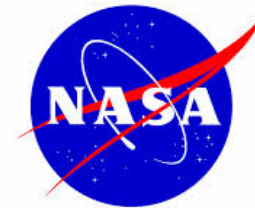# NOAA's
Beacon Registration Database (RGDB)

SARSAT Beacon Manufacturers Workshop 2020
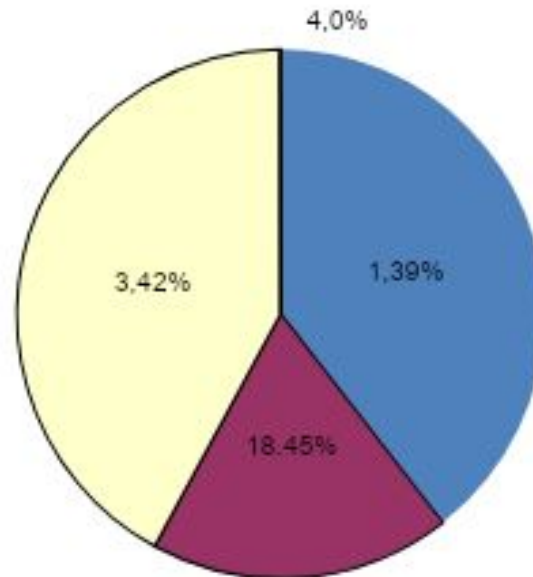Apurve Mathur
ERT, Inc.
Registration Database Lead

Topics That Will Be Covered

- RGDB Statistics
- Registration Website Improvements
- Registration Website Features
- Registration Forms and Beacon Labeling
- Beacon Servicing
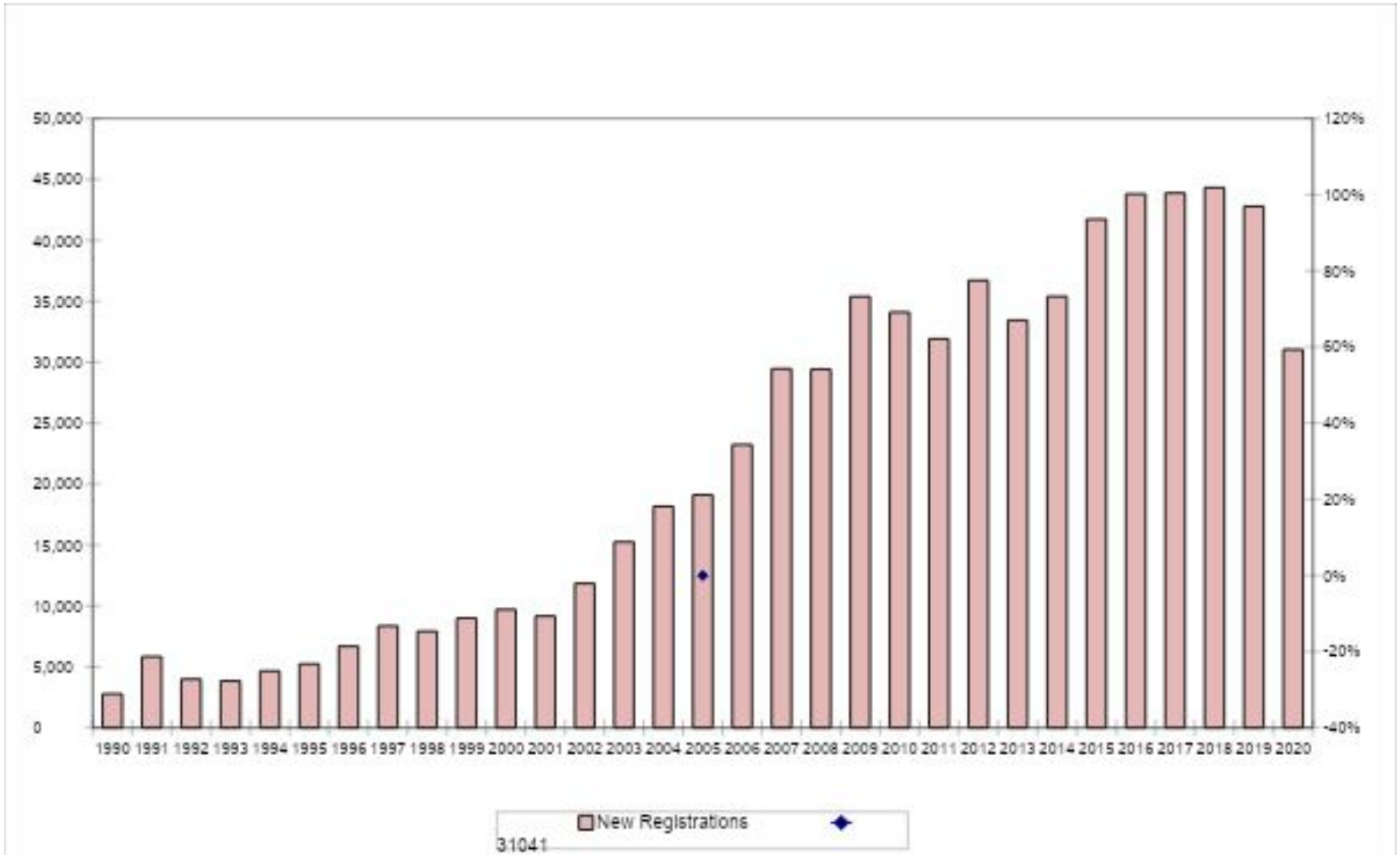- UIN Errors and Beacon Recalls
- Beacon Disposal

