

Element within Type-Approval Specifications	Draft Type-Approval Specifications for Reinstating Historical cELB Program for Shrimp Fishery	Type-Approval Specifications for Instituting NOAA OLE VMS Requirement for Shrimp Fishery
<b>Vessel Monitoring System Type-Approval Process</b>	<p>This section of cELB draft specifications and the NOAA OLE VMS specifications are largely the same, with the following exceptions:</p> <ul style="list-style-type: none"> <li>Any reference to EMTU, EMTU-C, VMS, or MTU in the VMS specifications is replaced with “hardware/software device” in the cELB specifications.</li> <li>Any reference to NMFS Office of Law Enforcement in the VMS specifications is replaced with “NMFS” in the cELB specifications; NOAA OLE is specifically excluded for transmission purposes in the cELB specifications.</li> <li>Applicability subsection of cELB specifications is amended to reflect devices on federally permitted shrimp vessels utilized to collect position data when shrimping for use in NMFS shrimp effort algorithms.</li> <li>In the cELB specifications, at-sea testing was made a requirement rather it being optional, as it is in the VMS specifications, and several specific testing protocols were detailed to ensure they are addressed.</li> </ul>	
<b>Communications Functionality</b>	<p>Must be able to:</p> <p>Transmit automatically generated 10 minute interval time-stamped position fix data from a hardware/software device installed upon the vessel when in range of non-roaming cellular communications service.</p> <p>Have one-way communication from the vessel to NMFS.</p> <p>Have communication and data mechanisms that are compatible with NMFS SEFSC cELB effort analysis programs.</p>	<p>Must be able to:</p> <p>Transmit automatically generated position reports, have visible/audible alarms, have two-way communications between unit and authorized entities, run/connect to dedicated message terminal and display component capable of running software that sends and receives electronic forms and internet email messages, messaging and communications that are completely compatible with NOAA vessel monitoring surveillance software, enable billing to be parsed out to show costs for government and owner of vessel.</p>
<b>Position Report/Fix Data Formats &amp; Transmission</b>	<p>Upon installation of the hardware/software device, position fix must be automatically recorded at 10-minute intervals to a file on the device’s local hard drive anytime the device is powered on.</p> <p>Accuracy of the reported position must be within 100 meters (328.1 ft).</p> <p>Must store minimum of 14,400 position fixes on local hard drive.</p> <p>When hardware/software device is powered up, it must automatically re-establish recording required data.</p>	<p>Must transmit all automatically generated position reports &amp; automatically re-establish position reporting function when powered.</p> <p>Position reports must contain unique identification of the device, position fixed latitude and longitude with date and time stamp, position accurate to within 100 meters (328.1 ft).</p> <p>Must store 1,000 position fixes in local non-volatile memory.</p> <p>Must allow for authorized user to remotely change reporting/ping interval from the standard pre-programmed interval for the fishery.</p>

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	<p>Transmitted position fix data must include date, time, latitude, longitude and a unique identifying number for the device.</p> <p>Data transmitted automatically to NMFS (excludes NOAA OLE) when within range of a non-roaming cellular mobile communications network.</p> <p>If program fails to transmit data, an automatic retry feature is enabled.</p> <p>Time-stamped position fix data must be in a format compatible with NMFS cELB effort analysis programs.</p>	<p>In addition to the automatically generated position reports, additional position reports must be generated when: antenna is disconnected, loss of position reference signal, power-up, power-down, loss of mobile communications signals, vessel crossing a pre-defined geographic boundary</p>
<b>Latency Requirement</b>	<p>“Position reports” (in the VMS specifications) are referred to as “time stamped position fixes” in the cELB specifications. Otherwise, these two sections are the same in both specifications.</p>	
<b>Messaging</b>	<p>Not applicable.</p> <p>Not required to reinstate the historical cELB program.</p>	<p>Must be able to run or connect to software/applications that can send email messages, must support message length of 1 KB, must have confirmation of delivery function for email messages, must be failed delivery notification for email messages, must support an “address book” and a “reply” function, must be able to review messages previously sent/received, must have minimum email message history of at least 50 messages to an inbox</p>
<b>Electronic Forms</b>	<p>Not applicable.</p> <p>Not required to reinstate the historical cELB program.</p>	<p>Must be able to run and transmit electronic forms, support forms software that holds a minimum of 20 electronic forms, fields must be capable of being defined as Optional/Mandatory/Logic Driven, be able to select forms from menu, be able to populate forms based on prior submission, be able to review minimum of 20 past form submissions, reporting of forms transmission failure/success, forms data compatible with NFMS vessel monitoring software, position reports unable to be manually entered or altered, capable of providing updates to forms or adding new forms</p>
<b>Communications Security</b>	<p>Must have mechanisms to prevent to the extent possible: sniffing or interception during transmission, spoofing, false position reports, modification of</p>	<p>Must have mechanisms to prevent to extent possible: sniffing or interception during transmission, spoofing, false position reports, modification of identification,</p>

