



# CEACT

## **Channel ECDIS, AIS & Course Trajectory System**

US Waterways Version

**Version 2.2**

## **Release Notes**

July 2009

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# CEACT

## Version 2.2 – Release Notes

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**July 31<sup>st</sup>, 2009      CEACTION 221 Released.**

### **Most important improvements are**

- Enhanced stability
- Easier usability
- Simplified installation of chart updates
- Support of new standards, e.g. IENC 2.1 and AIS Class B

### **Main Features and Changes**

- Support of new charts according to IENC 2.1
- Standard ENCs can still be used
  
- New additional functions for chart import and updates
- Support of Chart Push Services
- Automatic user notification of new charts and chart permits
- Simplified installation of chart updates
- Remote chart import verification support
  
- Improved AIS data handling
- Support of Class B AIS devices
  
- Support of the new CEACTION RTE box device
- Black box and local host recording of ship's sensor data and user interaction
- Remote access to stored logfiles including search function
- Separate license handling allows multi device configurations for high reliability
  
- Improved Bargetracker configuration
- Stable operation even in case of connection disruption and network failure
- Unlimited message size
- Support of external mail subsystems
  
- Improved NMEA parser
- Highly ruggedized to withstand corrupted input data
- Support of RTE box data distribution
  
- Revised and enhanced Route Network includes more channels and markers

# CEACT

## Version 2.2 – Release Notes, Extended Description

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### Enhanced Stability

Improvements to the parser have been achieved through extensive examination of corrupt incoming data from ship board and network devices. Parser integrity is left intact while improving system robustness when corrupt data from sensors and network devices is received.

### Easier Usability

The new Chart Push feature simplifies the chart updating process through physical media update or remote update. Once the update is installed, the user automatically receives a chart update prompt allowing the user to OK or update at a later time. Automatic prompts are generated after start up of CEACT or at regularly scheduled intervals of about 2 hours if the user chooses to update at a later time.

Turning off the Automatic Chart feed requires fewer steps, while still prompting the user to turn it off.

The North symbol has been enhanced.

Additional Rivers have been added to the Go to Position menu giving the user more choices while also extending the River Mark Display and Channel CPA capabilities.

### Simplified Installation of Chart Updates

New Chart Packages and Chart Permit files can now be placed into the C:\SevenCs\CEACT\Updates\Charts directory along with the trigger file “updates.txt”. The trigger file can contain text defined by the management team. Preferably this file would contain all of the Chart Names. CEACT automatically checks for this file every two hours, shortly after the software is started, or whenever the Import dENC Chart button in the Chart Handling menu is selected.

When CEACT locates the trigger file, the user is automatically prompted. If the user responds by selecting “Yes”, the browser window opens displaying all of the charts and permits. The user should then select all of the new charts and permits by left clicking and dragging the mouse or by left clicking inside the chart area of the browser window and holding down the “CTRL” button and pressing the “A” on the keyboard. Press the “Open” button to install the new charts and permits.

The charts, permits and the “updates.txt” trigger file and the current tracker.xml file from the bin directory are moved to the “Applied” folder. The name of the trigger file “updates.txt” is modified with the date and time prefix. The contents of the “Applied” folder may be viewed to determine the update status of each system.

### **Support of New Standards, e.g. IENC 2.1 and AIS Class B**

In the near future, all IENC chart packages from USACE will be converted to the new IENC 2.1 standard. The new 7Cs Kernel used in CEACT has been tested and is compliant with the new IENC 2.1 standard. CEACT is also compatible with the ENC standard that is currently in use with existing chart data.

The new 7Cs Kernel in CEACT also supports “Class B” AIS devices. This will allow CEACT to see pleasure craft or smaller work boats that may be using the Class B devices.

### **Support of the New CEACT RTE Box Device**

A new Serial Router Device is now available from CEACT Information Systems. This device receives incoming Marine Sensor Data from Satellite Compass, AIS, etc., and transmits the data over UDP to the connected CEACT system or systems. The Router does not require special software drivers to be installed on the computer. This improves network robustness. When the network is restored, the data is restored, without having to reboot the computer. Furthermore, multiple RTE devices may be connected, to eliminate single point of failure, and to improve system reliability by implementing redundant back up marine sensor systems.

