasing compliance (to register).
- The RGDB includes real-time checks that flag mismatches of the UIN and checksum values.
- Registrations entered with mismatches prompt the RGDB to automatically send an email or letter to the owner requesting them to verify the UIN, thereby allowing early determination of errors.

Manufacturers' Checksum Implementation

Standards are being updated to require all manufacturers to provide checksum values for new EPIRBs and PLBs.

- In preparation, NOAA requests that manufacturers start generating checksum values for new beacons.
- The checksum value should be printed on both the manufacturer decal that is affixed to the beacon and the decal affixed to the new registration form.
- For questions on implementing the checksum contact Jesse Reich, SARSAT Ground System Engineer:

jesse.reich@noaa.gov

301-817-4509

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.
- Use a font such as Consolas for all UIN labels to help owners distinguish between “0” and “D” and “8” and “B” and therefore help reduce UIN errors during the registration process:

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

- Include the model, serial number, and checksum on beacon labels.

Beacon Servicing

- When servicing a beacon, check the NOAA decal registration expiration date and remind the owner to properly renew with NOAA if expired.
- When replacing a beacon, ensure the owner is aware that the new UIN must be registered with NOAA and the old UIN registration must be updated with the correct disposition of the old beacon.
- Include a registration form with the new UIN whenever a beacon is reprogrammed.
- Inform the owner **in writing** that an ELT programmed with a 24-bit address or tail number UIN must be reprogrammed if installed in a different aircraft.

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.***

Programming National Use Beacons

- When a US Government agency orders beacons, ask the buyer to contact NOAA to ensure that special coding and processing are considered.
- NOAA will provide information on:
  - The C-S system and how alerts from their beacons will be distributed
  - Beacon operation and how to prevent false alerts
  - The importance of following proper test policies and procedures
  - Appropriate procedures to follow during beacon servicing (to ensure that the same beacon is returned to the owner)

Beacon Disposal (NOAA Efforts)

Landfill/garbage activations are an increasing problem for SAR forces. They occur when beacons are thrown away with their batteries still intact.

- The RGDB website provides a link to the COSPAS-SARSAT beacon disposal guidelines.
- NOAA is considering adding text in certain communications to highlight the issue and provide a direct link to the C-S disposal guidelines.
- NOAA is considering adding disposal guidelines that would appear when an owner selects the “destroyed” status in the RGDB.

Beacon Disposal (Manufacturers)

Beacon manufacturers play an important role in helping NOAA inform beacon owners about proper beacon disposal.
The following ideas may be viable for your company:

- Consider a “buy-back” or “core-charge” incentive program for current owners who purchase new beacons.
- Consider that service center locations near high-traffic areas (e.g., Florida, California) may help increase accurate disposal of old beacons.
- Ensure and/or increase the distribution of beacon registration forms and handling information to second-hand buyers.

Contact Information

Apurve Mathur
ERT, Inc.
Registration Database Lead

Apurve.Mathur@noaa.gov
301-817-4542