Registered Beacons by Beacon Type
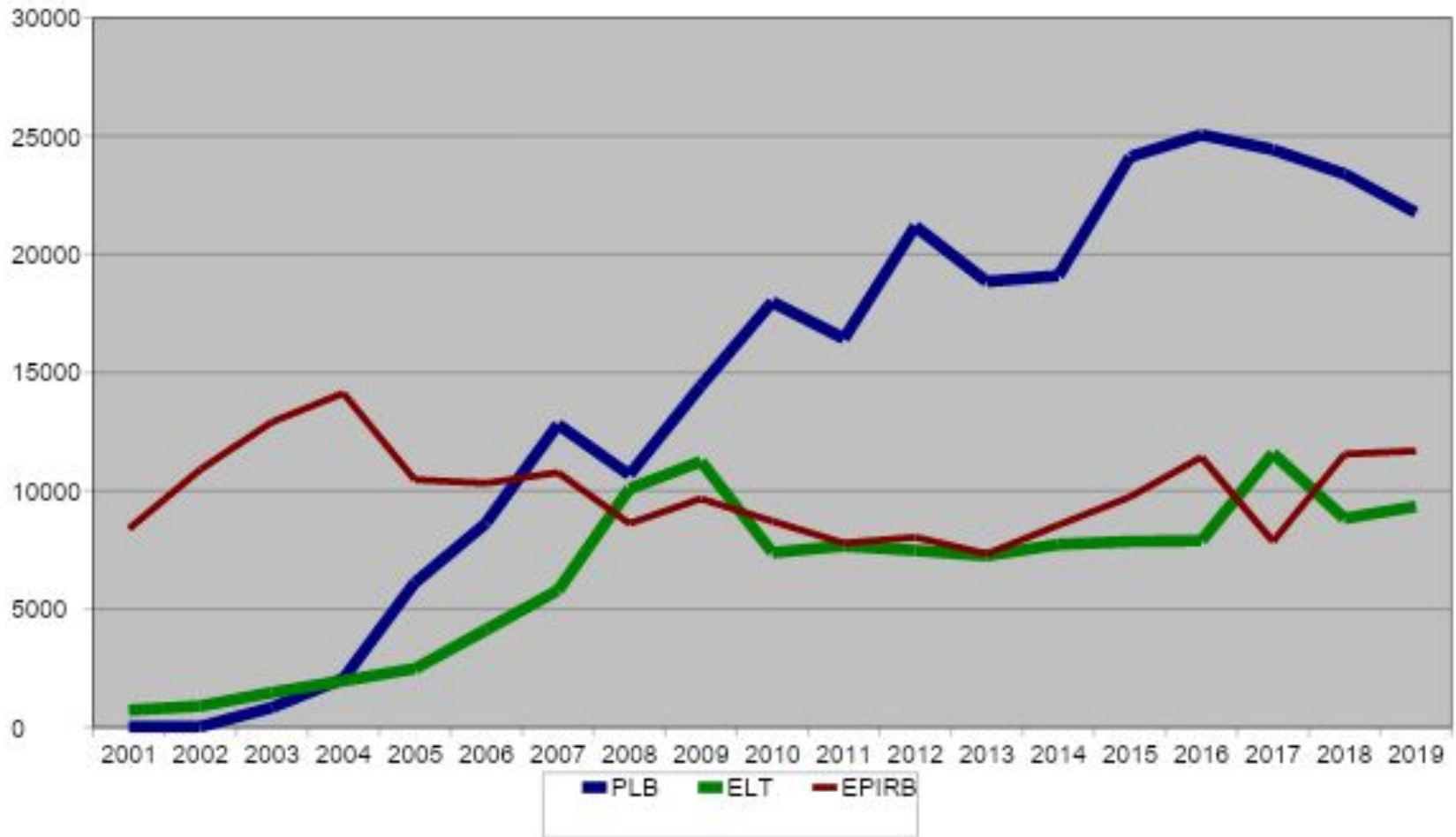# (Current to August 2020)