Incoming data from the connected marine sensors is written to the RTE device memory even when the CEACT application is not running. As long as the marine sensors are powered, the data is captured to the device. A unique web browser interface allows secure remote access to the RTE, and allows data to be compressed and retrieved based on definable date and time parameters.

When the device is connected to CEACT, UDP broadcast of Data is available to any platform requiring the data. This includes third party platforms or additional Shipboard CEACT viewers. This allows multiple CEACT terminals to be installed on the bridge or throughout the ship as remote viewers.

The CEACT RTE's UDP broadcasts allow many systems to be tested at one time. This is very useful when rolling out new systems for shipboard use as many can be tested over the Setup Labs Local Area Network, or when distributing data to multiple shipboard CEACT terminals.

System parameter changes on the CEACT terminal are recorded into the local host syslog files as well as the CEACT RTE device. This insures that when the data is replayed with future shore based CEACT systems, you will be able to see exactly how the Pilot was using CEACT, as his interactions are saved into the historical data files.

### **RTE and Local Host Recording of Ship's Sensor Data and User Interaction**

The name of the ship from the Bargetracker Configuration Menu and many of the CEACT parameters are now logged directly to the syslog files and to the CEACT RTE data storage files any time there is a change made. This will allow future version replays to show how the system was being used at the time of the recording. Future versions of CEACT will also embed advanced tow diagram information into the syslog and RTE data files.

## Improved Bargetracker Configuration

Bargetracker email service has become an integral part of vessel tracking for several companies that needed a reliable, low cost solution to track their vessels. This solution can send position reports and advanced tow diagrams at pre-defined intervals using the embedded mail client in CEACT or by allowing external applications access to the 60 second updates to the Tracker.xml file located in the c:\sevens\ceact\bin directory. The CEACT onboard email client has been toughened up to support the challenges of Cellular based email network interruptions and is available in both CEACT Classic and CEACT lite. Bargetracker emails are sent to the user configured tracker email server.

The Optional Bargetracker Internet Service from CEACT Information Systems is fully compatible with the Tracker.xml format, providing dispatchers and land based support personnel the ability to see all of their vessels, tow diagrams, barges and live AIS targets over a secure internet browser based service.

## Revised and Enhanced Route Network

Additional Channels and Mile Markers have been added to enhance the Go to Position, Channel CPA, and Tracking features.

Alabama	Elk	Neeches River
Algiers Alternate Route	Flint	Old River
Allegheny	GIWW East	Ohio-
Apalachicola	GIWW West	Ouachita
Arkansas	Greens Bayou	Outlet Canal Mississippi-Gulf
Arroyo Colorado	Green	Pearl River
Atchafalaya	Gulf County Canal	Port Allen Canal
Atchafalaya Channel	Holston	Port Arthur Canal
Brays Bayou	Harvey Canal	Red
Big Sandy	Hiwassee	San Jacinto
Black Warrior	Houston Ship Channel	Sims Bayou
Black Warrior Locust Fork	Illinois	Sabine Pass
Black Warrior Mulberry Fork	James	Sabine River
Carpenter Bayou	Kentucky	San Bernard
Chattahoochee	Kanawha	Savannah
Clearwater	Kaskaskia	Snake River
Calcasieu	Little Tennessee	St. Croix
Calumet River	Licking	Tchefuncte
Calumet Sag Channel	Little Calumet River	Tenn-Tom
Chicago River	Lower Mississippi	Tennessee
Chicago River North Branch	Lower Old River	Texas City Channel
Chicago River South Branch	Muskegan	Tombigbee
Chicago Sanitary and Ship Canal	Matagorda Ship Channel	Upper Mississippi
Chocolate Bayou	Mermentau	West Pearl
Clinch	Minnesota	White
Colorado	Missouri	Wilamette River
Columbia	Mobile Channel	Yazoo
Cumberland	Mobile River	
Des Plaines	Monongahela	