



Beacon Modernization

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Process

- EWG to develop Operational requirements
 - In years past, operational requirement were defined from capabilities.
 - Complete
- EWG to develop technical/operational trade-offs
 - First meeting end of Mar of this year



Operational Requirements

- **Compatibility with the Cospas-Sarsat System**
- **Independent Location Capability**
- **Independent Location Accuracy**
 - - 5 km, 95% of the time, within 30 seconds after beacon activation;
 - - 1 km, 95% of the time, within 5 minutes after beacon activation;
 - - 100 m, 95% of the time, within 30 minutes after beacon activation.



Operational Requirements

- **First Burst Transmission Timeliness**
 - The beacon shall transmit a valid message within [3] seconds after activation. The
 - transmission shall meet appropriate signal characteristics.
- **Increased Performance in First Thirty Seconds of Distress Alert Transmission**
- **Beacon Unique Identification**



Operational Requirements

- **Beacon Message Content**

- Identification (ID): To be used for MCC, RCC, and SPOC operations and for Registration Database lookup. The identification shall include:
 - a country code, and
 - additional information that uniquely identifies the beacon when combined with the country code.
- Elapsed time: Time elapsed since the beacon was activated (48 hrs maximum with 1 hr resolution).
- Beacon type: Identifier of the beacon type (ELT, EPIRB, PLB, SSAS, Test, Orbitographie, Multi-Environnement, plus nine spares).
- Type of homing/locating device: Identifier for the technology supported by the beacon for on-site location (121.5 MHz homer, 9 GHz SART, AIS, 406 MHz homer, plus four spares).



Operational Requirements

- **Operating Life Time**

- The beacon shall operate at specified temperature extremes and meet all required signal characteristics for a minimum of 24 hours.

- **Temperature Range of Operation**

- Class 1: -40 C to + 55 C.
- Class 2: -20 C to + 55 C.



Operational Requirements

- **Self-Test Function**
 - The number of self test transmissions should be limited to avoid possible abuses, such as tracking applications.
- **Cancellation Function of False Alert by User**
- **Indicator of Beacon Activation**
 - Aural and visual indicators
- **Verification of Beacon Registration**



Operational Requirements

- **Homing and On-Scene Locating**



- Questions