677,065 Beacons

4,0%

3,42%

1,39%

18.45%

New Registrations by Year
(1990 - August 2020)

New Registrations by Type
(2001 – 2019)

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
To Identify Incorrect IDs

- Added checks for location protocol beacon entries to prevent anything but FFBFF or 81FE0 for the last 5 characters of the ID.

- Added validation for encoded tail number against tail number entered into the registration (for ID protocols that encode 24-bit or tail number)

  - Check is real-time during registration or update

  - Provides a visual queue and warning message when encoded tail number is different than entered tail number

  - Provides added detection of beacon ID errors and situations where beacons are swapped into different aircraft (which could affect distress response)

RGDB Website Improvements
To Identify Incorrect IDs

- Added a COSPAS-SARSAT Type Approval Certificate (TAC) number validation check:

  - The valid TAC number list is downloaded from COSPAS-SARSAT website each month and uploaded into the RGDB as a configuration file.

  - During initial registration, a real-time check of the encoded TAC against valid TAC numbers (for ID protocols that encode TAC) is performed.

    - When the TAC programmed into the ID does not match, this message is displayed asking the registrant to verify the ID:

      ⚠ **Please verify that the beacon ID you entered is correct.** Only the letters A through F and the numbers 0 (zero) through 9 are used in a beacon's 15-character unique ID. (Note that it is common to mistake the letter B for the number 8 and the letter O for the number 0 when entering the ID.) Please check your beacon ID and update your entry if necessary, then continue with your registration.

    - The registrant can continue to register the beacon, but a follow-up email or letter will be sent to them.

    - The RGDB flags all invalid TAC number beacon IDs, allowing staff to search the database and perform additional follow-up when necessary.

RGDB Website Features – Changes of Ownership

The RGDB accepts "pending" registrations for beacon IDs that are already registered, which increases accuracy and compliance.

- The new registration is stored in the RGDB until NOAA confirms the transfer of ownership.

- The RGDB automatically sends the currently registered owner an email upon submission of the pending registration. The email provides a 1-click option to release the registration to the pending owner without having to log in to the RGDB.

- The RGDB allows the seller of a beacon to enter contact information for the purchaser and automatically sends an email or letter requesting registration.

Other RGDB Website Features

- 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 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 provided on the NOAA decal for all beacon types:

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. Please follow these guidelines when creating your UIN labels:

- The font size of the beacon ID should be large so owners can read the ID correctly. Small font size causes errors for all users, 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" to reduce ID 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 the label.

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 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 been noticing more issues with secondary beacon service providers in the last year. Some of these issues have resulted in duplicated and incorrect IDs. You can help by:

- Communicating current beacon programming protocols (e.g., MMSI protocol is no longer allowed for US-coded beacons).

- 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 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 added text on May 7, 2020 for certain communications to highlight the issue (remove battery from beacon prior to disposing) and provide a direct link to the C-S disposal guidelines.

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

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 providing a list of the IDs for beacons you have accepted from owners and which were disposed.

- 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

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