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	<p>hardware/software identification, or introduction of malware/spyware/etc., data shall be encrypted and sent securely.</p> <p>Acceptable for hardware/software device to interface with GPS antenna.</p>	<p>interference with safety functions, introduction of malware/spyware/etc., terminal from interfering with GPS antenna. Data must be encrypted and sent securely through all associated cellular, satellite and internet communication pathways and channels.</p>
<b>Field &amp; Technical Services</b>	<p>Hardware/software developers must have established facilities and procedures to assist fishers in maintaining and repairing the device/program, provide assistance to fishers in the diagnosis of the cause of communications anomalies, and provide assistance to NMFS to resolve technical issues with the transmission or format of data, warranty and maintenance agreements.</p>	<p>Must ensure field and technical services include: diagnostic and troubleshooting support to NMFS and fishers 24/7 and 365 days a year, response time for customer service inquiry no more than 24 hours, warranty and maintenance agreements, escalation procedures for problem resolution, established facilities &amp; procedures to assist fishers in maintaining and repairing equipment, assistance for diagnosis/resolution of communications anomalies, assistance to OLE</p>
<b>General</b>	<p>Device must have the durability and reliability necessary to meet all requirements regardless of weather conditions. The cabling, antenna and any portion of the device intended to be installed outdoors must be resistant to salt, moisture and shock associated with sea-going vessels in the marine environment and have functionality aboard vessels remaining offshore for up to 60 days and constructed of steel, wood, fiberglass, or other material.</p> <p>Remainder of this section of cELB draft specifications is largely the same as section 600.1509 of the NOAA OLE VMS specifications, with the following exceptions:</p> <ul style="list-style-type: none"> <li>any reference to EMTU, EMTU-C, VMS, or MTU in the VMS specifications is replaced with “hardware/software” in the cELB specifications</li> </ul>	<p>EMTU/EMTU-C must have the durability and reliability necessary to meet all requirements regardless of weather conditions, including in a marine environment where the unit may be subject to saltwater (spray) in smaller vessels, and in larger vessels where the unit may be maintained in a wheelhouse. The unit, cabling and antenna must be resistant to salt, moisture, and shock associated with sea-going vessels in the marine environment.</p> <p>Remainder of this section of the NOAA OLE VMS specifications is largely the same as the cELB draft specifications, with the following exceptions:</p> <ul style="list-style-type: none"> <li>any reference to EMTU, EMTU-C, VMS, or MTU in the VMS specifications is replaced with “hardware/software” in the cELB specifications</li> <li>any reference to NMFS Office of Law Enforcement in the VMS specifications is replaced with NMFS in the cELB specifications</li> </ul>

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<b>5 Sections:</b> <ul style="list-style-type: none"> <li><b>Notification of Type-Approval</b></li> <li><b>Changes or Modifications to Type-Approvals</b></li> <li><b>Type-Approval Revocation Process</b></li> <li><b>Type-Approval Revocation Appeals Process</b></li> <li><b>Revocation Effective Date and Notification to Vessel Owners</b></li> </ul>	<p>These sections of cELB draft specifications and the NOAA OLE VMS specifications are largely the same, with the following exceptions:</p> <ul style="list-style-type: none"> <li>Any reference to EMTU, EMTU-C, VMS, or MTU in the VMS specifications is replaced with “hardware/software” in the cELB specifications.</li> <li>Any reference to NMFS Office of Law Enforcement in the VMS specifications is replaced with “NMFS” in the cELB specifications.</li> </ul>	
<b>Litigation Support</b>	<p>Not applicable.</p> <p>Not Included in cELB specifications as cELB is a scientific data collection program and not a program designed for law enforcement purposes intended to be routinely utilized in a court of law.</p>	<p>All technical aspects of device subject to being admitted as evidence in court. Type approval holder must provide technical and expert support for litigation to establish NMFS OLE cases against violators. Type approval holder required to sign non-disclosure agreement limiting release of information that might compromise effectiveness of VMS operations.</p>
<b>Reimbursement Opportunities for Revoked Vessel Monitoring System Type-Approval Products</b>	<p>Not applicable.</p> <p>cELB’s do not have a designated reimbursement fund, therefore this section does not apply.</p>	<p>When an EMTU/EMTU-C approval has been revoked by NMFS, vessel owners may be eligible for reimbursement.</p>
<b>Definitions</b>	<p>Not currently included in cELB draft specifications, but would be added upon finalization.</p>	<p>Definitions of terms included in NOAA OLE VMS specifications.</p>